

SUB  
3-12-08  
SW

on R:  
e

GIS REGISTRY INFORMATION

SITE NAME: Johnson Sand & Gravel  
BRRTS #: 03-68-004228 FID # (if appropriate): 268438610  
COMMERCE # (if appropriate): 53186-1661-90  
CLOSURE DATE: 2-1-08  
STREET ADDRESS: N8 W22590 Johnson Drive  
CITY: Pewaukee

SOURCE PROPERTY GPS COORDINATES (meters in WTM91 projection): X= 6666829 Y= 287128

CONTAMINATED MEDIA: Groundwater  Soil  Both

OFF-SOURCE GW CONTAMINATION >ES:  Yes  No

IF YES, STREET ADDRESS 1: \_\_\_\_\_ RECEIVED APR 18 2008

GPS COORDINATES (meters in WTM91 projection): X= \_\_\_\_\_ Y= \_\_\_\_\_

OFF-SOURCE SOIL CONTAMINATION >Generic or Site-Specific RCL (SSRCL):  Yes  No RECEIVED APR 18 2008

IF YES, STREET ADDRESS 1: \_\_\_\_\_

GPS COORDINATES (meters in WTM91 projection): X= \_\_\_\_\_ Y= \_\_\_\_\_

CONTAMINATION IN RIGHT OF WAY:  Yes  No

DOCUMENTS NEEDED:

- Closure Letter, and any conditional closure letter issued
- Copy of most recent deed, including legal description, for all affected properties
- Certified survey map or relevant portion of the recorded plat map (if referenced in the legal description) for all affected properties
- County Parcel ID number, if used for county, for all affected properties
- Location Map which outlines all properties within contaminated site boundaries on USGS topographic map or plat map in sufficient detail to permit the parcels to be located easily (8.5x14" if paper copy). If groundwater standards are exceeded, the map must also include the location of all municipal and potable wells within 1200' of the site.
- Detailed Site Map(s) for all affected properties, showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells and potable wells. (8.5x14", if paper copy) This map shall also show the location of all contaminated public streets, highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding ch. NR 140 ESs and soil contamination exceeding ch. NR 720 generic or SSRCLs.
- Tables of Latest Groundwater Analytical Results (no shading or cross-hatching)
- Tables of Latest Soil Analytical Results (no shading or cross-hatching)
- Isoconcentration map(s), if required for site investigation (SI) (8.5x14" if paper copy). The isoconcentration map should have flow direction and extent of groundwater contamination defined. If not available, include the latest extent of contaminant plume map.
- GW: Table of water level elevations, with sampling dates, and free product noted if present
- GW: Latest groundwater flow direction/monitoring well location map (should be 2 maps if maximum variation in flow direction is greater than 20 degrees)
- SOIL: Latest horizontal extent of contamination exceeding generic or SSRCLs, with one contour
- Geologic cross-sections, if required for SI. (8.5x14" if paper copy)
- RP certified statement that legal descriptions are complete and accurate
- Copies of off-source notification letters (if applicable)
- Letter informing ROW owner of residual contamination (if applicable)(public, highway or railroad ROW)
- Copy of (soil or land use) deed restriction(s) or deed notice if any required as a condition of closure

|                                     |
|-------------------------------------|
| <input checked="" type="checkbox"/> |
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| <input checked="" type="checkbox"/> |
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| <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> |
| NA                                  |
| NA                                  |
| NA                                  |

Missing monitoring wells - MW-5 + MW-6  
well construction forms ✓



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
141 NW Barstow St.  
Room 180  
Waukesha, Wisconsin 53188  
Telephone 262-574-2100  
FAX 262-574-2117

February 1, 2008

Mr. Randy Johnson  
Johnson Sand & Gravel  
20685 W. National Ave.  
New Berlin, WI 53146

FID# 268438610  
BRRTS# 03-68-004228

Subject: Final Case Closure for Johnson Sand & Gravel, N8 W225990 Johnson Drive, Pewaukee

Dear Mr. Johnson:

The Wisconsin Department of Natural Resources (Department) notified you that conditional closure was granted to this case on October 1, 2007. The conditions of closure were the abandonment of all monitoring and recovery wells and the proper disposal of all investigative waste. On January 22, 2008, the Department received correspondence indicating that you have complied with the conditions of closure. Based on the correspondence and data provided, it appears that your case meets the requirements of ch. NR 726, Wis. Adm. Code. The Department considers this case closed and no further investigation, remediation or other action is required at this time.

Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code.

Lost Monitoring Wells

On September 12, 2007, your consultant, Northern Environmental, notified the Department that monitoring wells MW-5 and MW-6 located on the subject property could not be properly abandoned because they had been lost due to being paved over, covered or removed during site development activities. Your consultant has made a reasonable effort to locate the lost wells to determine whether they were properly abandoned, but has been unsuccessful in those efforts. You need to understand that in the future you may be held liable for any problems associated with monitoring wells MW-5 and MW-6 if they create a conduit for contaminants to enter groundwater. If in the future any of the lost groundwater monitoring wells are found, the then current owner of the subject property will be required to notify the Department and to properly abandon the wells in compliance with the requirements in ch. NR 141, Wis. Adm. Code, and to submit the required documentation of that abandonment to the Department.

Because these lost monitoring wells were not properly abandoned, your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites, as discussed in the next paragraph.

GIS Registry

Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites for the following reasons:

- Groundwater contamination is present above Chapter NR 140 enforcement standards
- One or more monitoring wells were not located and must be properly abandoned if found

Information that was submitted with your closure request application will be included on the registry. To review the sites on the GIS Registry web page, visit <http://gomapout.dnr.state.wi.us/org/at/et/geo/gwur/index.htm> If your property is listed on the GIS Registry due to groundwater contamination exceeding ch. NR 140 standards at the time of closure, and you intend to construct or reconstruct a well, you will need Department approval. Department approval is required before construction or reconstruction of a well on a property listed on the GIS Registry, in accordance with s. NR 812.09(4)(w). To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at the web address listed above.

Please note that this closure only applies to the leaking underground storage tank (LUST) activity listed at the top, right of this letter. The ERP activity, 02-68-259665, which was opened due to detections of chlorinated solvents in the groundwater, remains open on the DNR BRRTS database.

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Brenda Boyce at (262) 574-2140.

Sincerely,



Frances Koonce  
Remediation & Redevelopment Program SubTeam Supervisor

c: Chris Hatfield – Northern Environmental



## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
141 NW Barstow St.  
Room 180  
Waukesha, Wisconsin 53188  
Telephone 262-574-2100  
FAX 262-574-2117

October 1, 2007

Mr. Randy Johnson  
Johnson Sand & Gravel  
20685 W. National Ave.  
New Berlin, WI 53146

FID# 268438610  
BRRTS# 03-68-004228

Subject: Conditional Closure for Johnson Sand & Gravel, N8 W225990 Johnson Drive,  
Pewaukee

Dear Mr. Johnson:

On September 24, 2007, the Wisconsin Department of Natural Resources (Department) received your request for closure of the case described above. The Department reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. After careful review of the closure request, the Department has determined that the petroleum contamination on the site from the former underground storage tank (UST) system appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following conditions are satisfied:

- The monitoring wells and recovery/extraction wells at the site must be properly abandoned in compliance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to Ms. Victoria Stovall on Form 3300-5B found at [www.dnr.state.wi.us/org/water/dwg/gw/](http://www.dnr.state.wi.us/org/water/dwg/gw/) or provided by the Department.
- Any remaining waste (soil piles, drilling spoil, and/or purge water) generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with Department of Natural Resources' rules. Please send a letter advising me that any remaining waste has been removed once that work is completed.

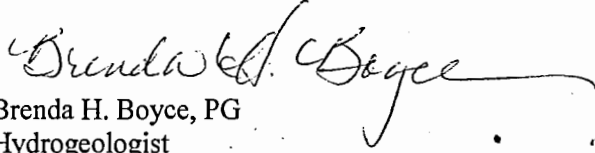
When the above conditions have been satisfied, please submit a letter to let me know that applicable conditions have been met, and your case will be closed.

If this is a PECFA site, section 101.143, Wis. Stats., requires that PECFA claimants seeking reimbursement of interest costs, for sites with petroleum contamination, submit a final reimbursement claim within 120 days after they receive a closure letter on their site. For claims not received by the PECFA Program within 120 days of the date of this letter, interest costs after 60 days of the date of this letter will not be eligible for PECFA reimbursement.

Johnson Sand & Gravel  
October 1, 2007  
Page 2 of 2

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me at (262) 574-2140.

Sincerely,

A handwritten signature in cursive script that reads "Brenda H. Boyce". The signature is written in black ink and extends across the width of the page.

Brenda H. Boyce, PG  
Hydrogeologist  
Bureau for Remediation & Redevelopment

c: Chris Hatfield – Northern Environmental

DOCUMENT NO.  
**2119519**

STATE BAR OF WISCONSIN FORM 1 - 1982  
WARRANTY DEED

THIS SPACE RESERVED FOR RECORDING DATA

**2119519**

This Deed, made between  
JOHNSON SAND & GRAVEL, INC., a Wisconsin Corporation

REGISTER'S OFFICE  
WAUKESHA COUNTY, WIS. } SS  
REC'D

Grantor, and  
R.R.S. PROPERTIES LLC., a Wisconsin Limited Liability  
Company

96 APR 29 AM 9:17  
REEL 2222 INAGE 0823

*[Signature]*  
REGISTER OF DEEDS

Grantee,  
Witnesseth, That the said Grantor, for a valuable consideration conveys to Grantee the  
following described real estate in WAUKESHA County,

RETURN TO  
N8 W22590 JOHNSON Dr  
WAUKESHA, WI 53186

Tax Parcel No:

Lot 22 of Certified Survey Map No. 3902, recorded on September 24, 1980 in Volume 30  
of Certified Survey Maps on Pages 138, 139 and 140, as Document No. 1138397, being a  
part of the NW 1/4 of Section 25, Town 7 North, Range 19 East, Town of Pewaukee,  
County of Waukesha, State of Wisconsin.

Tax Key No. PWT 0963.999.018

ADDRESS: N8 W22590 Johnson Drive

DLE/TS/JT

TRANSFER  
\$1140.00  
FEE

422  
10-

This is not homestead property.  
Together with all and singular the hereditaments and appurtenances thereunto belonging;  
And JOHNSON SAND & GRAVEL, INC., a Wisconsin Corporation  
warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except  
municipal and zoning ordinances and agreements entered under them, recorded building and use restrictions and covenants, and general  
taxes levied in the year of closing and subsequent years, and recorded easements for the distribution of utility and municipal services  
and will warrant and defend the same.

Dated this 18TH day of April, 1996

*[Signature]* (SEAL) \_\_\_\_\_ (SEAL)  
ROBERT A. JOHNSON, SECRETARY

\_\_\_\_\_ (SEAL) \_\_\_\_\_ (SEAL)

AUTHENTICATION  
Signature(s) of

ACKNOWLEDGEMENT

authenticated this \_\_\_\_\_ day of \_\_\_\_\_

STATE OF WISCONSIN  
Waukesha County. } SS.

Personally came before me this 18<sup>th</sup> day of  
April, 1996 the above named  
ROBERT A. JOHNSON, SECRETARY

TITLE: MEMBER STATE BAR OF WISCONSIN

(If not, \_\_\_\_\_  
authorized by § 700.00, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY

J. BUSHNELL NIELSEN

(Signatures may be authenticated or acknowledged. Both are not necessary.)

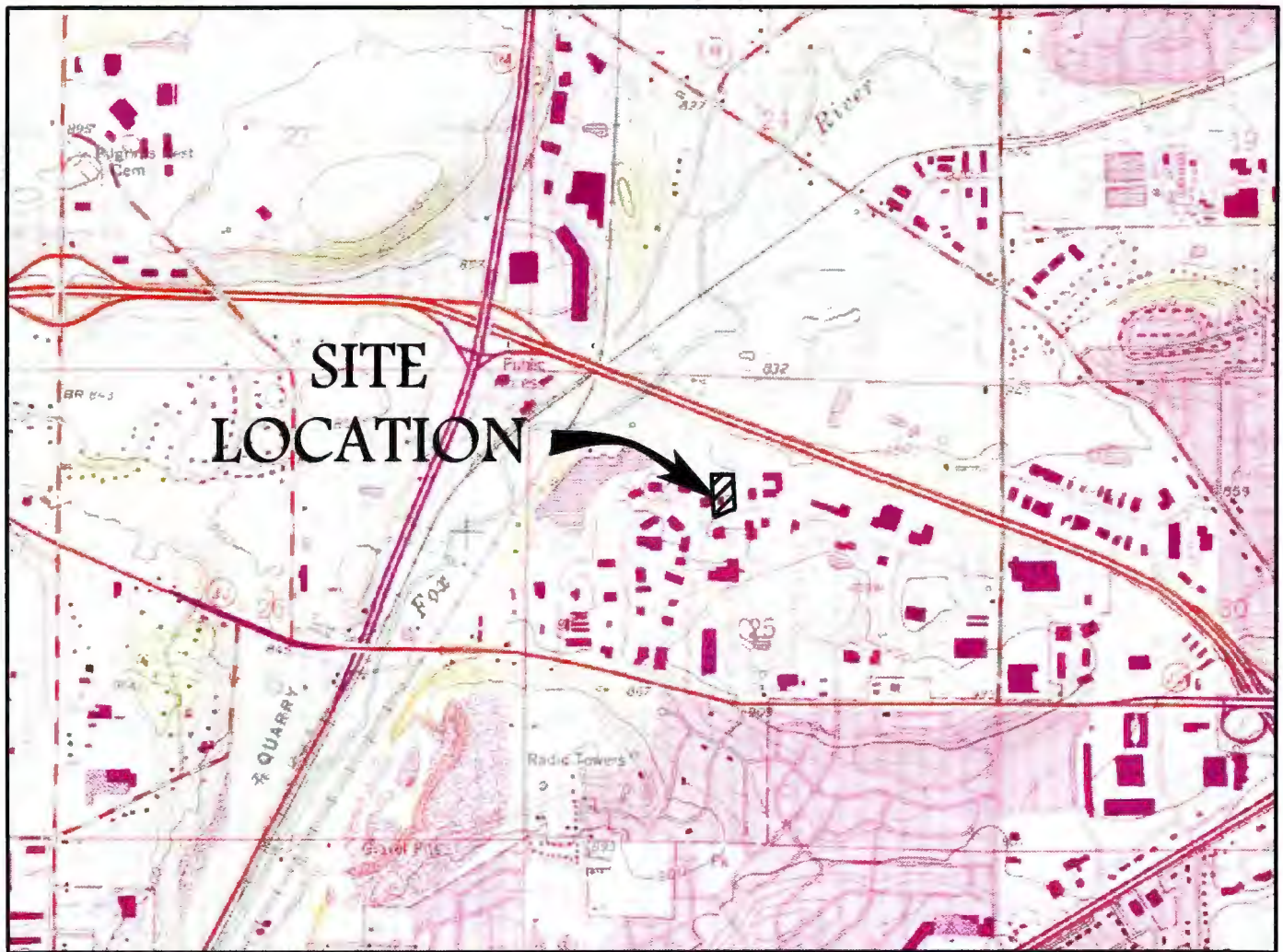
to me known to be the person(s) who executed the foregoing  
instrument and acknowledged the same.

*[Signature]*  
*[Signature]*

Notary Public Washington County, Wis.

My Commission is permanent: (If not, state expiration date: \_\_\_\_\_)

Sept 28, 1997



**SITE  
LOCATION**



SCALE IN FEET

1" = 2000'



CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

BASE MAP SOURCE: USGS 7.5 MINUTE QUADRANGLE, WAUKESHAG, WISCONSIN, 1992 (NATIONAL GEOGRAPHIC HOLDINGS, INC.)



Hydrologists • Engineers • Surveyors • Scientists

12075 North Corporate Parkway, Suite 210, Mequon, Wisconsin 53092  
Phone: 800-776-7140 Fax: 262-241-8222

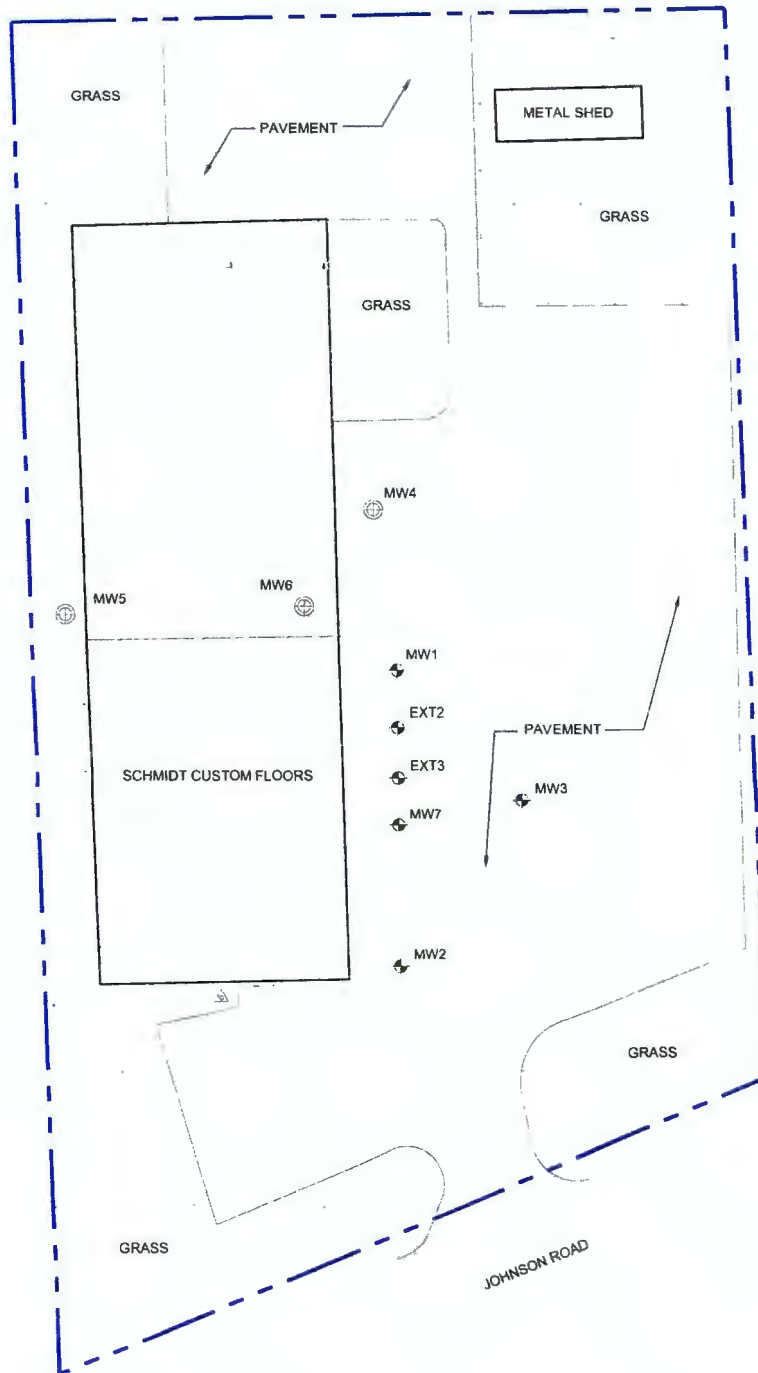
WISCONSIN ▲ MICHIGAN ▲ ILLINOIS ▲ IOWA

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**SITE LOCATION  
& LOCAL TOPOGRAPHY**

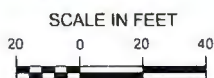
**JOHNSON SAND & GRAVEL  
PEWAUKEE, WISCONSIN**

|                |               |                  |                                  |          |
|----------------|---------------|------------------|----------------------------------|----------|
| DATE: 07/06/07 | DRAWN BY: BMP | TASK NUMBER: 100 | PROJECT NUMBER: JSG 01-2200-2866 | FIGURE 1 |
|----------------|---------------|------------------|----------------------------------|----------|



**LEGEND**

-  MONITORING WELL LOCATION AND IDENTIFICATION DESTROYED BY CONSTRUCTION
-  MONITORING WELL LOCATION AND IDENTIFICATION
-  FORMER POTABLE WELL LOCATION
-  PROPERTY BOUNDARY



**Northern Environmental**  
 Hydrologists • Engineers • Surveyors • Scientists  
 12075 North Corporate Parkway, Suite 210, Mequon, Wisconsin 53092  
 Phone: 800-776-7140 Fax: 262-241-8222

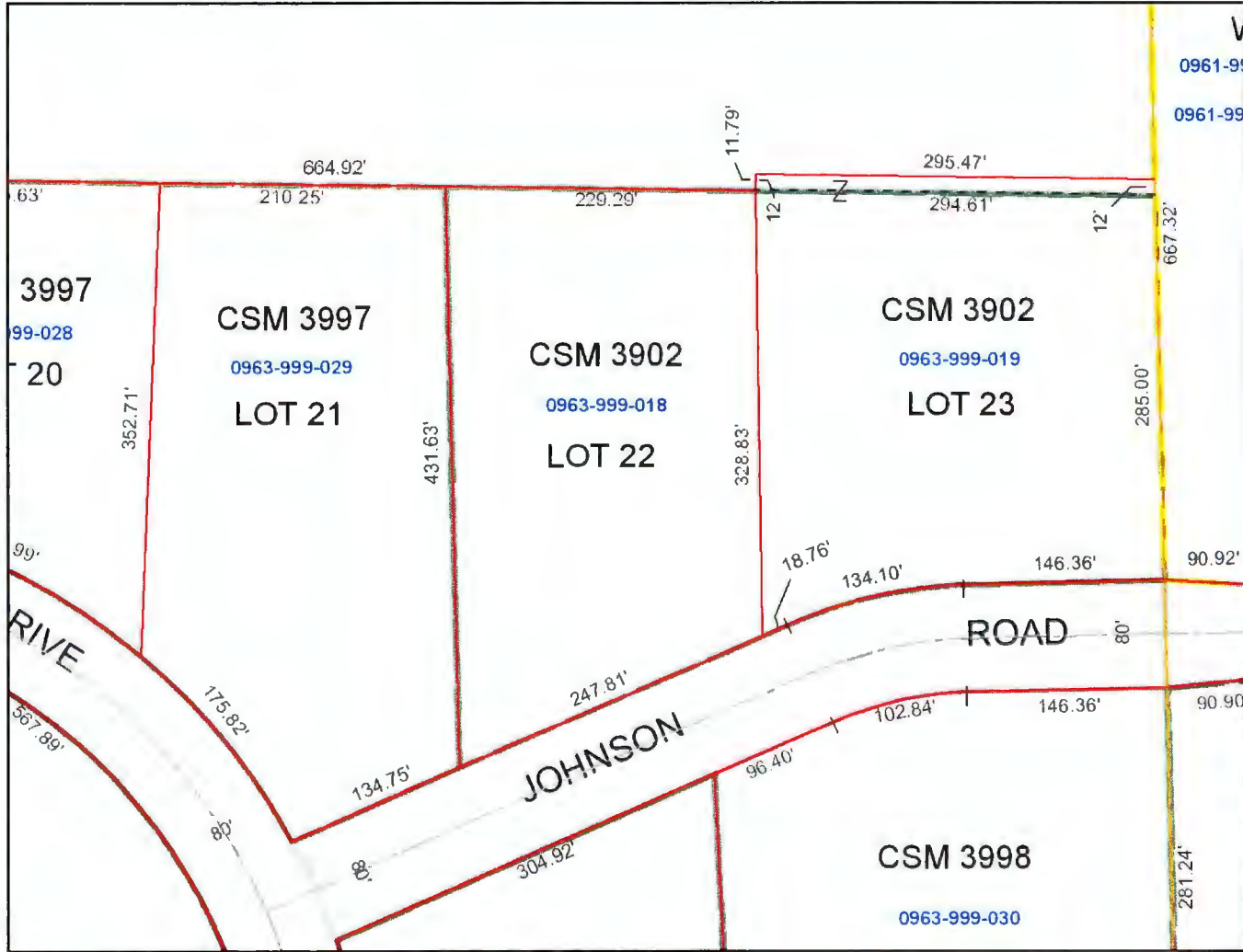
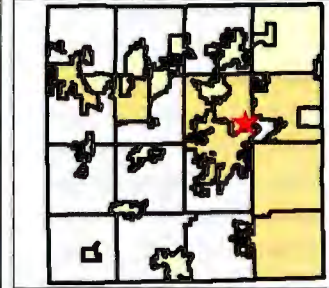
WISCONSIN ▲ MICHIGAN ▲ ILLINOIS ▲ IOWA

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DATE: 07/06/07 DRAWN BY: BMP TASK NUMBER: 100

|   |                  |
|---|------------------|
| <b>SITE LAYOUT</b>                                  |                  |
| FORMER JOHNSON SAND & GRAVEL<br>PEWAUKEE, WISCONSIN |                  |
| PROJECT NUMBER                                      | JSG 01-2260-2866 |
| FIGURE  | 1                |





**Legend**

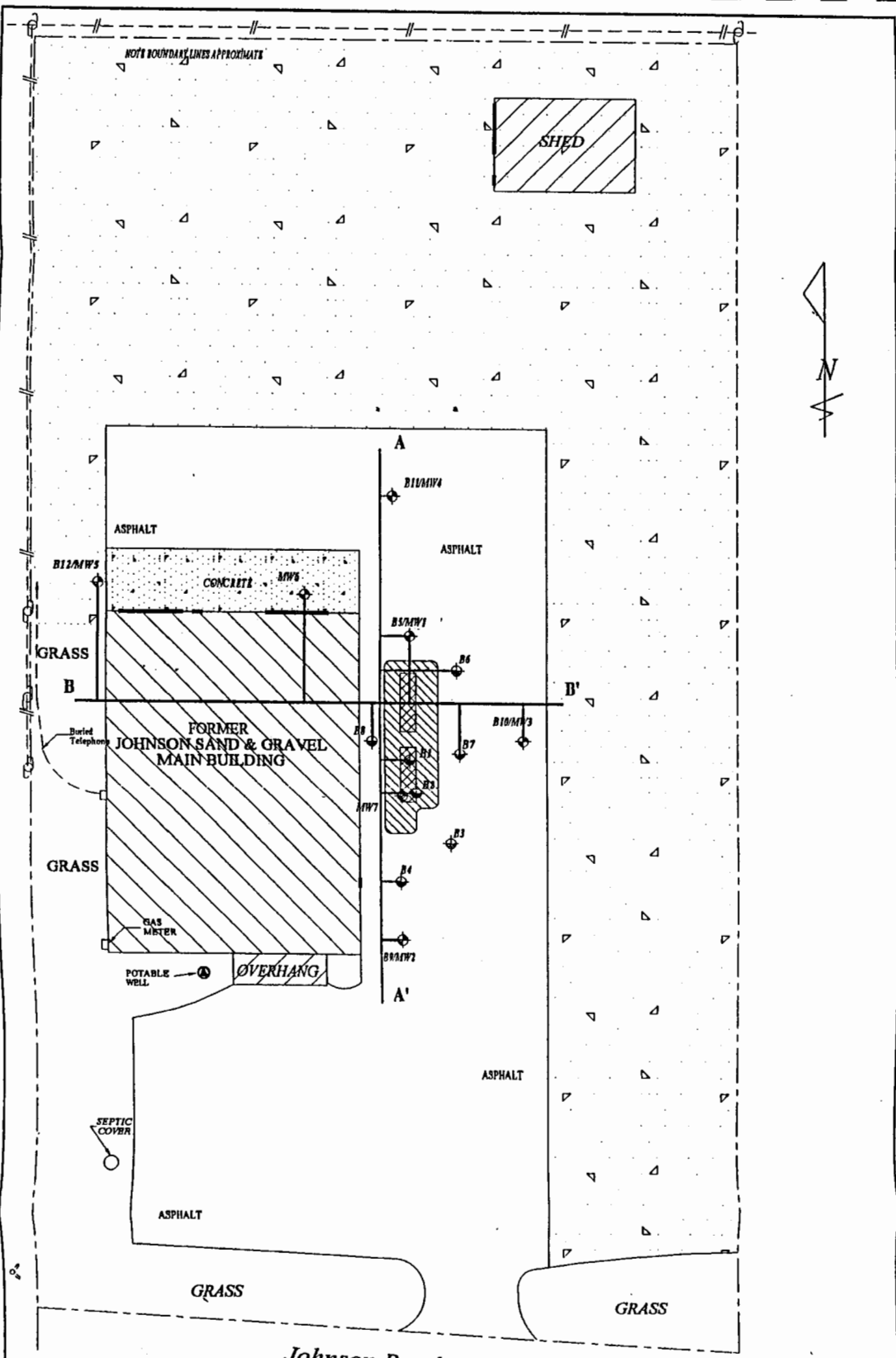
- Points of Interest**
- Airport
  - Cemetery
  - Fire Station
  - Government Building
  - Hospital
  - Library
  - Post Office
  - Park or Recreation
  - School
  - Unincorporated Place
  - County Parks
  - Police Station
  - Sheriff Substation
  - Civil Division Boundaries
  - PLSS Section Lines
  - PLSS Quarter Section Lines
  - Cartographic Elements
- Type**
- Easement Line (Major)
  - Dimension arrow
  - Extended Tie Line
  - Identification Arrow
  - Meander Line
  - Note Leader
  - Parcel Line (Water)
  - Tangency Tic
  - Tie Block
  - Tie Line
  - ROW Centerline
  - RR ROW Centerline
  - ROW Radius
  - Sub Block 100
  - Sub Block 200
  - Parcels
  - Shared Interest Parcels
- Road Rights of Way**
- Dedicated
  - Proposed
  - Reserved
  - Vicinal
  - Assessor Plat
  - Condo Plat
  - CSM
  - Subdivision Plat
- RR ROW Status**
- Active
  - Retired
- Lakes and Rivers**
- Lakes and Rivers
  - Streams and Creeks



The information and depictions found on this site are for informational purposes only and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein or for use which ignores this warning.

Notes: CSM 3902: Former Johnson Sand and Gravel Property





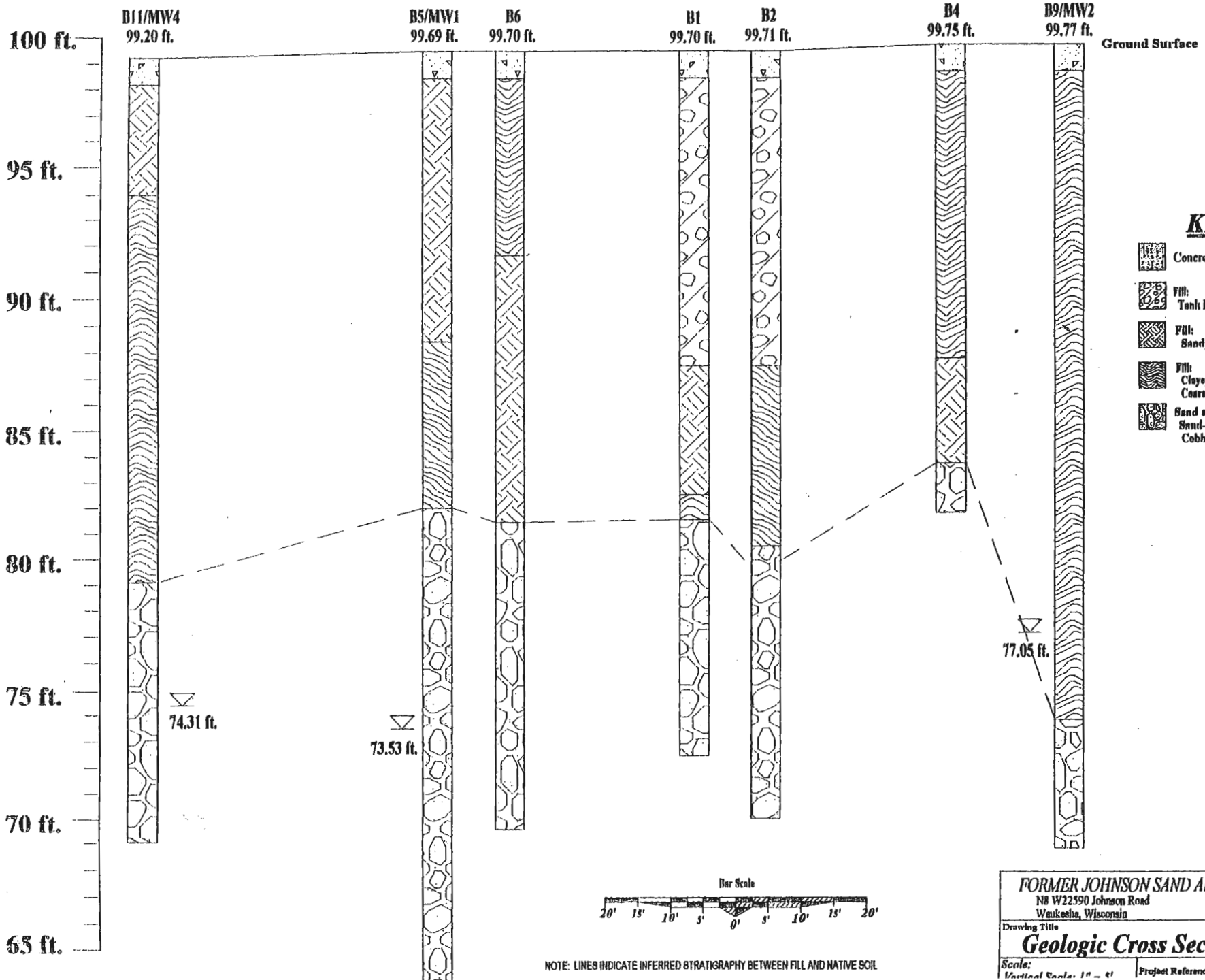
**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊗ - Hydrant
- — — Overhead Electric Line
- — — Monitoring Well
- ⊕ - Utility Pole
- - - Property Line
- - - Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|   |   |
|---|---|
| <p><b>Geologic Cross-Section Location Map</b></p>   |   |
| <p><b>Former Johnson Sand &amp; Gravel Site</b><br/> <b>N8 W22590 Johnson Road Waukesha, WI</b></p> |   |
| <p>PROJECT REFERENCE</p> <p><b>MEI #0305</b></p>  | <p>FIGURE NAME</p> <p><b>Figure 3</b></p> |



B11/MW4  
99.20 ft.

B5/MW1  
99.69 ft.

B6  
99.70 ft.

B1  
99.70 ft.

B2  
99.71 ft.

B4  
99.75 ft.

B9/MW2  
99.77 ft.

100 ft.  
95 ft.  
90 ft.  
85 ft.  
80 ft.  
75 ft.  
70 ft.  
65 ft.

▽  
74.31 ft.

▽  
73.53 ft.

▽  
77.05 ft.

**FORMER JOHNSON SAND AND GRAVEL**  
N8 W22590 Johnson Road  
Waukesha, Wisconsin

Drawing Title  
**Geologic Cross Section A - A'**

Scale:  
Vertical Scale: 1" = 5'

Project Reference

Figure

100 ft.  
95 ft.  
90 ft.  
85 ft.  
80 ft.  
75 ft.  
70 ft.  
65 ft.

B12/MW5  
99.62 ft.

MW6  
99.68 ft.

B8  
99.70 ft.






B5/MW1  
99.69 ft.

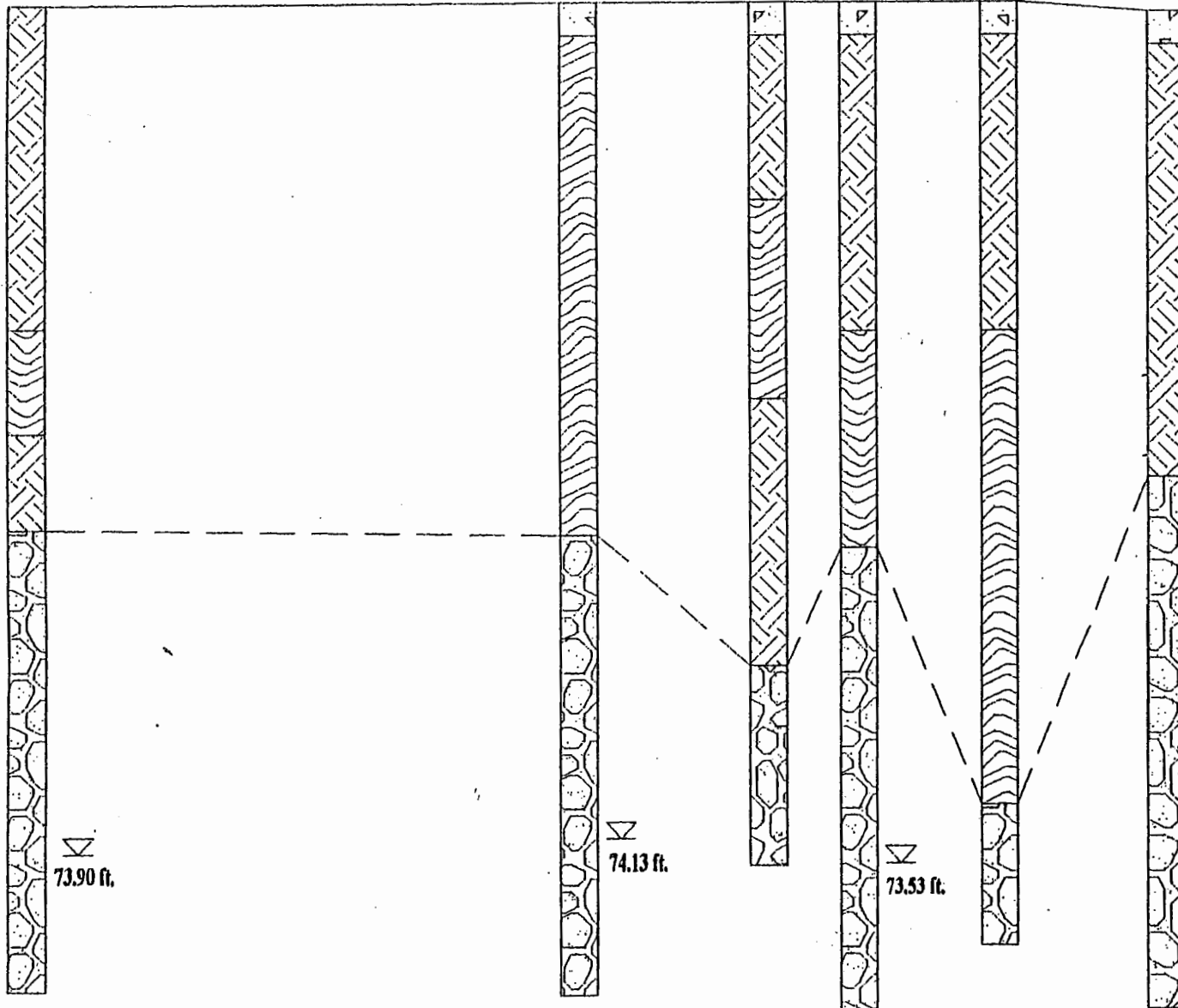
B7  
99.70 ft.

B10/MW3  
99.27 ft.

Ground Surface

**KEY**

-  Concrete and Base
-  Fill: Tank Excavation/2 Stone
-  Fill: Sandy Silt, Silt, Sand-Gravel
-  Fill: Clayey Silt, Silty Clay w/ Coarse Sand and Gravel
-  Sand and Gravel: Sand-Gravel, Silt-Sand and Cobbles



NOTE: LINES INDICATE INFERRED STRATIGRAPHY BETWEEN FILL AND NATIVE SOIL

FORMER JOHNSON SAND AND GRAVEL  
N8 W22590 Johnson Road  
Waukesha, Wisconsin

Drawing Title

**Geologic Cross Section B-B'**

Scale:

Vertical Scale: 1" = 4'

Project Reference

Figure

|   |  |   |
|---|--|---|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>  | Local Grid Location of Well<br>_____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E.<br>_____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.                  | Well Name<br><b>MW-5</b>  |
| Facility License, Permit or Monitoring Number   | Grid Origin Location<br>Lat. _____ Long. _____ or<br>St. Plane _____ ft. N. _____ ft. E.   | Wis. Unique Well Number: _____ DNR Well Number: _____                                   |
| Type of Well<br>Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location of Waste/Source<br>_____ 1/4 of _____ 1/4 of Sec. _____ T. _____ N, R. _____ <input type="checkbox"/> E. <input type="checkbox"/> W.  | Date Well Installed<br><b>08/08/96</b>  |
| Distance Well Is From Waste/Source Boundary<br>_____ ft.  | Location of Well Relative to Waste/Source<br>u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient<br>d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known | Well Installed By: (Person's Name and Firm)<br><b>Paul Dickinson<br/>Boart Longyear</b> |
| Is Well A Point of Enforcement Std. Application?<br><input type="checkbox"/> Yes <input type="checkbox"/> No                  |  |   |

|   |   |
|---|---|
| A. Protective pipe, top elevation _____ ft. MSL   | 1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| B. Well casing, top elevation <u>Flush</u> ft. MSL  | 2. Protective cover pipe:<br>a. Inside diameter: <u>8.0</u> in.<br>b. Length: <u>1.0</u> ft.<br>c. Material: Steel <input checked="" type="checkbox"/> 04<br>Other <input type="checkbox"/>   |
| C. Land surface elevation _____ ft. MSL   | d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If yes, describe: _____  |
| D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft.   | 3. Surface seal: Bentonite <input type="checkbox"/> 30<br>Concrete <input checked="" type="checkbox"/> 01<br>Other <input type="checkbox"/>   |
| 12. USC classification of soil near screen:<br>GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/><br>SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/><br>Bedrock <input type="checkbox"/> | 4. Material between well casing and protective pipe:<br>Bentonite <input type="checkbox"/> 30<br>Annular space seal <input type="checkbox"/><br>Other <input type="checkbox"/>  |
| 13. Sieve analysis attached? <input type="checkbox"/> Yes <input type="checkbox"/> No   | 5. Annular space seal:<br>a. Granular Bentonite <input checked="" type="checkbox"/> 33<br>b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35<br>c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 31<br>d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 50<br>e. _____ Ft <sup>3</sup> volume added for any of the above<br>f. How installed: Tremie <input type="checkbox"/> 01<br>Tremie pumped <input type="checkbox"/> 02<br>Gravity <input checked="" type="checkbox"/> 08 |
| 14. Drilling method used: Rotary <input type="checkbox"/> 50<br>Hollow Stem Auger <input checked="" type="checkbox"/> 41<br>Other <input type="checkbox"/>  | 6. Bentonite seal:<br>a. Bentonite granules <input checked="" type="checkbox"/> 33<br>b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32<br>c. _____ Other <input type="checkbox"/>  |
| 15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01<br>Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99  | 7. Fine sand material: Manufacturer, product name and mesh size<br>a. <u>#7 Badger</u><br>b. Volume added _____ ft <sup>3</sup>   |
| 16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Describe _____   | 8. Filter pack material: Manufacturer, product name and mesh size<br>a. <u>#30 American Material</u><br>b. Volume added _____ ft <sup>3</sup>   |
| 17. Source of water (attach analysis): _____  | 9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23<br>Flush threaded PVC schedule 80 <input type="checkbox"/> 24<br>Other <input type="checkbox"/>   |
| E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.  | 10. Screen material: <u>PVC</u><br>a. Screen Type: Factory cut <input checked="" type="checkbox"/> 11<br>Continuous slot <input type="checkbox"/> 01<br>Other <input type="checkbox"/>  |
| F. Fine sand, top _____ ft. MSL or <u>16.0</u> ft.  | b. Manufacturer: <u>Boart Longyear</u>  |
| G. Filter pack, top _____ ft. MSL or <u>18.0</u> ft.  | c. Slot size: <u>0.010</u> in.<br>d. Slotted length: <u>10.0</u> ft.  |
| H. Screen joint, top _____ ft. MSL or <u>20.0</u> ft.   | 11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 14<br>Other <input type="checkbox"/>  |
| I. Well bottom _____ ft. MSL or <u>30.0</u> ft.   |   |
| J. Filter pack, bottom _____ ft. MSL or <u>31.0</u> ft.   |   |
| K. Borehole, bottom _____ ft. MSL or <u>31.0</u> ft.  |   |
| L. Borehole, diameter <u>10.0</u> in.   |   |
| M. O.D. well casing <u>2.37</u> in.   |   |
| N. I.D. well casing <u>2.06</u> in.   |   |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [Signature] Firm **Boart Longyear** 101 Alderson Street  
Tel: (715) 359-7090 Fax: (715) 355-5715

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

|   |  |  |
|---|--|--|
| Facility/Project Name<br><u>Former Johnson Sand and Gravel</u>  | Grid Location<br>_____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S.<br>_____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.  | Well Name<br><u>M6</u>   |
| Facility License, Permit or Monitoring Number<br>_____  |  | Wis. Unique Well Number: _____ DNR Well Number: _____                      |
| Type of Well: Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location<br><u>NW 1/4 of NE 1/4 of Section 25</u>  | Date Well Installed<br><u>08/29/97</u><br>m m a a y y                      |
| Distance Well Is From Water/Source Boundary<br>_____ ft.  | Location of Well Relative to Waste/Source<br>T <u>7</u> N. R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W<br><input type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient<br><input type="checkbox"/> Downgradient <input checked="" type="checkbox"/> Not Known | Well Installed By: (Person's Name and Firm)<br><u>Briohn Environmental</u> |
| Is Well A Point of Enforcement Std. Application?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No     |  |  |

|  |  |  |
|--|--|--|
| A. Protective pipe, top elevation _____ ft. MSL<br>B. Well casing, top elevation _____ ft. MSL<br>C. Land surface elevation _____ ft. MSL<br>D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft.   |  | 1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>2. Protective cover pipe:<br>a. Inside diameter: <u>8.0</u> in.<br>b. Length: <u>1.0</u> ft.<br>c. Material: Steel <input checked="" type="checkbox"/> 04<br>Other <input type="checkbox"/><br>d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If yes, describe: _____<br>3. Surface seal: Bentonite <input type="checkbox"/> 30<br>Concrete <input checked="" type="checkbox"/> 01<br>Other <input type="checkbox"/><br>4. Material between well casing and protective pipe:<br>Bentonite <input type="checkbox"/> 30<br>Annular space seal <input type="checkbox"/><br>Other <input type="checkbox"/><br>5. Annular space seal: Granular Bentonite <input checked="" type="checkbox"/> 33<br>_____ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35<br>_____ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31<br>_____ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50<br>_____ Ft <sup>3</sup> volume added for any of the above<br>How installed: Tremie <input type="checkbox"/> 01<br>Tremie pumped <input type="checkbox"/> 02<br>Gravity <input checked="" type="checkbox"/> 08<br>6. Bentonite seal: Bentonite granules <input checked="" type="checkbox"/> 33<br><input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32<br>Other <input type="checkbox"/><br>7. Fine sand material: Manufacturer, product name and mesh size<br><u>Red Flint #95</u><br>Volume added _____ ft <sup>3</sup><br>8. Filter pack material: Manufacturer, product name and mesh size<br><u>Red Flint #30</u><br>Volume added _____ ft <sup>3</sup><br>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23<br>Flush threaded PVC schedule 80 <input type="checkbox"/> 24<br>Other <input type="checkbox"/><br>10. Screen material: <u>PVC</u><br>Screen type: Factory cut <input checked="" type="checkbox"/> 11<br>Continuous slot <input type="checkbox"/> 01<br>Other <input type="checkbox"/><br>Manufacturer <u>TIMCO</u><br>Slot size: <u>0.010</u> in.<br>Slotted length: <u>10.0</u> ft.<br>11. Backfill material (below filter pack): None <input checked="" type="checkbox"/><br>Other <input type="checkbox"/> |
| 12. USCS classification of soil near screen:<br><input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input checked="" type="checkbox"/> SW <input type="checkbox"/> SP<br><input checked="" type="checkbox"/> KSM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH<br><input type="checkbox"/> Bedrock  |  |  |
| 13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |  |  |
| 14. Drilling method used: Rotary <input type="checkbox"/> 50<br>Hollow Stem Auger <input checked="" type="checkbox"/> 41<br>Other <input type="checkbox"/>   |  |  |
| 15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01<br>Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99   |  |  |
| 16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Describe: _____   |  |  |
| 17. Source of water (attach analysis): _____   |  |  |
| E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.<br>F. Fine sand, top _____ ft. MSL or <u>15.3</u> ft.<br>G. Filter pack, top _____ ft. MSL or <u>17.3</u> ft.<br>H. Well screen, top _____ ft. MSL or <u>19.3</u> ft.<br>I. Well screen, bottom _____ ft. MSL or <u>29.3</u> ft.<br>J. Filter pack, bottom _____ ft. MSL or <u>30.0</u> ft.<br>K. Borehole, bottom _____ ft. MSL or <u>30.0</u> ft.<br>L. Borehole, diameter <u>8.0</u> in.<br>M. O.D. well casing <u>2.25</u> in.<br>N. I.D. well casing <u>2.00</u> in. |  |  |

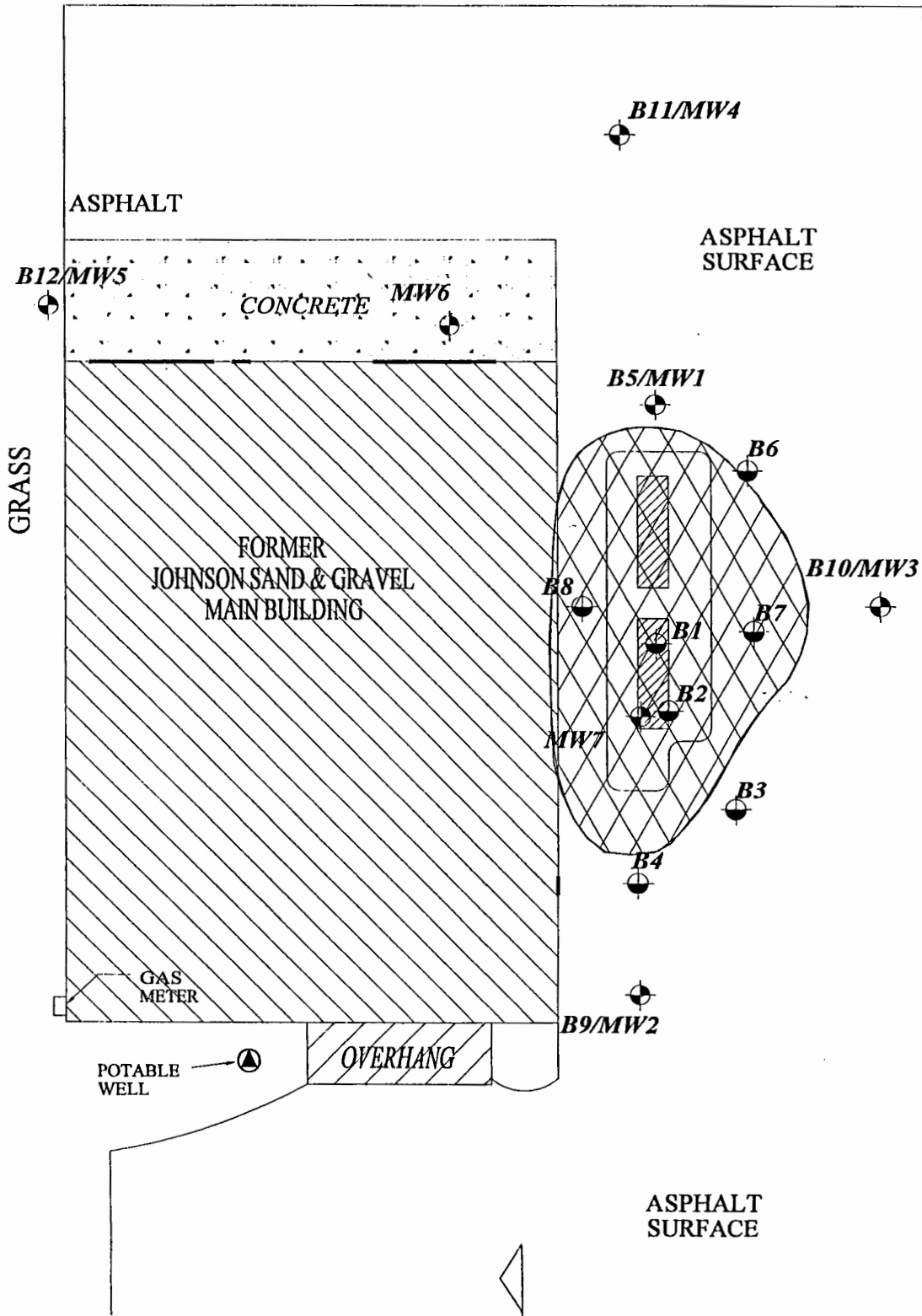
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Patricia Patterson Firm: MEI

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.

NOTE: Shaded areas are for DNR use only. See instructions for more information.

GRAVEL SURFACE



GRASS

ASPHALT

ASPHALT SURFACE

FORMER JOHNSON SAND & GRAVEL MAIN BUILDING

GAS METER

POTABLE WELL

OVERHANG

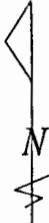
ASPHALT SURFACE

**MEI - Legend**

- ⊕ -- Potable Well Location
- ⊕ -- Soil Boring Location
- ⊕ -- Hydrant
- — — Overhead Electric Line
- ⊕ -- Monitoring Well
- ⊕ -- Utility Pole
- — — Property Line
- — — Buried Line



*\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.*



|  |                                |
|--|--------------------------------|
| FIGURE NAME<br><b>EXTENT OF SOIL CONTAMINATION<br/>(Exceeding NR720 Soil Standards)</b>                        |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #1401</b>  | FIGURE NAME<br><b>Figure 4</b> |

**TABLE 3  
SOIL QUALITY RESULTS  
Former Johnson Sand and Gravel Site**

|                        | B1<br>(16-18') | B1<br>(24-26') | B2<br>(12-14') | B2<br>(22-24') | B2<br>(28-30') | B3<br>(12-14') | B3<br>(26-28') | B4<br>(8-10') | B4<br>(14-16') | B5<br>(6-8') | B5<br>(20-22') | B5<br>(28-30') | B6<br>(12-14') | B6<br>(20-22') | B7<br>(4-6') | B7<br>(14-16') | B7<br>(22-24') | B8<br>(10-12') | B8<br>(18-20') | B8<br>(22-24') | M3<br>composite | M3<br>(14-16') | Generic<br>RCL's |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|--------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|------------------|
| GRO (mg/kg)            | 540            | ND             | 350            | 250            | 700            | ND             | ND             | ND            | ND             | ND           | 11             | ND             | ND             | 96             | ND           | 170            | ND             | ND             | ND             | 30             | NA              | ND             | 100              |
| DRO (mg/kg)            | 750            | 9.4            | 1600           | 370            | 4400           | 4.7            | ND             | 6.9           | ND             | 23           | 43             | ND             | ND             | 92             | 4.1          | 350            | ND             | 13             | 9.6            | 100            | 120             | ND             | 100              |
| Lead (mg/kg)           | 5.4            | 3.8            | ND             | 5.4            | 5.4            | 9.0            | 4.7            | 5.6           | 13             | 12           | ND             | ND             | 7.8            | 3.4            | ND           | ND             | 7.8            | 10             | 5.2            | ND             | NA              | NA             | 50               |
| Detected VOCs (ug/kg)  |                |                |                |                |                |                |                |               |                |              |                |                |                |                |              |                |                |                |                |                |                 |                |                  |
| Benzene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 5.5              |
| n-Butylbenzene         | 2000           | ND             | 750            | 1900           | 3300           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 270            | ND           | 74             | ND             | ND             | ND             | 73             | NA              | ND             | NSE              |
| sec-Butylbenzene       | 2000           | ND             | 790            | 1800           | 3600           | ND             | ND             | ND            | 37             | ND           | 40             | 40             | ND             | 310            | ND           | 80             | 35             | ND             | ND             | 76             | NA              | ND             | NSE              |
| cis-1,2 Dichloroethene | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | 43             | ND             | 100          | ND             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| Ethylbenzene           | 930            | ND             | 260            | 960            | 970            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 33           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 2900             |
| Isopropylbenzene       | 860            | ND             | 290            | 860            | 1500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 150            | ND           | 32             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| p-Isopropyltoluene     | 1300           | ND             | 530            | 1200           | 2400           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 43           | ND             | ND             | ND             | ND             | 130            | NA              | ND             | NSE              |
| n-Propylbenzene        | ND             | ND             | 460            | 1400           | 2500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 50           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| Naphthalene            | 5200           | ND             | 1600           | 4300           | 7200           | ND             | ND             | ND            | ND             | ND           | 51             | 67             | ND             | 540            | ND           | 270            | ND             | ND             | ND             | 83             | NA              | ND             | NSE              |
| Tetrachloroethene      | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 120            | ND           | ND             | ND             | ND             | ND             | 66             | NA              | ND             | NSE              |
| Toluene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 1500             |
| 1,2,4-Trimethylbenzene | 6500           | ND             | 1900           | 3500           | 7600           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 150          | ND             | ND             | ND             | ND             | 74             | NA              | ND             | NSE              |
| 1,3,5-Trimethylbenzene | 2300           | ND             | 550            | 1800           | 3000           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 70             | ND           | 51             | ND             | ND             | ND             | 67             | NA              | ND             | NSE              |
| Total Xylenes          | 1730           | ND             | 110            | ND             | 390            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 4100             |

**Notes:**

mg/kg - milligrams per kilogram

ug/kg - micrograms per kilogram

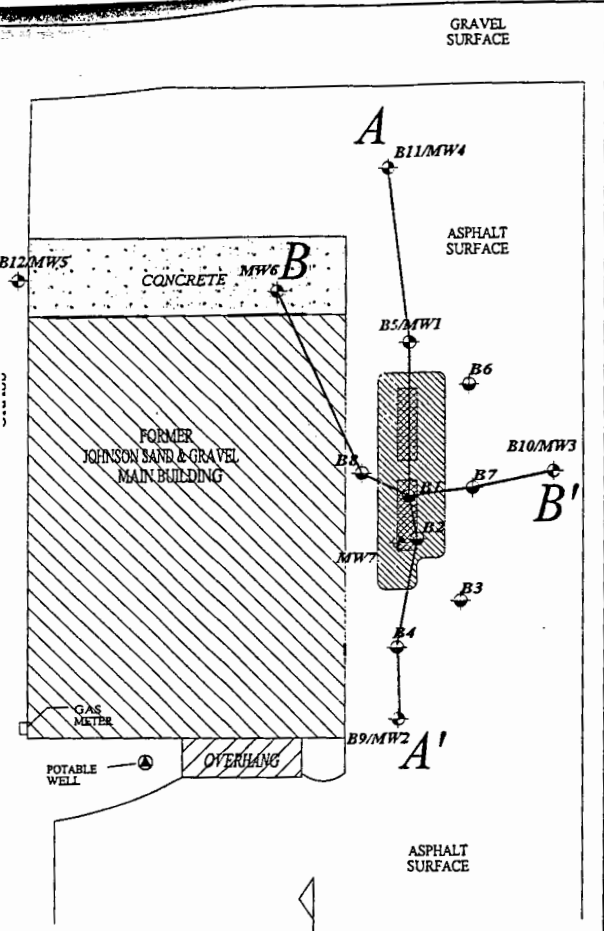
NA - Not Analyzed

ND - Not Detected

NSE - No Standard Established

00.00 - Shaded numbers indicate concentrations exceeding WDNR soil cleanup guidelines in NR720





**MEI - Legend**

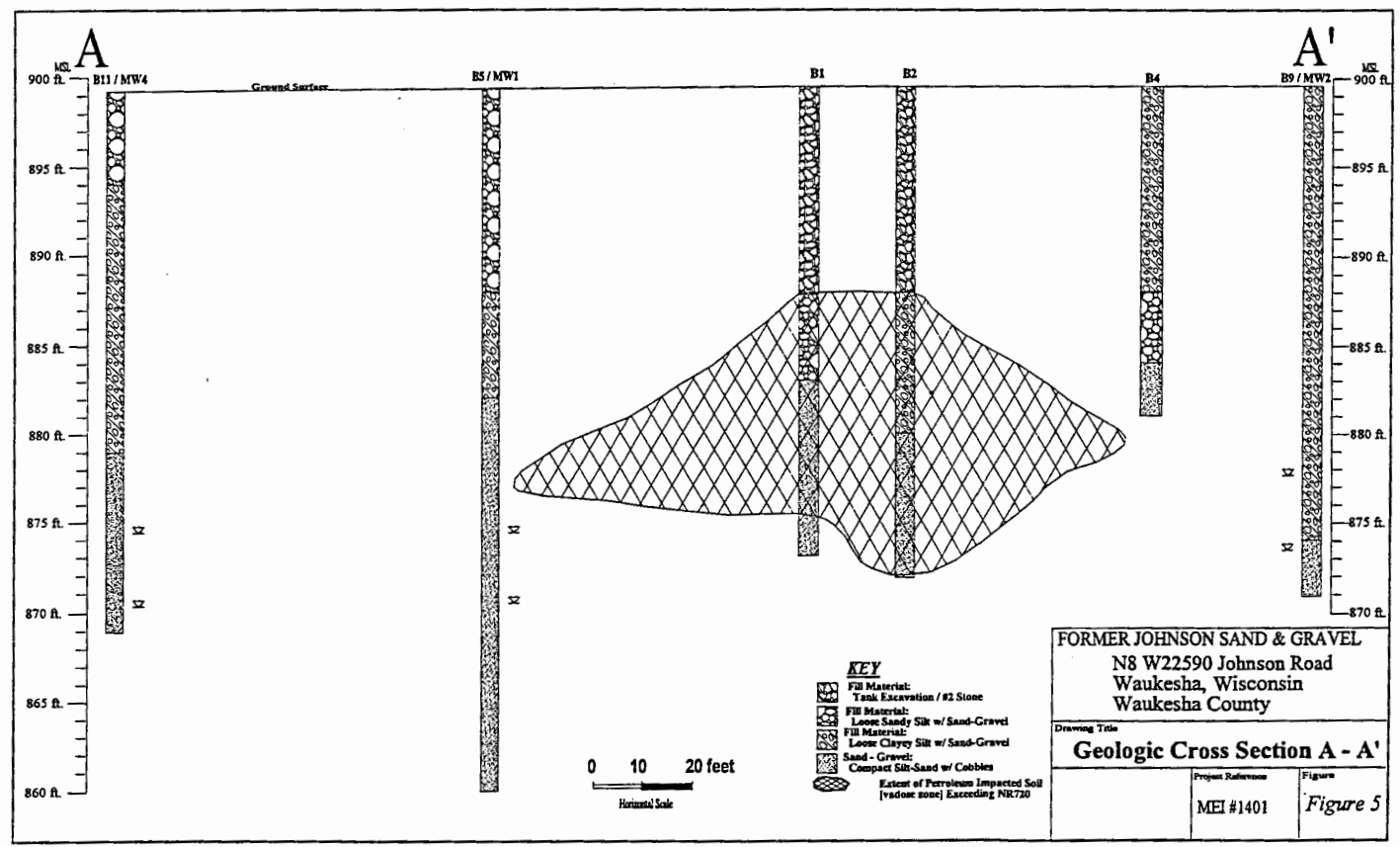
- Potable Well Location
- Well Boring Location
- System
- Overhead Electric Line
- Metering Well
- Utility Pole
- Property Line
- Setback Line

\* Dimensions and Locations on Map are Approximate and For Reference Only. Site Has Not Been Surveyed.

**SITE PLAN MAP**

Former Johnson Sand & Gravel Site  
 N8 W22590 Johnson Road Waukesha, WI

PROJECT REFERENCE: MEI #1401  
 DRAWING NAME: Figure 5



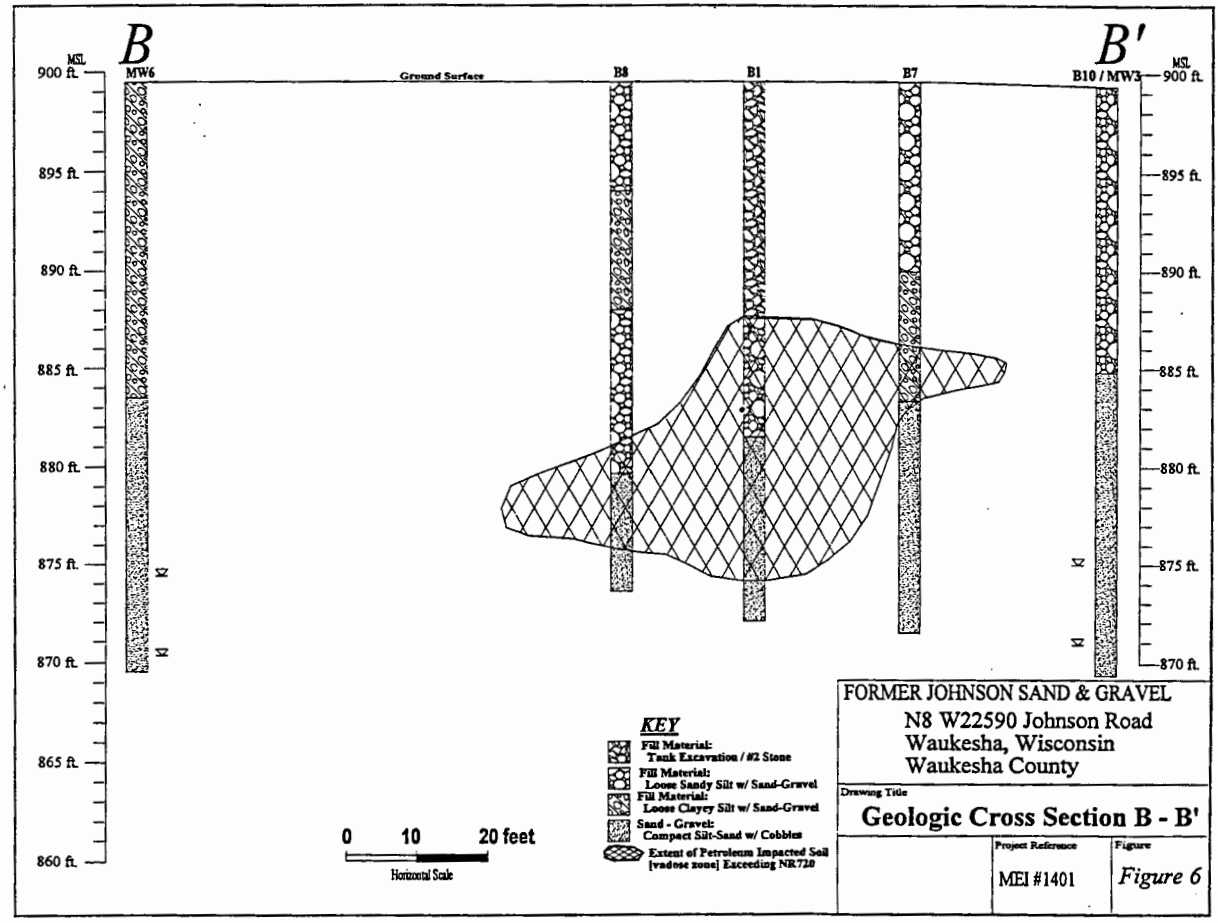
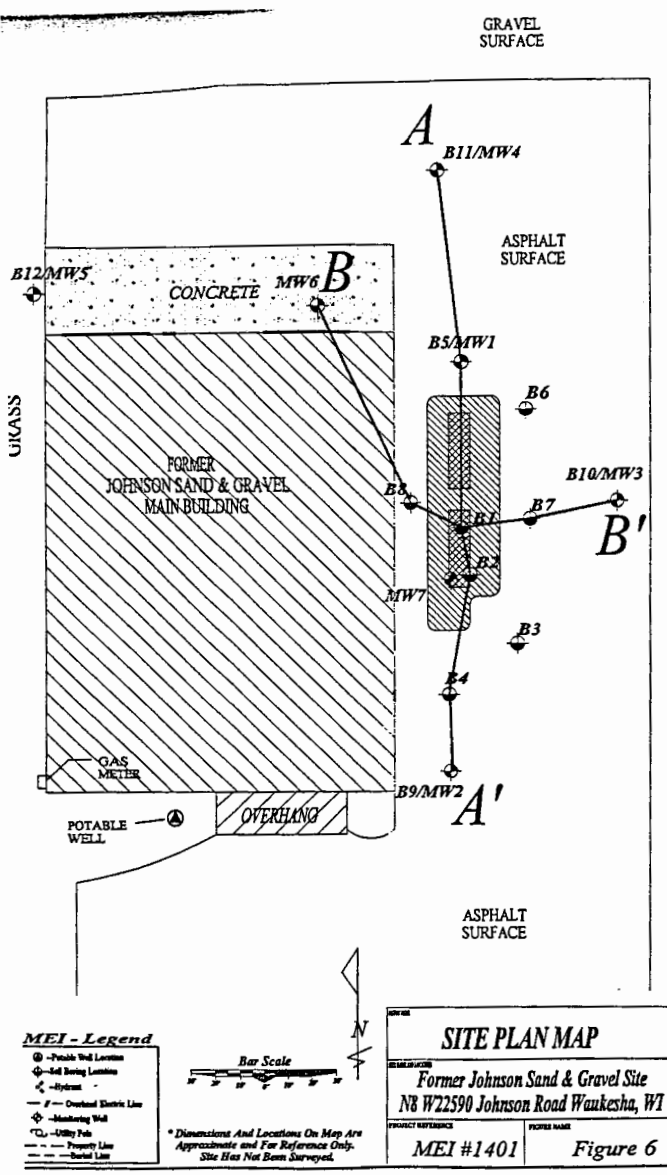
**KEY**

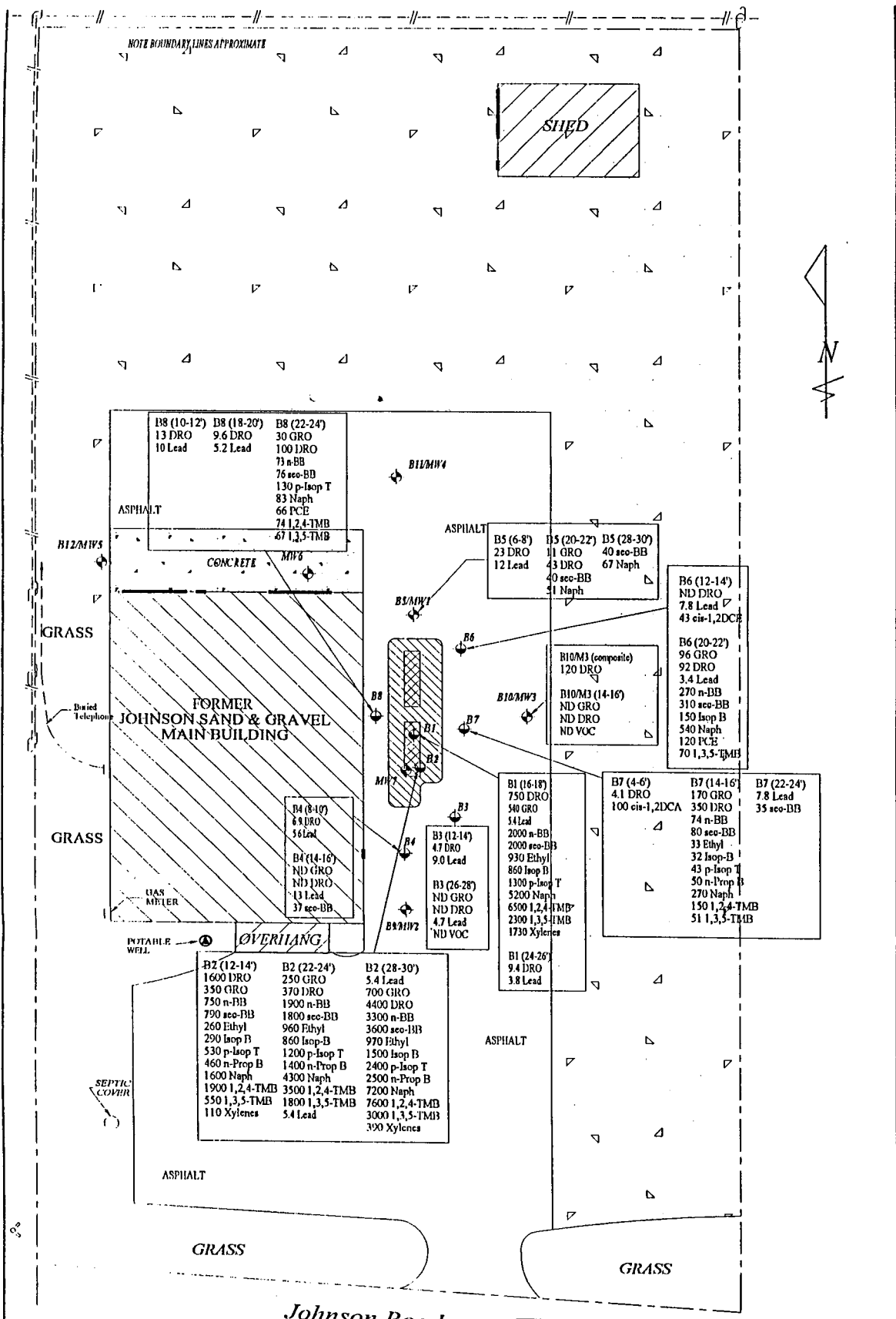
- Fill Material: Tank Excavation / #2 Stone
- Fill Material: Loose Sandy Silt w/ Sand-Gravel
- Fill Material: Loose Clayey Silt w/ Sand-Gravel
- Sand - Gravel: Compact Silt-Sand w/ Cobbles
- Extent of Petroleum Impacted Soil [vadose zone] Exceeding NR720

**FORMER JOHNSON SAND & GRAVEL**  
 N8 W22590 Johnson Road  
 Waukesha, Wisconsin  
 Waukesha County

Drawing Title: **Geologic Cross Section A - A'**

|                   |          |
|-------------------|----------|
| Project Reference | Figure   |
| MEI #1401         | Figure 5 |





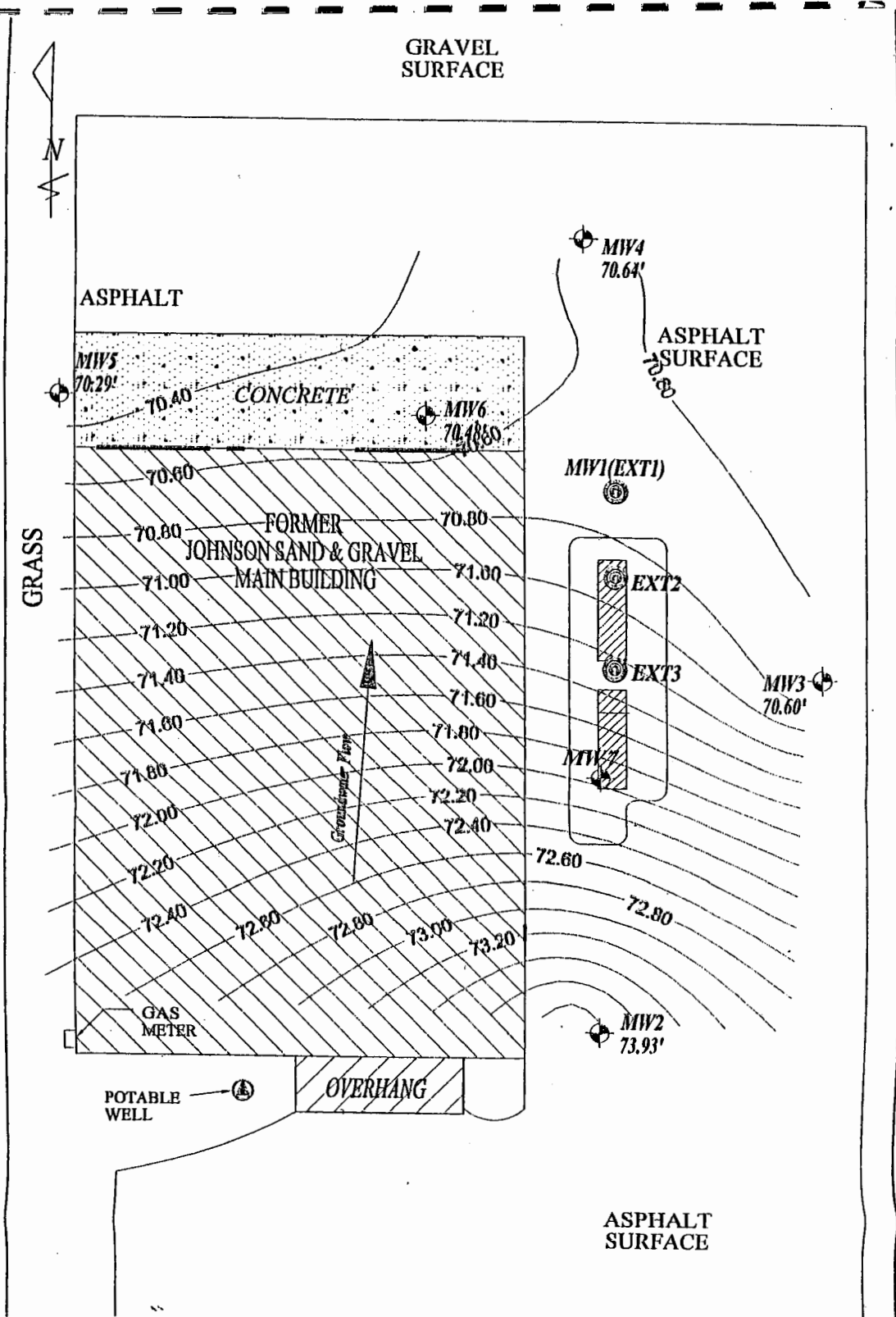
**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊙ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- — — Property Line
- ⋯ Buried Line



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|  |                 |
|--|-----------------|
| <b>Soil Analytical Test Results</b>  |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 7</b> |



**MEI - Legend**

- Potable Well Location
- Groundwater Monitoring Well Location
- Extraction Sump

**Bar Scale**

\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |  |
|--|--|
| <p><small>PICTURE NAME</small></p> <p><b>Groundwater Elevation Map</b><br/>December 18, 2002 Data</p>  |  |
| <p><small>MAP NAME AND LOCATION</small></p> <p><b>Former Johnson Sand &amp; Gravel Site</b><br/><b>N8 W22590 Johnson Road Waukesha, WI</b></p> |  |
| <p><small>PROJECT REFERENCE</small></p> <p><b>MEI #1401</b></p>  | <p><small>FIGURE NAME</small></p> <p><b>Figure 2</b></p> |

**Table 1 Groundwater Elevation Data, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

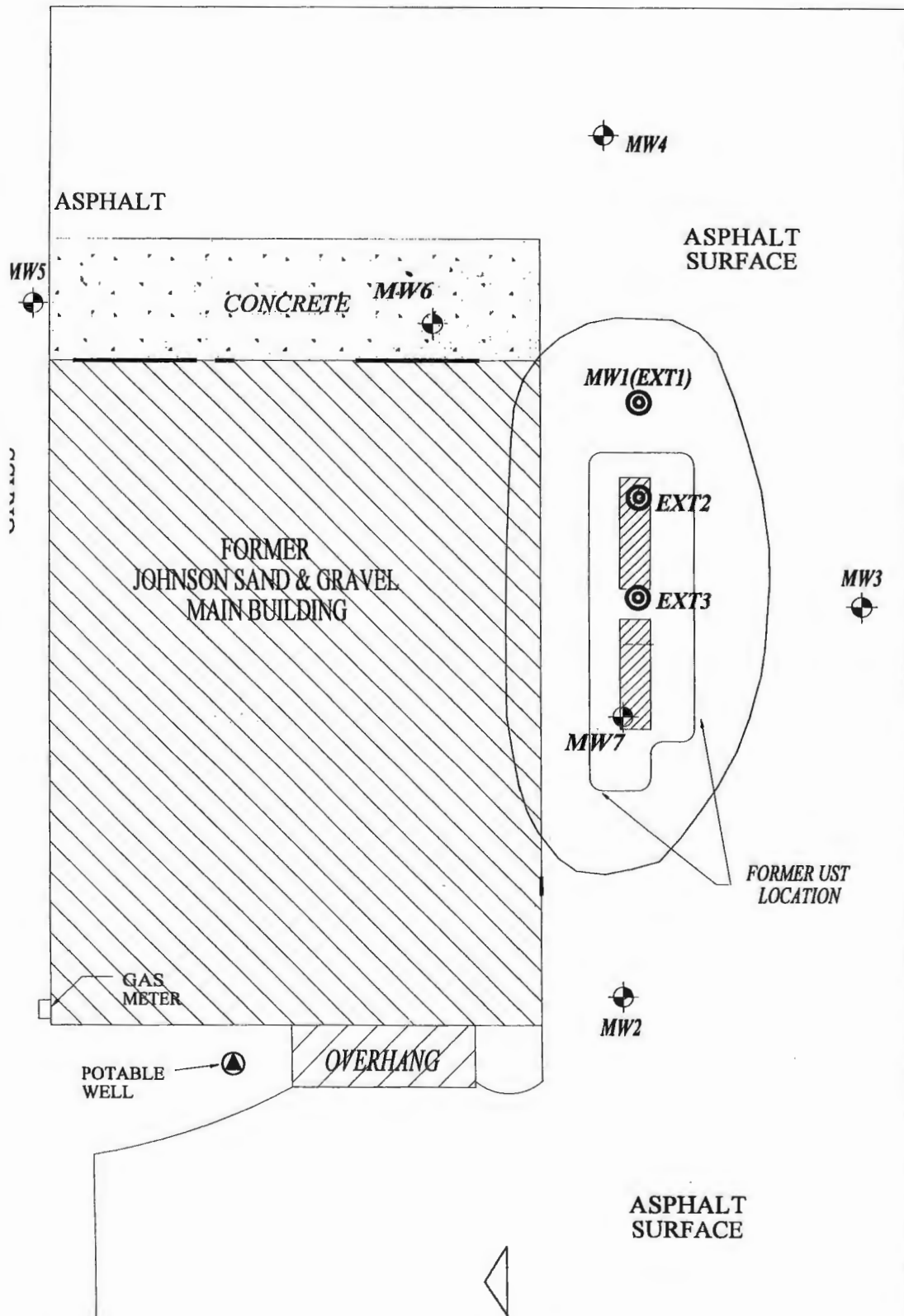
| Well ID   | Date     | Ground Surface Elevation (feet) | Reference Point Elevation* (feet) | Depth to Water (feet below Reference Point) | Water Table Elevation (feet) |
|-----------|----------|---------------------------------|-----------------------------------|---|------------------------------|
| MW1/EXT-1 | 10/13/04 | 99.69                           | 99.13                             | 29.13                                       | 70.00                        |
|           | 02/07/06 |                                 |                                   | 26.15                                       | 72.98                        |
|           | 08/23/06 |                                 |                                   | 26.65                                       | 72.48                        |
|           | 11/30/06 |                                 |                                   | 24.83                                       | 74.30                        |
|           | 02/23/07 |                                 |                                   | 27.18                                       | 71.95                        |
|           | 05/18/07 |                                 |                                   | 22.61                                       | 76.52                        |
| EXT2      | 10/13/04 | 99.69                           | 99.30                             | 29.37                                       | 69.93                        |
|           | 08/23/06 |                                 |                                   | 26.99                                       | 72.31                        |
|           | 11/30/06 |                                 |                                   | 25.06                                       | 74.24                        |
|           | 02/23/07 |                                 |                                   | 27.44                                       | 71.86                        |
|           | 05/18/07 |                                 |                                   | 22.89                                       | 76.41                        |
| EXT3      | 10/13/04 | 99.69                           | 99.07                             | 28.94                                       | 70.13                        |
|           | 08/23/06 |                                 |                                   | 25.25                                       | 73.82                        |
|           | 11/30/06 |                                 |                                   | 24.95                                       | 74.12                        |
|           | 02/23/07 |                                 |                                   | Well Cap Frozen in Ice - Could Not Measure  |                              |
|           | 05/18/07 |                                 |                                   | 21.65                                       | 77.42                        |
| MW2       | 10/03/04 | 99.77                           | 99.34                             | 25.30                                       | 74.04                        |
|           | 08/23/06 |                                 |                                   | 24.13                                       | 75.21                        |
|           | 11/30/06 |                                 |                                   | 23.93                                       | 75.41                        |
|           | 02/23/07 |                                 |                                   | 24.60                                       | 74.74                        |
|           | 05/18/07 |                                 |                                   | 21.22                                       | 78.12                        |
| MW3       | 10/03/04 | 99.27                           | 98.81                             | 28.58                                       | 70.23                        |
|           | 08/23/06 |                                 |                                   | 28.39                                       | 70.42                        |
|           | 11/30/06 |                                 |                                   | 24.61                                       | 74.20                        |
|           | 02/23/07 |                                 |                                   | 26.94                                       | 71.87                        |
|           | 05/18/07 |                                 |                                   | 22.32                                       | 76.49                        |
| MW4       | 10/03/04 | 99.20                           | 98.78                             | 28.64                                       | 70.14                        |
| MW7       | 10/03/04 | 99.92                           | 99.55                             | 29.31                                       | 70.24                        |
|           | 08/23/06 |                                 |                                   | 26.84                                       | 72.71                        |
|           | 11/30/06 |                                 |                                   | 25.63                                       | 73.92                        |
|           | 02/23/07 |                                 |                                   | 27.69                                       | 71.86                        |
|           | 05/18/07 |                                 |                                   | 23.12                                       | 76.43                        |

Note:

Elevations are referenced to a site datum of 100 feet

\* Reference Point is the top of the monitoring well casing

GRAVEL SURFACE



**MEI - Legend**

- - Potable Well Location
- ⊙ - Extraction Well Location
- ⊕ - Hydrant
- //— Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- Property Line
- Buried Line



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|  |                                |
|--|--------------------------------|
| FIGURE NAME<br><b>EXTENT OF GROUNDWATER IMPACT<br/>(Exceeding NR140 Standards)</b>                             |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #1401</b>  | FIGURE NAME<br><b>Figure 7</b> |

**Table 2 Groundwater Volatile Organic Compound Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID                  | Date Sampled | Water Table Elevation (feet below grade) | Relevant and Significant Volatile Organic Compounds (micrograms per liter) |                |                  |                        |                    |              |                  |                    |                             |             |                 |         |                   |                |         |
|--------------------------|--------------|--|--|----------------|------------------|------------------------|--------------------|--------------|------------------|--------------------|-----------------------------|-------------|-----------------|---------|-------------------|----------------|---------|
|                          |              |  | Benzene  | n-Butylbenzene | sec-Butylbenzene | cis-1,2-Dichloroethene | Di-Isopropyl Ether | Ethylbenzene | Isopropylbenzene | p-Isopropyltoluene | Methyl-tertiary-butyl-ether | Naphthalene | n-Propylbenzene | Toluene | Trimethylbenzenes | Vinyl Chloride | Xylenes |
| NR 140, Wis Adm Code PAL |              |  | 0.5  | NE             | NE               | 7                      | NE                 | 140          | NE               | NE                 | 12                          | 8           | NE              | 200     | 96                |                | 1000    |
| NR 140, Wis Adm Code ES  |              |  | 5  | NE             | NE               | 70                     | NE                 | 700          | NE               | NE                 | 60                          | 40          | NE              | 1000    | 480               |                | 10,000  |
| MW1/EXT-1                | 08/23/06     | 75.48                                    | <0.17  | <1.1           | 0.86 "J"         | 1.48 "J"               | 29.6               | 0.69         | 1.39 "J"         | 1.08 "J"           | <0.34                       | 15.6        | 0.81 "J"        | <0.59   | 0.48 "J"          | <0.2           | <1.28   |
|                          | 11/30/06     | 74.30                                    | <0.47  | <1.1           | 1.13 "J"         | 1.19 "J"               | 25.4               | 0.74 "J"     | 1.12 "J"         | <0.81              | <0.52                       | 4.6 "J"     | 1.02 "J"        | <0.59   | <1.59             | <0.2           | <1.42   |
|                          | 02/23/07     | 71.95                                    | <0.47  | <0.52          | <0.36            | 0.85 "J"               | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |
|                          | 05/08/07     | 76.52                                    | <0.47  | 1.29 "J"       | 2.1              | 2.57                   | 48                 | 1.27         | 2.35             | 1.11               | <0.52                       | 6.6         | 1.98            | <0.46   | <1.57             | 0.24 "J"       | <0.99   |
| MW3                      | 08/23/06     | 70.42                                    | <0.17  | -              | -                | -                      | -                  | <1           | -                | -                  | <0.52                       | -           | -               | <0.78   | <1.95             | <0.2           | <2.84   |
|                          | 02/23/07     | 74.20                                    | <0.47  | -              | -                | -                      | -                  | <0.38        | -                | -                  | <0.52                       | -           | -               | <0.46   | <1.57             | <0.2           | <0.99   |
| MW7                      | 08/23/06     | 72.71                                    | <0.17  | <1.1           | <0.76            | <0.5                   | 0.29               | <0.2         | <0.99            | <0.81              | <0.34                       | <2.2        | <0.61           | <0.59   | 0.37 "J"          | <0.2           | <1.28   |
|                          | 11/30/06     | 73.92                                    | <0.47  | <1.1           | <0.76            | <0.68                  | <0.71              | <0.38        | <0.99            | <0.81              | <0.52                       | <2.2        | <0.61           | <0.59   | <1.59             | <0.2           | <1.42   |
|                          | 02/23/07     | 71.86                                    | <0.47  | <0.52          | <0.36            | <0.68                  | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |
|                          | 05/08/07     | 76.43                                    | <0.47  | <0.52          | <0.36            | <0.68                  | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |

**Key:**

NE = Not established

- = Not analyzed

J = analyte detected between Limit of Detection and Limit of Quantitation

<X = not detected above laboratory Limit of Detection of X

**XXX** = exceeds Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL)

**XXX** = exceeds NR 140, Wis. Adm. Code enforcement standard (ES)

**Table 3 Groundwater Polynuclear Aromatic Hydrocarbon Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID                                      | Date Sampled | Water Table Elevation (ftg) | Relevant and Significant Polynuclear Aromatic Hydrocarbons (micrograms per liter) |                |            |                    |                |                      |                      |                      |          |                        |              |          |                        |                      |                      |             |              |        |
|--|--------------|-----------------------------|---|----------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|----------|------------------------|--------------|----------|------------------------|----------------------|----------------------|-------------|--------------|--------|
|  |              |                             | Acenaphthene  | Acenaphthylene | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Chrysene | Dibenzo(a,h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd)pyrene | 1-Methyl Naphthalene | 2-Methyl Naphthalene | Naphthalene | Phenanthrene | Pyrene |
| NR 140, Wis Adm Code Preventive Action Limit |              |                             | NE  | NE             | 600        | NE                 | 0.02           | 0.02                 | NE                   | NE                   | 0.02     | NE                     | 80           | 80       | NE                     | NE                   | NE                   | 8           | NE           | NE     |
| NR 140, Wis Adm Code Enforcement Standard    |              |                             | NE  | NE             | 3000       | NE                 | 0.2            | 0.2                  | NE                   | NE                   | 0.2      | NE                     | 400          | 400      | NE                     | NE                   | NE                   | 40          | NE           | NE     |
| MW1/EXT-1                                    | 08/23/06     | 75.48                       | 22  | 5.6 **J*       | 6.1 **J*   | 3.6 **J*           | <1.6           | <1.8                 | <2                   | <1.8                 | 3.6 **J* | <1.8                   | 7.1          | 58       | <3                     | 107                  | 62                   | 13 **J*     | 67           | 24     |
|  | 11/30/06     | 74.30                       | 7.9   | 1.9            | 4.0        | 0.56               | 0.25 **J*      | 0.34                 | 0.15 **J*            | 0.16 **J*            | 1.9      | <0.09                  | 2.8          | 18       | <0.15                  | 31                   | 4.7                  | 1.5         | 22           | 9.3    |
|  | 02/23/07     | 71.93                       | 5.3   | 0.46 **J*      | 1.4        | 0.77               | <0.15          | 0.31 **J*            | <0.15                | <0.23                | 0.75     | <0.15                  | 1.9          | 8        | <0.14                  | 8.4                  | 0.51 **J*            | 1.1         | 3.6          | 5.1    |
|  | 05/08/07     | 76.52                       | 6.4   | 1.51           | 2.82       | 0.79               | 0.39 **J*      | 0.52                 | 0.223 **J*           | <0.23                | 1.78     | <0.15                  | 2.35         | 11.3     | 0.241 **J*             | 30.8                 | 6.3                  | 5.2         | 10.1         | 8.7    |
| MW3  | 08/23/06     | 70.42                       | <0.016  | <0.012         | <0.013     | <0.012             | <0.008         | <0.009               | <0.01                | <0.009               | <0.011   | <0.009                 | <0.011       | <0.015   | <0.015                 | <0.018               | <0.021               | <0.028      | <0.011       | <0.01  |
|  | 02/23/07     | 74.20                       | 5.3   | 0.46 **J*      | 1.4        | 0.77               | <0.15          | 0.31 **J*            | <0.15                | <0.23                | 0.75     | <0.15                  | 1.9          | 8        | <0.14                  | 8.4                  | 0.51 **J*            | 1.1         | 3.6          | 5.1    |
| MW7  | 08/23/06     | 72.71                       | 4.4   | 1.2            | 3.1        | 1.2                | 0.25           | 0.37                 | 0.19                 | 0.14 **J*            | 1.7      | <0.045                 | 3.1          | 6.7      | 0.16 **J*              | 10                   | 1.6                  | 1.3         | 5.8          | 15     |
|  | 11/30/06     | 73.92                       | 3.7   | 0.98           | 2.7        | 0.32               | 0.12 **J*      | 0.15                 | 0.072 **J*           | 0.066 **J*           | 1.2      | <0.045                 | 1.7          | 6.0      | <0.075                 | 11                   | 2.5                  | 1.4         | 5.1          | 7.3    |
|  | 02/23/07     | 71.86                       | 5.0   | 1.4            | 2.4        | 0.32               | 0.19 **J*      | 0.31                 | 0.14 **J*            | <0.115               | 1.3      | <0.075                 | 3.1          | 7        | 0.14 **J*              | 18                   | 2.6                  | 1.7         | 3.8          | 10     |
|  | 05/08/07     | 76.43                       | 5.7   | 0.93           | 6.3        | 1.4                | 0.40           | 0.52                 | 0.248                | 0.181 **J*           | 2.86     | <0.075                 | 5.0          | 8.5      | 0.267                  | 17.5                 | 3.6                  | 1.73        | 13.2         | 22.7   |

Key:  
 ftg - feet below grade  
 NE - Not established  
 J - analyte detected between Limit of Detection and Limit of Quantitation  
 <X - not detected above laboratory Limit of Detection of X

XXX - exceeds Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit

XXX - exceeds NR 140, Wis. Adm. Code enforcement standard



August 21, 2007

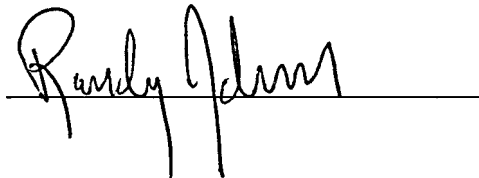
Mr. Chris Hatfield  
Northern Environmental Technologies, Incorporated  
12075 North Corporate Parkway, Suite 210  
Mequon, Wisconsin 53092

RE: Signed Statement; N8 W22590 Johnson Drive, Waukesha, Wisconsin

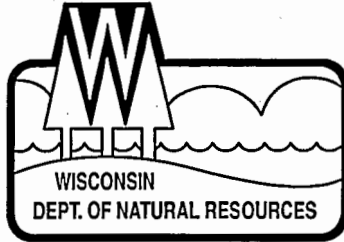
Dear Mr. Hatfield:

The tax key number for the above-referenced site from the Waukesha County Register of Deeds is PWT 0963.999.018. The most-recent deeds is enclosed. I, Randy Johnson, am providing a signed statement that the legal descriptions and attachments to this statement are, to the best of my knowledge, complete and accurate.

Sincerely,

A handwritten signature in cursive script that reads "Randy Johnson". The signature is written in black ink and is positioned above a solid horizontal line that extends to the right.

Enclosures



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
141 NW Barstow St.  
Room 180  
Waukesha, Wisconsin 53188  
Telephone 262-574-2100  
FAX 262-574-2117

February 1, 2008

Mr. Randy Johnson  
Johnson Sand & Gravel  
20685 W. National Ave.  
New Berlin, WI 53146

FID# 268438610  
BRRTS# 03-68-004228

Subject: Final Case Closure for Johnson Sand & Gravel, N8 W225990 Johnson Drive, Pewaukee

Dear Mr. Johnson:

The Wisconsin Department of Natural Resources (Department) notified you that conditional closure was granted to this case on October 1, 2007. The conditions of closure were the abandonment of all monitoring and recovery wells and the proper disposal of all investigative waste. On January 22, 2008, the Department received correspondence indicating that you have complied with the conditions of closure. Based on the correspondence and data provided, it appears that your case meets the requirements of ch. NR 726, Wis. Adm. Code. The Department considers this case closed and no further investigation, remediation or other action is required at this time.

Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code.

Lost Monitoring Wells

On September 12, 2007, your consultant, Northern Environmental, notified the Department that monitoring wells MW-5 and MW-6 located on the subject property could not be properly abandoned because they had been lost due to being paved over, covered or removed during site development activities. Your consultant has made a reasonable effort to locate the lost wells to determine whether they were properly abandoned, but has been unsuccessful in those efforts. You need to understand that in the future you may be held liable for any problems associated with monitoring wells MW-5 and MW-6 if they create a conduit for contaminants to enter groundwater. If in the future any of the lost groundwater monitoring wells are found, the then current owner of the subject property will be required to notify the Department and to properly abandon the wells in compliance with the requirements in ch. NR 141, Wis. Adm. Code, and to submit the required documentation of that abandonment to the Department.

Because these lost monitoring wells were not properly abandoned, your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites, as discussed in the next paragraph.

GIS Registry

Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites for the following reasons:

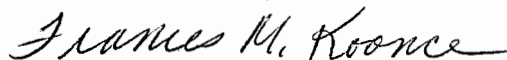
- Groundwater contamination is present above Chapter NR 140 enforcement standards
- One or more monitoring wells were not located and must be properly abandoned if found

Information that was submitted with your closure request application will be included on the registry. To review the sites on the GIS Registry web page, visit <http://gomapout.dnr.state.wi.us/org/at/et/geo/gwur/index.htm> If your property is listed on the GIS Registry due to groundwater contamination exceeding ch. NR 140 standards at the time of closure, and you intend to construct or reconstruct a well, you will need Department approval. Department approval is required before construction or reconstruction of a well on a property listed on the GIS Registry, in accordance with s. NR 812.09(4)(w). To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at the web address listed above.

Please note that this closure only applies to the leaking underground storage tank (LUST) activity listed at the top, right of this letter. The ERP activity, 02-68-259665, which was opened due to detections of chlorinated solvents in the groundwater, remains open on the DNR BRRTS database.

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Brenda Boyce at (262) 574-2140.

Sincerely,



Frances Koonce  
Remediation & Redevelopment Program SubTeam Supervisor

c: Chris Hatfield – Northern Environmental

# LETTER OF TRANSMITTAL



12075 North Corporate Parkway  
Suite 210  
Mequon, Wisconsin 53092

Phone: 800-776-7140  
Direct Line: 262-643-9171  
FAX: 262-241-8222

|  |
|--|
| DATE 1/17/08 PROJECT : JSG-01-2200-2806          |
| ATTENTION: Brenda H Boyce                        |
| RE: Former Johnson Sand and Gravel, Pewaukee, WI |

**TO: Ms. Brenda Boyce**  
WDNR  
141 NW Barstow Street  
Waukesha, WI 53188

**WE ARE SENDING YOU:**

- Attached
- Shop drawings
- Copy of letter
- Under separate cover
- Specifications
- Plans
- Samples
- Change order

|  |  |
|--|--|
|  | <b>Final Closure Information - Former Johnson Sand &amp; Gravel, N8 W22590, Pewaukee, WI (BRRTS #03-68-004228)</b> |
|  |  |
|  |  |
|  |  |
|  |  |

**THESE ARE TRANSMITTED (see code)**

- For approval
- For your use
- As requested
- For review and comment
- For bids due \_\_\_\_\_ 19\_\_\_\_
- No exceptions taken
- Make noted corrections
- Amend & resubmit
- \_\_\_\_\_
- Resubmit \_\_\_\_\_ copies for review
- Submit \_\_\_\_\_ copies for distribution
- Return \_\_\_\_\_ corrected prints

Brenda,


As instructed, I submitted the well abandonment forms directly to Victoria Stovall. We had anticipated one barrel of well purge water to still be stored at the Site. However, the barrel was not at the site. The Site is not owned by the RP anymore, and the current site operator did not know where the barrel went. Therefore, I cannot provide disposal documentation for the barrel of purge water. No other waste related to the petroleum release remains at the Site. If you have any questions, please let me know.

**COPY TO:** file

\_\_\_\_\_

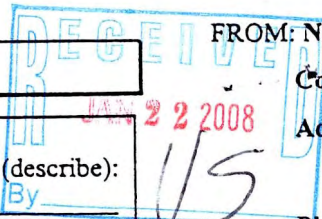
\_\_\_\_\_

\_\_\_\_\_

SIGNED: 

Christopher C. Hatfield

**Letter Of Transmittal**



FROM: Name

CHRIS HATFIELD

Company

NORTHERN ENVIRONMENTAL

Address

12075 N. CORPORATE PARKWAY

Phone

262-643-9171

Date

1/17/08

FOR: Site Name

FORMER JOHNSON SAND & GRAVEL

Address

N8 W225990 Johnson Drive

PEWAUKEE, WI

FID#

268438610

BRRTS#

03-68-004228

Type of Submittal:

LUST  ERP  VPLE  other (describe):

By

To: Program Assistant/BRR Program *Victoria Stovel*  
 Wisconsin Dept. of Natural Resources Box 12436  
 2300 N. Dr. Martin Luther King Jr. Dr.  
 Milwaukee, WI 53212

Check type(s) of documents enclosed. Submittals are tracked & filed based on information you provide. Include FID & BRRTS numbers assigned to this site. Identify the intent of document(s) you are submitting in order to speed processing. Please attach required fees to this form.

Are you requesting Department Review?  YES  NO

| √                                   | TYPE OF DOCUMENT/REPORT  | FEE                             | DNR CODE (office use only) |
|-------------------------------------|--|---------------------------------|----------------------------|
|                                     | Notification of Release  | none                            | 01                         |
|                                     | Tank Closure/Site Assessment <i>where release(s) have been detected*</i>   | none                            | 33                         |
|                                     | Site Investigation Workplan  | \$500 if review is requested    | 35, 135~                   |
|                                     | Site Investigation Report  | \$750 if review is requested    | 37,                        |
|                                     | __ groundwater impacts above ES  |                                 | 137~,                      |
|                                     | __ no groundwater impacts or gw impacts below ES <i>(if petroleum constituents only, case will be transferred to Department of Commerce)</i> |                                 | 76,                        |
|                                     |  |                                 | 96                         |
|                                     | Request to Transfer Case to Department of Commerce   | none                            | 76                         |
|                                     | Off-Site Determination Request   | \$500 mandatory                 | 638~                       |
|                                     | Remedial Action Options Plan   | \$750 if review is requested    | 39, 143~                   |
|                                     | NR 720.19 Site Specific Clean-Up Goal Proposal   | \$750 if review is requested    | 67, 68~                    |
|                                     | NR 718 Landspreading Request   | \$500 mandatory                 | 61~                        |
|                                     | "Notification to Treat or Dispose" of Contaminated Soil/Water  | none                            | 99                         |
|                                     | Injection/Infiltration Request   | \$500 mandatory                 | 63~                        |
|                                     | Quarterly Report or Update   | \$500 if review is requested    | 43, 43~                    |
|                                     | O & M Form 4400-194  | \$300 if review is requested    | 92, 192~                   |
|                                     | Remedial Action Options Report   | \$750 if review is requested    | 41, 41~                    |
|                                     | Closure Review Request   | \$750 mandatory                 | 79~                        |
|                                     | NR700.11 Simple Site Closure Request   | \$250 mandatory                 | 183~                       |
|                                     | "Draft Deed Affidavit" or "Restriction required for close-out"   | none                            | 99                         |
| <input checked="" type="checkbox"/> | "Well Abandonment Forms"   | none                            | 99                         |
|                                     | Remedial Design Report   | \$750 if review is requested    | 147, 148~                  |
|                                     | Construction Documentation Reports   | \$250 if review is requested    | 151, 152~                  |
|                                     | Long Term Monitoring Plan  | \$300 if review is requested    | 24, 25~                    |
|                                     | Voluntary Party Liability Exemption (VPLE) Application   | \$250 mandatory                 | 662                        |
|                                     | VPLE "Phase I/II Assessments" or "Additional Reports"  | computed hourly                 | 99                         |
|                                     | Tax Cancellation Agreement   | \$500 mandatory                 | 654                        |
|                                     | Negotiated Agreement   | \$1000 mandatory                | 630                        |
|                                     | Lender Assessment  | \$500 mandatory                 | 686                        |
|                                     | Negotiation and Cost Recovery (municipalities only)  | fee for each service, mandatory | 90~                        |
|                                     | General Liability Clarification Request  | \$500 mandatory                 | 684                        |
|                                     | Lease Letter Request - Single Property   | \$500 mandatory                 | 646                        |
|                                     | Lease Letter Request - Multiple Properties   | \$1000 mandatory                | 646                        |
|                                     | Request for Other Technical Assistance   | \$500 mandatory                 | 90~                        |
|                                     | Other (please describe)  |                                 |                            |

\* Closure reports for sites where no releases have been detected should be sent directly to "Clean Closures" c/o DNR Remediation & Redevelopment Program, P.O. Box 7921, Madison WI 53707

Remarks:

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

|   |                 |                           |   |                               |
|---|-----------------|---------------------------|---|-------------------------------|
| <b>(1) GENERAL INFORMATION</b>  |                 |                           | <b>(2) FACILITY/OWNER INFORMATION</b>             |                               |
| WI Unique Well No.  | DNR Well ID No. | County<br><b>WAUKESHA</b> | Facility Name<br>Johnson Sand and Gravel          |                               |
| Common Well Name <u>MW-1</u> Gov't Lot (If applicable)<br><u>SE 1/4 of NW 1/4 of Sec. 25</u> ; T. <u>7</u> N; R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W<br>Grid Location<br>_____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.<br>Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/><br>Lat. _____ Long _____ or<br>St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone |                 |                           | Facility ID                                       | License/Permit/Monitoring No. |
| Reason For Abandonment<br>To prevent contamination  |                 |                           | Street Address of Well<br>N8 W22590 Johnson Drive |                               |
| WI Unique Well No.<br>of Replacement Well _____   |                 |                           | City, Village, or Town<br>Pewaukee                |                               |
|   |                 |                           | Present Well Owner                                | Original Owner                |
|   |                 |                           | Street Address or Route of Owner                  |                               |
|   |                 |                           | City, State, Zip Code                             |                               |

|   |  |   |  |
|---|--|---|--|
| <b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>  |  | <b>(4) PUMP, LINER, SCREEN, CASING, &amp; SEALING MATERIAL</b>  |  |
| Original Construction Date <u>unknown</u><br><input checked="" type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Borehole / Drillhole<br>Construction Type:<br><input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input type="checkbox"/> Other (Specify) _____<br>Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock<br>Total Well Depth (ft.) <u>35</u> Casing Diameter (in.) <u>8.62</u><br>(From ground surface) Casing Depth (ft.) _____<br>Lower Drillhole Diameter (in.) <u>14.25</u><br>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet<br>Depth to Water (Feet) <u>26</u> |  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>GRAVITY</b><br>Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Bentonite Chips<br><input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite - Cement Grout<br><input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite - Sand Slurry<br><input type="checkbox"/> Bentonite-Sand Slurry " " <input type="checkbox"/> Bentonite Chips |  |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 35       | 850    | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|   |  |                                    |
|---|--|------------------------------------|
| (7) Name of Person or Firm Doing Sealing Work<br>KITSON ENVIRONMENTAL SERVICES, INC |  | Date of Abandonment<br>1/9/2008    |
| Signature of Person Doing Work<br><i>Bryan J. Kitson</i>                            |  | Date Signed<br>1-15-08             |
| Street or Route<br>N4299 S HELENVILLE ROAD  |  | Telephone Number<br>(920) 674-2378 |
| City, State, Zip Code<br>HELENVILLE WI 53137-9794                                   |  |                                    |

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| Date Received              | Noted By |
| Comments                   |          |

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Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

| (1) GENERAL INFORMATION   |                 | (2) FACILITY/OWNER INFORMATION                        |                         |
|---|-----------------|---|-------------------------|
| WI Unique Well No.  | DNR Well ID No. | County  | Facility Name           |
|   |                 | WAUKESHA  | Johnson Sand and Gravel |
| Common Well Name <u>MW-2</u>  |                 | Gov't Lot (If applicable)                             |                         |
| Grid Location <u>SE 1/4 of NW 1/4 of Sec. 25</u> ; T. <u>7</u> N; R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W |                 | Facility ID _____ License/Permit/Monitoring No. _____ |                         |
| _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.            |                 | Street Address of Well                                |                         |
| Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>                     |                 | N8 W22590 Johnson Drive                               |                         |
| Lat. _____ Long _____ or _____  |                 | City, Village, or Town                                |                         |
| St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone                             |                 | Pewaukee  |                         |
| Reason For Abandonment To prevent contamination   |                 | Present Well Owner _____ Original Owner _____         |                         |
| WI Unique Well No. of Replacement Well _____  |                 | Street Address or Route of Owner _____                |                         |
|   |                 | City, State, Zip Code _____                           |                         |

| (3) WELL/DRILLHOLE/BOREHOLE INFORMATION  | (4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL  |
|--|--|
| Original Construction Date <u>unknown</u>  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable |
| <input checked="" type="checkbox"/> Monitoring Well  | Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable      |
| <input type="checkbox"/> Water Well  | Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable        |
| <input type="checkbox"/> Borehole / Drillhole  | Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |
| If a Well Construction Report is available, please attach.   | Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                              |
| Construction Type:   | Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                          |
| <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug                 | Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                            |
| <input type="checkbox"/> Other (Specify) _____   | If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No  |
| Formation Type:  | Required Method of Placing Sealing Material  |
| <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock  | <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped                                     |
| Total Well Depth (ft.) <u>38</u> Casing Diameter (in.) <u>2.23</u>   | <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) GRAVITY           |
| (From ground surface) Casing Depth (ft.) _____   | Sealing Materials  |
| Lower Drillhole Diameter (in.) <u>8</u>  | <input type="checkbox"/> Neat Cement Grout   |
| Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown | <input type="checkbox"/> Sand-Cement (Concrete) Grout  |
| If Yes, To What Depth? _____ Feet  | <input type="checkbox"/> Concrete  |
| Depth to Water (Feet) <u>26</u>  | <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)  |
|  | <input type="checkbox"/> Bentonite-Sand Slurry " "   |
|  | <input type="checkbox"/> Bentonite Chips   |
|  | For monitoring wells and monitoring well boreholes only  |
|  | <input checked="" type="checkbox"/> Bentonite Chips  |
|  | <input type="checkbox"/> Granular Bentonite  |
|  | <input type="checkbox"/> Bentonite - Cement Grout  |
|  | <input type="checkbox"/> Bentonite - Sand Slurry   |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 38       | 60     | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|   |  |                     |  |
|---|--|---------------------|--|
| (7) Name of Person or Firm Doing Sealing Work |  | Date of Abandonment |  |
| KITSON ENVIRONMENTAL SERVICES, INC            |  | 1/9/2008            |  |
| Signature of Person Doing Work                |  | Date Signed         |  |
| <i>[Signature]</i>                            |  | 1-15-08             |  |
| Street or Route                               |  | Telephone Number    |  |
| N4299 S HELENVILLE ROAD                       |  | ( 920 ) 674-2378    |  |
| City, State, Zip Code                         |  |                     |  |
| HELENVILLE WI                                 |  | 53137-9794          |  |

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| Date Received              | Noted By |
|                            |          |
| Comments                   |          |
|                            |          |

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Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

|   |                 |                                       |                               |
|---|-----------------|---------------------------------------|-------------------------------|
| <b>(1) GENERAL INFORMATION</b>  |                 | <b>(2) FACILITY/OWNER INFORMATION</b> |                               |
| WI Unique Well No.  | DNR Well ID No. | County                                | Facility Name                 |
|   |                 | WAUKESHA                              | Johnson Sand and Gravel       |
| Common Well Name <u>MW-3</u> Gov't Lot (If applicable)  |                 | Facility ID                           | License/Permit/Monitoring No. |
| <u>SE</u> 1/4 of <u>NW</u> 1/4 of Sec. <u>25</u> ; T. <u>7</u> N; R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W |                 | Street Address of Well                |                               |
| Grid Location   |                 | N8 W22590 Johnson Drive               |                               |
| _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.            |                 | City, Village, or Town                |                               |
| Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>                     |                 | Pewaukee                              |                               |
| Lat. _____ Long _____ or _____  |                 | Present Well Owner                    | Original Owner                |
| St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone                             |                 | Street Address or Route of Owner      |                               |
| Reason For Abandonment  |                 | City, State, Zip Code                 |                               |
| To prevent contamination  |                 |                                       |                               |
| WI Unique Well No. of Replacement Well _____  |                 |                                       |                               |

|  |  |  |  |
|--|--|--|--|
| <b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>   |  | <b>(4) PUMP, LINER, SCREEN, CASING, &amp; SEALING MATERIAL</b>   |  |
| Original Construction Date <u>unknown</u>  |  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable |  |
| <input checked="" type="checkbox"/> Monitoring Well  |  | Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable      |  |
| <input type="checkbox"/> Water Well  |  | Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable        |  |
| <input type="checkbox"/> Borehole / Drillhole  |  | Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |  |
| Construction Type:   |  | Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                              |  |
| <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug                 |  | Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                          |  |
| <input type="checkbox"/> Other (Specify) _____   |  | Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                            |  |
| Formation Type:  |  | If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No  |  |
| <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock  |  | Required Method of Placing Sealing Material  |  |
| Total Well Depth (ft.) <u>30</u> Casing Diameter (in.) <u>2.32</u>   |  | <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped                                     |  |
| (From ground surface) Casing Depth (ft.) _____   |  | <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <u>GRAVITY</u>    |  |
| Lower Drillhole Diameter (in.) <u>8</u>  |  | Sealing Materials  |  |
| Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown |  | <input type="checkbox"/> Neat Cement Grout   |  |
| If Yes, To What Depth? _____ Feet  |  | <input type="checkbox"/> Sand-Cement (Concrete) Grout  |  |
| Depth to Water (Feet) <u>26</u>  |  | <input type="checkbox"/> Concrete  |  |
|  |  | <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)  |  |
|  |  | <input type="checkbox"/> Bentonite-Sand Slurry " "   |  |
|  |  | <input type="checkbox"/> Bentonite Chips   |  |
|  |  | For monitoring wells and monitoring well boreholes only  |  |
|  |  | <input checked="" type="checkbox"/> Bentonite Chips  |  |
|  |  | <input type="checkbox"/> Granular Bentonite  |  |
|  |  | <input type="checkbox"/> Bentonite - Cement Grout  |  |
|  |  | <input type="checkbox"/> Bentonite - Sand Slurry   |  |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 30       | 50     | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|  |                  |                     |
|--|------------------|---------------------|
| <b>(7) Name of Person or Firm Doing Sealing Work</b> |                  | Date of Abandonment |
| KITSON ENVIRONMENTAL SERVICES, INC                   |                  | 1/9/2008            |
| Signature of Person Doing Work                       | Date Signed      |                     |
| <i>Gregory J. Kutsa</i>                              | 1-15-08          |                     |
| Street or Route                                      | Telephone Number |                     |
| N4299 S HELENVILLE ROAD                              | ( 920 ) 674-2378 |                     |
| City, State, Zip Code                                |                  |                     |
| HELENVILLE WI 53137-9794                             |                  |                     |

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|                            |          |
| Comments                   |          |
|                            |          |



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Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

|  |                 |  |             |
|--|-----------------|--|-------------|
| <b>(1) GENERAL INFORMATION</b>   |                 | <b>(2) FACILITY/ OWNER INFORMATION</b>                   |             |
| WI Unique Well No.   | DNR Well ID No. | County<br><b>WAUKESHA</b>                                |             |
| Common Well Name <u>MW-4</u> Gov't Lot (If applicable)   |                 | Facility Name<br><b>Johnson Sand and Gravel</b>          | Facility ID |
| Grid Location<br><u>SE</u> 1/4 of <u>NW</u> 1/4 of Sec. <u>25</u> ; T. <u>7</u> N; R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W |                 | License/Permit/Monitoring No.                            |             |
| ft. <input type="checkbox"/> N. <input type="checkbox"/> S., ft. <input type="checkbox"/> E. <input type="checkbox"/> W.   |                 | Street Address of Well<br><b>N8 W22590 Johnson Drive</b> |             |
| Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>                                      |                 | City, Village, or Town<br><b>Pewaukee</b>                |             |
| Lat. _____ Long _____ or _____   |                 | Present Well Owner                                       |             |
| St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone  |                 | Original Owner   |             |
| Reason For Abandonment<br>To prevent contamination   |                 | Street Address or Route of Owner                         |             |
| WI Unique Well No.<br>of Replacement Well _____  |                 | City, State, Zip Code                                    |             |

|   |  |  |  |
|---|--|--|--|
| <b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>  |  | <b>(4) PUMP, LINER, SCREEN, CASING, &amp; SEALING MATERIAL</b>   |  |
| Original Construction Date <u>unknown</u>   |  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable |  |
| <input checked="" type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Borehole / Drillhole |  | Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable      |  |
| Construction Type:<br><input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug  |  | Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable        |  |
| Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock                            |  | Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |  |
| Total Well Depth (ft.) <u>30</u> Casing Diameter (in.) <u>2.32</u>  |  | Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                              |  |
| (From ground surface) Casing Depth (ft.) _____  |  | Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                          |  |
| Lower Drillhole Diameter (in.) <u>8</u>   |  | Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                            |  |
| Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown        |  | If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No  |  |
| If Yes, To What Depth? _____ Feet   |  | Required Method of Placing Sealing Material  |  |
| Depth to Water (Feet) <u>26</u>   |  | <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped                                     |  |
|   |  | <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>GRAVITY</b>    |  |
|   |  | Sealing Materials  |  |
|   |  | For monitoring wells and monitoring well boreholes only  |  |
|   |  | <input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Bentonite Chips                                     |  |
|   |  | <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Granular Bentonite                                  |  |
|   |  | <input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite - Cement Grout  |  |
|   |  | <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite - Sand Slurry                       |  |
|   |  | <input type="checkbox"/> Bentonite-Sand Slurry " " <input type="checkbox"/> Bentonite - Sand Slurry                                |  |
|   |  | <input type="checkbox"/> Bentonite Chips   |  |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 30       | 50     | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|  |  |                                    |  |
|--|--|------------------------------------|--|
| <b>(7) Name of Person or Firm Doing Sealing Work</b><br>KITSON ENVIRONMENTAL SERVICES, INC |  | Date of Abandonment<br>1/9/2008    |  |
| Signature of Person Doing Work<br><i>[Signature]</i>                                       |  | Date Signed<br>1-75-08             |  |
| Street or Route<br>N4299 S HELENVILLE ROAD   |  | Telephone Number<br>(920) 674-2378 |  |
| City, State, Zip Code<br>HELENVILLE WI 53137-9794  |  |                                    |  |

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| Comments                   |          |
|                            |          |

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Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

|   |                 |   |   |                               |  |
|---|-----------------|---|---|-------------------------------|--|
| <b>(1) GENERAL INFORMATION</b>  |                 |   | <b>(2) FACILITY/OWNER INFORMATION</b>   |                               |  |
| WI Unique Well No.  | DNR Well ID No. | County<br><b>WAUKESHA</b>                       | Facility Name<br>Johnson Sand and Gravel  |                               |  |
| Common Well Name <u>MW-7</u>  |                 | Gov't Lot (If applicable)                       | Facility ID   | License/Permit/Monitoring No. |  |
| SE 1/4 of NW 1/4 of Sec. 25 ; T. 7 N; R. 19 <input checked="" type="checkbox"/> E <input type="checkbox"/> W<br>Grid Location<br>_____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.<br>Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/><br>Lat. _____ Long _____ or _____<br>St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone |                 |   | Street Address of Well<br>N8 W22590 Johnson Drive<br>City, Village, or Town<br>Pewaukee<br>Present Well Owner _____ Original Owner _____<br>Street Address or Route of Owner _____<br>City, State, Zip Code _____ |                               |  |
| Reason For Abandonment<br>To prevent contamination  |                 | WI Unique Well No.<br>of Replacement Well _____ |   |                               |  |

|   |  |   |  |  |  |
|---|--|---|--|--|--|
| <b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>  |  | <b>(4) PUMP, LINER, SCREEN, CASING, &amp; SEALING MATERIAL</b>  |  |  |  |
| Original Construction Date <u>unknown</u><br><input checked="" type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Borehole / Drillhole<br>Construction Type:<br><input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input type="checkbox"/> Other (Specify) _____<br>Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock<br>Total Well Depth (ft.) <u>30</u> Casing Diameter (in.) <u>2.32</u><br>(From ground surface) Casing Depth (ft.) _____<br>Lower Drillhole Diameter (in.) <u>8</u><br>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet<br>Depth to Water (Feet) <u>26</u> |  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>GRAVITY</b><br>Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Bentonite Chips<br><input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite - Cement Grout<br><input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite - Sand Slurry<br><input type="checkbox"/> Bentonite-Sand Slurry " " <input type="checkbox"/> Bentonite - Sand Slurry<br><input type="checkbox"/> Bentonite Chips |  |  |  |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 30       | 50     | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|   |  |                                    |
|---|--|------------------------------------|
| (7) Name of Person or Firm Doing Sealing Work<br>KITSON ENVIRONMENTAL SERVICES, INC |  | Date of Abandonment<br>1/9/2008    |
| Signature of Person Doing Work<br><i>Alexander J. Mitsch</i>                        |  | Date Signed<br>1-15-08             |
| Street or Route<br>N4299 S HELENVILLE ROAD  |  | Telephone Number<br>(920) 674-2378 |
| City, State, Zip Code<br>HELENVILLE WI 53137-9794                                   |  |                                    |

| FOR DNR OR COUNTY USE ONLY |          |
|----------------------------|----------|
| Date Received              | Noted By |
| Comments                   |          |

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Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

| (1) GENERAL INFORMATION   |                 |                           | (2) FACILITY/OWNER INFORMATION  |                               |
|---|-----------------|---------------------------|---|-------------------------------|
| WI Unique Well No.  | DNR Well ID No. | County<br><b>WAUKESHA</b> | Facility Name<br>Johnson Sand and Gravel  |                               |
| Common Well Name <u>EXT-2</u> Gov't Lot (if applicable)   |                 |                           | Facility ID   | License/Permit/Monitoring No. |
| Grid Location<br><u>SE</u> 1/4 of <u>NW</u> 1/4 of Sec. <u>25</u> ; T. <u>7</u> N; R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W<br>ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.<br>Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/><br>Lat. _____ Long _____ or _____<br>St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone |                 |                           | Street Address of Well<br>N8 W22590 Johnson Drive<br>City, Village, or Town<br>Pewaukee<br>Present Well Owner _____ Original Owner _____<br>Street Address or Route of Owner _____<br>City, State, Zip Code _____ |                               |
| Reason For Abandonment<br>To prevent contamination  |                 |                           | WI Unique Well No. _____<br>of Replacement Well _____   |                               |

| (3) WELL/DRILLHOLE/BOREHOLE INFORMATION   | (4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL   |
|---|---|
| Original Construction Date <u>unknown</u><br><input checked="" type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Borehole / Drillhole<br>Construction Type:<br><input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input type="checkbox"/> Other (Specify) _____<br>Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock<br>Total Well Depth (ft.) <u>35</u> Casing Diameter (in.) <u>8.62</u><br>(From ground surface) Casing Depth (ft.) _____<br>Lower Drillhole Diameter (in.) <u>14.25</u><br>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet<br>Depth to Water (Feet) <u>26</u> | Pump & Piping Removed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) <b>GRAVITY</b><br>Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout <input checked="" type="checkbox"/> Bentonite Chips<br><input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite - Cement Grout<br><input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Bentonite - Sand Slurry<br><input type="checkbox"/> Bentonite-Sand Slurry " " <input type="checkbox"/> Bentonite - Sand Slurry<br><input type="checkbox"/> Bentonite Chips |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 35       | 850    | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|   |  |                                    |
|---|--|------------------------------------|
| (7) Name of Person or Firm Doing Sealing Work<br>KITSON ENVIRONMENTAL SERVICES, INC |  | Date of Abandonment<br>1/9/2008    |
| Signature of Person Doing Work<br><i>[Signature]</i>                                |  | Date Signed<br>1-15-08             |
| Street or Route<br>N4299 S HELENVILLE ROAD  |  | Telephone Number<br>(920) 674-2378 |
| City, State, Zip Code<br>HELENVILLE WI 53137-9794                                   |  |                                    |

| FOR DNR OR COUNTY USE ONLY |          |
|----------------------------|----------|
| Date Received              | Noted By |
| Comments                   |          |
|                            |          |

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Route to:  Drinking Water  Watershed/Wastewater  Waste Management  Remediation/Redevelopment  Other \_\_\_\_\_

|   |                 |                                       |                               |
|---|-----------------|---------------------------------------|-------------------------------|
| <b>(1) GENERAL INFORMATION</b>  |                 | <b>(2) FACILITY/OWNER INFORMATION</b> |                               |
| WI Unique Well No.  | DNR Well ID No. | County                                | Facility Name                 |
|   |                 | WAUKESHA                              | Johnson Sand and Gravel       |
| Common Well Name <u>EXT-3</u> Gov't Lot (If applicable)   |                 | Facility ID                           | License/Permit/Monitoring No. |
| <u>SE</u> 1/4 of <u>NW</u> 1/4 of Sec. <u>25</u> ; T. <u>7</u> N; R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W |                 | Street Address of Well                |                               |
| Grid Location   |                 | N8 W22590 Johnson Drive               |                               |
| _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.             |                 | City, Village, or Town                |                               |
| Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>                     |                 | Pewaukee                              |                               |
| Lat. _____ Long _____ or _____  |                 | Present Well Owner                    |                               |
| St. Plane _____ ft. N. _____ ft. E. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Zone                             |                 | Original Owner                        |                               |
| Reason For Abandonment  |                 | Street Address or Route of Owner      |                               |
| To prevent contamination  |                 | City, State, Zip Code                 |                               |
| WI Unique Well No.  |                 |                                       |                               |
| of Replacement Well   |                 |                                       |                               |

|  |  |  |  |
|--|--|--|--|
| <b>(3) WELL/DRILLHOLE/BOREHOLE INFORMATION</b>   |  | <b>(4) PUMP, LINER, SCREEN, CASING, &amp; SEALING MATERIAL</b>   |  |
| Original Construction Date <u>unknown</u>  |  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable |  |
| <input checked="" type="checkbox"/> Monitoring Well  |  | Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable      |  |
| <input type="checkbox"/> Water Well  |  | Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable        |  |
| <input type="checkbox"/> Borehole / Drillhole  |  | Casing Left in Place? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |  |
| If a Well Construction Report is available, please attach.   |  | Was Casing Cut Off Below Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                              |  |
| Construction Type:   |  | Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                          |  |
| <input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug                 |  | Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                            |  |
| <input type="checkbox"/> Other (Specify) _____   |  | If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No  |  |
| Formation Type:  |  | Required Method of Placing Sealing Material  |  |
| <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock  |  | <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped                                     |  |
| Total Well Depth (ft.) <u>35</u> Casing Diameter (in.) <u>8.62</u>   |  | <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain) GRAVITY           |  |
| (From ground surface) Casing Depth (ft.) _____   |  | Sealing Materials  |  |
| Lower Drillhole Diameter (in.) <u>14.25</u>  |  | For monitoring wells and monitoring well boreholes only  |  |
| Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown |  | <input type="checkbox"/> Neat Cement Grout   |  |
| If Yes, To What Depth? _____ Feet  |  | <input type="checkbox"/> Sand-Cement (Concrete) Grout  |  |
| Depth to Water (Feet) <u>26</u>  |  | <input type="checkbox"/> Concrete  |  |
|  |  | <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)  |  |
|  |  | <input type="checkbox"/> Bentonite-Sand Slurry " "   |  |
|  |  | <input type="checkbox"/> Bentonite Chips   |  |
|  |  | <input type="checkbox"/> Bentonite - Cement Grout  |  |
|  |  | <input type="checkbox"/> Bentonite - Sand Slurry   |  |

| (5) Material Used To Fill Well/Drillhole | From (Ft.) | To (Ft.) | Pounds | Mix Ratio or Mud Weight |
|--|------------|----------|--------|-------------------------|
| Bentonite Chips                          | Surface    | 35       | 850    | 100%                    |
|  |            |          |        |                         |
|  |            |          |        |                         |

(6) Comments: \_\_\_\_\_

|   |  |                     |  |
|---|--|---------------------|--|
| (7) Name of Person or Firm Doing Sealing Work |  | Date of Abandonment |  |
| KITSON ENVIRONMENTAL SERVICES, INC            |  | 1/9/2008            |  |
| Signature of Person Doing Work                |  | Date Signed         |  |
| <i>[Signature]</i>                            |  | 1-15-08             |  |
| Street or Route                               |  | Telephone Number    |  |
| N4299 S HELENVILLE ROAD                       |  | ( 920 ) 674-2378    |  |
| City, State, Zip Code                         |  |                     |  |
| HELENVILLE WI 53137-9794                      |  |                     |  |

| FOR DNR OR COUNTY USE ONLY |          |
|----------------------------|----------|
| Date Received              | Noted By |
|                            |          |
| Comments                   |          |
|                            |          |



ENVIRONMENTAL & REGULATORY SERVICES DIVISION  
BUREAU OF PECFA  
9316 North 107TH Street  
Milwaukee, Wisconsin 53224-1121  
TDD #: (608) 264-8777  
Fax #: (414) 357-4700  
Jim Doyle, Governor  
Jack L. Fischer, A.I.A., Secretary

December 18, 2007

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W National Ave.  
New Berlin, WI 53146

RE: **Public Bidding Process Waived – Cost Cap Approved**  
**Commerce # 53186-1661-90-A DNR BRRTS # 03-68-004228**  
Robert Johnson Sand & Gravel Inc., N8 W22590 Johnson Dr., Waukesha

268438610

On December 6, 2007, the Wisconsin Department of Commerce (Commerce) received a scope of work (SOW) and cost estimate to achieve a closed remedial status for the site referenced above. Per Comm 47.63 (3), Commerce has determined that the submitted SOW is reasonable and cost effective to achieve a closed remedial status and **approves** the additional costs through closure, including final claim submittal.

**Approved Cost Cap through Closure:**

**\$3,365.53**

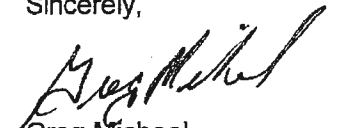
Be reminded that annual web reports are required until this case is closed.

Costs for activities that are included in this approval that are on the Comm 47 Usual and Customary Cost Schedule (Cost Schedule) must be incurred at a rate equal to or less than that allowed unless separate prior Commerce authorization is obtained. Costs for activities not included in this approval are not reimbursable without prior Commerce authorization. For activities approved herein that are not on the Cost Schedule, please be reminded that competitive commodity bidding is required for those costs to be eligible for reimbursement.

This approval does not guarantee eligibility of any specific costs that have been incurred or that may be incurred in the future. Final determination regarding the eligibility of costs will be made by the claim reviewer when the entire claim, including all invoices and reports, is submitted for payment.

Thank you for your efforts to protect Wisconsin's environment. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 357-4702.

Sincerely,



Greg Michael  
Advanced Hydrogeologist  
Site Review Section

cc: Northern Environmental Technologies, Inc.  
Brenda Boyce, WDNR, Project Manager  
State Bank of Chilton, PECFA Loan Dept , 26 E Main St, PO Box 149, Chilton WI 53014

**Effective Schedule Date: September 2007 to December 2007**  
**Schedule #3**

**Usual & Customary Standardized Invoice**

**Commerce #:** 53186-1661-90-A      **Vendor Name:** [REDACTED]

**BRRT's #:** 03-68-004228      **Invoice #:** [REDACTED]

**Site Name:** Former Johnson Sand & Gravel      **Invoice Date:** [REDACTED]

**Site Address:** N8W225990 Johnson Drive      **Check #:** [REDACTED]

Personal information you provide may be used for a secondary purposes [Privacy Law, s. 15.04 (1) (m), Stats.]

| TASK CODE/ACTIVITY REFERENCE CODE              | TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION  | UNIT                    | MAXIMUM REIMBURSEABLE UNIT COST | UNITS INVOICED | UNIT COST CLAIMED      | AMOUNT CLAIMED |
|--|--|-------------------------|---------------------------------|----------------|------------------------|----------------|
| <b>1 GROUNDWATER SAMPLING</b>                  |  |                         |                                 |                |                        |                |
| GS05   | Sample Collection  | WELL                    | \$84.50                         |                | \$                     | \$ -           |
| GS10   | Incremental Sample Collection (natural attenuation)  | WELL                    | \$42.40                         |                | \$                     | \$ -           |
| GS15   | Incremental Sample Collection (cadmium & lead)   | WELL                    | \$23.38                         |                | \$                     | \$ -           |
| GS20   | Measure Water Levels (for wells not being sampled)   | WELL                    | \$13.05                         |                | \$                     | \$ -           |
| GS25   | Primary Mob/Demob  | SITE                    | \$487.36                        |                | \$                     | \$ -           |
| GS30   | Temp Well Abandonment  | WELL                    | \$24.00                         |                | \$                     | \$ -           |
| <b>2 OPERATION &amp; MAINTENANCE REPORTING</b> |  |                         |                                 |                |                        |                |
| OMR05  | Annual GW Monitoring   | REPORT                  | \$733.66                        |                | Current Invoice Amount | \$             |
| OMR10  | Annual GW Monitoring (DNR Form 4400-194) with LNAPL Removal per SIR guidance document (RR-628) | REPORT                  | \$926.72                        |                | Current Invoice Amount | \$             |
| <b>3 LNAPL ASSESSMENT &amp; REMOVAL</b>        |  |                         |                                 |                |                        |                |
| LAR05  | Removal Activity (Limited to 12 per site)  | WELL                    | \$42.37                         |                | \$                     | \$ -           |
| LAR06  | LNAPL Sample Collection (1 per site)   | SITE                    | \$18.30                         |                | \$                     | \$ -           |
| LAR10  | Primary Mob/Demob  | SITE                    | \$389.27                        |                | \$                     | \$ -           |
| <b>4 WASTE DISPOSAL</b>                        |  |                         |                                 |                |                        |                |
| <b>CONSULTANT SERVICES</b>                     |  |                         |                                 |                |                        |                |
| WD05   | Consultant Coordination  | SITE                    | \$122.10                        |                | \$122.10               | \$ 122.10      |
| <b>COMMODITY SERVICES</b>                      |  |                         |                                 |                |                        |                |
| WD10   | Groundwater Sample and/or Purge  | DRUM                    | \$79.94                         |                | \$79.94                | \$ 159.88      |
| WD15   | Drill Cuttings   | DRUM                    | \$138.80                        |                | \$                     | \$ -           |
| WD20   | Free Product   | DRUM                    | \$148.19                        |                | \$                     | \$ -           |
| WD25   | Primary Mob/Demob  | SITE                    | \$188.87                        |                | \$188.87               | \$ 188.87      |
| <b>5 CLOSURE REQUEST</b>                       |  |                         |                                 |                |                        |                |
| CR05   | Primary Closure Request  | SUBMITTAL               | \$1,841.97                      |                | Current Invoice Amount | \$             |
| CR10   | Closure Request with LNAPL Reporting (incremental to CR05)                                     | SUBMITTAL               | \$1,025.87                      |                | Current Invoice Amount | \$             |
| CR15   | GIS Packet Submittal (For Source Property only)  | PACKET                  | \$451.88                        |                | Current Invoice Amount | \$             |
| CR20   | GIS Packet Submittal (For off-site Properties only)  | PER ADDITIONAL PROPERTY | \$198.29                        |                | Current Invoice Amount | \$             |
| <b>6 LETTER REPORT/ADDENDUM</b>                |  |                         |                                 |                |                        |                |
| LRA05  | Letter Report/Addendum   | LETTER                  | \$925.68                        |                | Current Invoice Amount | \$             |
| <b>7 REGULATORY CORRESPONDENCE</b>             |  |                         |                                 |                |                        |                |
| RC05   | Regulatory Correspondence  | LETTER/STATUS UPDATE    | \$114.80                        |                | \$114.80               | \$ 114.80      |

Effective Schedule Date: September 2007 to December 2007  
Schedule #3

| TASK CODE/ACTIVITY REFERENCE CODE                            | TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION                                | UNIT   | MAXIMUM REIMBURSEABLE UNIT COST | UNITS INVOICED         | UNIT COST CLAIMED | AMOUNT CLAIMED |
|--|--|--------|---------------------------------|------------------------|-------------------|----------------|
| <b>8 WELL ABANDONMENT</b>                                    |  |        |                                 |                        |                   |                |
|  | CONSULTANT SERVICES  |        |                                 |                        |                   |                |
| WAB05  | Coordination   | SITE   | \$145.06                        | 1                      | \$ 145.06         | \$ 145.06      |
| WAB10  | Water column < 30 ft   | FT     | \$2.19                          |                        |                   | \$ -           |
| WAB15  | Water column > 30 ft   | FT     | \$7.83                          |                        |                   | \$ -           |
| WAB20  | Bentonite Pellets (50lb bag - 1/4" pellet)   | BAG    | \$9.02                          | 26                     | \$ 902            | \$ 234.52      |
| WAB25  | Portland Cement (94lb bag)   | BAG    | \$6.07                          |                        |                   | \$ -           |
| WAB30  | Primary Mob/Demob  | SITE   | \$250.47                        |                        |                   | \$ -           |
|  | COMMODITY SERVICES   |        |                                 |                        |                   |                |
| WAB35  | Well Abandonment Mob/Demob   | SITE   | \$232.70                        | 1                      | \$ 232.70         | \$ 232.70      |
| WAB40  | Well Abandonment (2 inch)  | FT     | \$4.90                          | 80                     | \$ 392.00         | \$ 392.00      |
| WAB45  | Well Abandonment (4 inch)  | FT     | \$5.71                          |                        |                   | \$ -           |
| WAB50  | Well Abandonment (6 inch)  | FT     | \$7.06                          | 125                    | \$ 706            | \$ 882.50      |
| <b>9 INVESTIGATION WORKPLAN PREPARATION</b>                  |  |        |                                 |                        |                   |                |
| IWP05  | Investigation Workplan Preparation   | REPORT | \$1,293.03                      | Current Invoice Amount |                   | \$ -           |
| <b>10 INITIAL SITE SURVEY - FEATURES AND WELL ELEVATIONS</b> |  |        |                                 |                        |                   |                |
|  | CONSULTANT SERVICES  |        |                                 |                        |                   |                |
| IS05   | Consultant Coordination of Initial Site Survey - Features and Well Elevations        | SURVEY | \$104.36                        |                        |                   | \$ -           |
| IS10   | Subsequent Surveys   | WELL   | \$98.10                         |                        |                   | \$ -           |
|  | COMMODITY SERVICES   |        |                                 |                        |                   |                |
| IS15   | Initial Survey   | SURVEY | \$1,043.61                      |                        |                   | \$ -           |
| <b>11 POTABLE WELL FIELD RECONNAISSANCE</b>                  |  |        |                                 |                        |                   |                |
| PWFR05   | Potable Well Field Reconnaissance  | SITE   | \$519.72                        |                        |                   | \$ -           |
| <b>12 DIRECT PUSH</b>  |  |        |                                 |                        |                   |                |
|  | CONSULTANT SERVICES  |        |                                 |                        |                   |                |
| DP05   | 0 - 24 ft bgs W/ Continuous Soil Sampling  | FT     | \$4.17                          |                        |                   | \$ -           |
| DP10   | > 24 ft bgs W/ Continuous Soil Sampling  | FT     | \$4.70                          |                        |                   | \$ -           |
| DP15   | Groundwater Profiling (No Soil Sampling)   | FT     | \$1.98                          |                        |                   | \$ -           |
| DP20   | Groundwater Sample Collection (to be used in conjunction with activity DP05 or DP10) | EACH   | \$32.04                         |                        |                   | \$ -           |
| DP25   | Temporary Well Installation  | EACH   | \$44.35                         |                        |                   | \$ -           |
| DP30   | Primary Mob/Demob  | SITE   | \$456.06                        |                        |                   | \$ -           |
|  | COMMODITY SERVICES   |        |                                 |                        |                   |                |
| DP35   | 0 - 24 ft bgs W/ Continuous Soil Sampling  | FT     | \$6.16                          |                        |                   | \$ -           |
| DP40   | > 24 ft bgs W/ Continuous Soil Sampling  | FT     | \$8.04                          |                        |                   | \$ -           |
| DP45   | Groundwater Profiling (no soil sampling)   | FT     | \$5.22                          |                        |                   | \$ -           |
| DP50   | Groundwater Sample Collection (cost for tubing)                                      | FT     | \$0.31                          |                        |                   | \$ -           |
| DP55   | Expendable Drive Point   | EACH   | \$8.35                          |                        |                   | \$ -           |
| DP60   | Borehole Abandonment   | FT     | \$0.83                          |                        |                   | \$ -           |
| DP65   | Concrete Penetration   | EACH   | \$10.44                         |                        |                   | \$ -           |
| DP70   | Groundwater Sample Collection (to be used in conjunction with activity DP35 or DP40) | EACH   | \$24.32                         |                        |                   | \$ -           |
| DP75   | Temporary Well Installation (use DP45 to advance this borehole)                      | FT     | \$3.65                          |                        |                   | \$ -           |
| DP80   | Mob/Demob (Includes Decon)   | SITE   | \$275.30                        |                        |                   | \$ -           |

Effective Schedule Date: September 2007 to December 2007  
Schedule #3

| TASK CODE/ACTIVITY REFERENCE CODE | TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION   | UNIT      | MAXIMUM REIMBURSEABLE UNIT COST | UNITS INVOICED | UNIT COST CLAIMED | AMOUNT CLAIMED |
|-----------------------------------|---|-----------|---------------------------------|----------------|-------------------|----------------|
| <b>13</b>                         | <b>DRILLING</b>   |           |                                 |                |                   |                |
|                                   | CONSULTANT SERVICES   |           |                                 |                |                   |                |
| <b>13.a</b>                       | CONSULTANT OVERSIGHT DRILLING IN UNCONSOLIDATED SOILS - WITH SOIL SAMPLING  |           |                                 |                |                   |                |
| DR05                              | For depth interval 0 - 25 ft bgs  | FT        | \$4.70                          |                | \$                | \$ -           |
| DR10                              | For depth interval 26 - 50 ft bgs   | FT        | \$5.01                          |                | \$                | \$ -           |
| DR15                              | For depth interval 51 - 75 ft bgs   | FT        | \$6.37                          |                | \$                | \$ -           |
| DR20                              | Primary Mob/Demob   | SITE      | \$456.06                        |                | \$                | \$ -           |
| <b>13.b</b>                       | CONSULTANT OVERSIGHT DRILLING IN UNCONSOLIDATED SOILS - WITHOUT SOIL AND/OR GROUNDWATER SAMPLING                                  |           |                                 |                |                   |                |
| DR25                              | Consultant Oversight  | FT        | \$1.36                          |                | \$                | \$ -           |
| DR30                              | Primary Mob/Demob   | SITE      | \$377.79                        |                | \$                | \$ -           |
| <b>13.c</b>                       | CONSULTANT OVERSIGHT DRILLING IN BEDROCK  |           |                                 |                |                   |                |
| DR35                              | Consultant Oversight  | FT        | \$5.43                          |                | \$                | \$ -           |
| DR40                              | Primary Mob/Demob   | SITE      | \$456.06                        |                | \$                | \$ -           |
|                                   | COMMODITY SERVICES  |           |                                 |                |                   |                |
| <b>13.d</b>                       | DRILLING IN UNCONSOLIDATED SOILS - WITH SOIL SAMPLING   |           |                                 |                |                   |                |
| DR45                              | 0 - 25 ft bgs   | FT        | \$13.15                         |                | \$                | \$ -           |
| DR50                              | 26 - 50 ft bgs  | FT        | \$13.67                         |                | \$                | \$ -           |
| DR55                              | 51 - 75 ft bgs  | FT        | \$16.59                         |                | \$                | \$ -           |
| <b>13.e</b>                       | DRILLING IN UNCONSOLIDATED SOILS - WITHOUT SOIL AND/OR GROUNDWATER SAMPLING   |           |                                 |                |                   |                |
| DR60                              | Drilling in Unconsolidated Soils  | FT        | \$10.33                         |                | \$                | \$ -           |
| <b>13.f</b>                       | DRILLING IN BEDROCK   |           |                                 |                |                   |                |
| DR65                              | Drilling in Bedrock   | FT        | \$29.53                         |                | \$                | \$ -           |
| DR70                              | Bedrock Drilling Setup Charge   | EACH      | \$104.36                        |                | \$                | \$ -           |
| DR75                              | Air Compressor  | DAY       | \$317.05                        |                | \$                | \$ -           |
| <b>14</b>                         | <b>MONITORING WELL INSTALLATION</b>   |           |                                 |                |                   |                |
|                                   | CONSULTANT SERVICES   |           |                                 |                |                   |                |
|                                   | CONSULTANT OVERSIGHT MONITORING WELL INSTALLATION   |           |                                 |                |                   |                |
| MWI05                             | 0 - 25 ft bgs   | FT        | \$3.44                          |                | \$                | \$ -           |
| MWI10                             | 26 - 75 ft bgs  | FT        | \$2.40                          |                | \$                | \$ -           |
|                                   | COMMODITY SERVICES  |           |                                 |                |                   |                |
| MWI15                             | 2 inch PVC Casing   | FT        | \$11.79                         |                | \$                | \$ -           |
| MWI20                             | Well Development  | WELL      | \$115.32                        |                | \$                | \$ -           |
| MWI25                             | Mob/Demob (For development of grout or slurry sealed wells)   | SITE      | \$295.34                        |                | \$                | \$ -           |
| <b>15</b>                         | <b>MISCELLANEOUS DRILLING ACTIVITIES AND SUPPLIES</b>   |           |                                 |                |                   |                |
| MDT05                             | Drill Rig Mob/Demob (includes decontamination)  | MOB/DEMOB | \$664.78                        |                | \$                | \$ -           |
| MDT10                             | Well Cover/flushmount   | EACH      | \$131.49                        |                | \$                | \$ -           |
| MDT15                             | Stickup Well Cover  | EACH      | \$122.42                        |                | \$                | \$ -           |
| MDT20                             | Bumper Guard Posts  | EACH      | \$41.74                         |                | \$                | \$ -           |
| MDT25                             | Commodity service provider (drilling & direct push) Per Diem (includes meals and overnight stay per person, maximum of 2 persons) | EACH      | \$125.75                        |                | \$                | \$ -           |
| MDT30                             | Well Repair (Department approval is required prior to conducting this activity.)  | LUMP SUM  | \$65.75                         |                | \$                | \$ -           |
| MDT35                             | Borehole Abandonment  | FT        | \$3.55                          |                | \$                | \$ -           |
| MDT40                             | Concrete Penetration  | EACH      | \$43.52                         |                | \$                | \$ -           |
| MDT41                             | Private Utility Locale  | EACH      | \$104.36                        |                | \$                | \$ -           |
| MDT45                             | Pad Locks   | EACH      | \$7.10                          |                | \$                | \$ -           |



Effective Schedule Date: September 2007 to December 2007  
Schedule #3

| TASK CODE/ACTIVITY REFERENCE CODE                                | TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION | UNIT                 | MAXIMUM REIMBURSEABLE UNIT COST | UNITS INVOICED | UNIT COST CLAIMED      | AMOUNT CLAIMED |
|--|---|----------------------|---------------------------------|----------------|------------------------|----------------|
| <b>16 HAND AUGER BORING</b>                                      |   |                      |                                 |                |                        |                |
| HA05   | Hand Augering   | BORING               | \$38.09                         |                | \$                     | \$ -           |
| HA10   | Primary Mob/Demob                                     | SITE                 | \$422.66                        |                | \$                     | \$ -           |
| <b>17 SURFACE SOIL/SEDIMENT/WATER SAMPLING</b>                   |   |                      |                                 |                |                        |                |
| SSWS05   | Sampling  | SAMPLE LOCATION      | \$19.10                         |                | \$                     | \$ -           |
| SSWS10   | Primary Mob/Demob                                     | SITE                 | \$330.82                        |                | \$                     | \$ -           |
| <b>18 VAPOR SCREENING</b>  |   |                      |                                 |                |                        |                |
| VS05   | Vapor Screening                                       | SITE                 | \$189.21                        |                | \$                     | \$ -           |
| <b>19 HYDRAULIC CONDUCTIVITY TESTING</b>                         |   |                      |                                 |                |                        |                |
| HCT05  | Hydraulic Conductivity Testing                        | WELL                 | \$52.18                         |                | \$                     | \$ -           |
| HCT10  | Mob/Demob   | SITE                 | \$509.28                        |                | \$                     | \$ -           |
| <b>20 SOIL BORING/MONITORING WELL PERMITS</b>                    |   |                      |                                 |                |                        |                |
| SBMWP05  | Soil Boring/Monitoring Well Permit                    | PERMIT               | \$219.16                        |                | \$                     | \$ -           |
| SBMWP10  | Permit Fee (copy of permit & fee receipt required)    | PERMIT FEE           | PERMIT FEE                      |                | \$                     | \$ -           |
| <b>21 ACCESS AGREEMENTS</b>                                      |   |                      |                                 |                |                        |                |
| AA05   | Access Agreements                                     | PROPERTY             | \$357.96                        |                | \$                     | \$ -           |
| <b>22 SOIL INVESTIGATION REPORT</b>                              |   |                      |                                 |                |                        |                |
| SIR05  | Soil Investigation Report                             | REPORT               | \$2,986.98                      |                | Current Invoice Amount |                |
| <b>23 SOIL AND GROUNDWATER INVESTIGATION REPORT</b>              |   |                      |                                 |                |                        |                |
| SGIR05   | Soil and Groundwater Investigation Report             | REPORT               | \$4,422.81                      |                | Current Invoice Amount |                |
| <b>24 LIMITED SOIL EXCAVATION</b>                                |   |                      |                                 |                |                        |                |
| <b>CONSULTANT SERVICES</b>                                       |   |                      |                                 |                |                        |                |
| LSE05  | Consultant Oversight for Limited Soil Excavation      | TON                  | \$4.38                          |                | \$                     | \$ -           |
| LSE10  | Mob/Demob   | SITE                 | \$740.96                        |                | \$                     | \$ -           |
| <b>COMMODITY SERVICES</b>  |   |                      |                                 |                |                        |                |
| LSE13  | Laboratory  | LAB SCHEDULE         | See Lab Schedule Task 24 total  |                | \$                     | \$ -           |
| LSE15  | Limited Soil Excavation                               | TON                  | \$43.94                         |                | \$                     | \$ -           |
| <b>25 REMEDIATION SYSTEM SHUT DOWN</b>                           |   |                      |                                 |                |                        |                |
| SSD05  | Parmanent   | SITE                 | \$975.77                        |                | \$                     | \$ -           |
| SSD10  | Temporary   | SITE                 | \$293.25                        |                | \$                     | \$ -           |
| SSD15  | Primary Mob/Demob                                     | SITE                 | \$349.61                        |                | \$                     | \$ -           |
| <b>26 SITE SPECIFIC RCL CALCULATIONS FOR DIRECT CONTACT RISK</b> |   |                      |                                 |                |                        |                |
| SSRCL05  | SSRCL Calculations                                    | SITE                 | \$344.39                        |                | \$                     | \$ -           |
| <b>27 CLAIM SUBMITTAL</b>  |   |                      |                                 |                |                        |                |
| CS05   | Claim Submittal                                       | CLAIM                | \$521.80                        |                | \$ 521.80              | \$ 521.80      |
| <b>28 STANDARDIZED INVOICE</b>                                   |   |                      |                                 |                |                        |                |
| SI05   | Standardized Invoice                                  | INVOICE              | \$15.65                         |                | \$ 15.65               | \$ 31.30       |
| <b>29 OCCURRENCE CLASSIFICATION</b>                              |   |                      |                                 |                |                        |                |
| OC05   | Occurrence Classification                             | LETTER/STATUS UPDATE | \$111.67                        |                | \$                     | \$ -           |
| <b>30 MEETING WITH REGULATORS</b>                                |   |                      |                                 |                |                        |                |
| MR05   | Meeting with Regulators                               | MEETING              | \$311.00                        |                | \$                     | \$ -           |

Effective Schedule Date: September 2007 to December 2007  
 Schedule #3

| TASK CODE/ACTIVITY REFERENCE CODE                                      | TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION | UNIT                  | MAXIMUM REIMBURSEABLE UNIT COST | UNITS INVOICED | UNIT COST CLAIMED | AMOUNT CLAIMED     |      |
|--|---|-----------------------|---------------------------------|----------------|-------------------|--------------------|------|
| <b>31 CONSULTANT OVERNIGHT PER DIEM</b>                                |   |                       |                                 |                |                   |                    |      |
| COPD05   | Overnight   | NIGHT                 | \$101.23                        |                | \$                | \$ -               |      |
| <b>32 DEED RESTRICTION PREPARATION</b>                                 |   |                       |                                 |                |                   |                    |      |
| DRP05  | Deed Restriction Preparation                          | DEED                  | \$158.63                        |                | \$                | \$ -               |      |
| 33   | SCHEDULE OF LABORATORY MAXIMUMS                       | SEE ATTACHED SCHEDULE |                                 |                |                   | \$                 | \$ - |
| <b>34 CONSULTANT INCREMENTAL MOB/DEMOB</b>                             |   |                       |                                 |                |                   |                    |      |
| IMD05  | Incremental Mob/Demob                                 | SITE                  | \$183.68                        |                | \$                | \$ -               |      |
| <b>35 CAP MAINTENANCE PLAN</b>   |   |                       |                                 |                |                   |                    |      |
| CMP05  | Cap Maintenance Plan                                  | PLAN                  | \$285.00                        |                | \$                | \$ -               |      |
| <b>36 CHANGE ORDER REQUEST (includes cost cap exceedence requests)</b> |   |                       |                                 |                |                   |                    |      |
| COR05  | Change Order Request                                  | CHANGE ORDER          | \$340.00                        |                | \$ 340.00         | \$ 340.00          |      |
| <b>TOTAL AMOUNT CLAIMED</b>  |   |                       |                                 |                |                   | <b>\$ 3,365.53</b> |      |



## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
141 NW Barstow St.  
Room 180  
Waukesha, Wisconsin 53188  
Telephone 262-574-2100  
FAX 262-574-2117

October 1, 2007

Mr. Randy Johnson  
Johnson Sand & Gravel  
20685 W. National Ave.  
New Berlin, WI 53146

FID# 268438610  
BRRTS# 03-68-004228

Subject: Conditional Closure for Johnson Sand & Gravel, N8 W225990 Johnson Drive,  
Pewaukee

Dear Mr. Johnson:

On September 24, 2007, the Wisconsin Department of Natural Resources (Department) received your request for closure of the case described above. The Department reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. After careful review of the closure request, the Department has determined that the petroleum contamination on the site from the former underground storage tank (UST) system appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following conditions are satisfied:

- The monitoring wells and recovery/extraction wells at the site must be properly abandoned in compliance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to Ms. Victoria Stovall on Form 3300-5B found at [www.dnr.state.wi.us/org/water/dwg/gw/](http://www.dnr.state.wi.us/org/water/dwg/gw/) or provided by the Department.
- Any remaining waste (soil piles, drilling spoil, and/or purge water) generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with Department of Natural Resources' rules. Please send a letter advising me that any remaining waste has been removed once that work is completed.

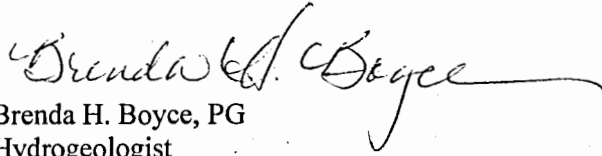
When the above conditions have been satisfied, please submit a letter to let me know that applicable conditions have been met, and your case will be closed.

If this is a PECFA site, section 101.143, Wis. Stats., requires that PECFA claimants seeking reimbursement of interest costs, for sites with petroleum contamination, submit a final reimbursement claim within 120 days after they receive a closure letter on their site. For claims not received by the PECFA Program within 120 days of the date of this letter, interest costs after 60 days of the date of this letter will not be eligible for PECFA reimbursement.

Johnson Sand & Gravel  
October 1, 2007  
Page 2 of 2

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me at (262) 574-2140.

Sincerely,

A handwritten signature in cursive script that reads "Brenda H. Boyce". The signature is written in black ink and has a long, sweeping tail that extends to the right.

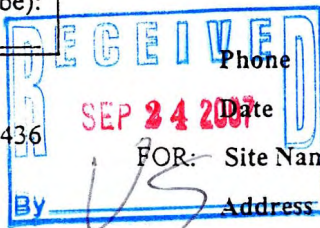
Brenda H. Boyce, PG  
Hydrogeologist  
Bureau for Remediation & Redevelopment

c: Chris Hatfield – Northern Environmental

**Letter Of Transmittal**

FROM: Name Chris Hatfield  
 Company Northern Environmental  
 Address \_\_\_\_\_  
 \_\_\_\_\_

Type of Submittal:  
 \_\_\_ LUST \_\_\_ ERP \_\_\_ VPLE \_\_\_ other (describe): \_\_\_\_\_



To: Program Assistant/BRR Program  
 Wisconsin Dept. of Natural Resources Box 12436  
 2300 N. Dr. Martin Luther King Jr. Dr.  
 Milwaukee, WI 53212

Phone \_\_\_\_\_  
 Date \_\_\_\_\_  
 FOR: Site Name Johnson Sand + Gravel  
 Address \_\_\_\_\_

Check type(s) of documents enclosed. Submittals are tracked & filed based on information you provide. Include FID & BRRTS numbers assigned to this site. Identify the intent of document(s) you are submitting in order to speed processing. Please attach required fees to this form.

FID# \_\_\_\_\_  
 BRRTS# 03-68-004228

Are you requesting Department Review?  Y  N

| √                                   | TYPE OF DOCUMENT/REPORT   | FEE                             | DNR (office use CODE only) |
|-------------------------------------|---|---------------------------------|----------------------------|
|                                     | Notification of Release   | none                            | 01                         |
|                                     | Tank Closure/Site Assessment where release(s) have been detected*   | none                            | 33                         |
|                                     | Site Investigation Workplan   | \$500 if review is requested    | 35, 135~                   |
|                                     | Site Investigation Report<br>___ groundwater impacts above ES<br>___ no groundwater impacts or gw impacts below ES (if petroleum constituents only, case will be transferred to Department of Commerce) | \$750 if review is requested    | 37,<br>137~,<br>76,<br>96  |
|                                     | Request to Transfer Case to Department of Commerce  | none                            | 76                         |
|                                     | Off-Site Determination Request  | \$500 mandatory                 | 638~                       |
|                                     | Remedial Action Options Plan  | \$750 if review is requested    | 39, 143~                   |
|                                     | NR 720.19 Site Specific Clean-Up Goal Proposal  | \$750 if review is requested    | 67, 68~                    |
|                                     | NR 718 Landspreading Request  | \$500 mandatory                 | 61~                        |
|                                     | "Notification to Treat or Dispose" of Contaminated Soil/Water   | none                            | 99                         |
|                                     | Injection/Infiltration Request  | \$500 mandatory                 | 63~                        |
|                                     | Quarterly Report or Update  | \$500 if review is requested    | 43, 43~                    |
|                                     | O & M Form 4400-194   | \$300 if review is requested    | 92, 192~                   |
|                                     | Remedial Action Options Report  | \$750 if review is requested    | 41, 41~                    |
|                                     | Closure Review Request  | \$750 mandatory                 | 79~                        |
|                                     | NR700.11 Simple Site Closure Request  | \$250 mandatory                 | 183~                       |
|                                     | "Draft Deed Affidavit" or "Restriction required for close-out"  | none                            | 99                         |
|                                     | "Well Abandonment Forms"  | none                            | 99                         |
|                                     | Remedial Design Report  | \$750 if review is requested    | 147, 148~                  |
|                                     | Construction Documentation Reports  | \$250 if review is requested    | 151, 152~                  |
|                                     | Long Term Monitoring Plan   | \$300 if review is requested    | 24, 25~                    |
|                                     | Voluntary Party Liability Exemption (VPLE) Application  | \$250 mandatory                 | 662                        |
|                                     | VPLE "Phase I/II Assessments" or "Additional Reports"   | computed hourly                 | 99                         |
|                                     | Tax Cancellation Agreement  | \$500 mandatory                 | 654                        |
|                                     | Negotiated Agreement  | \$1000 mandatory                | 630                        |
|                                     | Lender Assessment   | \$500 mandatory                 | 686                        |
|                                     | Negotiation and Cost Recovery (municipalities only)   | fee for each service, mandatory | 90~                        |
|                                     | General Liability Clarification Request   | \$500 mandatory                 | 684                        |
|                                     | Lease Letter Request - Single Property  | \$500 mandatory                 | 646                        |
|                                     | Lease Letter Request - Multiple Properties  | \$1000 mandatory                | 646                        |
|                                     | Request for Other Technical Assistance  | \$500 mandatory                 | 90~                        |
| <input checked="" type="checkbox"/> | Other (please describe) <u>GIS Info</u>   |                                 |                            |

\* Closure reports for sites where no releases have been detected should be sent directly to "Clean Closures" c/o DNR Remediation & Redevelopment Program, P.O. Box 7921, Madison WI 53707  
 Remarks: \_\_\_\_\_  
 letter of transmittal.doc 2/24/99

WDNR BRRTS CASE # 03 - 68 - 004228

WDNR SITE NAME : Robert Johnson Sand + Gravel

**WISCONSIN DEPARTMENT OF NATURAL RESOURCES**  
**Bureau for Remediation and Redevelopment**

This form is intended to provide instructions and a list of information that must be submitted for evaluation for case closure, each time a request is made. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

**NOTICE: Completion of this form is mandatory** for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing close out requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

In order to expedite the closure process, provide a complete and accurate closure package according to the following instructions, each time a closure decision is requested:

- Submit the Case Summary and Close Out Form and the required attachments as a stand-alone, **unbound** package. Include all information requested per section, as appropriate to the site, in the order shown. Include all attachments per section, as appropriate. Do not attach previously submitted reports. Correctly reference any reports in the case summary, as applicable.
- Include fees with this package at the time it is submitted to the department in order for the application to be considered complete.
- Specify your selected closure option.
- Include all **GIS Registry information** (in Section I) as a stand-alone document (*do not refer to materials in other attachments*). Include copies of **all off-source property and ROW notifications**.
- Place a ✓ (attached) or NA (not applicable) in the blank next to each attachment, in each section.
- Include a draft of the deed document with the close out application, if a **deed restriction** or **deed notice** is required as a condition of closure of the selected remedy. Include a maintenance plan, if it is required in the deed instrument.
- **Maps for the GIS Registry may not be larger than 8.5 x 14 inches**, unless maps are submitted in electronic form in portable document format (pdf) readable by the Adobe Acrobat Reader. For electronic document submittal requirements, see <http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR690.pdf>.
- Prepare maps according to the applicable portions of ss. NR 716.15(2)(h)1 and 726.05(3)(a)4.d. Prepare visual aids, including maps, plans, drawings, cross sections, fence diagrams, tables and photographs according to s. NR 716.15(2)(h)1. – 4.
- **Use a bold font** on information of importance on tables, maps and figures. A **bold font (for ES exceedances)** and *italics (for PALs)* are preferred when differentiation is necessary. **Please do not use shading or highlights** on any of the analytical tables (per s. NR 726.05(3)) and maps as the shading obscures the information that is scanned for inclusion in the GIS Registry.
- Put multiple tables submitted for contaminated media data (eg. pre- and post-remedial data) in chronological order. Include the level of detection for results which are below the detection level (i.e. do not just list as no detect (ND)). Summaries of all data should include information collected by previous consultants. Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15(2)(g)3 in the format required in s. NR 716.15(2)(h)3.
- Document free product recovery estimates as required in s. NR 708.15, if applicable.

WDNR BRRTS CASE # 03-68-004228

WDNR SITE NAME : Johnson Sand + Gravel

**Section A: Case History and Closure Pathway Selected**

**ATTACHMENTS:**

- A brief site summary including results of all investigative activities, interim and remedial actions taken, a description of any residual soil and/or groundwater contamination and their locations, a description of any other media affected, and a description of how actual and potential impacts to receptors have been addressed.
- Site location map on USGS topographic base map.
- Site map including buildings, utilities, property lines of source property and impacted non-source properties, ground cover and supply wells. *These maps may be combined. A copy of the map(s) from Section I, #5 may be used.*
- Verification of the zoning for affected properties.

**INFORMATION NEEDED:**

1. Site Name Johnson Sand + Gravel (Former)  
 Street Address: N8 W22590 Johnson Dr  
 City/Zip Code: Pewaukee, WI
2. BRRTS #: 03-68-004228
3. DNR FID #: 26843 8610 PECFA Claim#: 53186-1661-90
4. Responsible Party Name Johnson Sand + Gravel, Incorporated  
 Mailing Address: 20685 West National Ave City/Zip Code: New Berlin, WI 53146  
 Phone number: \_\_\_\_\_ Contact Person: Randy Johnson
5. Date of Incident/Discovery: 03/31/1994 Contaminant Type(s): Petroleum
6. Quantity Released: Unknown
7. Land Use:  
 Current : \_\_\_\_\_ Residential  Commercial \_\_\_\_\_ Industrial \_\_\_\_\_ Other \_\_\_\_\_  
 If other, specify: \_\_\_\_\_  
 Planned Post Remediation : \_\_\_\_\_ Residential  Commercial \_\_\_\_\_ Industrial \_\_\_\_\_ Other \_\_\_\_\_  
 If other, specify: \_\_\_\_\_
8. Is a zoning change required? \_\_\_\_\_ Y  N  
 If so, has it been completed for post remedial land use? \_\_\_\_\_ Y \_\_\_\_\_ N
9. 2 Acres ready for use (The total area in acres of all adjacent tax parcels owned by the same entity on the site where the contamination originated, rounding fractions to nearest .5 acre and noting >100 acres for acreages above 100 acres. For multiple discharges that are cleaned up concurrently, count the acres once.)
10. Geographic Coordinates (meters/WTM83/91) E 666829 N 287128
11. Method Used to Obtain Geographic Coordinates:  
 \_\_\_\_\_ On-site using GPS equipment, converted or projected into WTM83/91 coordinates  
 Used RR GIS Registry web site to get WTM83/91 coordinates  
 \_\_\_\_\_ Other (specify): \_\_\_\_\_
12. \*Groundwater Contamination Remaining (>ES):  
 On Source Property  Y \_\_\_\_\_ N  
 Off Source Property \_\_\_\_\_ Y  N
13. \*Residual Soil Contamination > Generic or Site-Specific RCL:  
 On Source Property  Y \_\_\_\_\_ N  
 Off Source Property \_\_\_\_\_ Y  N
14. Contamination in Right of Way: \_\_\_\_\_ Y  N
15. Closure Pathway Selected: check all that apply

| <u>CLOSURE via NR 726</u>   |   |
|---|---|
| <u>Soil</u>   | <u>Groundwater</u>  |
| <input type="checkbox"/> < s. NR 720.09/720.11 Generic RCLs         | <input type="checkbox"/> < s. NR 140.10 Table 1 & Table 2 Values      |
| <input type="checkbox"/> s. NR 720.19(2) Soil Performance Standards | <input type="checkbox"/> s. NR 140.28(2) PAL Exemption                |
| <input type="checkbox"/> s. NR 720.19(4) Groundwater Pathway        | <input type="checkbox"/> s. NR 726.05(2)(b), ≥ ES Natural Attenuation |
| <input type="checkbox"/> s. NR 720.19(5) Direct Contact             |   |
| <input type="checkbox"/> s. NR 720.19(6) Other Pathways             |   |

WDNR BRRTS CASE # 03 - 68 - 004228 WDNR SITE NAME : Johnson Sand & Gravel

|   |  |
|---|--|
| <u>CLOSURE via NR 746 and NR 726</u>                                      |  |
| <u>Petroleum Storage Tank Soil Options for Closure:</u>                   |  |
| <input type="checkbox"/> s. NR 746.07 Requirements Met-Post Investigation |  |
| <input type="checkbox"/> s. NR 746.08 Requirements Met-Post Remed.        |  |
| <u>Petroleum Storage Tank GW Options for Closure:</u>                     | <u>Petroleum Storage Tank GW Options for Closure:</u>        |
| <u>Within Permeable Material:</u>   | <u>Within Low Permeability Material:</u>                     |
| <input type="checkbox"/> s. NR 746.07(3) ≥PAL <ES, Post Investigation     | <input type="checkbox"/> s. NR 746.07(2), Post Investigation |
| <input type="checkbox"/> s. NR746.07(4) >ES, Post Investigation           | <input type="checkbox"/> s. NR 746.08(2), Post Remediation   |
| <input type="checkbox"/> s. NR 746.08(3) ≥ PAL, <ES, Post Remediation     |  |
| <input checked="" type="checkbox"/> s. NR 746.08(4) >ES, Post Remediation |  |

**Section B: Receptor Summary**

ATTACHMENTS:

- NA Notification(s) regarding contamination in ROW
- NA Notification(s) to off-source property owners regarding sampling results

INFORMATION NEEDED:

1. Identify all pre-remedial actual receptors, the assessed risk and their locations (e.g., both on- and off-site utility corridors, basements or sumps of nearby buildings, direct contact threat from soil, water supplies, surface waters, sediments, vapors, etc.) For definitions, refer to s. NR 700.03 (47), Wis. Adm. Code.

none

2. Have the remedial actions addressed the potential or actual impacts to these receptors?  
 Y (Details in the case history summary (Section A)).  
 N If no, please identify the nature of the remaining risk and the receptor at risk, if any:

**Section C: Soil Investigation Information**

ATTACHMENTS:

- Complete soil data summary table of field screening and laboratory analytical results, including all detects, regardless of ch. NR 720 standards, with dates, sample locations, depths and detection limits. Identify exceedances.
- Map(s) of all pre-remedial soil sampling locations: depicting all soil sample locations relative to site facilities. Note in bold font those sample locations that exceed ch. NR 720 RCLs (including free product location) and delineate the extent of contamination.
- Pre-remedial geologic cross-sections; including geology, source location(s), extent of soil and groundwater contamination, free product location/depth, soil sample locations, water table elevation, and bedrock elevation, if encountered.

INFORMATION NEEDED:

1. Extent Defined?  Y  N If not, explain why. \_\_\_\_\_
2. Soil Type(s): Clayey silt and sand, sandy and gravel
3. Depth of Contamination: Top: 10 fbg Bottom: 22 fbg
4. Type of Bedrock: \_\_\_\_\_ Depth to Bedrock: greater than 38 ft



WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ WDNR SITE NAME : \_\_\_\_\_

5. Is Any Contaminated Soil (Unsaturated or Saturated) in Contact With the Bedrock? \_\_\_Y N  
6. Measurable Free Product? \_\_\_Y N Depth/Location: \_\_\_\_\_

**Section D: Soil Remediation Information**

ATTACHMENTS:

- Map showing remediated area (for example, excavation limits or area influenced by SVE) and locations of post-remediation soil samples (if any). This map should show the locations and extent of residual soil contamination exceeding ch. NR 720 RCLs. These samples should be noted in bold font. *A copy of the map(s) from Section I, #10, may be used.*
- Soil disposal documentation
- NR 720.19 analysis, assumptions and calculations for site specific RCLs (SSRCLs) , with justification
- Calculations and results of EPA Soil Screening Level Model.
- Post-remedial cross-section(s) with post remedial soil sampling results, if soil removal or treatment has occurred. Identify sample results and depths. *A copy of the cross-section(s) from Section I, #11, may be used or you may refer to the cross-section(s) in Section E, as appropriate.*
- \_\_\_see Section E

INFORMATION NEEDED:

1. Remedial Action Completed? \_\_\_Y \_\_\_N
2. Were immediate or interim actions conducted? \_\_\_Y \_\_\_N If yes, what action was taken?  
\_\_\_\_\_
3. Brief description of remedial action taken:  
\_\_\_\_\_
4. Were soils excavated? \_\_\_Y \_\_\_N  
Quantity: \_\_\_\_\_ Disposal Method: \_\_\_\_\_
5. Final Confirmation Sample Collection Methods:  
\_\_\_\_\_
6. Final Soil/Drill Cuttings Disposal Location:  
\_\_\_\_\_
7. Estimated volume and depth of in situ soils exceeding ch. NR 720 Table RCLs or Site Specific RCLs:  
\_\_\_\_\_
8. Estimated volume and depth of in situ soils exceeding ch. NR 746 Table 1 or Table 2 or Site Specific RCLs (*underground petroleum tank systems, as defined in ch. NR 746 only*):  
\_\_\_\_\_
9. s. NR 720.19 Analysis? \_\_\_Y \_\_\_N  
\_\_\_ Performance Standard -NR 720.19(2)  
\_\_\_ SSRCL - NR 720.19(3) and (4),(5) or ( 6)
10. If the remedy includes a Soil Performance Standard, what type? \_\_\_ not applicable  
\_\_\_Cap \_\_\_ Soil \_\_\_ Building \_\_\_ Natural Attenuation of Groundwater \_\_\_ Other  
Specify other: \_\_\_\_\_
11. Will the maintenance of the SPS be consistent with the planned post remediation land use?  
\_\_\_Y \_\_\_N If No, please explain: \_\_\_\_\_
12. Is the EPA Soil Screening Level Model used as justification for closure of sites with residual contaminated soils?  
\_\_\_Y \_\_\_N Are the input numbers used: \_\_\_ Site Specific , or \_\_\_ WI Defaults?

**Section E: Groundwater Information**

ATTACHMENTS:

- Table identifying all contaminants, summarizing all pre- and post-remediation groundwater analytical results, with sample collection dates (*prepared in accordance with guidance document RR-628*)
- Groundwater sample location map showing the site facilities and all monitoring wells, sumps, extraction wells, and potable and non-potable wells.

WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ WDNR SITE NAME : \_\_\_\_\_

- Isoconcentration map(s) when included as part of the site investigation or map(s) of the horizontal extent of contamination based on most recent data. *A copy of the map(s) from Section I, #7, may be used.*
- A map showing groundwater flow direction(s) and summarizing the maximum variation in flow direction. *Multiple maps may be used. A copy of the map(s) from Section I, #9, may be used.*
- A table summarizing all groundwater elevations, with dates, and top and bottom elevations of well screens. *(Wells are to be referenced to national geodetic survey datum, as per NR 141.065(2)).*
- Graphs and statistical analyses which demonstrate the dynamics of the groundwater plume, for sites requesting closure using natural attenuation that meet the criteria s. NR 726.05(2)(b) or of s. NR 746 (permeable soils). *Refer to WDNR publication RR-614 for guidance.*
- Geologic cross-sections showing extent of residual soil and/or groundwater contamination, as applicable. *A copy of the cross-section(s) from Section I, #11 may be used.*

**INFORMATION NEEDED:**

1. Extent of Contamination Defined?  Y  N  N/A
2. Remedial Action Completed?  Y  N  N/A  
 Brief Description of Remedial Action Taken: Groundwater pumped from extraction wells during five events over 5 month period
3. Depth(s) to Groundwater 21 to 30ft Flow Direction(s): North
4. Field Analyses?  Y  N  
 Lab Analyses?  Y  N
5. 4 # of Sample Rounds  
3 # of Sampling Points  
2 # NR 141 Monitoring Wells Sampled  
0 # Temporary GW Sampling Points Sampled  
1 # Recovery Sumps Sampled  
0 # Municipal Wells Sampled  
0 # Private Wells Sampled
6. Was DNR notified of substances in groundwater without standards?  Y  N  N/A  
 If yes, how many? \_\_\_\_\_ What substances? \_\_\_\_\_
7. Preventive Action Limit currently exceeded?  Y  N If yes, identify location(s)  
MW1, MW3, & MW7
8. Enforcement Standard currently exceeded?  Y  N If yes, identify location(s)  
MW1, MW3 & MW7
9. Measurable free product detected?  Y  N Pre-remediation  
 Y  N Post-remediation
10. Was free product remediated?  Y  N  
 Method: Groundwater pumped from extraction wells during over 5 month period  
 Purge water or free product-groundwater mixture disposal method?  
Purge water containerized & sent to treatment facility
11. Potable wells within 1200 feet of site?  Y  N  
 Have they been sampled?  Y  N  
 Type (i.e. municipal, private, etc.)? \_\_\_\_\_  
 [NOTE: Include wells on groundwater well location map]
12. Has DNR been provided with all results of private well sampling?  Y  N
13. Have well owners/occupants been notified of results? (Sec. B Attachments)  Y  N  
 (Results also need to be sent to the DNR Water Supply Specialist)

**Section F. Other Contaminated Media Information:**

**ATTACHMENTS:**

NA Table of analytical results for all contaminants for media other than soil or groundwater

WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ WDNR SITE NAME : \_\_\_\_\_

**INFORMATION NEEDED:**

1. Have other media been impacted (either on-site or off-site e.g. sediment, utilities, air)? \_\_\_\_Y  N  
Briefly describe type and extent of all contamination found in media other than soil or groundwater:

\_\_\_\_\_

2. Remedial action completed? \_\_\_\_Y \_\_\_\_N  N/A  
Brief description of remedial action taken: \_\_\_\_\_

3. # of Post Remedial Sample Rounds: \_\_\_\_\_  
# of Sampling Points: \_\_\_\_\_  
Field Analyses? \_\_\_\_Y \_\_\_\_N  
Lab Analyses? \_\_\_\_Y \_\_\_\_N

**Section G. Associated Site Closure Information:**

**ATTACHMENTS:**

- \_\_\_\_\_ Construction documentation or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), in accordance with s. NR 724.15.
- \_\_\_\_\_ Maps and photos documenting the cap area, and/or integrity of the cap, with date.
- \_\_\_\_\_ Description of any soil performance standard cover system used, including a description of how it meets the requirement to be protective until residual contaminant concentrations no longer pose a threat to public health, safety, welfare or the environment, per s. NR 720.19(2), s. NR 722.09(2) and (3).
- \_\_\_\_\_ Maintenance plan with deed restriction for performance standard remedy. (per ss. NR 720.19(2) and 724.13(2))

**INFORMATION NEEDED:**

1. Enforcement actions closed out? \_\_\_\_Y \_\_\_\_N \_\_\_\_N/A  
2. Permits closed out? \_\_\_\_Y \_\_\_\_N \_\_\_\_N/A  
3. Describe how the following pathways are protected:

- a) Direct Contact Pathway: \_\_\_\_\_
- b) Groundwater: \_\_\_\_\_
- c) Other: \_\_\_\_\_

**H. Proposed Institutional Controls: (See Pub. RR-606)**

**ATTACHMENTS:**

- RR GIS Registry of Closed Remediation Sites
  - \_\_\_\_\_ Soil
  - Groundwater
  - Both
- \_\_\_\_\_ Draft deed document (Contact your DNR project manager for a template or guidance.)  
Type: \_\_\_\_\_ Deed Restriction  
\_\_\_\_\_ Deed Notice  
\_\_\_\_\_ Maintenance Agreement  
\_\_\_\_\_ Other: \_\_\_\_\_

WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ WDNR SITE NAME : \_\_\_\_\_

**I. Required GIS Registry Information:** Provide the following information, as a separate, stand-alone attachment, in the order specified.

- ✓ 1. **Copy(s) of most recent deed**, including legal description(s), for all affected properties within or partially within the contaminated site boundary. *(NOTE: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.)*
- ✓ 2. **A copy of certified survey map(s)**, as required by s. NR 716.15(2)(j)2., or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map (lots on subdivided or platted property (e.g., lot 2 of xyz subdivision).
- ✓ 3. **The parcel identification number** (if county uses them) for each property within the contaminated site boundaries. Include the address of each property within the contaminated site boundary (regardless of whether parcel id # exists). **Geographic position** data for each property (meters in WTM83/91 projection) in compliance with the requirements of s. NR 716.15 (2)(k), unless this information was previously submitted to the agency with administrative authority for the site as part of the site investigation report, or unless the agency with administrative authority has directed that the responsible party does not need to provide geographic position data for a specific site.
- ✓ 4. **A site location map** which outlines all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit the easy location of all parcels. If groundwater standards are exceeded, the map must also include the location of all municipal and potable wells within 1200 feet of the site. (If only one property, combine with map required in next item #5.)
- ✓ 5. **A map of contaminated properties within the site boundary** showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells and potable wells. This map shall also show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding ch. NR 140 enforcement standards, and/or in relation to the boundaries of soil contamination exceeding generic or site-specific residual contaminant levels as determined under s. NR 720.09, 720.11 and 720.19.
- ✓ 6. **A table of the most recent analytical results**, with sample collection dates from all monitoring wells, and any potable wells for which samples have been collected for groundwater, and/or showing results for all contaminants found in pre-remedial sampling and in the most recent soil sampling event, for soils (without shading or crosshatching). Note occurrence of free product.
- ✓ 7. **A groundwater isoconcentration map**, if required as part of the site investigation (SI), of the contaminated properties within the site boundaries. The map must include the areal extent of groundwater contamination exceeding PALS and the areal extent of groundwater contamination exceeding ESs, groundwater flow direction(s) based on the most recent data, and sample collection dates. **If an isoconcentration map was not required** as part of the SI, substitute a map showing the horizontal extent of contamination, based on the most recent data. Note free product location(s).
- ✓ 8. **A table of the previous 4 water level elevation measurements from all monitoring wells**, at a minimum, with the date measurements were made, is to be included. If present, note free product elevation and thickness on the table.
- ✓ 9. **A groundwater flow direction map** representative of groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, 2 groundwater flow maps showing the maximum variation in flow direction are to be submitted. *Prepare maps according to the applicable portions of ss. NR 716.15(2)(g)5-8 and 716.15(2)(h)1-2.*
- ✓ 10. For sites closing with residual soil contamination, **include a map showing the location of all soil samples** and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds generic or site specific residual contaminant levels.
- ✓ 11. **A geologic cross section**, if required as part of the SI, showing vertical extent and location of residual soil contamination exceeding generic or site specific RCLs and residual groundwater contamination, source extent and location, isoconcentrations for all groundwater contaminants that exceed PALS that remain when closure is requested; water table and piezometric elevations, and the location and elevation of geologic units, bedrock, and confining units, if any.
- ✓ 12. **A statement signed by the responsible party**, which states that he or she believes that the legal description has been attached for each property that is within, or partially within, the contaminated site boundary. *(The purpose of this requirement is that a legal description for each of the contaminated properties has been submitted. The RP is not required to attest to the accuracy of the attached legal descriptions.)*

WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ WDNR SITE NAME : \_\_\_\_\_

NA 13. A copy of the letters sent by the RP to all owners of properties with groundwater exceeding ESs as required by s. NR 726.05(3)(a)4.g. Letters sent to off-source properties must contain standard provisions in Appendix A of ch. NR 726. (Off source properties are listed separately on the GIS Registry with a link to the source property.) If the source property is owned by someone other than the person who is applying for case closure, a copy of the letter notifying the current owner of the source property that case closure has been requested should also be included.

NA 14. A copy of all written notifications provided to the city/village/municipal/state agency or other entity responsible for maintenance of a public street or highway or railroad right-of-way, within or partially within the boundaries of the contaminated site, for contamination exceeding groundwater ESs and/or soil exceeding generic or site specific RCLs.

NA 15. A list of addresses for all off-source properties affected by residual soil or groundwater contamination exceeding applicable standards.

I certify that, to the best of my knowledge, the information presented on and attached to this form is true and accurate. This recommendation for case closure is based upon all available data as of 9/10/07 (date). I have read the Case Summary and Close Out Form instructions and all required information has been included.

Form Completed By: \_\_\_\_\_

(Signature)

9/10/07  
(Date)

- \$750.00 Closeout Review Fee Attached
- \$250.00 GIS Registry Maintenance Fee Attached (GW)
- \$200.00 GIS Registry Maintenance Fee Attached (Soil)

Printed Name: CHRISTOPHER HATFIELD

Company Name: NORTHERN ENVIRONMENTAL TECH

Email address: CHATFIELD@WI.RR.COM

If not site owner, relationship to site owner: CONSULTANT

Address: 12075 N. CORPORATE PKWY City/Zip Code MERUEN 53092

Telephone Number: (262) 241-3133 FAX Number: (262) 241-8222

Environmental Consultant (if different than above): \_\_\_\_\_

Address: \_\_\_\_\_ City/Zip Code \_\_\_\_\_

Telephone Number: (\_\_\_\_\_) \_\_\_\_\_ FAX Number: (\_\_\_\_\_) \_\_\_\_\_

WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_      WDNR SITE NAME : \_\_\_\_\_

**FOR DEPARTMENT USE ONLY**

PROJECT MANAGER: \_\_\_\_\_ Date Reviewed: \_\_\_\_\_

( ) Approved ( ) Denied ( ) Sent to Committee

CLOSURE COMMITTEE DECISION ON CLOSURE:

FIRST COMMITTEE REVIEW DATE: \_\_\_\_\_ ( ) Approved ( ) Denied

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

**COMMITTEE RECOMMENDATION:**

\_\_\_\_\_ **Closure Approved With:**

\_\_\_\_\_ No Restrictions

\_\_\_\_\_ Listing on GIS Registry due to Groundwater impacts

\_\_\_\_\_ Listing on GIS Registry due to Soil impacts

\_\_\_\_\_ Zoning Verification

\_\_\_\_\_ Deed Restriction

\_\_\_\_\_ Deed Notice

\_\_\_\_\_ Site Specific Close Out Letter

\_\_\_\_\_ Well Abandonment Documentation

\_\_\_\_\_ Soil Disposal Documentation

\_\_\_\_\_ NR 140 Exemption For: \_\_\_\_\_

\_\_\_\_\_ VPLE Insurance needed

\_\_\_\_\_ Other Conditions/Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ **Closure Denied, Needs More:**

\_\_\_\_\_ Investigation

\_\_\_\_\_ Groundwater Monitoring

\_\_\_\_\_ Soil Remediation

\_\_\_\_\_ Groundwater Remediation

\_\_\_\_\_ Documentation of Soil Landspreading or Biopile Destiny

\_\_\_\_\_ Specific Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WDNR BRRTS CASE # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ WDNR SITE NAME : \_\_\_\_\_

**FOR DEPARTMENT USE ONLY**

PROJECT MANAGER: \_\_\_\_\_ Date Reviewed: \_\_\_\_\_

Approved  Denied  Sent to Committee

CLOSURE COMMITTEE DECISION ON CLOSURE:

SECOND COMMITTEE REVIEW DATE: \_\_\_\_\_  Approved  Denied

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

**COMMITTEE RECOMMENDATION:**

\_\_\_\_\_ **Closure Approved With:**

- \_\_\_\_\_ No Restrictions
- \_\_\_\_\_ Listing on GIS Registry due to Groundwater impacts
- \_\_\_\_\_ Listing on GIS Registry due to Soil impacts
- \_\_\_\_\_ Zoning Verification
- \_\_\_\_\_ Deed Restriction
- \_\_\_\_\_ Deed Notice
- \_\_\_\_\_ Site Specific Close Out Letter
- \_\_\_\_\_ Well Abandonment Documentation
- \_\_\_\_\_ Soil Disposal Documentation
- \_\_\_\_\_ NR 140 Exemption For: \_\_\_\_\_
- \_\_\_\_\_ VPLE Insurance needed
- \_\_\_\_\_ Other Conditions/Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ **Closure Denied, Needs More:**

- \_\_\_\_\_ Investigation
- \_\_\_\_\_ Groundwater Monitoring
- \_\_\_\_\_ Soil Remediation
- \_\_\_\_\_ Groundwater Remediation
- \_\_\_\_\_ Documentation of Soil Landspreading or Biopile Destiny
- \_\_\_\_\_ Specific Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DOCUMENT NO.  
**2119519**

STATE BAR OF WISCONSIN FORM 1 - 1982  
**WARRANTY DEED**

THIS SPACE RESERVED FOR RECORDING DATA

**2119519**

This Deed, made between  
JOHNSON SAND & GRAVEL, INC., a Wisconsin Corporation

REGISTER'S OFFICE  
WAUKESHA COUNTY, WIS. } SS  
REC'D

96 APR 29 AM 9:17  
REEL **2222** IMAGE **0823**

*[Signature]*  
REGISTER OF DEEDS

Grantor, and  
R.R.S. PROPERTIES LLC., a Wisconsin Limited Liability  
Company

Grantee,  
Witnesseth, That the said Grantor, for a valuable consideration conveys to Grantee the  
following described real estate in WAUKESHA County,

RETURN TO  
**N8 W22590 Johnson Dr**  
**WAUKESHA, WI 53186**

Tax Parcel No:

Lot 22 of Certified Survey Map No. 3902, recorded on September 24, 1980 in Volume 30  
of Certified Survey Maps on Pages 138, 139 and 140, as Document No. 1138397, being a  
part of the NW 1/4 of Section 25, Town 7 North, Range 19 East, Town of Pewaukee,  
County of Waukesha, State of Wisconsin.

Tax Key No. PWT 0963.999.018

ADDRESS: N8 W22590 Johnson Drive

DLE/TS/JT

TRANSFER  
\$1140.00  
FEE

222  
10-

This is not homestead property.  
Together with all and singular the hereditaments and appurtenances thereunto belonging;

And JOHNSON SAND & GRAVEL, INC., a Wisconsin Corporation  
warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except  
municipal and zoning ordinances and agreements entered under them, recorded building and use restrictions and covenants, and general  
taxes levied in the year of closing and subsequent years, and recorded easements for the distribution of utility and municipal services  
and will warrant and defend the same.

Dated this 18TH day of April, 1996

*[Signature]* (SEAL) \_\_\_\_\_ (SEAL)

ROBERT A. JOHNSON, SECRETARY

\_\_\_\_ (SEAL) \_\_\_\_\_ (SEAL)

**AUTHENTICATION**

**ACKNOWLEDGEMENT**

Signature(s) of

STATE OF WISCONSIN

Waukesha County. } SS.

authenticated this \_\_\_\_\_ day of \_\_\_\_\_

Personally came before me this 18th day of  
April, 1996 the above named  
ROBERT A. JOHNSON, SECRETARY

TITLE: MEMBER STATE BAR OF WISCONSIN

to me known to be the person(s) who executed the foregoing  
instrument and acknowledged the same.

*[Signature]*  
*[Signature]*

(If not, \_\_\_\_\_  
authorized by § 700.00, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY

Notary Public Washington County, Wis.

My Commission is permanent: (If not, state expiration date: \_\_\_\_\_)

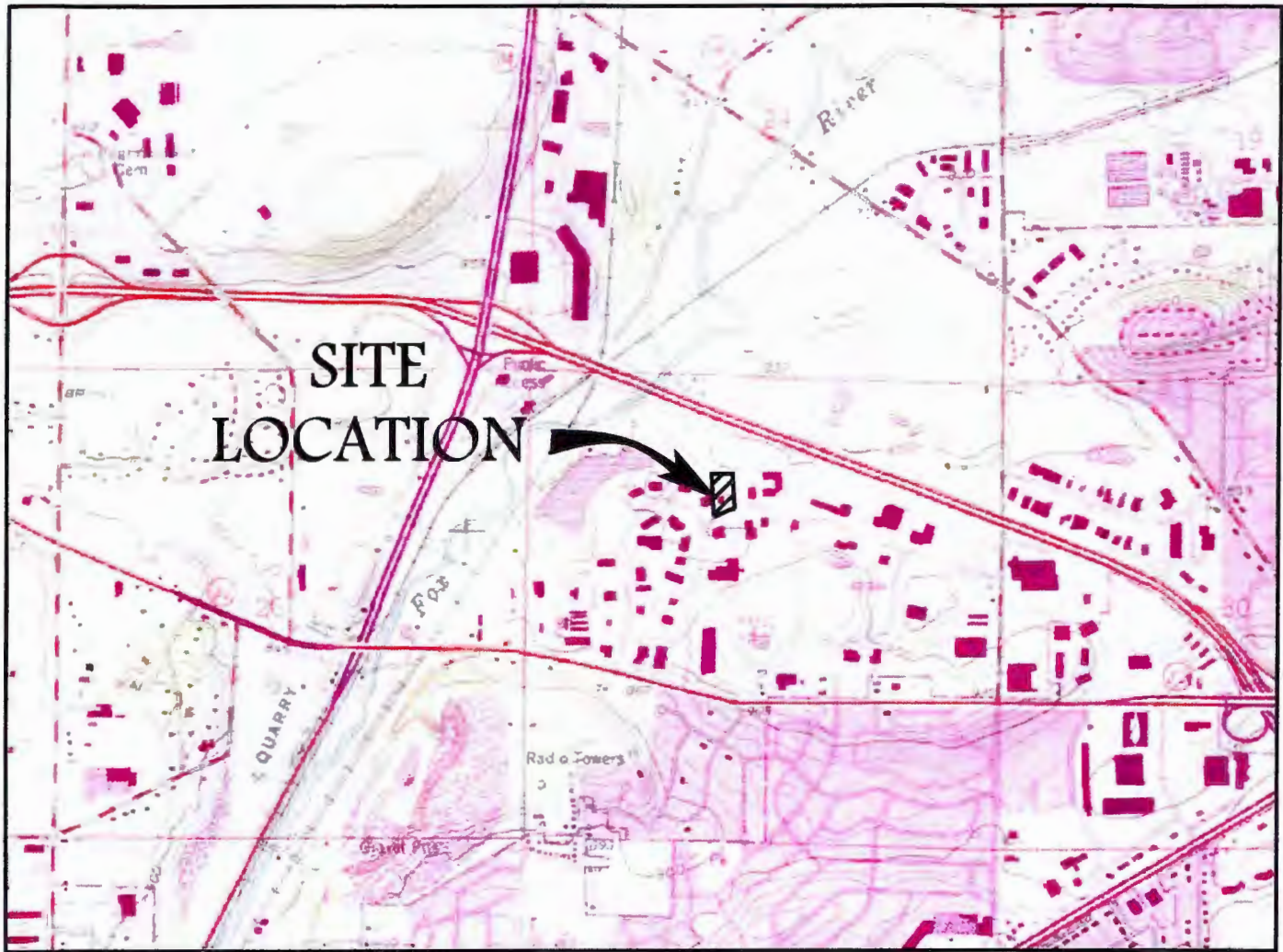
J. BUSHNELL NIELSEN

(Signatures may be authenticated or acknowledged. Both are not necessary.)

Sept 28, 1997

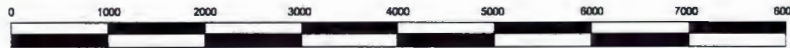
\* Names of persons signing in any capacity should be typed or printed below their signatures.





**SITE  
LOCATION**

SCALE IN FEET  
1" = 2000'



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

BASE MAP SOURCE: USGS 7.5 MINUTE QUADRANGLE, WAUKESHAG, WISCONSIN, 1992 (NATIONAL GEOGRAPHIC HOLDINGS, INC.)

**Northern Environmental**

Hydrologists • Engineers • Surveyors • Scientists

12075 North Corporate Parkway, Suite 210, Mequon, Wisconsin 53092  
Phone: 800-776-7140 Fax: 262-241-8222

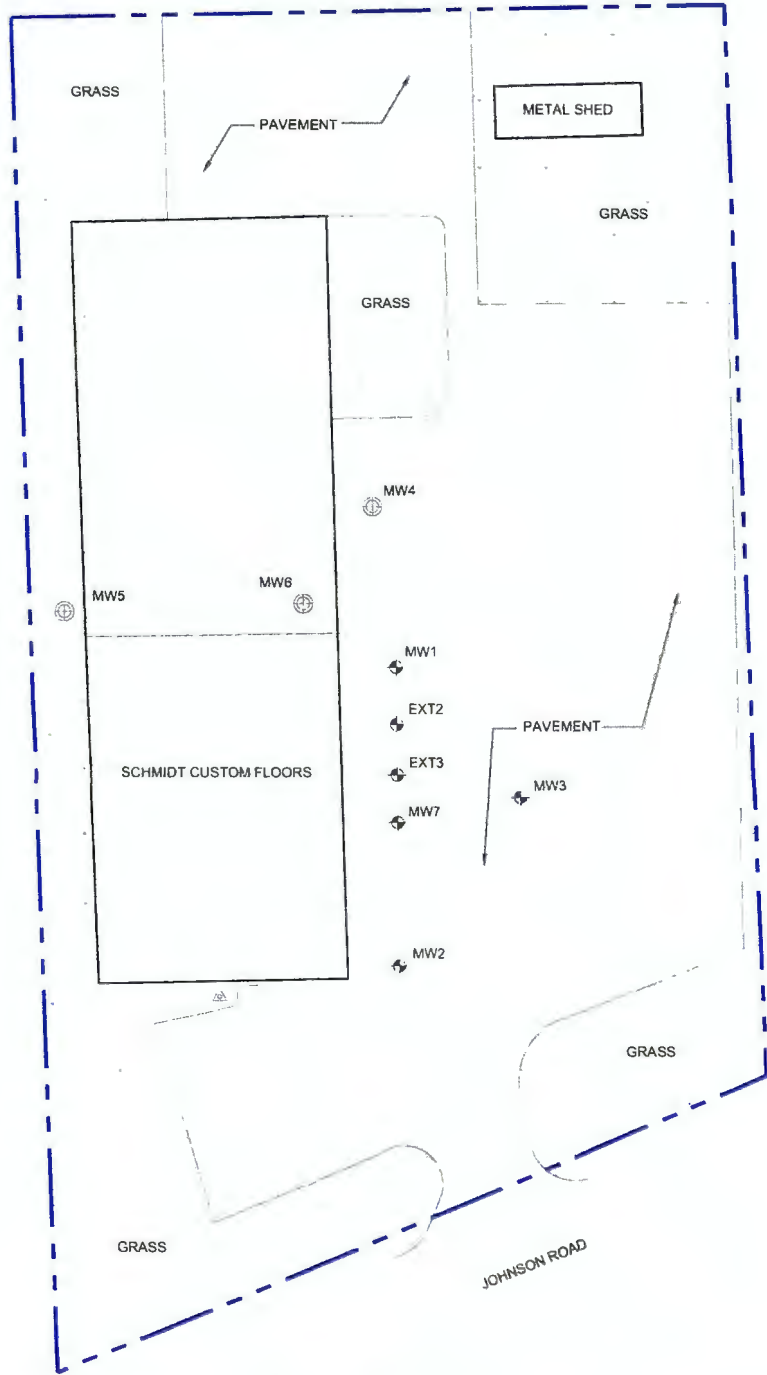
WISCONSIN ▲ MICHIGAN ▲ ILLINOIS ▲ IOWA

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

**SITE LOCATION  
& LOCAL TOPOGRAPHY**

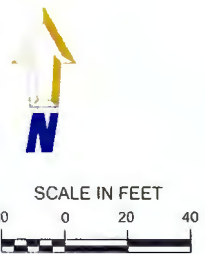
**JOHNSON SAND & GRAVEL  
PEWAUKEE, WISCONSIN**

|                |               |                  |                                  |          |
|----------------|---------------|------------------|----------------------------------|----------|
| DATE: 07/06/07 | DRAWN BY: BMP | TASK NUMBER: 100 | PROJECT NUMBER: JSG 01-2200-2866 | FIGURE 1 |
|----------------|---------------|------------------|----------------------------------|----------|



**LEGEND**

- 
**MW4** MONITORING WELL LOCATION AND IDENTIFICATION DESTROYED BY CONSTRUCTION
- 
**MW1** MONITORING WELL LOCATION AND IDENTIFICATION
- 
 FORMER POTABLE WELL LOCATION
- 
 PROPERTY BOUNDARY



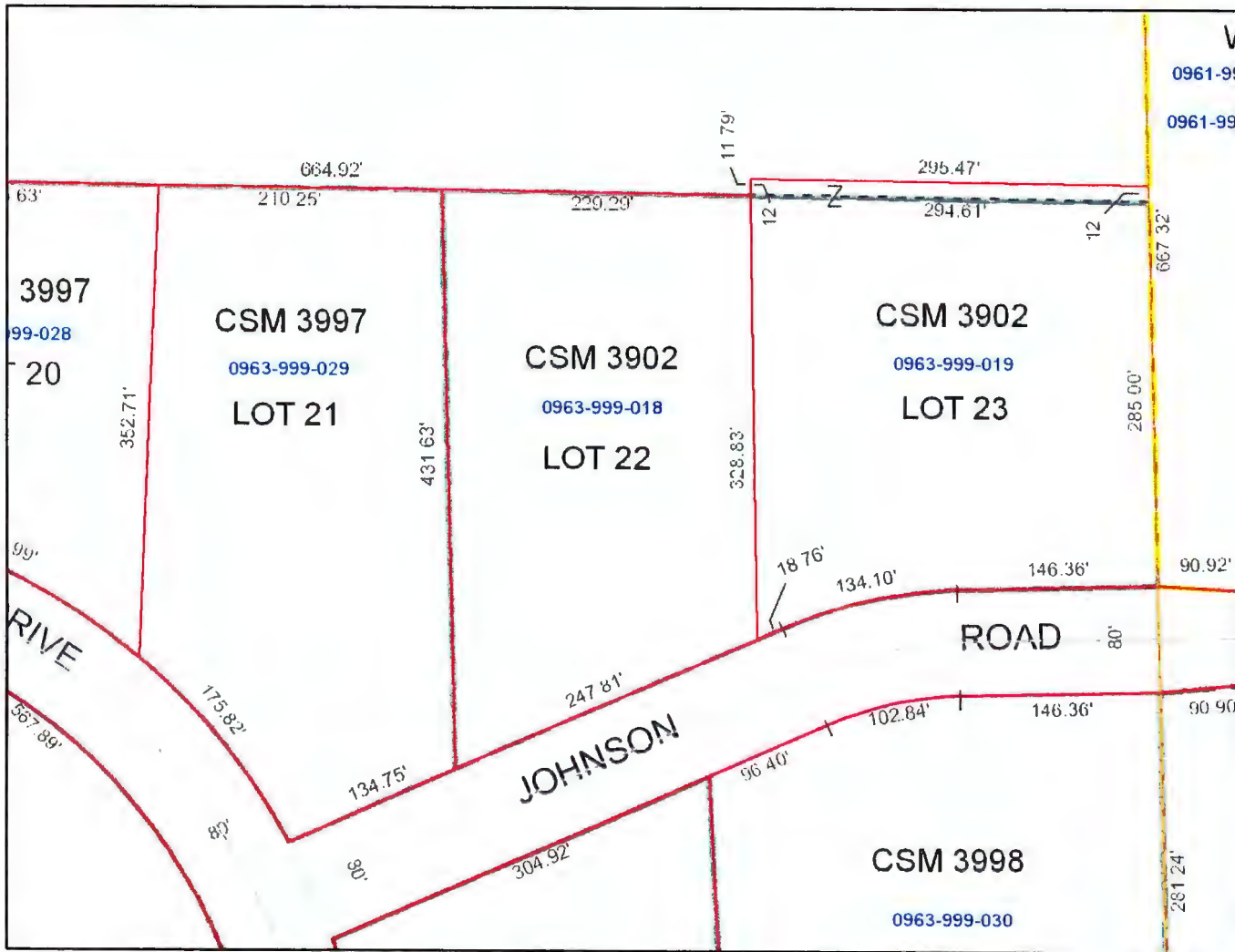
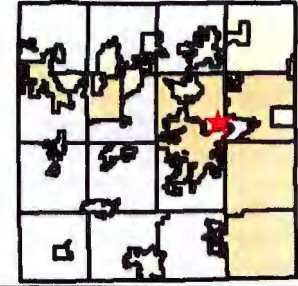
**Northern Environmental**  
 Hydrologists • Engineers • Surveyors • Scientists  
 12075 North Corporate Parkway, Suite 210, Mequon, Wisconsin 53092  
 Phone: 800-776-7140 Fax: 262-241-8222

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DATE: 07/06/07 DRAWN BY: BMP TASK NUMBER: 100

|   |                  |
|---|------------------|
| <b>SITE LAYOUT</b>                                  |                  |
| FORMER JOHNSON SAND & GRAVEL<br>PEWAUKEE, WISCONSIN |                  |
| PROJECT NUMBER                                      | JSG 01-2200-2866 |
| FIGURE  | 1                |



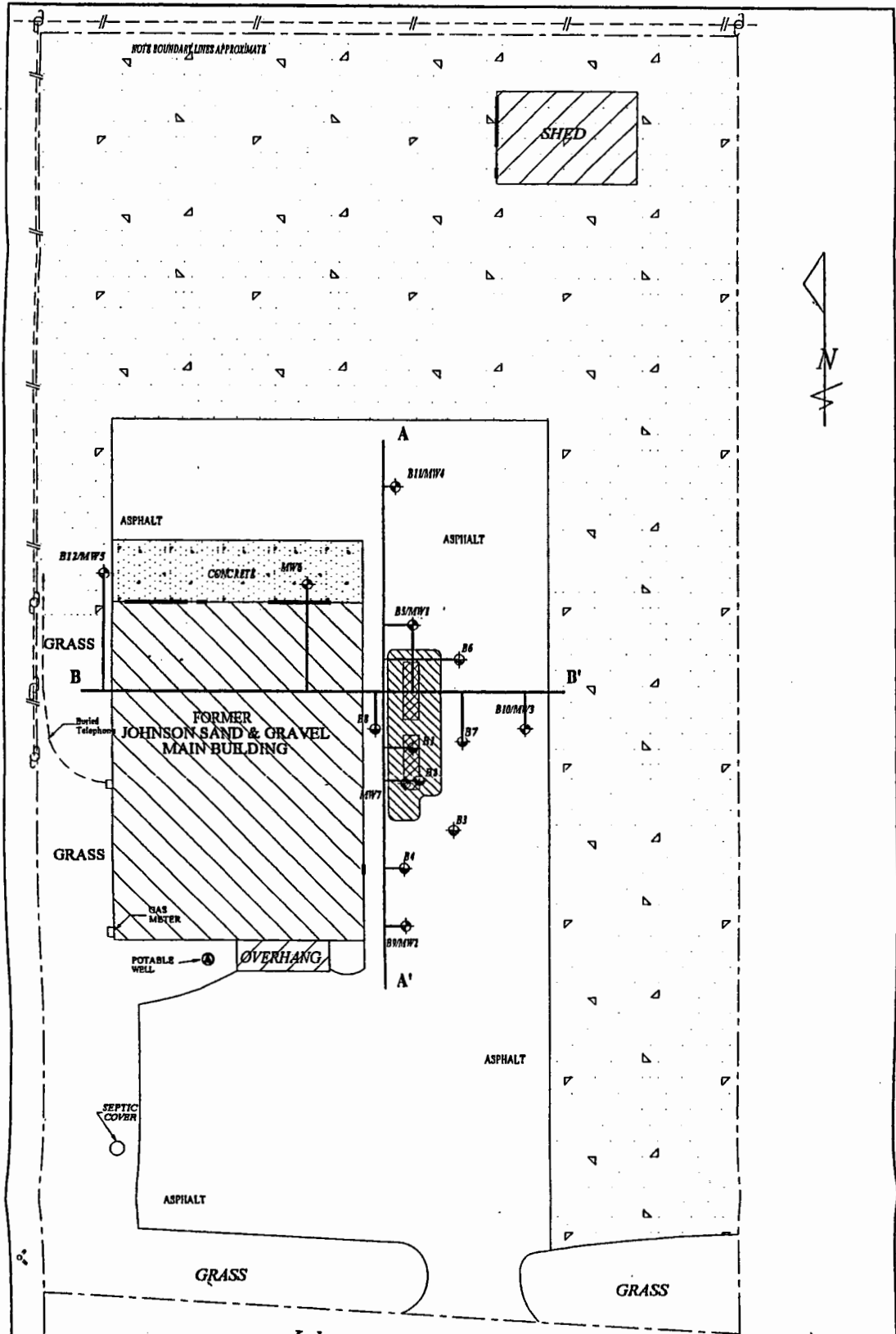
The information and depictions found on this site are for informational purposes only and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein or for use which ignores this warning.

Notes: CSM 3902: Former Johnson Sand and Gravel Property

## Legend

- Points of Interest**
- Type**
- ✚ Airport
  - Cemetery
  - ⚡ Fire Station
  - 🏛️ Government Building
  - 🏥 Hospital
  - 📖 Library
  - 📮 Post Office
  - ⚡ Park or Recreation
  - 🎓 School
  - 🏘️ Unincorporated Place
  - 🌳 County Parks
  - 🚓 Police Station
  - ⚡ Sheriff Substation
  - 🗺️ Civil Division Boundaries
  - PLSS Section Lines
  - PLSS Quarter Section Lines
- Cartographic Elements**
- Type**
- Easement Line (Major)
  - Easement Arrow
  - Easement Tie Line
  - Identification Arrow
  - Mound Line
  - Note Leader
  - Parcel Line (Water)
  - Tangency Tic
  - Tie Hook
  - Tie Line
  - ROW Centerline
  - RR ROW Centerline
  - ROW Radius
  - Sub Block 100
  - Sub Block 200
  - Parcels
  - Shared Interest Parcels
- Road Right of Way**
- ROW Type**
- Dedicated
  - Proposed
  - Reserved
  - Vacated
  - Assessor Plat
  - Condo Plat
  - CSM
  - Subdivision Plat
- Reserved Rights of Way**
- RR ROW Status**
- Active
  - Relined
  - Lakes and Rivers
  - Shoals and Creeks





**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊗ - Hydrant
- //— Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- - - Property Line
- Boried Line



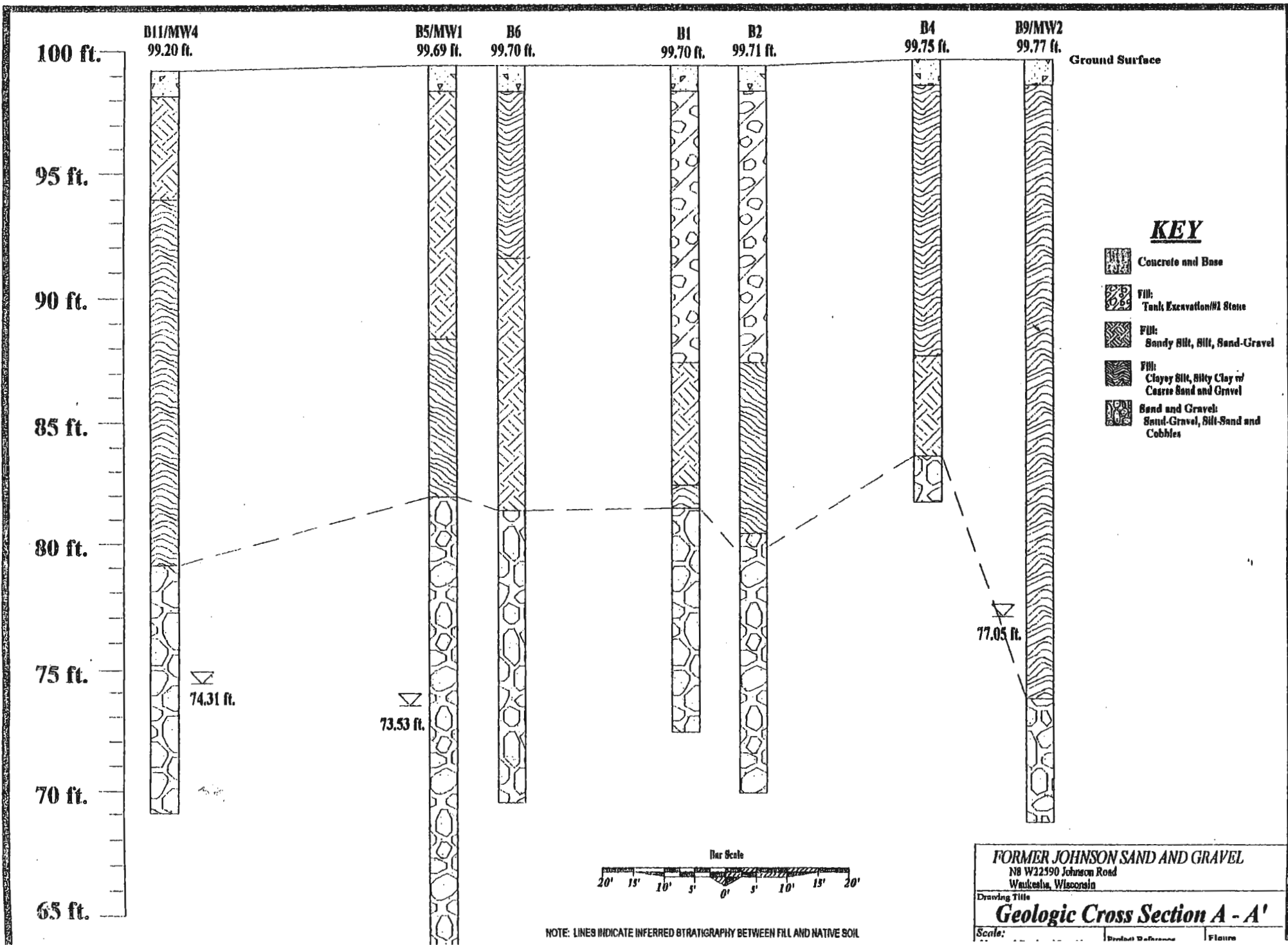
\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

**Figure Name**  
**Geologic Cross-Section Location Map**

**SITE NAME AND LOCATION**  
Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road Waukesha, WI

**PROJECT REFERENCE**  
MEI #0305

**FIGURE NAME**  
Figure 3



▽  
74.31 ft.

▽  
73.53 ft.

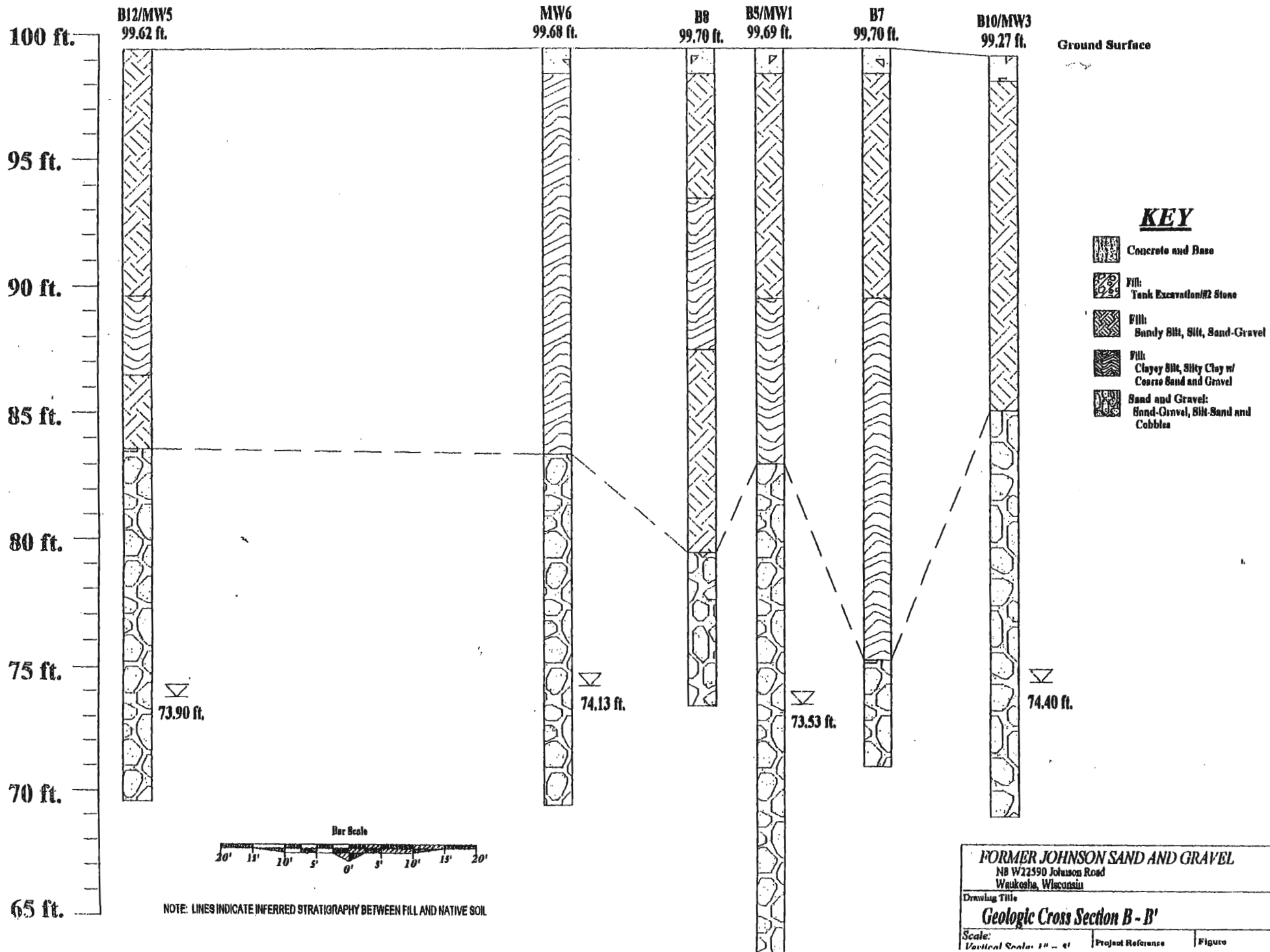
▽  
77.05 ft.

NOTE: LINES INDICATE INFERRED STRATIGRAPHY BETWEEN FILL AND NATIVE SOIL

**FORMER JOHNSON SAND AND GRAVEL**  
 NB W22590 Johnson Road  
 Waukegan, Wisconsin

Drawing Title  
**Geologic Cross Section A - A'**

Scale: \_\_\_\_\_



100 ft.

95 ft.

90 ft.

85 ft.

80 ft.

75 ft.

70 ft.

65 ft.

B12/MW5  
99.62 ft.

MW6  
99.68 ft.

B8  
99.70 ft.

B5/MW1  
99.69 ft.

B7  
99.70 ft.

B10/MW3  
99.27 ft.

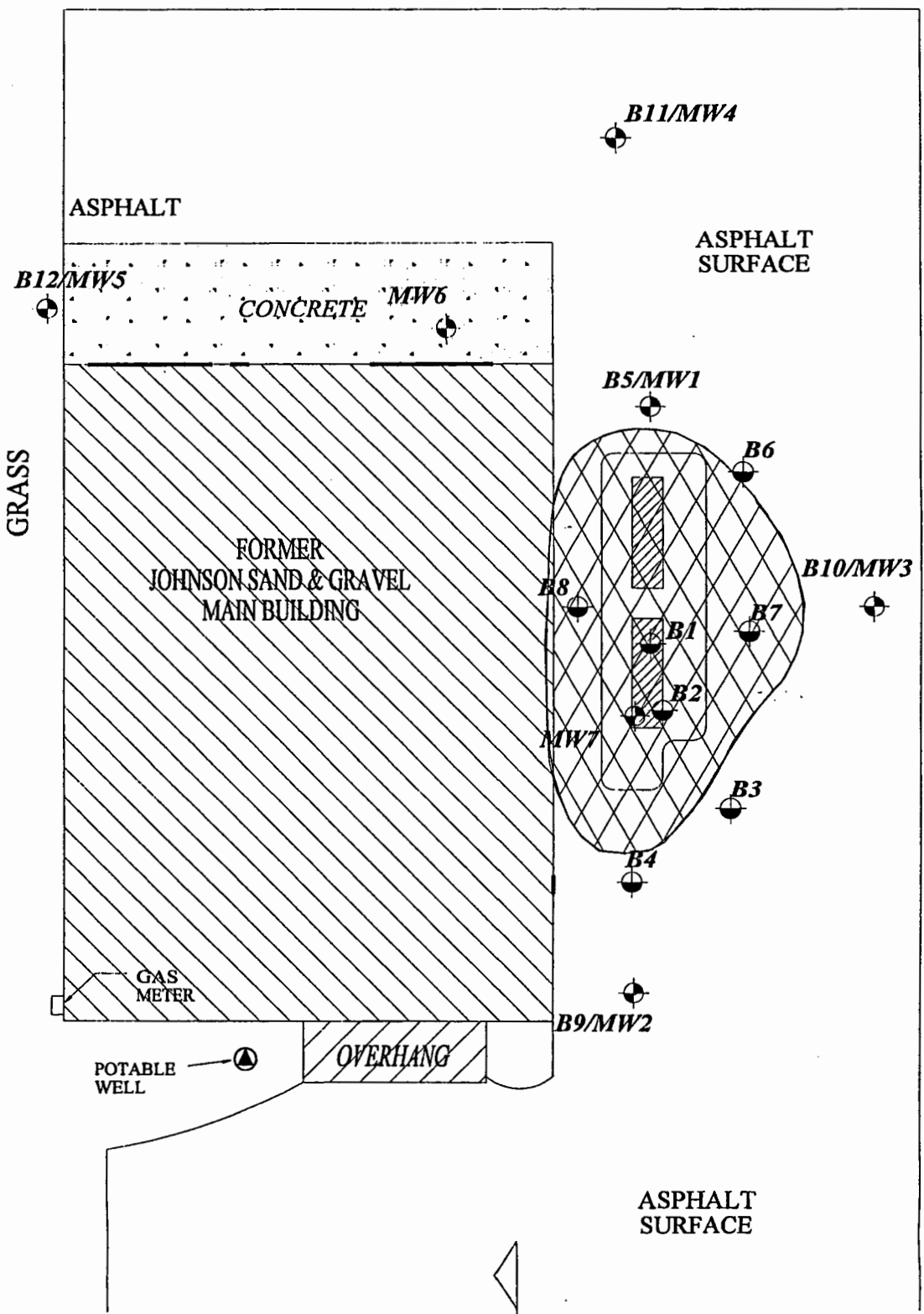
73.90 ft.

74.13 ft.

73.53 ft.

74.40 ft.

GRAVEL  
SURFACE



**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊙ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊙ - Utility Pole
- — — Property Line
- — — Buried Line



\* Dimensions And Locations On Map Are  
Approximate and For Reference Only.  
Site Has Not Been Surveyed.

|  |                                |
|--|--------------------------------|
| FIGURE NAME<br><b>EXTENT OF SOIL CONTAMINATION<br/>(Exceeding NR720 Soil Standards)</b>                        |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #1401</b>  | FIGURE NAME<br><b>Figure 4</b> |

**TABLE 3**  
**SOIL QUALITY RESULTS**  
**Former Johnson Sand and Gravel Site**

|                        | B1<br>(16-18') | B1<br>(24-26') | B2<br>(12-14') | B2<br>(22-24') | B2<br>(28-30') | B3<br>(12-14') | B3<br>(26-28') | B4<br>(8-10') | B4<br>(14-16') | B5<br>(6-8') | B5<br>(20-22') | B5<br>(28-30') | B6<br>(12-14') | B6<br>(20-22') | B7<br>(4-6') | B7<br>(14-16') | B7<br>(22-24') | B8<br>(10-12') | B8<br>(18-20') | B8<br>(22-24') | M3<br>composite | M3<br>(14-16') | Generic<br>RCL's |     |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|--------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|------------------|-----|
| GRO (mg/kg)            | 540            | ND             | 350            | 250            | 700            | ND             | ND             | ND            | ND             | ND           | 11             | ND             | ND             | 96             | ND           | 170            | ND             | ND             | ND             | 30             | NA              | ND             | 100              |     |
| DRO (mg/kg)            | 750            | 9.4            | 1600           | 370            | 4400           | 4.7            | ND             | 6.9           | ND             | 23           | 43             | ND             | ND             | 92             | 4.1          | 350            | ND             | 13             | 9.6            | 100            | 120             | ND             | 100              |     |
| Lead (mg/kg)           | 5.4            | 3.8            | ND             | 5.4            | 5.4            | 9.0            | 4.7            | 5.6           | 13             | 12           | ND             | ND             | 7.8            | 3.4            | ND           | ND             | 7.8            | 10             | 5.2            | ND             | NA              | NA             | 50               |     |
| Detected VOCs (ug/kg)  |                |                |                |                |                |                |                |               |                |              |                |                |                |                |              |                |                |                |                |                |                 |                |                  |     |
| Benzene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | ND              | NA             | ND               | 5.5 |
| n-Butylbenzene         | 2000           | ND             | 750            | 1900           | 3300           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 270            | ND           | 74             | ND             | ND             | ND             | 73             | NA              | ND             | NSE              |     |
| sec-Butylbenzene       | 2000           | ND             | 790            | 1800           | 3600           | ND             | ND             | ND            | 37             | ND           | 40             | 40             | ND             | 310            | ND           | 80             | 35             | ND             | ND             | 76             | NA              | ND             | NSE              |     |
| cis-1,2 Dichloroethene | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | 43             | ND             | 100          | ND             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |     |
| Ethylbenzene           | 930            | ND             | 260            | 960            | 970            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 33             | ND             | ND             | ND             | ND             | NA              | ND             | 2900             |     |
| Isopropylbenzene       | 860            | ND             | 290            | 860            | 1500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 150            | ND           | 32             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |     |
| p-Isopropyltoluene     | 1300           | ND             | 530            | 1200           | 2400           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 43             | ND             | ND             | ND             | 130            | NA              | ND             | NSE              |     |
| n-Propylbenzene        | ND             | ND             | 460            | 1400           | 2500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 50             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |     |
| Naphthalene            | 5200           | ND             | 1600           | 4300           | 7200           | ND             | ND             | ND            | ND             | ND           | 51             | 67             | ND             | 340            | ND           | 270            | ND             | ND             | ND             | 83             | NA              | ND             | NSE              |     |
| Tetrachloroethene      | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 120            | ND           | ND             | ND             | ND             | ND             | 66             | NA              | ND             | NSE              |     |
| Toluene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 1500             |     |
| 1,2,4-Trimethylbenzene | 6500           | ND             | 1900           | 3500           | 7600           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 150            | ND             | ND             | ND             | 74             | NA              | ND             | NSE              |     |
| 1,3,5-Trimethylbenzene | 2300           | ND             | 550            | 1800           | 3000           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 70             | ND           | 51             | ND             | ND             | ND             | 67             | NA              | ND             | NSE              |     |
| Total Xylenes          | 1730           | ND             | 110            | ND             | 390            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 4100             |     |

**Notes:**

mg/kg - milligrams per kilogram

ug/kg - micrograms per kilogram

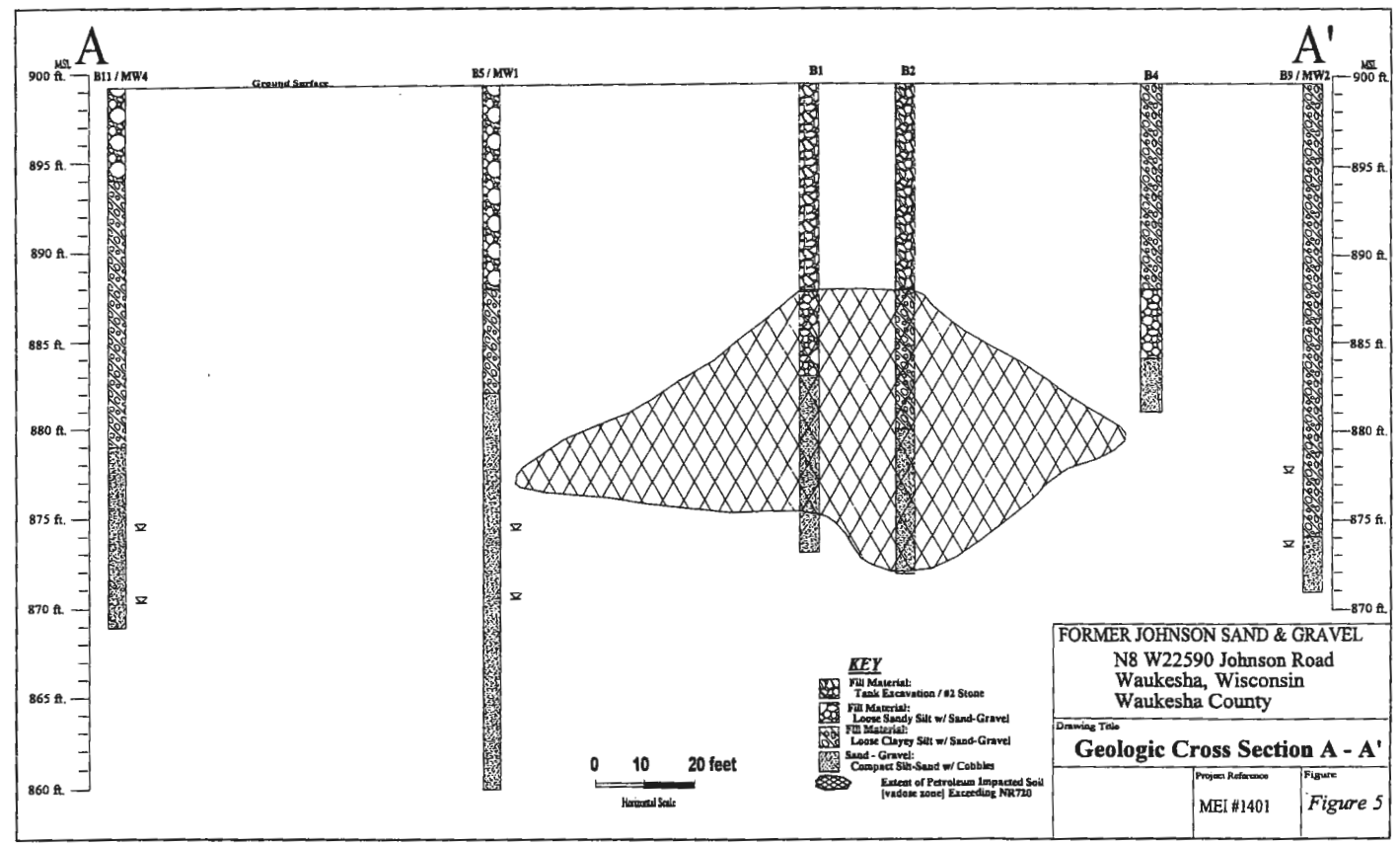
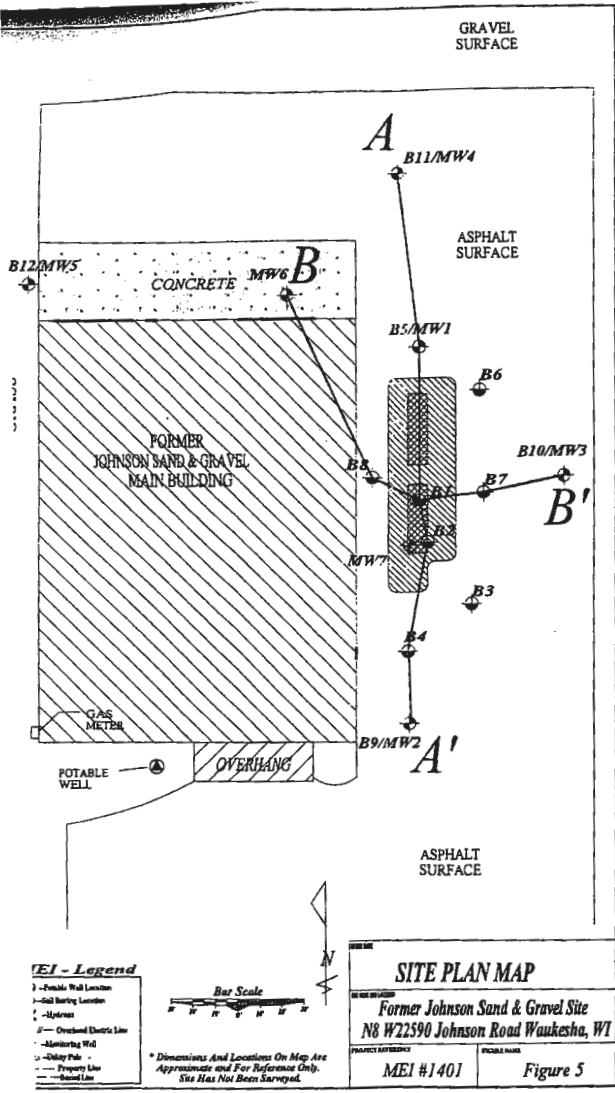
NA - Not Analyzed

ND - Not Detected

NSE - No Standard Established

00.00 - Shaded numbers indicate concentrations exceeding WDNR soil cleanup guidelines in NR720





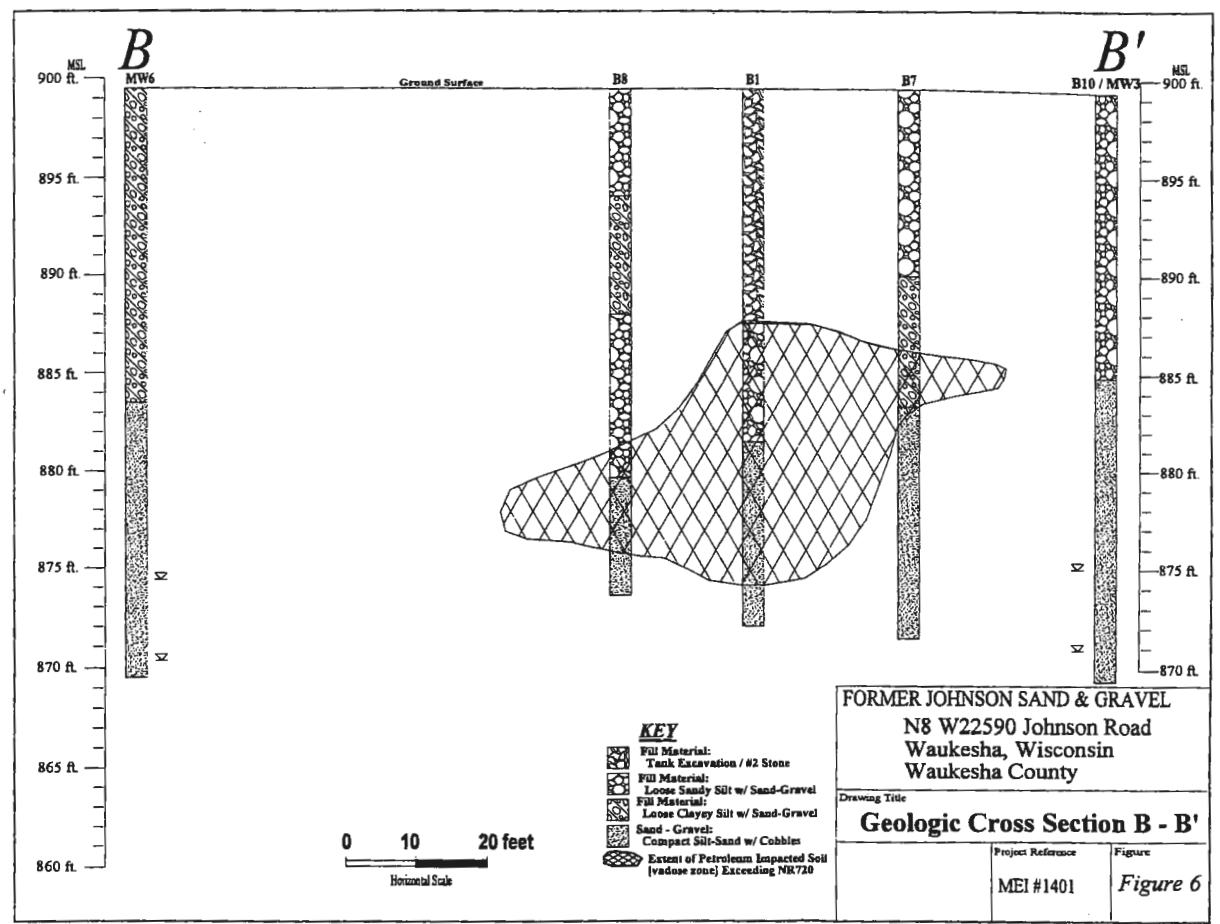
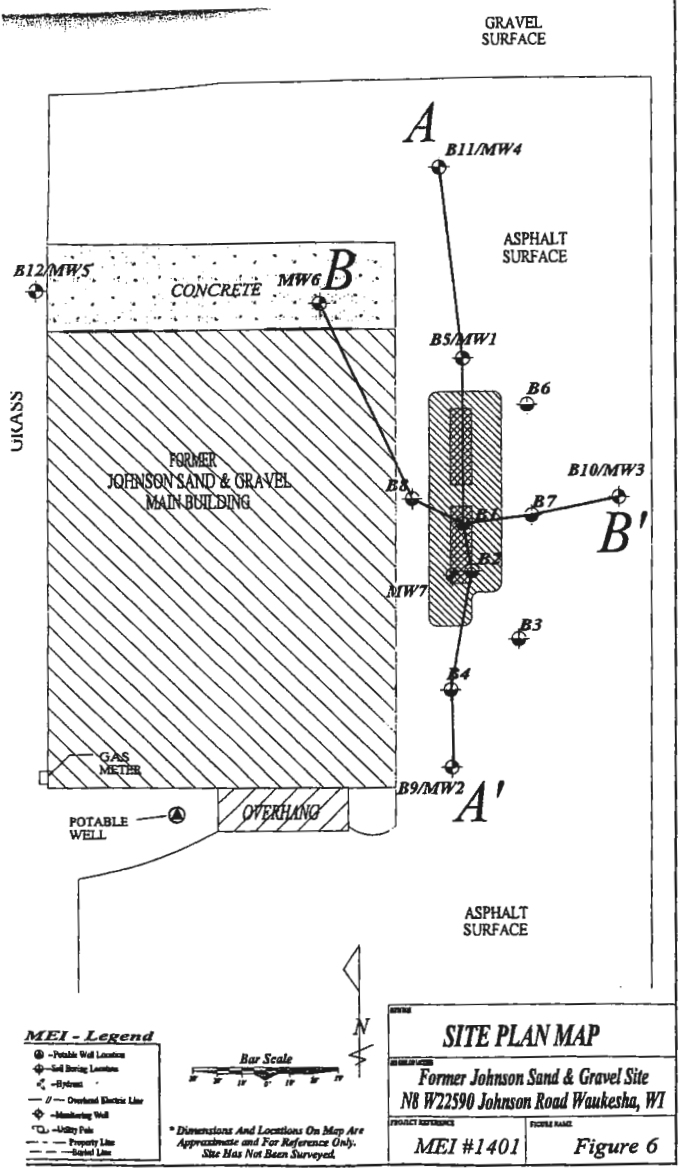
**FEI - Legend**

- Double Wall Location
- Soil Boring Location
- Meter
- Overhead Electric Line
- Monitoring Well
- Utility Pole
- Property Line
- Sand Line

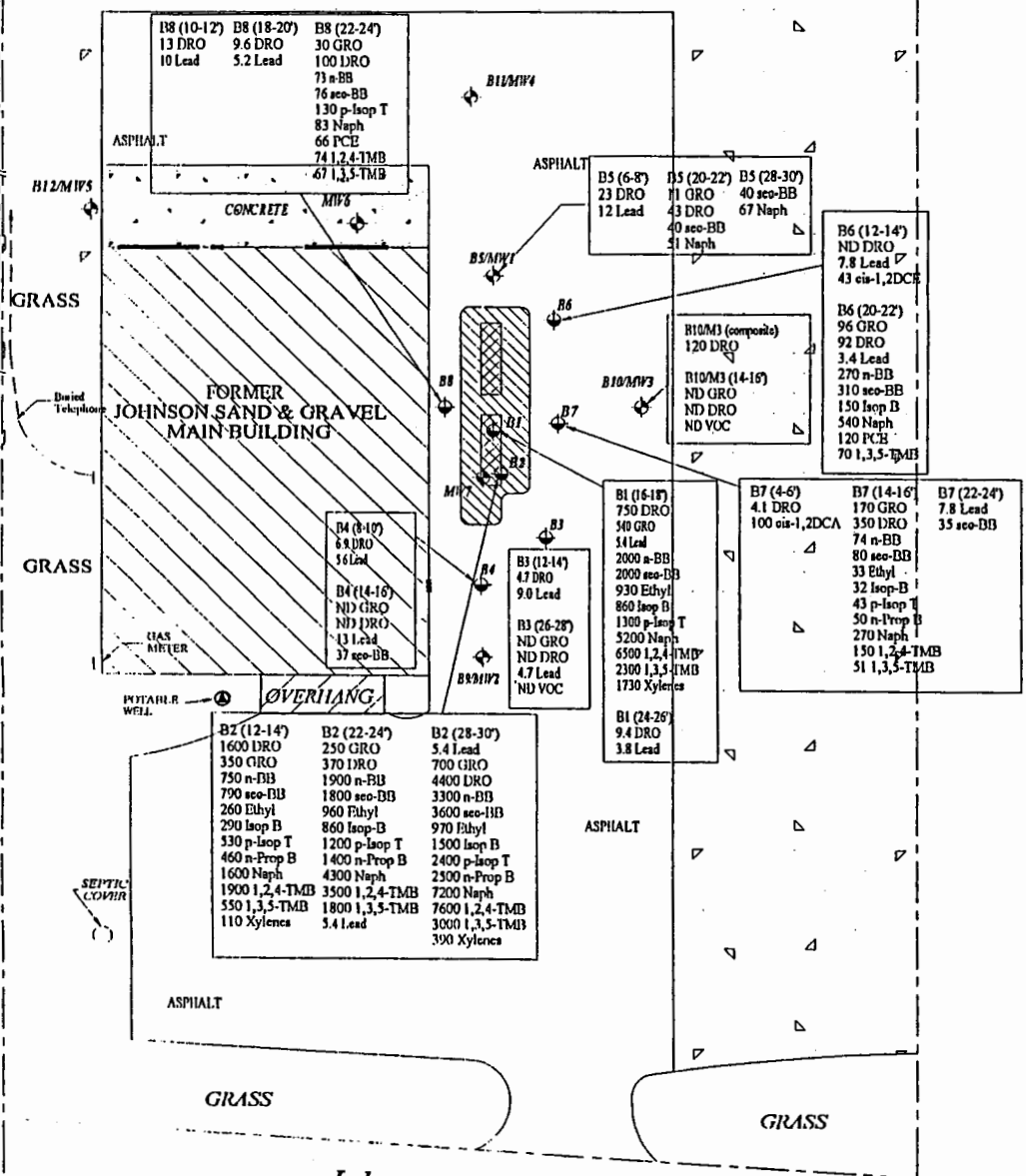
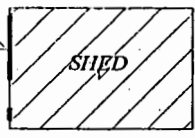
Bar Scale: 0 10 20 feet

**KEY**

- Fill Material: Trench Excavation / #1 Stone
- Fill Material: Loose Sandy Silt w/ Sand-Gravel
- Fill Material: Loose Clayey Silt w/ Sand-Gravel
- Sand - Gravel: Compact Silt-Sand w/ Cobbles
- Extent of Petroleum Impacted Soil (vadose zone) Exceeding NIK720



NOTE: DIMENSION LINES APPROXIMATE



**MEI - Legend**

- ⊕ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- (T) - Utility Pole
- — — Property Line
- ⋯ Buried Line



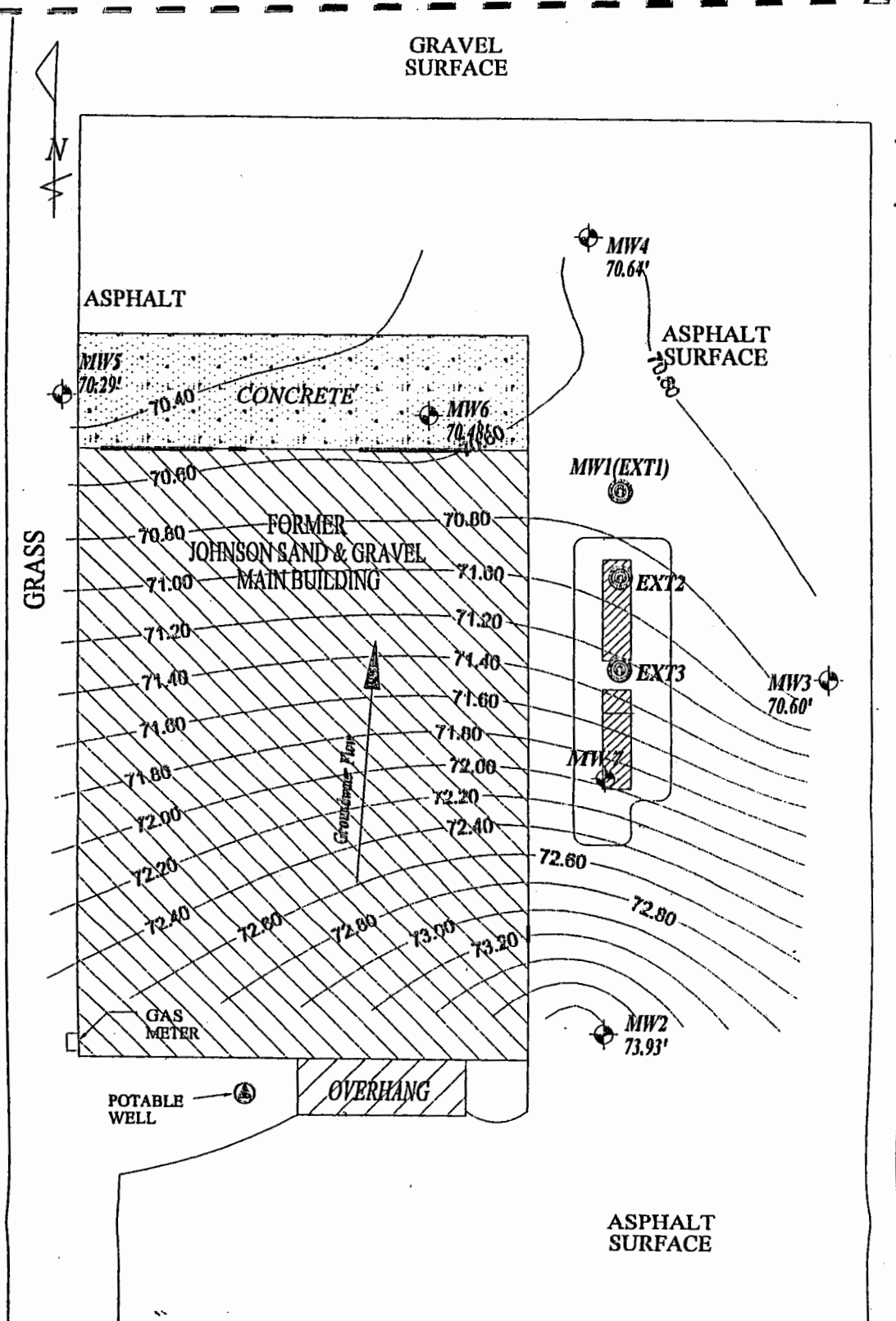
\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

FIGURE NAME  
**Soil Analytical Test Results**

SITE NAME AND LOCATION  
**Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road Waukesha, WI**

PROJECT REFERENCE  
**MEI #0305**

FIGURE NAME  
**Figure 7**



**MEI - Legend**

|  |                                      |
|--|--------------------------------------|
|  | Potable Well Location                |
|  | Groundwater Monitoring Well Location |
|  | Extraction Sumps                     |



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|   |  |
|---|--|
| <p>FIGURE NAME<br/><b>Groundwater Elevation Map</b><br/>December 18, 2002 Data</p>  |  |
| <p>SITE NAME AND LOCATION<br/><b>Former Johnson Sand &amp; Gravel Site</b><br/><b>N8 W22590 Johnson Road Waukesha, WI</b></p> |  |
| <p>PROJECT REFERENCE<br/><b>MEI #1401</b></p>   | <p>FIGURE NAME<br/><b>Figure 2</b></p> |

**Table 1 Groundwater Elevation Data, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

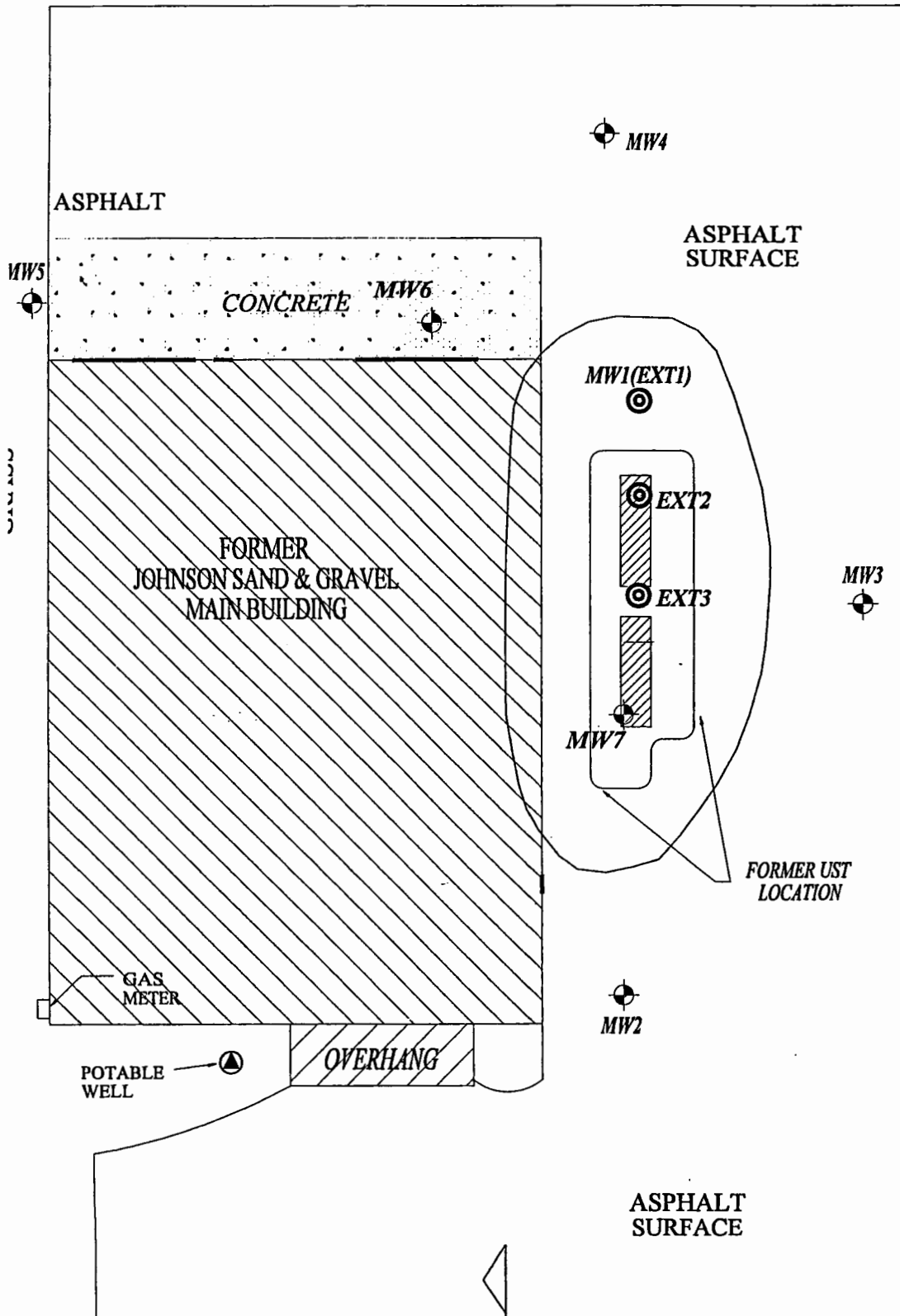
| Well ID   | Date     | Ground Surface Elevation (feet) | Reference Point Elevation* (feet) | Depth to Water (feet below Reference Point) | Water Table Elevation (feet) |
|-----------|----------|---------------------------------|-----------------------------------|---|------------------------------|
| MW1/EXT-1 | 10/13/04 | 99.69                           | 99.13                             | 29.13                                       | 70.00                        |
|           | 02/07/06 |                                 |                                   | 26.15                                       | 72.98                        |
|           | 08/23/06 |                                 |                                   | 26.65                                       | 72.48                        |
|           | 11/30/06 |                                 |                                   | 24.83                                       | 74.30                        |
|           | 02/23/07 |                                 |                                   | 27.18                                       | 71.95                        |
|           | 05/18/07 |                                 |                                   | 22.61                                       | 76.52                        |
| EXT2      | 10/13/04 | 99.69                           | 99.30                             | 29.37                                       | 69.93                        |
|           | 08/23/06 |                                 |                                   | 26.99                                       | 72.31                        |
|           | 11/30/06 |                                 |                                   | 25.06                                       | 74.24                        |
|           | 02/23/07 |                                 |                                   | 27.44                                       | 71.86                        |
|           | 05/18/07 |                                 |                                   | 22.89                                       | 76.41                        |
| EXT3      | 10/13/04 | 99.69                           | 99.07                             | 28.94                                       | 70.13                        |
|           | 08/23/06 |                                 |                                   | 25.25                                       | 73.82                        |
|           | 11/30/06 |                                 |                                   | 24.95                                       | 74.12                        |
|           | 02/23/07 |                                 |                                   | Well Cap Frozen in Ice - Could Not Measure  |                              |
|           | 05/18/07 |                                 |                                   | 21.65                                       | 77.42                        |
| MW2       | 10/03/04 | 99.77                           | 99.34                             | 25.30                                       | 74.04                        |
|           | 08/23/06 |                                 |                                   | 24.13                                       | 75.21                        |
|           | 11/30/06 |                                 |                                   | 23.93                                       | 75.41                        |
|           | 02/23/07 |                                 |                                   | 24.60                                       | 74.74                        |
|           | 05/18/07 |                                 |                                   | 21.22                                       | 78.12                        |
| MW3       | 10/03/04 | 99.27                           | 98.81                             | 28.58                                       | 70.23                        |
|           | 08/23/06 |                                 |                                   | 28.39                                       | 70.42                        |
|           | 11/30/06 |                                 |                                   | 24.61                                       | 74.20                        |
|           | 02/23/07 |                                 |                                   | 26.94                                       | 71.87                        |
|           | 05/18/07 |                                 |                                   | 22.32                                       | 76.49                        |
| MW4       | 10/03/04 | 99.20                           | 98.78                             | 28.64                                       | 70.14                        |
| MW7       | 10/03/04 | 99.92                           | 99.55                             | 29.31                                       | 70.24                        |
|           | 08/23/06 |                                 |                                   | 26.84                                       | 72.71                        |
|           | 11/30/06 |                                 |                                   | 25.63                                       | 73.92                        |
|           | 02/23/07 |                                 |                                   | 27.69                                       | 71.86                        |
|           | 05/18/07 |                                 |                                   | 23.12                                       | 76.43                        |

Note:

Elevations are referenced to a site datum of 100 feet

\* Reference Point is the top of the monitoring well casing

GRAVEL SURFACE



**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Extraction Well Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- — — Property Line
- · — · — Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                                |
|--|--------------------------------|
| FIGURE NAME<br><b>EXTENT OF GROUNDWATER IMPACT<br/>(Exceeding NRI40 Standards)</b>                             |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #1401</b>  | FIGURE NAME<br><b>Figure 7</b> |

**Table 2 Groundwater Volatile Organic Compound Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID                  | Date Sampled | Water Table Elevation (feet below grade) | Relevant and Significant Volatile Organic Compounds (micrograms per liter) |                |                  |                        |                    |              |                  |                    |                             |             |                 |         |                   |                |         |
|--------------------------|--------------|--|--|----------------|------------------|------------------------|--------------------|--------------|------------------|--------------------|-----------------------------|-------------|-----------------|---------|-------------------|----------------|---------|
|                          |              |  | Benzene  | n-Butylbenzene | sec-Butylbenzene | cis-1,2-Dichloroethene | Di-Isopropyl Ether | Ethylbenzene | Isopropylbenzene | p-Isopropyltoluene | Methyl-tertiary-butyl-ether | Naphthalene | n-Propylbenzene | Toluene | Trimethylbenzenes | Vinyl Chloride | Xylenes |
| NR 140, Wis Adm Code PAL |              |  | 0.5  | NE             | NE               | 7                      | NE                 | 140          | NE               | NE                 | 12                          | 8           | NE              | 200     | 96                |                | 1000    |
| NR 140, Wis Adm Code ES  |              |  | 5  | NE             | NE               | 70                     | NE                 | 700          | NE               | NE                 | 60                          | 40          | NE              | 1000    | 480               |                | 10,000  |
| MW1/EXT-1                | 08/23/06     | 75.48                                    | <0.17  | <1.1           | 0.86 "J"         | 1.48 "J"               | 29.6               | 0.69         | 1.39 "J"         | 1.08 "J"           | <0.34                       | 15.6        | 0.81 "J"        | <0.59   | 0.48 "J"          | <0.2           | <1.28   |
|                          | 11/30/06     | 74.30                                    | <0.47  | <1.1           | 1.13 "J"         | 1.19 "J"               | 25.4               | 0.74 "J"     | 1.12 "J"         | <0.81              | <0.52                       | 4.6 "J"     | 1.02 "J"        | <0.59   | <1.59             | <0.2           | <1.42   |
|                          | 02/23/07     | 71.95                                    | <0.47  | <0.52          | <0.36            | 0.85 "J"               | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |
|                          | 05/08/07     | 76.52                                    | <0.47  | 1.29 "J"       | 2.1              | 2.57                   | 48                 | 1.27         | 2.35             | 1.11               | <0.52                       | 6.6         | 1.98            | <0.46   | <1.57             | 0.24 "J"       | <0.99   |
| MW3                      | 08/23/06     | 70.42                                    | <0.17  | -              | -                | -                      | -                  | <1           | -                | -                  | <0.52                       | -           | -               | <0.78   | <1.95             | <0.2           | <2.84   |
|                          | 02/23/07     | 74.20                                    | <0.47  | -              | -                | -                      | -                  | <0.38        | -                | -                  | <0.52                       | -           | -               | <0.46   | <1.57             | <0.2           | <0.99   |
| MW7                      | 08/23/06     | 72.71                                    | <0.17  | <1.1           | <0.76            | <0.5                   | 0.29               | <0.2         | <0.99            | <0.81              | <0.34                       | <2.2        | <0.61           | <0.59   | 0.37 "J"          | <0.2           | <1.28   |
|                          | 11/30/06     | 73.92                                    | <0.47  | <1.1           | <0.76            | <0.68                  | <0.71              | <0.38        | <0.99            | <0.81              | <0.52                       | <2.2        | <0.61           | <0.59   | <1.59             | <0.2           | <1.42   |
|                          | 02/23/07     | 71.86                                    | <0.47  | <0.52          | <0.36            | <0.68                  | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |
|                          | 05/08/07     | 76.43                                    | <0.47  | <0.52          | <0.36            | <0.68                  | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |

Key:  
 NE = Not established  
 - = Not analyzed  
 J = analyte detected between Limit of Detection and Limit of Quantitation  
 <x = not detected above laboratory Limit of Detection of X

**XXX** = exceeds Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL)

**XXX** = exceeds NR 140, Wis. Adm. Code enforcement standard (ES)

**Table 3 Groundwater Polynuclear Aromatic Hydrocarbon Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID                                      | Date Sampled | Water Table Elevation (ftg) | Relevant and Significant Polynuclear Aromatic Hydrocarbons (micrograms per liter) |                |            |                    |                |                      |                      |                      |          |                       |              |          |                        |                      |                      |             |              |        |
|--|--------------|-----------------------------|---|----------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|----------|-----------------------|--------------|----------|------------------------|----------------------|----------------------|-------------|--------------|--------|
|  |              |                             | Acenaphthene  | Acenaphthylene | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Chrysene | Dibenz(a,h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd)pyrene | 1-Methyl Naphthalene | 2-Methyl Naphthalene | Naphthalene | Phenanthrene | Pyrene |
| NR 140, Wis Adm Code Preventive Action Limit |              |                             | NE  | NE             | 600        | NE                 | 0.02           | 0.02                 | NE                   | NE                   | 0.02     | NE                    | 80           | 80       | NE                     | NE                   | NE                   | 8           | NE           | NE     |
| NR 140, Wis Adm Code Enforcement Standard    |              |                             | NE  | NE             | 3000       | NE                 | 0.2            | 0.2                  | NE                   | NE                   | 0.2      | NE                    | 400          | 400      | NE                     | NE                   | NE                   | 40          | NE           | NE     |
| MW1/EXT-1                                    | 08/23/06     | 75.48                       | 22  | 5.6 "J"        | 6.1 "J"    | 3.6 "J"            | <1.6           | <1.8                 | <2                   | <1.8                 | 3.0 "J"  | <1.8                  | 7.1          | 58       | <3                     | 107                  | 62                   | 13 "J"      | 67           | 24     |
|  | 11/30/06     | 74.30                       | 7.9   | 1.9            | 4.0        | 0.56               | 0.25 "J"       | 0.34                 | 0.15 "J"             | 0.16 "J"             | 1.9      | <0.09                 | 2.8          | 18       | <0.15                  | 31                   | 4.7                  | 1.5         | 22           | 9.3    |
|  | 02/23/07     | 71.95                       | 5.3   | 0.46 "J"       | 1.4        | 0.77               | <0.15          | 0.51 "J"             | <0.15                | <0.23                | 0.75     | <0.15                 | 1.9          | 8        | <0.14                  | 8.4                  | 0.51 "J"             | 1.1         | 3.6          | 5.1    |
|  | 05/08/07     | 76.52                       | 6.4   | 1.51           | 2.82       | 0.79               | 0.39 "J"       | 0.52                 | 0.223 "J"            | <0.23                | 1.78     | <0.15                 | 2.35         | 11.3     | 0.241 "J"              | 30.8                 | 6.3                  | 5.2         | 10.1         | 8.7    |
| MW3  | 08/23/06     | 70.42                       | <0.016  | <0.012         | <0.013     | <0.012             | <0.008         | <0.009               | <0.01                | <0.009               | <0.011   | <0.009                | <0.011       | <0.015   | <0.015                 | <0.018               | <0.021               | <0.028      | <0.011       | <0.01  |
|  | 02/23/07     | 74.20                       | 5.3   | 0.46 "J"       | 1.4        | 0.77               | <0.15          | 0.31 "J"             | <0.15                | <0.23                | 0.75     | <0.15                 | 1.9          | 8        | <0.14                  | 8.4                  | 0.51 "J"             | 1.1         | 3.6          | 5.1    |
| MW7  | 08/23/06     | 72.71                       | 4.4   | 1.2            | 3.1        | 1.2                | 0.25           | 0.37                 | 0.19                 | 0.14 "J"             | 1.7      | <0.045                | 3.1          | 6.7      | 0.16 "J"               | 10                   | 1.6                  | 1.3         | 5.8          | 15     |
|  | 11/30/06     | 73.92                       | 3.7   | 0.98           | 2.7        | 0.32               | 0.12 "J"       | 0.15                 | 0.072 "J"            | 0.066 "J"            | 1.2      | <0.045                | 1.7          | 6.0      | <0.075                 | 11                   | 2.5                  | 1.4         | 5.1          | 7.3    |
|  | 02/23/07     | 71.86                       | 5.0   | 1.4            | 2.4        | 0.32               | 0.19 "J"       | 0.31                 | 0.14 "J"             | <0.115               | 1.3      | <0.075                | 3.1          | 7        | 0.14 "J"               | 18                   | 2.6                  | 1.7         | 3.8          | 10     |
|  | 05/08/07     | 76.43                       | 5.7   | 0.93           | 6.3        | 1.4                | 0.40           | 0.52                 | 0.248                | 0.181 "J"            | 2.86     | <0.075                | 5.0          | 8.5      | 0.267                  | 17.5                 | 3.6                  | 1.73        | 13.2         | 22.7   |

Key:  
 ftg = feet below grade  
 NE = Not established  
 J = analyte detected between Limit of Detection and Limit of Quantitation  
 <x = not detected above laboratory Limit of Detection of X

XXX = exceeds Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit

XXX = exceeds NR 140, Wis. Adm. Code enforcement standard



August 21, 2007

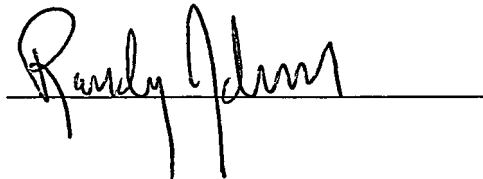
Mr. Chris Hatfield  
Northern Environmental Technologies, Incorporated  
12075 North Corporate Parkway, Suite 210  
Mequon, Wisconsin 53092

RE: Signed Statement; N8 W22590 Johnson Drive, Waukesha, Wisconsin

Dear Mr. Hatfield:

The tax key number for the above-referenced site from the Waukesha County Register of Deeds is PWT 0963.999.018. The most-recent deeds is enclosed. I, Randy Johnson, am providing a signed statement that the legal descriptions and attachments to this statement are, to the best of my knowledge, complete and accurate.

Sincerely,

A handwritten signature in cursive script, reading "Randy Johnson", is written over a horizontal line.

Enclosures

**Letter Of Transmittal**



FROM: Name CHRIS HATFIELD  
 Company NORTHERN ENVIRONMENTAL  
 Address 12075 NORTH CORPORATE PKWY  
MERQUON, WI 53092  
 Phone 262-241-3133  
 Date 9/10/07  
 FOR: Site Name JOHNSON SAND & GRAVEL  
 Address N8 W22590 JOHNSON DRIVE  
PEWAUKEE, WI  
 FID# \_\_\_\_\_  
 BRRTS# 03-68-004228

Type of Submittal:  
 LUST     ERP     VPLE     other (describe): \_\_\_\_\_

To: Program Assistant/BRR Program  
 Wisconsin Dept. of Natural Resources Box 12436  
 2300 N. Dr. Martin Luther King Jr. Dr.  
 Milwaukee, WI 53212

Check type(s) of documents enclosed. Submittals are tracked & filed based on information you provide. Include FID & BRRTS numbers assigned to this site. Identify the intent of document(s) you are submitting in order to speed processing. Please attach required fees to this form.

Are you requesting Department Review?  Y  N

| √                                   | TYPE OF DOCUMENT/REPORT   | FEE                             | DNR CODE (office use only) |
|-------------------------------------|---|---------------------------------|----------------------------|
|                                     | Notification of Release   | none                            | 01                         |
|                                     | Tank Closure/Site Assessment <i>where release(s) have been detected*</i>  | none                            | 33                         |
|                                     | Site Investigation Workplan   | \$500 if review is requested    | 35, 135~                   |
|                                     | Site Investigation Report   | \$750 if review is requested    | 37,                        |
|                                     | __ groundwater impacts above ES   |                                 | 137~,                      |
|                                     | __ no groundwater impacts or gw impacts below ES (if petroleum constituents only, case will be transferred to Department of Commerce) |                                 | 76,                        |
|                                     |   |                                 | 96                         |
|                                     | Request to Transfer Case to Department of Commerce  | none                            | 76                         |
|                                     | Off-Site Determination Request  | \$500 mandatory                 | 638~                       |
|                                     | Remedial Action Options Plan  | \$750 if review is requested    | 39, 143~                   |
|                                     | NR 720.19 Site Specific Clean-Up Goal Proposal  | \$750 if review is requested    | 67, 68~                    |
|                                     | NR 718 Landspreading Request  | \$500 mandatory                 | 61~                        |
|                                     | "Notification to Treat or Dispose" of Contaminated Soil/Water   | none                            | 99                         |
|                                     | Injection/Infiltration Request  | \$500 mandatory                 | 63~                        |
|                                     | Quarterly Report or Update  | \$500 if review is requested    | 43, 43~                    |
|                                     | O & M Form 4400-194   | \$300 if review is requested    | 92, 192~                   |
|                                     | Remedial Action Options Report  | \$750 if review is requested    | 41, 41~                    |
| <input checked="" type="checkbox"/> | Closure Review Request  | \$750 mandatory                 | 79~                        |
|                                     | NR700.11 Simple Site Closure Request  | \$250 mandatory                 | 183~                       |
|                                     | "Draft Deed Affidavit" or "Restriction required for close-out"  | none                            | 99                         |
|                                     | "Well Abandonment Forms"  | none                            | 99                         |
|                                     | Remedial Design Report  | \$750 if review is requested    | 147, 148~                  |
|                                     | Construction Documentation Reports  | \$250 if review is requested    | 151, 152~                  |
|                                     | Long Term Monitoring Plan   | \$300 if review is requested    | 24, 25~                    |
|                                     | Voluntary Party Liability Exemption (VPLE) Application  | \$250 mandatory                 | 662                        |
|                                     | VPLE "Phase I/II Assessments" or "Additional Reports"   | computed hourly                 | 99                         |
|                                     | Tax Cancellation Agreement  | \$500 mandatory                 | 654                        |
|                                     | Negotiated Agreement  | \$1000 mandatory                | 630                        |
|                                     | Lender Assessment   | \$500 mandatory                 | 686                        |
|                                     | Negotiation and Cost Recovery (municipalities only)   | fee for each service, mandatory | 90~                        |
|                                     | General Liability Clarification Request   | \$500 mandatory                 | 684                        |
|                                     | Lease Letter Request - Single Property  | \$500 mandatory                 | 646                        |
|                                     | Lease Letter Request - Multiple Properties  | \$1000 mandatory                | 646                        |
|                                     | Request for Other Technical Assistance  | \$500 mandatory                 | 90~                        |
| <input checked="" type="checkbox"/> | Other (please describe) <u>GIS Registry</u>   |                                 |                            |

\* Closure reports for sites where no releases have been detected should be sent directly to "Clean Closures" c/o DNR Remediation & Redevelopment Program, P.O. Box 7921, Madison WI 53707  
 Remarks: \_\_\_\_\_  
 letter of transmittal.doc 2/24/99

September 10, 2007  
(JSG 01-2200-2806)

Mr. Randy Johnson  
Johnson Sand & Gravel, Incorporated  
20685 West National Avenue  
New Berlin, Wisconsin 53146

RE: Groundwater Monitoring Results; Johnson Sand & Gravel (Former), N8 W22590 Johnson Drive, Pewaukee, Wisconsin; WI BRRTS# 03-68-004228, COMM# 53186166190

Dear Mr. Johnson:

Northern Environmental Technologies, Incorporated (Northern Environmental) completed the workscope proposed in the Wisconsin Department of Commerce (COMM) Public Bidding Round 32 for the Johnson Sand & Gravel, Incorporated (JSG, Inc) property located at N8W22590 Johnson Drive, Pewaukee, Wisconsin (the Site). This letter documents the results of the additional work and concludes with a request for case closure.

**BACKGROUND INFORMATION**

The approximately 2-acre Site is located at N8 W22590 Johnson Road, Pewaukee, Wisconsin. The headquarters and service area for JSG Inc formerly occupied the Site. The petroleum release occurred from two former 10,000 gallon underground storage tanks (USTs) located along the east side of the building. Between February 1996 and August 1997, Moraine Environmental, Inc (MEI) performed a subsurface investigation to define extent of soil and groundwater impact. MEI conducted free-product removal and groundwater monitoring activities between 1998 and 2002. During October 2004, JSG Inc contracted Northern Environmental to perform remedial action services at the Site as specified in the COMM Public Bidding Round 32.

**REMEDIATION ACTIVITIES**

On February 7, March 4, April 4, May 2, and June 6, 2006, groundwater was pumped from three recovery sumps near the former USTs to remove free-phase product that had been reported in monitoring wells MW1 and MW7. Extraction well EXT-1 was pumped dry, and a total of 6692 gallons was pumped. A summary of the groundwater extraction results is presented below.

**Groundwater Extraction Results**

| <u>Pumping Event</u> | <u>Gallons Pumped</u> |
|----------------------|-----------------------|
| February 7, 2006     | 861                   |
| March 4, 2006        | 1231                  |
| April 14, 2006       | 2000                  |
| May 2, 2006          | 1100                  |
| June 6, 2006         | 1500                  |

*no free product  
since Dec. 2004.*

## GROUNDWATER SAMPLING METHODS

Groundwater monitoring wells MW1 and MW7 were sampled on August 23 and November 30, 2006 and February 23 and May 8, 2007. In addition, MW3 was also sampled during the August 23, 2006 and February 23, 2007 events. The COMM bid also requested that the on-site private water supply well be sampled. However, the current site owner did not provide access to the private water supply well. Reportedly, the well has not been used since the city of Pewaukee began supplying water to the Site during 1998, and is likely not operational at this time. Monitoring well locations are illustrated in Figure 1.

The monitoring wells were purged according to Chapter NR 141, Wisconsin Administrative Code (NR 141, Wis. Adm. Code) before collecting water samples for laboratory analyses. Before purging and sampling, Northern Environmental personnel measured the depth to water in each well. A bailer was then lowered into each well and examined to determine if free-phase product was present. Groundwater samples collected from all wells were laboratory analyzed for volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). **Monitoring wells MW4, MW5, and MW6 were destroyed during construction of a warehouse and, therefore, were not sampled.**

## GROUNDWATER SAMPLING RESULTS

Water table elevation data are provided in Table 1. Since only three wells oriented in a north-south direction remain at the Site, insufficient data was available to construct more relevant groundwater contour maps. Historically, groundwater flowed north across the site and with a horizontal hydraulic gradient of 0.02 foot/foot. Historic groundwater contour maps are included with the case summary and closeout forms.

The groundwater analytical results for VOCs are summarized in Table 2. The groundwater analytical results for PAHs are summarized in Table 3. All of the monitoring wells sampled as part of the scope of work contained no VOC concentrations exceeding their respective NR 140, Wis. Adm. Code preventive action limit (PAL), with the exception of MW1 during August 23, 2006 sampling event. Free-phase product was not detected in any groundwater monitoring well at the Site. However, a petroleum sheen was observed in MW1 during the sampling events. Laboratory reports and chain-of-custody records are included in Attachment A.

The Mann-Kendall Statistical Analysis (Mann-Kendall) was prepared using groundwater quality data collected from MW1, and MW7. Based on the Mann-Kendall results, concentration trends for all PAHs exceeding NR140 ES are stable or decreasing. The Mann-Kendall results are presented in Attachment B.

## CONCLUSIONS AND RECOMMENDATIONS

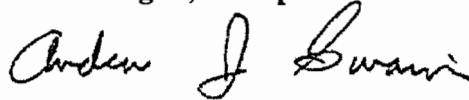
Measurable free product has not been observed in the existing monitoring wells. VOC concentrations above their respective NR 140, Wis. Adm. Code PAL have not been detected at the Site during the last four monitoring events. Various PAHs continue to be detected above their respective NR 140, Wis. Adm. Code ES in monitoring wells MW1, MW3, and MW7. However, PAH concentrations exhibit stable or decreasing trends.

Based on the results of groundwater monitoring activities, **Northern Environmental believes no further investigation or groundwater monitoring is required and, on behalf of JSG, Inc, recommends that the case be reviewed for closure.** On behalf of JSG, Inc, we request case closure. A Wisconsin Department of Natural Resources (WDNR) case summary and closeout form is enclosed. In addition, we understand the Site will be listed on the WDNR soil land groundwater Geographic Information System

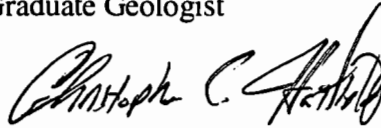
(GIS) Registry as a condition of closure. Therefore, site-specific information required to place the Site on the GIS Registry is enclosed. The associated fees to review the case for closure (\$750) and register the Site on the GIS Registry for soil (\$200) and groundwater (\$250) were forwarded to the WDNR.

We trust this information meets your needs. Please contact us if you have any questions or comments.

Sincerely,  
**Northern Environmental  
Technologies, Incorporated**



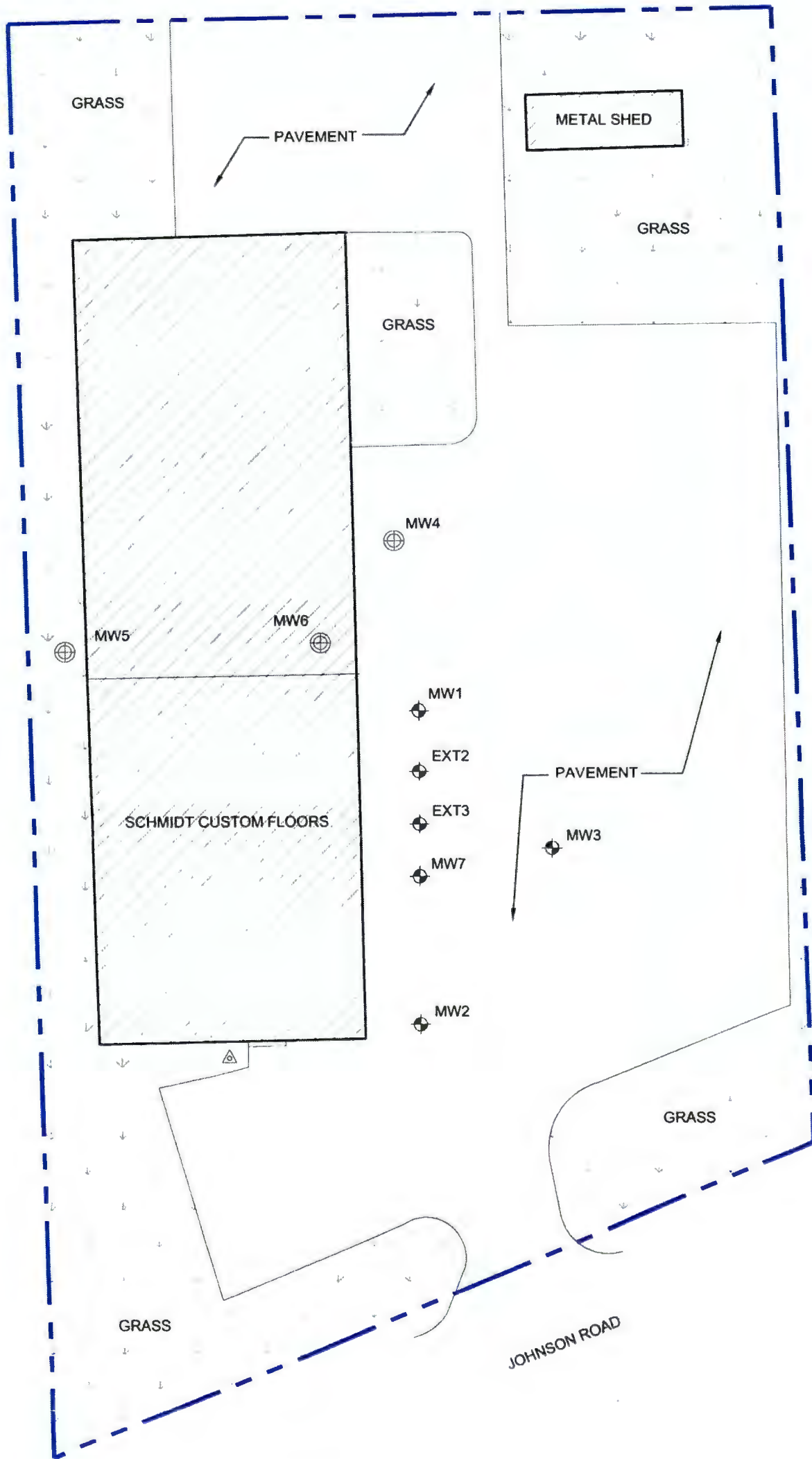
Andrew J Swaim  
Graduate Geologist



Christopher C. Hatfield, PG  
Registered Geologist

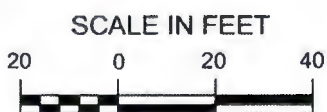
AJS/lmh  
Attachments

c: Mrs. James Delwiche, Wisconsin Department of Natural Resources  
Mr. Shawn Wenzel, Wisconsin Department of Commerce



**LEGEND**

- MW4 MONITORING WELL LOCATION AND IDENTIFICATION DESTROYED BY CONSTRUCTION
- MW1 MONITORING WELL LOCATION AND IDENTIFICATION
- FORMER POTABLE WELL LOCATION
- PROPERTY BOUNDARY



**Northern Environmental**  
 Hydrologists • Engineers • Surveyors • Scientists  
 12075 North Corporate Parkway, Suite 210, Mequon, Wisconsin 53092  
 Phone: 800-776-7140 Fax: 262-241-8222

WISCONSIN ▲ MICHIGAN ▲ ILLINOIS ▲ IOWA

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DATE: 07/06/07    DRAWN BY: BMP    TASK NUMBER: 100

**SITE LAYOUT**

FORMER JOHNSON SAND & GRAVEL  
PEWAUKEE, WISCONSIN

PROJECT NUMBER: JSG 01-2200-2866    FIGURE 1

**Table 1 Groundwater Elevation Data, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID   | Date     | Ground Surface Elevation (feet) | Reference Point Elevation* (feet) | Depth to Water (feet below Reference Point) | Water Table Elevation (feet) |
|-----------|----------|---------------------------------|-----------------------------------|---|------------------------------|
| MW1/EXT-1 | 10/13/04 | 99.69                           | 99.13                             | 29.13                                       | 70.00                        |
|           | 02/07/06 |                                 |                                   | 26.15                                       | 72.98                        |
|           | 08/23/06 |                                 |                                   | 26.65                                       | 72.48                        |
|           | 11/30/06 |                                 |                                   | 24.83                                       | 74.30                        |
|           | 02/23/07 |                                 |                                   | 27.18                                       | 71.95                        |
|           | 05/18/07 |                                 |                                   | 22.61                                       | 76.52                        |
| EXT2      | 10/13/04 | 99.69                           | 99.30                             | 29.37                                       | 69.93                        |
|           | 08/23/06 |                                 |                                   | 26.99                                       | 72.31                        |
|           | 11/30/06 |                                 |                                   | 25.06                                       | 74.24                        |
|           | 02/23/07 |                                 |                                   | 27.44                                       | 71.86                        |
|           | 05/18/07 |                                 |                                   | 22.89                                       | 76.41                        |
| EXT3      | 10/13/04 | 99.69                           | 99.07                             | 28.94                                       | 70.13                        |
|           | 08/23/06 |                                 |                                   | 25.25                                       | 73.82                        |
|           | 11/30/06 |                                 |                                   | 24.95                                       | 74.12                        |
|           | 02/23/07 |                                 |                                   | Well Cap Frozen in Ice - Could Not Measure  |                              |
|           | 05/18/07 |                                 |                                   | 21.65                                       | 77.42                        |
| MW2       | 10/03/04 | 99.77                           | 99.34                             | 25.30                                       | 74.04                        |
|           | 08/23/06 |                                 |                                   | 24.13                                       | 75.21                        |
|           | 11/30/06 |                                 |                                   | 23.93                                       | 75.41                        |
|           | 02/23/07 |                                 |                                   | 24.60                                       | 74.74                        |
|           | 05/18/07 |                                 |                                   | 21.22                                       | 78.12                        |
| MW3       | 10/03/04 | 99.27                           | 98.81                             | 28.58                                       | 70.23                        |
|           | 08/23/06 |                                 |                                   | 28.39                                       | 70.42                        |
|           | 11/30/06 |                                 |                                   | 24.61                                       | 74.20                        |
|           | 02/23/07 |                                 |                                   | 26.94                                       | 71.87                        |
|           | 05/18/07 |                                 |                                   | 22.32                                       | 76.49                        |
| MW4       | 10/03/04 | 99.20                           | 98.78                             | 28.64                                       | 70.14                        |
| MW7       | 10/03/04 | 99.92                           | 99.55                             | 29.31                                       | 70.24                        |
|           | 08/23/06 |                                 |                                   | 26.84                                       | 72.71                        |
|           | 11/30/06 |                                 |                                   | 25.63                                       | 73.92                        |
|           | 02/23/07 |                                 |                                   | 27.69                                       | 71.86                        |
|           | 05/18/07 |                                 |                                   | 23.12                                       | 76.43                        |

Note:

Elevations are referenced to a site datum of 100 feet

\* Reference Point is the top of the monitoring well casing

**Table 2 Groundwater Volatile Organic Compound Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID                  | Date Sampled | Water Table Elevation (feet below grade) | Relavant and Significant Volatile Organic Compounds (micrograms per liter) |                |                  |                        |                    |              |                  |                    |                             |             |                 |         |                   |                |         |
|--------------------------|--------------|--|--|----------------|------------------|------------------------|--------------------|--------------|------------------|--------------------|-----------------------------|-------------|-----------------|---------|-------------------|----------------|---------|
|                          |              |  | Benzene  | n-Butylbenzene | sec-Butylbenzene | cis-1,2-Dichloroethene | Di-Isopropyl Ether | Ethylbenzene | Isopropylbenzene | p-Isopropyltoluene | Methyl-tertiary-butyl-ether | Naphthalene | n-Propylbenzene | Toluene | Trimethylbenzenes | Vinyl Chloride | Xylenes |
| NR 140, Wis Adm Code PAL |              |  | 0.5  | NE             | NE               | 7                      | NE                 | 140          | NE               | NE                 | 12                          | 8           | NE              | 200     | 96                |                | 1000    |
| NR 140, Wis Adm Code ES  |              |  | 5  | NE             | NE               | 70                     | NE                 | 700          | NE               | NE                 | 60                          | 40          | NE              | 1000    | 480               |                | 10,000  |
| MW1/EXT-1                | 08/23/06     | 75.48                                    | <0.17  | <1.1           | 0.86 "J"         | 1.48 "J"               | 29.6               | 0.69         | 1.39 "J"         | 1.08 "J"           | <0.34                       | 15.6        | 0.81 "J"        | <0.59   | 0.48 "J"          | <0.2           | <1.28   |
|                          | 11/30/06     | 74.30                                    | <0.47  | <1.1           | 1.13 "J"         | 1.19 "J"               | 25.4               | 0.74 "J"     | 1.12 "J"         | <0.81              | <0.52                       | 4.6 "J"     | 1.02 "J"        | <0.59   | <1.59             | <0.2           | <1.42   |
|                          | 02/23/07     | 71.95                                    | <0.47  | <0.52          | <0.36            | 0.85 "J"               | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |
|                          | 05/08/07     | 76.52                                    | <0.47  | 1.29 "J"       | 2.1              | 2.57                   | 48                 | 1.27         | 2.35             | 1.11               | <0.52                       | 6.6         | 1.98            | <0.46   | <1.57             | 0.24 "J"       | <0.99   |
| MW3                      | 08/23/06     | 70.42                                    | <0.17  | -              | -                | -                      | -                  | <1           | -                | -                  | <0.52                       | -           | -               | <0.78   | <1.95             | <0.2           | <2.84   |
|                          | 02/23/07     | 74.20                                    | <0.47  | -              | -                | -                      | -                  | <0.38        | -                | -                  | <0.52                       | -           | -               | <0.46   | <1.57             | <0.2           | <0.99   |
| MW7                      | 08/23/06     | 72.71                                    | <0.17  | <1.1           | <0.76            | <0.5                   | 0.29               | <0.2         | <0.99            | <0.81              | <0.34                       | <2.2        | <0.61           | <0.59   | 0.37 "J"          | <0.2           | <1.28   |
|                          | 11/30/06     | 73.92                                    | <0.47  | <1.1           | <0.76            | <0.68                  | <0.71              | <0.38        | <0.99            | <0.81              | <0.52                       | <2.2        | <0.61           | <0.59   | <1.59             | <0.2           | <1.42   |
|                          | 02/23/07     | 71.86                                    | <0.47  | <0.52          | <0.36            | <0.68                  | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |
|                          | 05/08/07     | 76.43                                    | <0.47  | <0.52          | <0.36            | <0.68                  | 27.2               | <0.38        | <0.48            | <0.35              | <0.52                       | <1.8        | <0.38           | <0.46   | <1.57             | <0.2           | <0.99   |

Key:  
 NE = Not established  
 - = Not analyzed  
 J = analyte detected between Limit of Detection and Limit of Quantitation  
 <X = not detected above laboratory Limit of Detection of X

XXX = exceeds Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL)

XXX = exceeds NR 140, Wis. Adm. Code enforcement standard (ES)



**Table 3 Groundwater Polynuclear Aromatic Hydrocarbon Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin**

| Well ID                                      | Date Sampled | Water Table Elevation (fbg) | Relevant and Significant Polynuclear Aromatic Hydrocarbons (micrograms per liter) |                |            |                    |                |                      |                      |                      |          |                        |              |          |                        |                      |                      |             |              |        |
|--|--------------|-----------------------------|---|----------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|----------|------------------------|--------------|----------|------------------------|----------------------|----------------------|-------------|--------------|--------|
|  |              |                             | Acenaphthene  | Acenaphthylene | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Chrysene | Dibenzo(a,h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd)pyrene | 1-Methyl Naphthalene | 2-Methyl Naphthalene | Naphthalene | Phenanthrene | Pyrene |
| NR 140, Wis Adm Code Preventive Action Limit |              |                             | NE  | NE             | 600        | NE                 | 0.02           | 0.02                 | NE                   | NE                   | 0.02     | NE                     | 80           | 80       | NE                     | NE                   | NE                   | 8           | NE           | NE     |
| NR 140, Wis Adm Code Enforcement Standard    |              |                             | NE  | NE             | 3000       | NE                 | 0.2            | 0.2                  | NE                   | NE                   | 0.2      | NE                     | 400          | 400      | NE                     | NE                   | NE                   | 40          | NE           | NE     |
| MW1/EXT-1                                    | 08/23/06     | 75.48                       | 22  | 5.6 "J"        | 6.1 "J"    | 3.6 "J"            | <1.6           | <1.8                 | <2                   | <1.8                 | 3.0 "J"  | <1.8                   | 7.1          | 58       | <3                     | 107                  | 62                   | 13 "J"      | 67           | 24     |
|  | 11/30/06     | 74.30                       | 7.9   | 1.9            | 4.0        | 0.56               | 0.25 "J"       | 0.34                 | 0.15 "J"             | 0.16 "J"             | 1.9      | <0.09                  | 2.8          | 18       | <0.15                  | 31                   | 4.7                  | 1.5         | 22           | 9.3    |
|  | 02/23/07     | 71.95                       | 5.3   | 0.46 "J"       | 1.4        | 0.77               | <0.15          | 0.31 "J"             | <0.15                | <0.23                | 0.75     | <0.15                  | 1.9          | 8        | <0.14                  | 8.4                  | 0.51 "J"             | 1.1         | 3.6          | 5.1    |
|  | 05/08/07     | 76.52                       | 6.4   | 1.51           | 2.82       | 0.79               | 0.39 "J"       | 0.52                 | 0.223 "J"            | <0.23                | 1.78     | <0.15                  | 2.35         | 11.3     | 0.241 "J"              | 30.8                 | 6.3                  | 5.2         | 10.1         | 8.7    |
| MW3  | 08/23/06     | 70.42                       | <0.016  | <0.012         | <0.013     | <0.012             | <0.008         | <0.009               | <0.01                | <0.009               | <0.011   | <0.009                 | <0.011       | <0.015   | <0.015                 | <0.018               | <0.021               | <0.028      | <0.011       | <0.01  |
|  | 02/23/07     | 74.20                       | 5.3   | 0.46 "J"       | 1.4        | 0.77               | <0.15          | 0.31 "J"             | <0.15                | <0.23                | 0.75     | <0.15                  | 1.9          | 8        | <0.14                  | 8.4                  | 0.51 "J"             | 1.1         | 3.6          | 5.1    |
| MW7  | 08/23/06     | 72.71                       | 4.4   | 1.2            | 3.1        | 1.2                | 0.25           | 0.37                 | 0.19                 | 0.14 "J"             | 1.7      | <0.045                 | 3.1          | 6.7      | 0.16 "J"               | 10                   | 1.6                  | 1.3         | 5.8          | 15     |
|  | 11/30/06     | 73.92                       | 3.7   | 0.98           | 2.7        | 0.32               | 0.12 "J"       | 0.15                 | 0.072 "J"            | 0.066 "J"            | 1.2      | <0.045                 | 1.7          | 6.0      | <0.075                 | 11                   | 2.5                  | 1.4         | 5.1          | 7.3    |
|  | 02/23/07     | 71.86                       | 5.0   | 1.4            | 2.4        | 0.32               | 0.19 "J"       | 0.31                 | 0.14 "J"             | <0.115               | 1.3      | <0.075                 | 3.1          | 7        | 0.14 "J"               | 18                   | 2.6                  | 1.7         | 3.8          | 10     |
|  | 05/08/07     | 76.43                       | 5.7   | 0.93           | 6.3        | 1.4                | 0.40           | 0.52                 | 0.248                | 0.181 "J"            | 2.86     | <0.075                 | 5.0          | 8.5      | 0.267                  | 17.5                 | 3.6                  | 1.73        | 13.2         | 22.7   |

Key:  
 fbg = feet below grade  
 NE = Not established  
 J = analyte detected between Limit of Detection and Limit of Quantitation  
 <x = not detected above laboratory Limit of Detection of X

XXX = exceeds Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit

XXX = exceeds NR 140, Wis. Adm. Code enforcement standard

**ATTACHMENT A**

**LABORATORY REPORTS AND  
CHAIN OF CUSTODY RECORD**

# Synergy Environmental Lab, Inc.

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

CHRIS HATFIELD  
NORTHERN ENVIRONMENTAL  
12075 N. CORPORATE PARKWAY  
MEQUON WI 53092

Report 06-Sep-06

Project Name WAUKESHA  
Project # JSG 01-2200-2506  
Lab 5014020A  
Sample ID MW1/EXT-1  
Sample Water  
Sample Date 8/23/2006

Invoice # E14020

|                        | Result   | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|------------------------|----------|------|------|------|-----|--------|-----------|---------|------|
| Organic                |          |      |      |      |     |        |           |         |      |
| PAH SIM                |          |      |      |      |     |        |           |         |      |
| Acenaphthene           | 22       | ug/l | 3.2  | 10   | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Acenaphthylene         | 5.6 "J"  | ug/l | 2.4  | 7.8  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Anthracene             | 6.1 "J"  | ug/l | 2.6  | 8    | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Benzo(a)anthracene     | 3.6 "J"  | ug/l | 2.4  | 7.4  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Benzo(a)pyrene         | < 1.6    | ug/l | 1.6  | 5.2  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Benzo(b)fluoranthene   | < 1.8    | ug/l | 1.8  | 5.8  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Benzo(g,h,i)perylene   | < 2      | ug/l | 2    | 6.6  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Benzo(k)fluoranthene   | < 1.8    | ug/l | 1.8  | 5.8  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Chrysene               | 3.0 "J"  | ug/l | 2.2  | 7    | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Dibenzo(a,h)anthracene | < 1.8    | ug/l | 1.8  | 5.8  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Fluoranthene           | 7.1      | ug/l | 2.2  | 6.8  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Fluorene               | 58       | ug/l | 3    | 9.2  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene | < 3      | ug/l | 3    | 9.4  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| 1-Methyl naphthalene   | 107      | ug/l | 3.6  | 11.6 | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| 2-Methyl naphthalene   | 62       | ug/l | 4.2  | 13.4 | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Naphthalene            | 13 "J"   | ug/l | 5.6  | 17.8 | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Phenanthrene           | 67       | ug/l | 2.2  | 7    | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| Pyrene                 | 24       | ug/l | 2    | 6.4  | 200 | M8270  | 8/30/2006 | MJR     | 1    |
| VOC's                  |          |      |      |      |     |        |           |         |      |
| Benzene                | < 0.17   | ug/l | 0.17 | 0.53 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Bromobenzene           | < 0.62   | ug/l | 0.62 | 2    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Bromodichloromethane   | < 0.82   | ug/l | 0.82 | 2.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Bromoform              | < 0.3    | ug/l | 0.3  | 0.97 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| tert-Butylbenzene      | < 0.6    | ug/l | 0.6  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| sec-Butylbenzene       | 0.86 "J" | ug/l | 0.76 | 2.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| n-Butylbenzene         | < 1.1    | ug/l | 1.1  | 3.5  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Carbon Tetrachloride   | < 0.52   | ug/l | 0.52 | 1.7  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chlorobenzene          | < 0.56   | ug/l | 0.56 | 1.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chloroethane           | < 0.54   | ug/l | 0.54 | 1.7  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2506  
**Lab** 5014020A  
**Sample ID** MW1/EXT-1  
**Sample** Water  
**Sample Date** 8/23/2006

**Invoice #** E14020

|                                | Result   | Unit | LOD   | LOQ  | Dil | Method | Run       | Analyst | Code |
|--------------------------------|----------|------|-------|------|-----|--------|-----------|---------|------|
| Chloroform                     | <0.61    | ug/l | 0.61  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chloromethane                  | <0.91    | ug/l | 0.91  | 2.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 2-Chlorotoluene                | <1.1     | ug/l | 1.1   | 3.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 4-Chlorotoluene                | <0.62    | ug/l | 0.62  | 2    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | <2.5     | ug/l | 2.5   | 8.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Dibromochloromethane           | <0.65    | ug/l | 0.65  | 2.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,4-Dichlorobenzene            | <0.68    | ug/l | 0.68  | 2.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,3-Dichlorobenzene            | <0.72    | ug/l | 0.72  | 2.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dichlorobenzene            | <0.69    | ug/l | 0.69  | 2.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Dichlorodifluoromethane        | <0.5     | ug/l | 0.5   | 1.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dichloroethane             | <0.72    | ug/l | 0.72  | 2.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1-Dichloroethane             | <0.22    | ug/l | 0.22  | 0.69 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1-Dichloroethene             | <0.3     | ug/l | 0.3   | 0.97 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| cis-1,2-Dichloroethene         | 1.48 "J" | ug/l | 0.5   | 1.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| trans-1,2-Dichloroethene       | <0.65    | ug/l | 0.65  | 2.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dichloropropane            | <0.21    | ug/l | 0.21  | 0.67 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 2,2-Dichloropropane            | <1.2     | ug/l | 1.2   | 4    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,3-Dichloropropane            | <0.67    | ug/l | 0.67  | 2.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Di-isopropyl ether             | 29.6     | ug/l | 0.079 | 0.25 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | <0.21    | ug/l | 0.21  | 0.67 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Ethylbenzene                   | 0.69     | ug/l | 0.2   | 0.62 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Hexachlorobutadiene            | <2.1     | ug/l | 2.1   | 6.7  | 1   | 8260B  | 8/29/2006 | CJR     | 4    |
| Isopropylbenzene               | 1.39 "J" | ug/l | 0.99  | 3.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| p-Isopropyltoluene             | 1.08 "J" | ug/l | 0.81  | 2.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Methylene chloride             | <0.61    | ug/l | 0.61  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | <0.34    | ug/l | 0.34  | 1.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Naphthalene                    | 15.6     | ug/l | 2.2   | 6.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| n-Propylbenzene                | 0.81 "J" | ug/l | 0.61  | 2    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | <0.89    | ug/l | 0.89  | 2.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | <0.48    | ug/l | 0.48  | 1.5  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Tetrachloroethene              | <0.37    | ug/l | 0.37  | 1.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Toluene                        | <0.59    | ug/l | 0.59  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2,4-Trichlorobenzene         | <1.5     | ug/l | 1.5   | 4.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2,3-Trichlorobenzene         | <1.4     | ug/l | 1.4   | 4.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,1-Trichloroethane          | <0.42    | ug/l | 0.42  | 1.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,2-Trichloroethane          | <0.36    | ug/l | 0.36  | 1.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Trichloroethene (TCE)          | <0.39    | ug/l | 0.39  | 1.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Trichlorofluoromethane         | <0.22    | ug/l | 0.22  | 0.71 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | 0.48 "J" | ug/l | 0.16  | 0.5  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | <1.2     | ug/l | 1.2   | 3.7  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Vinyl Chloride                 | 0.16 "J" | ug/l | 0.11  | 0.35 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| m&p-Xylene                     | <1.1     | ug/l | 1.1   | 3.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| o-Xylene                       | <0.18    | ug/l | 0.18  | 0.56 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |

**Lab** 5014020B  
**Sample ID** MW3  
**Sample** Water  
**Sample Date** 8/23/2006

|                    | Result | Unit | LOD   | LOQ   | Dil | Method | Run       | Analyst | Code |
|--------------------|--------|------|-------|-------|-----|--------|-----------|---------|------|
| <b>Organic</b>     |        |      |       |       |     |        |           |         |      |
| <b>PAH SIM</b>     |        |      |       |       |     |        |           |         |      |
| Acenaphthene       | <0.016 | ug/l | 0.016 | 0.05  | 1   | M8270  | 8/30/2006 | MJR     | 1    |
| Acenaphthylene     | <0.012 | ug/l | 0.012 | 0.039 | 1   | M8270  | 8/30/2006 | MJR     | 1    |
| Anthracene         | <0.013 | ug/l | 0.013 | 0.04  | 1   | M8270  | 8/30/2006 | MJR     | 1    |
| Benzo(a)anthracene | <0.012 | ug/l | 0.012 | 0.037 | 1   | M8270  | 8/30/2006 | MJR     | 1    |

Project Name WAUKESHA  
 Project # JSG 01-2200-2506

Invoice # E14020

Lab 5014020B  
 Sample ID MW3  
 Sample Water  
 Sample Date 8/23/2006

|                                | Result  | Unit | LOD   | LOQ   | Dil | Method     | Run       | Analyst | Code |
|--------------------------------|---------|------|-------|-------|-----|------------|-----------|---------|------|
| Benzo(a)pyrene                 | < 0.008 | ug/l | 0.008 | 0.026 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Benzo(b)fluoranthene           | < 0.009 | ug/l | 0.009 | 0.029 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Benzo(g,h,i)perylene           | < 0.01  | ug/l | 0.01  | 0.033 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Benzo(k)fluoranthene           | < 0.009 | ug/l | 0.009 | 0.029 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Chrysene                       | < 0.011 | ug/l | 0.011 | 0.035 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Dibenzo(a,h)anthracene         | < 0.009 | ug/l | 0.009 | 0.029 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Fluoranthene                   | < 0.011 | ug/l | 0.011 | 0.034 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Fluorene                       | < 0.015 | ug/l | 0.015 | 0.046 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene         | < 0.015 | ug/l | 0.015 | 0.047 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| 1-Methyl naphthalene           | < 0.018 | ug/l | 0.018 | 0.058 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| 2-Methyl naphthalene           | < 0.021 | ug/l | 0.021 | 0.067 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Naphthalene                    | < 0.028 | ug/l | 0.028 | 0.089 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Phenanthrene                   | < 0.011 | ug/l | 0.011 | 0.035 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| Pyrene                         | < 0.01  | ug/l | 0.01  | 0.032 | 1   | M8270      | 8/30/2006 | MJR     | 1    |
| PVOC                           |         |      |       |       |     |            |           |         |      |
| Benzene                        | < 0.17  | ug/l | 0.17  | 0.53  | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| Ethylbenzene                   | < 1     | ug/l | 1     | 3.3   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52  | ug/l | 0.52  | 1.6   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| Toluene                        | < 0.78  | ug/l | 0.78  | 2.5   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | < 0.85  | ug/l | 0.85  | 2.7   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 1.1   | ug/l | 1.1   | 3.4   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| m&p-Xylene                     | < 2     | ug/l | 2     | 6.4   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |
| o-Xylene                       | < 0.84  | ug/l | 0.84  | 2.7   | 1   | GRO95/8021 | 8/29/2006 | CJR     | 1    |

Lab 5014020C  
 Sample ID MW7  
 Sample Water  
 Sample Date 8/23/2006

|                        | Result   | Unit | LOD   | LOQ   | Dil | Method | Run       | Analyst | Code |
|------------------------|----------|------|-------|-------|-----|--------|-----------|---------|------|
| Organic                |          |      |       |       |     |        |           |         |      |
| PAH SIM                |          |      |       |       |     |        |           |         |      |
| Acenaphthene           | 4.4      | ug/l | 0.08  | 0.25  | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Acenaphthylene         | 1.2      | ug/l | 0.06  | 0.195 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Anthracene             | 3.1      | ug/l | 0.065 | 0.2   | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Benzo(a)anthracene     | 1.2      | ug/l | 0.06  | 0.185 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Benzo(a)pyrene         | 0.25     | ug/l | 0.04  | 0.13  | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Benzo(b)fluoranthene   | 0.37     | ug/l | 0.045 | 0.145 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Benzo(g,h,i)perylene   | 0.19     | ug/l | 0.05  | 0.165 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Benzo(k)fluoranthene   | 0.14 "J" | ug/l | 0.045 | 0.145 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Chrysene               | 1.7      | ug/l | 0.055 | 0.175 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Dibenzo(a,h)anthracene | < 0.045  | ug/l | 0.045 | 0.145 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Fluoranthene           | 3.1      | ug/l | 0.055 | 0.17  | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Fluorene               | 6.7      | ug/l | 0.075 | 0.23  | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene | 0.16 "J" | ug/l | 0.075 | 0.235 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| 1-Methyl naphthalene   | 10       | ug/l | 0.09  | 0.29  | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| 2-Methyl naphthalene   | 1.6      | ug/l | 0.105 | 0.335 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Naphthalene            | 1.3      | ug/l | 0.14  | 0.445 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Phenanthrene           | 5.8      | ug/l | 0.055 | 0.175 | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| Pyrene                 | 15       | ug/l | 0.05  | 0.16  | 5   | M8270  | 8/31/2006 | MJR     | 1    |
| VOC's                  |          |      |       |       |     |        |           |         |      |
| Benzene                | < 0.17   | ug/l | 0.17  | 0.53  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Bromobenzene           | < 0.62   | ug/l | 0.62  | 2     | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Bromodichloromethane   | < 0.82   | ug/l | 0.82  | 2.6   | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Bromoform              | < 0.3    | ug/l | 0.3   | 0.97  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2506  
**Lab** 5014020C  
**Sample ID** MW7  
**Sample** Water  
**Sample Date** 8/23/2006

**Invoice #** E14020

|                                | Result   | Unit | LOD   | LOQ  | Dil | Method | Run       | Analyst | Code |
|--------------------------------|----------|------|-------|------|-----|--------|-----------|---------|------|
| tert-Butylbenzene              | < 0.6    | ug/l | 0.6   | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| sec-Butylbenzene               | < 0.76   | ug/l | 0.76  | 2.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| n-Butylbenzene                 | < 1.1    | ug/l | 1.1   | 3.5  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Carbon Tetrachloride           | < 0.52   | ug/l | 0.52  | 1.7  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chlorobenzene                  | < 0.56   | ug/l | 0.56  | 1.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chloroethane                   | < 0.54   | ug/l | 0.54  | 1.7  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chloroform                     | < 0.61   | ug/l | 0.61  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Chloromethane                  | < 0.91   | ug/l | 0.91  | 2.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 2-Chlorotoluene                | < 1.1    | ug/l | 1.1   | 3.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 4-Chlorotoluene                | < 0.62   | ug/l | 0.62  | 2    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | < 2.5    | ug/l | 2.5   | 8.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Dibromochloromethane           | < 0.65   | ug/l | 0.65  | 2.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,4-Dichlorobenzene            | < 0.68   | ug/l | 0.68  | 2.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,3-Dichlorobenzene            | < 0.72   | ug/l | 0.72  | 2.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dichlorobenzene            | < 0.69   | ug/l | 0.69  | 2.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Dichlorodifluoromethane        | < 0.5    | ug/l | 0.5   | 1.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dichloroethane             | < 0.72   | ug/l | 0.72  | 2.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1-Dichloroethane             | < 0.22   | ug/l | 0.22  | 0.69 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1-Dichloroethene             | < 0.3    | ug/l | 0.3   | 0.97 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| cis-1,2-Dichloroethene         | < 0.5    | ug/l | 0.5   | 1.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| trans-1,2-Dichloroethene       | < 0.65   | ug/l | 0.65  | 2.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2-Dichloropropane            | < 0.21   | ug/l | 0.21  | 0.67 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 2,2-Dichloropropane            | < 1.2    | ug/l | 1.2   | 4    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,3-Dichloropropane            | < 0.67   | ug/l | 0.67  | 2.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Di-isopropyl ether             | 0.29     | ug/l | 0.079 | 0.25 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.21   | ug/l | 0.21  | 0.67 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Ethylbenzene                   | < 0.2    | ug/l | 0.2   | 0.62 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Hexachlorobutadiene            | < 2.1    | ug/l | 2.1   | 6.7  | 1   | 8260B  | 8/29/2006 | CJR     | 4    |
| Isopropylbenzene               | < 0.99   | ug/l | 0.99  | 3.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| p-Isopropyltoluene             | < 0.81   | ug/l | 0.81  | 2.6  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Methylene chloride             | < 0.61   | ug/l | 0.61  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.34   | ug/l | 0.34  | 1.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Naphthalene                    | < 2.2    | ug/l | 2.2   | 6.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| n-Propylbenzene                | < 0.61   | ug/l | 0.61  | 2    | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.89   | ug/l | 0.89  | 2.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.48   | ug/l | 0.48  | 1.5  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Tetrachloroethene              | < 0.37   | ug/l | 0.37  | 1.2  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Toluene                        | < 0.59   | ug/l | 0.59  | 1.9  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2,4-Trichlorobenzene         | < 1.5    | ug/l | 1.5   | 4.8  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2,3-Trichlorobenzene         | < 1.4    | ug/l | 1.4   | 4.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,1-Trichloroethane          | < 0.42   | ug/l | 0.42  | 1.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,1,2-Trichloroethane          | < 0.36   | ug/l | 0.36  | 1.1  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Trichloroethene (TCE)          | < 0.39   | ug/l | 0.39  | 1.3  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Trichlorofluoromethane         | < 0.22   | ug/l | 0.22  | 0.71 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | 0.37 "J" | ug/l | 0.16  | 0.5  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 1.2    | ug/l | 1.2   | 3.7  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| Vinyl Chloride                 | < 0.11   | ug/l | 0.11  | 0.35 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| m&p-Xylene                     | < 1.1    | ug/l | 1.1   | 3.4  | 1   | 8260B  | 8/29/2006 | CJR     | 1    |
| o-Xylene                       | < 0.18   | ug/l | 0.18  | 0.56 | 1   | 8260B  | 8/29/2006 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2506

**Invoice #** E14020

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

| <i>Code</i> | <i>Comment</i>   |
|-------------|--|
| 1           | Laboratory QC within limits.                                       |
| 4           | The continuing calibration standard not within established limits. |

**Authorized Signature** *Michael J. Ricker*

Check office originating request

954 Circle Drive  
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15851 S. U.S. 27 - Bldg. 30, Suite 318  
Lansing, MI 48906  
517-702-0470  
FAX 517-702-0477

| Project No: <u>JSG-01-2200-2506</u> Task No: <u>100</u> |                 | Laboratory: <u>Synergy</u>   |      | Sample Integrity - To be completed by receiving lab<br>Seal intact upon receipt <input checked="" type="checkbox"/> yes <input type="checkbox"/> no  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
|---|-----------------|--|------|--|-------------|----------------------|-------|------------------|--------------------------|--------------------------|------------------------|------------------------|-----------------------|--|---|
| Project Location: (city) <u>Waukesha</u>                |                 | Wisconsin DNR Certification #:   |      | Method of shipment <u>Over Land</u>  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Project Manager: <u>CCH</u>                             |                 | Laboratory Contact:  |      | Contents Temperature <u>On Ice</u> °C Refrigerator No. _____   |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Sampler: (name) <u>Molly McElligott</u>                 |                 | Price Quote: <u>PECFA</u>  |      | <b>ANALYSES REQUESTED</b><br>DRO (WI Modified Method) <input type="checkbox"/><br>GRO (WI Modified Method) <input type="checkbox"/><br>BETX (EPA Method 8020) <input type="checkbox"/><br>PVOC (EPA Method 8020) <input type="checkbox"/><br>VOC (EPA Method 8021) <input type="checkbox"/><br>PAH (EPA Method <input type="checkbox"/> ) <input type="checkbox"/><br>Pb (EPA Method <input type="checkbox"/> ) <input type="checkbox"/> |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Sampler: (Signature) <u>[Signature]</u>                 |                 | TURNAROUND TIME REQUIRED<br><input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush |      |  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Sampling Date(s): <u>8/23/06</u>                        |                 | Date Needed _____  |      |  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Reports to be Sent to: <u>CCH</u>                       |                 |  |      |  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Lab ID No.  | Sample No.      | Collection   |      | No. of Containers, Size & Type   | Description |                      |       | Preservative     | DRO (WI Modified Method) | GRO (WI Modified Method) | BETX (EPA Method 8020) | PVOC (EPA Method 8020) | VOC (EPA Method 8021) | PAH (EPA Method <input type="checkbox"/> ) | Pb (EPA Method <input type="checkbox"/> ) |
|   |                 | Date   | Time |  | Water       | Soil                 | Other |                  |                          |                          |                        |                        |                       |  |   |
| <u>5014020A</u>   | <u>MW/EXT-1</u> | <u>8/23</u>  |      | <u>3-40ml + 11-Lamber</u>  | <u>X</u>    |                      |       | <u>Hcl, ice</u>  |                          |                          |                        | <u>X</u>               | <u>X</u>              | <u>X</u>                                   |   |
|   | <u>B MW3</u>    | <u>↓</u>   |      |  | <u>↓</u>    |                      |       |                  |                          |                          |                        | <u>X</u>               | <u>X</u>              | <u>X</u>                                   |   |
|   | <u>C MW7</u>    | <u>↓</u>   |      |  | <u>↓</u>    |                      |       |                  |                          |                          |                        | <u>X</u>               | <u>X</u>              | <u>X</u>                                   |   |
| Packed for Shipping by: <u>Molly McElligott</u>         |                 | Comments:  |      |  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Shipment Date: <u>8/24/06</u>                           |                 |  |      |  |             |                      |       |                  |                          |                          |                        |                        |                       |  |   |
| Relinquished By: <u>Ryan McCreel</u>                    |                 | Date: <u>8/24/06</u>   |      | Relinquished By:   |             | Date:                |       | Relinquished By: |                          | Date:                    |                        | Relinquished By:       |                       | Date:                                      |   |
| Company: <u>NETI</u>                                    |                 | Time: <u>1:25pm</u>  |      | Company:   |             | Time:                |       | Company:         |                          | Time:                    |                        | Company:               |                       | Time:                                      |   |
| Received By: <u>[Signature]</u>                         |                 | Date: <u>8/24</u>  |      | Received By: <u>Daniel Bir</u>   |             | Date: <u>8/25/06</u> |       | Received By:     |                          | Date:                    |                        | Received By:           |                       | Date:                                      |   |
| Company: <u>DUMP</u>                                    |                 | Time: <u>1:24</u>  |      | Company: <u>Synergy</u>  |             | Time: <u>8:20</u>    |       | Company:         |                          | Time:                    |                        | Company:               |                       | Time:                                      |   |



# Synergy Environmental Lab, Inc.

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

CHRIS HATFIELD  
NORTHERN ENVIRONMENTAL  
12075 N. CORPORATE PARKWAY  
MEQUON WI 53092

Report 08-Dec-06

Project Name WAUKESHA  
Project # JSG 01-2200-2806  
Lab 5014566A  
Sample ID MW1/EXT-1  
Sample Water  
Sample Date 11/30/2006

Invoice # E14566

|                        | Result   | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|------------------------|----------|------|------|------|-----|--------|-----------|---------|------|
| Organic                |          |      |      |      |     |        |           |         |      |
| PAH SIM                |          |      |      |      |     |        |           |         |      |
| Acenaphthene           | 7.9      | ug/l | 0.16 | 0.5  | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Acenaphthylene         | 1.9      | ug/l | 0.12 | 0.39 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Anthracene             | 4.0      | ug/l | 0.13 | 0.4  | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(a)anthracene     | 0.56     | ug/l | 0.12 | 0.37 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(a)pyrene         | 0.25 "J" | ug/l | 0.08 | 0.26 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(b)fluoranthene   | 0.34     | ug/l | 0.09 | 0.29 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(g,h,i)perylene   | 0.15 "J" | ug/l | 0.1  | 0.33 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(k)fluoranthene   | 0.16 "J" | ug/l | 0.09 | 0.29 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Chrysene               | 1.9      | ug/l | 0.11 | 0.35 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Dibenzo(a,h)anthracene | < 0.09   | ug/l | 0.09 | 0.29 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Fluoranthene           | 2.8      | ug/l | 0.11 | 0.34 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Fluorene               | 18       | ug/l | 0.15 | 0.46 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene | < 0.15   | ug/l | 0.15 | 0.47 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| 1-Methyl naphthalene   | 31       | ug/l | 0.18 | 0.58 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| 2-Methyl naphthalene   | 4.7      | ug/l | 0.21 | 0.67 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Naphthalene            | 1.5      | ug/l | 0.28 | 0.89 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Phenanthrene           | 22       | ug/l | 0.11 | 0.35 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| Pyrene                 | 9.3      | ug/l | 0.1  | 0.32 | 10  | M8270  | 12/7/2006 | MJR     | 1    |
| VOC's                  |          |      |      |      |     |        |           |         |      |
| Benzene                | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Bromobenzene           | < 0.62   | ug/l | 0.62 | 2    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Bromodichloromethane   | < 0.82   | ug/l | 0.82 | 2.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Bromoform              | < 0.3    | ug/l | 0.3  | 0.97 | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| tert-Butylbenzene      | < 0.6    | ug/l | 0.6  | 1.9  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| sec-Butylbenzene       | 1.13 "J" | ug/l | 0.76 | 2.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| n-Butylbenzene         | < 1.1    | ug/l | 1.1  | 3.5  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Carbon Tetrachloride   | < 0.52   | ug/l | 0.52 | 1.7  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chlorobenzene          | < 0.56   | ug/l | 0.56 | 1.8  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chloroethane           | < 0.54   | ug/l | 0.54 | 1.7  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |

Project Name WAUKESHA  
 Project # JSG 01-2200-2806

Invoice # E14566

Lab 5014566A  
 Sample ID MW1/EXT-1  
 Sample Water  
 Sample Date 11/30/2006

|                                | Result   | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|--------------------------------|----------|------|------|------|-----|--------|-----------|---------|------|
| Chloroform                     | < 0.61   | ug/l | 0.61 | 1.9  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chloromethane                  | < 1      | ug/l | 1    | 3.3  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 2-Chlorotoluene                | < 1.1    | ug/l | 1.1  | 3.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 4-Chlorotoluene                | < 0.62   | ug/l | 0.62 | 2    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | < 2.5    | ug/l | 2.5  | 8.1  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Dibromochloromethane           | < 0.65   | ug/l | 0.65 | 2.1  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,4-Dichlorobenzene            | < 0.68   | ug/l | 0.68 | 2.2  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,3-Dichlorobenzene            | < 0.72   | ug/l | 0.72 | 2.3  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2-Dichlorobenzene            | < 0.69   | ug/l | 0.69 | 2.2  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Dichlorodifluoromethane        | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 3    |
| 1,2-Dichloroethane             | < 0.72   | ug/l | 0.72 | 2.3  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1-Dichloroethane             | < 0.56   | ug/l | 0.56 | 1.8  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1-Dichloroethene             | < 0.3    | ug/l | 0.3  | 0.97 | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| cis-1,2-Dichloroethene         | 1.19 "J" | ug/l | 0.68 | 2.2  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| trans-1,2-Dichloroethene       | < 0.95   | ug/l | 0.95 | 3    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2-Dichloropropane            | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 2,2-Dichloropropane            | < 1.2    | ug/l | 1.2  | 4    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,3-Dichloropropane            | < 0.67   | ug/l | 0.67 | 2.1  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Di-isopropyl ether             | 25.4     | ug/l | 0.71 | 2.3  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.49   | ug/l | 0.49 | 1.5  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Ethylbenzene                   | 0.74 "J" | ug/l | 0.38 | 1.2  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Hexachlorobutadiene            | < 2.1    | ug/l | 2.1  | 6.7  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Isopropylbenzene               | 1.12 "J" | ug/l | 0.99 | 3.2  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| p-Isopropyltoluene             | < 0.81   | ug/l | 0.81 | 2.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Methylene chloride             | < 0.69   | ug/l | 0.69 | 2.2  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Naphthalene                    | 4.6 "J"  | ug/l | 2.2  | 6.8  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| n-Propylbenzene                | 1.02 "J" | ug/l | 0.61 | 2    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.89   | ug/l | 0.89 | 2.8  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.65   | ug/l | 0.65 | 2.1  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Tetrachloroethene              | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Toluene                        | < 0.59   | ug/l | 0.59 | 1.9  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2,4-Trichlorobenzene         | < 1.5    | ug/l | 1.5  | 4.8  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2,3-Trichlorobenzene         | < 1.4    | ug/l | 1.4  | 4.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,1-Trichloroethane          | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,2-Trichloroethane          | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Trichloroethene (TCE)          | < 0.44   | ug/l | 0.44 | 1.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Trichlorofluoromethane         | < 0.61   | ug/l | 0.61 | 1.9  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | < 0.39   | ug/l | 0.39 | 1.3  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 1.2    | ug/l | 1.2  | 3.7  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Vinyl Chloride                 | < 0.17   | ug/l | 0.17 | 0.55 | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| m&p-Xylene                     | < 1.1    | ug/l | 1.1  | 3.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| o-Xylene                       | < 0.32   | ug/l | 0.32 | 1    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |

Lab 5014566B  
 Sample ID MW7  
 Sample Water  
 Sample Date 11/30/2006

|                    | Result | Unit | LOD   | LOQ   | Dil | Method | Run       | Analyst | Code |
|--------------------|--------|------|-------|-------|-----|--------|-----------|---------|------|
| Organic            |        |      |       |       |     |        |           |         |      |
| PAH SIM            |        |      |       |       |     |        |           |         |      |
| Acenaphthene       | 3.7    | ug/l | 0.08  | 0.25  | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Acenaphthylene     | 0.98   | ug/l | 0.06  | 0.195 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Anthracene         | 2.7    | ug/l | 0.065 | 0.2   | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(a)anthracene | 0.32   | ug/l | 0.06  | 0.185 | 5   | M8270  | 12/7/2006 | MJR     | 1    |

Project Name WAUKESHA  
 Project # JSG 01-2200-2806

Invoice # E14566

Lab 5014566B  
 Sample ID MW7  
 Sample Water  
 Sample Date 11/30/2006

|                                | Result    | Unit | LOD   | LOQ   | Dil | Method | Run       | Analyst | Code |
|--------------------------------|-----------|------|-------|-------|-----|--------|-----------|---------|------|
| Benzo(a)pyrene                 | 0.12 "J"  | ug/l | 0.04  | 0.13  | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(b)fluoranthene           | 0.15      | ug/l | 0.045 | 0.145 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(g,h,i)perylene           | 0.072 "J" | ug/l | 0.05  | 0.165 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Benzo(k)fluoranthene           | 0.066 "J" | ug/l | 0.045 | 0.145 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Chrysene                       | 1.2       | ug/l | 0.055 | 0.175 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Dibenzo(a,h)anthracene         | < 0.045   | ug/l | 0.045 | 0.145 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Fluoranthene                   | 1.7       | ug/l | 0.055 | 0.17  | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Fluorene                       | 6.0       | ug/l | 0.075 | 0.23  | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene         | < 0.075   | ug/l | 0.075 | 0.235 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| 1-Methyl naphthalene           | 11        | ug/l | 0.09  | 0.29  | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| 2-Methyl naphthalene           | 2.5       | ug/l | 0.105 | 0.335 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Naphthalene                    | 1.4       | ug/l | 0.14  | 0.445 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Phenanthrene                   | 5.1       | ug/l | 0.055 | 0.175 | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| Pyrene                         | 7.3       | ug/l | 0.05  | 0.16  | 5   | M8270  | 12/7/2006 | MJR     | 1    |
| <b>VOC's</b>                   |           |      |       |       |     |        |           |         |      |
| Benzene                        | < 0.47    | ug/l | 0.47  | 1.5   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Bromobenzene                   | < 0.62    | ug/l | 0.62  | 2     | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Bromodichloromethane           | < 0.82    | ug/l | 0.82  | 2.6   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Bromoform                      | < 0.3     | ug/l | 0.3   | 0.97  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| tert-Butylbenzene              | < 0.6     | ug/l | 0.6   | 1.9   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| sec-Butylbenzene               | < 0.76    | ug/l | 0.76  | 2.4   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| n-Butylbenzene                 | < 1.1     | ug/l | 1.1   | 3.5   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Carbon Tetrachloride           | < 0.52    | ug/l | 0.52  | 1.7   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chlorobenzene                  | < 0.56    | ug/l | 0.56  | 1.8   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chloroethane                   | < 0.54    | ug/l | 0.54  | 1.7   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chloroform                     | < 0.61    | ug/l | 0.61  | 1.9   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Chloromethane                  | < 1       | ug/l | 1     | 3.3   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 2-Chlorotoluene                | < 1.1     | ug/l | 1.1   | 3.4   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 4-Chlorotoluene                | < 0.62    | ug/l | 0.62  | 2     | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | < 2.5     | ug/l | 2.5   | 8.1   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Dibromochloromethane           | < 0.65    | ug/l | 0.65  | 2.1   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,4-Dichlorobenzene            | < 0.68    | ug/l | 0.68  | 2.2   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,3-Dichlorobenzene            | < 0.72    | ug/l | 0.72  | 2.3   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2-Dichlorobenzene            | < 0.69    | ug/l | 0.69  | 2.2   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Dichlorodifluoromethane        | < 0.5     | ug/l | 0.5   | 1.6   | 1   | 8260B  | 12/7/2006 | CJR     | 3    |
| 1,2-Dichloroethane             | < 0.72    | ug/l | 0.72  | 2.3   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1-Dichloroethane             | < 0.56    | ug/l | 0.56  | 1.8   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1-Dichloroethene             | < 0.3     | ug/l | 0.3   | 0.97  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| cis-1,2-Dichloroethene         | < 0.68    | ug/l | 0.68  | 2.2   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| trans-1,2-Dichloroethene       | < 0.95    | ug/l | 0.95  | 3     | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2-Dichloropropane            | < 0.47    | ug/l | 0.47  | 1.5   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 2,2-Dichloropropane            | < 1.2     | ug/l | 1.2   | 4     | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,3-Dichloropropane            | < 0.67    | ug/l | 0.67  | 2.1   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Di-isopropyl ether             | < 0.71    | ug/l | 0.71  | 2.3   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.49    | ug/l | 0.49  | 1.5   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Ethylbenzene                   | < 0.38    | ug/l | 0.38  | 1.2   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Hexachlorobutadiene            | < 2.1     | ug/l | 2.1   | 6.7   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Isopropylbenzene               | < 0.99    | ug/l | 0.99  | 3.2   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| p-Isopropyltoluene             | < 0.81    | ug/l | 0.81  | 2.6   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Methylene chloride             | < 0.69    | ug/l | 0.69  | 2.2   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52    | ug/l | 0.52  | 1.6   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Naphthalene                    | < 2.2     | ug/l | 2.2   | 6.8   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| n-Propylbenzene                | < 0.61    | ug/l | 0.61  | 2     | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.89    | ug/l | 0.89  | 2.8   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.65    | ug/l | 0.65  | 2.1   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Tetrachloroethene              | < 0.52    | ug/l | 0.52  | 1.6   | 1   | 8260B  | 12/7/2006 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2806  
**Lab** 5014566B  
**Sample ID** MW7  
**Sample** Water  
**Sample Date** 11/30/2006

**Invoice #** E14566

|                        | Result | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|------------------------|--------|------|------|------|-----|--------|-----------|---------|------|
| Toluene                | < 0.59 | ug/l | 0.59 | 1.9  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2,4-Trichlorobenzene | < 1.5  | ug/l | 1.5  | 4.8  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2,3-Trichlorobenzene | < 1.4  | ug/l | 1.4  | 4.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,1-Trichloroethane  | < 0.5  | ug/l | 0.5  | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,1,2-Trichloroethane  | < 0.5  | ug/l | 0.5  | 1.6  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Trichloroethene (TCE)  | < 0.44 | ug/l | 0.44 | 1.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Trichlorofluoromethane | < 0.61 | ug/l | 0.61 | 1.9  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,2,4-Trimethylbenzene | < 0.39 | ug/l | 0.39 | 1.3  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| 1,3,5-Trimethylbenzene | < 1.2  | ug/l | 1.2  | 3.7  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| Vinyl Chloride         | < 0.17 | ug/l | 0.17 | 0.55 | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| m&p-Xylene             | < 1.1  | ug/l | 1.1  | 3.4  | 1   | 8260B  | 12/7/2006 | CJR     | 1    |
| o-Xylene               | < 0.32 | ug/l | 0.32 | 1    | 1   | 8260B  | 12/7/2006 | CJR     | 1    |

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

| Code | Comment   |
|------|---|
| 1    | Laboratory QC within limits.                    |
| 3    | The matrix spike not within established limits. |

**Authorized Signature** *Michael J. Ricker*

Check office originating request

954 Circle Drive  
Green Bay, WI 54304  
920-592-8400  
FAX 920-592-8444

330 South 4th Avenue  
Park Falls, WI 54552  
715-762-1544  
Fax 715-762-1844

647 Academy Drive  
Northbrook, IL 60062  
847-562-8577  
FAX 847-562-8552

3349 Southgate Court SW #102  
Cedar Rapids, IA 52404  
319-365-0466  
FAX 319-365-0464

1214 W. Venture Ct.  
Mequon, WI 53092  
262-241-3133  
FAX 262-241-8222

1203 Storbeck Drive  
Waupun, WI 53963  
920-324-8600  
FAX 920-324-3023

203 West Upham Street  
Marshfield, WI 54449  
715-486-1300  
FAX 715-486-1313

15851 S. U.S. 27 - Bldg. 30, Suite 318  
Lansing, MI 48906  
517-702-0470  
FAX 517-702-0477

| Project No: <u>156701-2200-2806</u> Task No: <u>100</u> |                  | Laboratory: <u>Synergy</u>   |      | Sample Integrity - To be completed by receiving lab<br>Seal intact upon receipt <input checked="" type="checkbox"/> yes <input type="checkbox"/> no   |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
|---|------------------|--|------|---|-------------|------|-------|-----------------|--------------------------|--------------------------|------------------------|------------------------|-----------------------|------------------------|-----------------------|
| Project Location: <u>Waukesha</u>                       |                  | Wisconsin DNR Certification #:   |      | Method of shipment <u>Dunham</u>  |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
| Project Manager: <u>CCH</u>                             |                  | Laboratory Contact:  |      | Contents Temperature <u>On Ice</u> °C Refrigerator No. _____  |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
| Sampler: (name) <u>Molly McElligott</u>                 |                  | Price Quote: <u>PELFA</u>  |      | <b>ANALYSES REQUESTED</b><br>DRO (WI Modified Method) _____<br>GRO (WI Modified Method) _____<br>BETX (EPA Method 8020) _____<br>PVOC (EPA Method 8020) _____<br>VOC (EPA Method 8021) _____<br>PAH (EPA Method _____) _____<br>Pb (EPA Method _____) _____ |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
| Sampler: (Signature) <u>[Signature]</u>                 |                  | TURNAROUND TIME REQUIRED   |      |   |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
| Sampling Date(s): <u>11/30/06</u>                       |                  | <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush |      |   |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
| Reports to be Sent to: <u>CCH</u>                       |                  | Date Needed _____  |      |   |             |      |       |                 |                          |                          |                        |                        |                       |                        |                       |
| Lab ID No.  | Sample No.       | Collection   |      | No. of Containers, Size & Type  | Description |      |       | Preservative    | DRO (WI Modified Method) | GRO (WI Modified Method) | BETX (EPA Method 8020) | PVOC (EPA Method 8020) | VOC (EPA Method 8021) | PAH (EPA Method _____) | Pb (EPA Method _____) |
|   |                  | Date   | Time |   | Water       | Soil | Other |                 |                          |                          |                        |                        |                       |                        |                       |
| <u>S014566A</u>   | <u>MW1/EXT-1</u> | <u>11/30</u>   |      | <u>3-40mL; 1-1L and</u>   | <u>X</u>    |      |       | <u>HCl, i/c</u> |                          |                          |                        |                        | <u>X</u>              | <u>X</u>               |                       |
| <u>B</u>  | <u>MW7</u>       | <u>↓</u>   |      |   | <u>X</u>    |      |       | <u>↓</u>        |                          |                          |                        |                        | <u>X</u>              | <u>X</u>               |                       |

|   |  |  |                                  |                       |                        |
|---|--|--|----------------------------------|-----------------------|------------------------|
| Packed for Shipping by: <u>Molly McElligott</u> |  | Comments: <u>One of the VOC vials for MW1/EXT-1 broke upon returning to the office. The well is fairly dirty - (past lab results attached)</u> |                                  |                       |                        |
| Shipment Date: <u>12/4/06</u>                   |  | <u>MW1/EXT-1, 2 = 40mL Vials Received - DUN</u>  |                                  |                       |                        |
| Relinquished By: <u>Molly McElligott</u>        |  | Date: <u>12/4/06</u>   | Relinquished By: _____           | Date: _____           | Relinquished By: _____ |
| Company: <u>NETL</u>                            |  | Time: <u>1:15pm</u>  | Company: _____                   | Time: _____           | Company: _____         |
| Received By: <u>[Signature]</u>                 |  | Date: <u>1:15</u>  | Received By: <u>Daniel Gries</u> | Date: <u>12/05/06</u> | Received By: _____     |
| Company: <u>DUNX</u>                            |  | Time: _____  | Company: <u>Synergy</u>          | Time: <u>08:30</u>    | Company: _____         |

# Synergy Environmental Lab,

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

CHRIS HATFIELD  
NORTHERN ENVIRONMENTAL  
12075 N. CORPORATE PARKWAY  
MEQUON WI 53092

Report 08-Mar-0

Project Name WAUKESHA  
Project # JSG 01-2200-2806  
Lab 5014958A  
Sample ID mwl/ext1  
Sample Water  
Sample Date 2/23/2007

Invoice # E14958

|                        | Result   | Unit | LOD  | LOQ  | Dil | Method | Run      | Analyst | Code |
|------------------------|----------|------|------|------|-----|--------|----------|---------|------|
| Organic                |          |      |      |      |     |        |          |         |      |
| PAH SIM                |          |      |      |      |     |        |          |         |      |
| Acenaphthene           | 5.3      | ug/l | 0.15 | 0.49 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Acenaphthylene         | 0.46 "J" | ug/l | 0.16 | 0.52 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Anthracene             | 1.4      | ug/l | 0.13 | 0.43 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(a)anthracene     | 0.77     | ug/l | 0.15 | 0.47 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(a)pyrene         | < 0.15   | ug/l | 0.15 | 0.47 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(b)fluoranthene   | 0.31 "J" | ug/l | 0.14 | 0.44 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(g,h,i)perylene   | < 0.15   | ug/l | 0.15 | 0.46 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(k)fluoranthene   | < 0.23   | ug/l | 0.23 | 0.72 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Chrysene               | 0.75     | ug/l | 0.16 | 0.52 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Dibenzo(a,h)anthracene | < 0.15   | ug/l | 0.15 | 0.48 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Fluoranthene           | 1.9      | ug/l | 0.15 | 0.49 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Fluorene               | 7.6      | ug/l | 0.19 | 0.6  | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene | < 0.14   | ug/l | 0.14 | 0.46 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| 1-Methyl naphthalene   | 8.4      | ug/l | 0.13 | 0.4  | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| 2-Methyl naphthalene   | 0.51 "J" | ug/l | 0.22 | 0.69 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Naphthalene            | 1.1      | ug/l | 0.18 | 0.56 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Phenanthrene           | 3.6      | ug/l | 0.17 | 0.55 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| Pyrene                 | 5.1      | ug/l | 0.15 | 0.46 | 10  | M8270  | 3/2/2007 | MJR     | 1    |
| VOC's                  |          |      |      |      |     |        |          |         |      |
| Benzene                | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Bromobenzene           | < 0.36   | ug/l | 0.36 | 1.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Bromodichloromethane   | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Bromoform              | < 0.38   | ug/l | 0.38 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| tert-Butylbenzene      | < 0.34   | ug/l | 0.34 | 1.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| sec-Butylbenzene       | < 0.36   | ug/l | 0.36 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2806  
**Lab** 5014958A  
**Sample ID** mw1/ext1  
**Sample** Water  
**Sample Date** 2/23/2007

**Invoice #** E14958

|                                | Result   | Unit | LOD  | LOQ  | Dil | Method | Run      | Analyst | Code |
|--------------------------------|----------|------|------|------|-----|--------|----------|---------|------|
| n-Butylbenzene                 | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Carbon Tetrachloride           | < 0.46   | ug/l | 0.46 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chlorobenzene                  | < 0.31   | ug/l | 0.31 | 1    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chloroethane                   | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chloroform                     | < 0.48   | ug/l | 0.48 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chloromethane                  | < 1      | ug/l | 1    | 3.3  | 1   | 8260B  | 3/6/2007 | CJR     | 4    |
| 2-Chlorotoluene                | < 0.49   | ug/l | 0.49 | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 4-Chlorotoluene                | < 0.38   | ug/l | 0.38 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | < 1.4    | ug/l | 1.4  | 4.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Dibromochloromethane           | < 0.32   | ug/l | 0.32 | 1    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,4-Dichlorobenzene            | < 0.33   | ug/l | 0.33 | 1.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,3-Dichlorobenzene            | < 0.3    | ug/l | 0.3  | 0.95 | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dichlorobenzene            | < 0.35   | ug/l | 0.35 | 1.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Dichlorodifluoromethane        | < 0.46   | ug/l | 0.46 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dichloroethane             | < 0.45   | ug/l | 0.45 | 1.4  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1-Dichloroethane             | < 0.56   | ug/l | 0.56 | 1.8  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1-Dichloroethene             | < 0.64   | ug/l | 0.64 | 2    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| cis-1,2-Dichloroethene         | 0.85 "J" | ug/l | 0.68 | 2.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| trans-1,2-Dichloroethene       | < 0.95   | ug/l | 0.95 | 3    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dichloropropane            | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 2,2-Dichloropropane            | < 0.98   | ug/l | 0.98 | 3.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,3-Dichloropropane            | < 0.39   | ug/l | 0.39 | 1.3  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Di-isopropyl ether             | 27.2     | ug/l | 1.3  | 4.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.49   | ug/l | 0.49 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Ethylbenzene                   | < 0.38   | ug/l | 0.38 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Hexachlorobutadiene            | < 1.5    | ug/l | 1.5  | 4.9  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Isopropylbenzene               | < 0.48   | ug/l | 0.48 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| p-Isopropyltoluene             | < 0.35   | ug/l | 0.35 | 1.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Methylene chloride             | < 0.69   | ug/l | 0.69 | 2.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Naphthalene                    | < 1.8    | ug/l | 1.8  | 5.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| n-Propylbenzene                | < 0.38   | ug/l | 0.38 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.75   | ug/l | 0.75 | 2.4  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.65   | ug/l | 0.65 | 2.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Tetrachloroethene              | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Toluene                        | < 0.46   | ug/l | 0.46 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2,4-Trichlorobenzene         | < 1.5    | ug/l | 1.5  | 4.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2,3-Trichlorobenzene         | < 1.6    | ug/l | 1.6  | 5    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,1-Trichloroethane          | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,2-Trichloroethane          | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Trichloroethene (TCE)          | < 0.44   | ug/l | 0.44 | 1.4  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Trichlorofluoromethane         | < 0.61   | ug/l | 0.61 | 1.9  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | < 1.2    | ug/l | 1.2  | 3.8  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 0.37   | ug/l | 0.36 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Vinyl Chloride                 | < 0.2    | ug/l | 0.2  | 0.63 | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| m&p-Xylene                     | < 0.67   | ug/l | 0.67 | 2.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| o-Xylene                       | < 0.32   | ug/l | 0.32 | 1    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2806  
**Lab** 5014958B  
**Sample ID** mw 3  
**Sample** Water  
**Sample Date** 2/23/2007

**Invoice #** E14958

|                                | Result    | Unit | LOD   | LOQ   | Dil | Method | Run      | Analyst | Code |
|--------------------------------|-----------|------|-------|-------|-----|--------|----------|---------|------|
| <b>Organic</b>                 |           |      |       |       |     |        |          |         |      |
| <b>PAH SIM</b>                 |           |      |       |       |     |        |          |         |      |
| Acenaphthene                   | < 0.015   | ug/l | 0.015 | 0.049 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Acenaphthylene                 | < 0.016   | ug/l | 0.016 | 0.052 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Anthracene                     | < 0.013   | ug/l | 0.013 | 0.043 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(a)anthracene             | 0.016 "J" | ug/l | 0.015 | 0.047 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(a)pyrene                 | < 0.015   | ug/l | 0.015 | 0.047 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(b)fluoranthene           | < 0.014   | ug/l | 0.014 | 0.044 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(g,h,i)perylene           | < 0.015   | ug/l | 0.015 | 0.046 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(k)fluoranthene           | < 0.023   | ug/l | 0.023 | 0.072 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Chrysene                       | < 0.016   | ug/l | 0.016 | 0.052 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Dibenzo(a,h)anthracene         | < 0.015   | ug/l | 0.015 | 0.048 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Fluoranthene                   | < 0.015   | ug/l | 0.015 | 0.049 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Fluorene                       | < 0.019   | ug/l | 0.019 | 0.06  | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene         | < 0.014   | ug/l | 0.014 | 0.046 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| 1-Methyl naphthalene           | < 0.018   | ug/l | 0.013 | 0.04  | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| 2-Methyl naphthalene           | < 0.021   | ug/l | 0.022 | 0.069 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Naphthalene                    | < 0.018   | ug/l | 0.018 | 0.056 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Phenanthrene                   | < 0.017   | ug/l | 0.017 | 0.055 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| Pyrene                         | < 0.015   | ug/l | 0.015 | 0.046 | 1   | M8270  | 3/2/2007 | MJR     | 1    |
| <b>PVOC</b>                    |           |      |       |       |     |        |          |         |      |
| Benzene                        | < 0.47    | ug/l | 0.47  | 1.5   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| Ethylbenzene                   | < 0.38    | ug/l | 0.38  | 1.2   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52    | ug/l | 0.52  | 1.6   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| Toluene                        | < 0.46    | ug/l | 0.46  | 1.5   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | < 1.2     | ug/l | 1.2   | 3.8   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 0.37    | ug/l | 0.36  | 1.2   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| m&p-Xylene                     | < 0.67    | ug/l | 0.67  | 2.1   | 1   | 8260B  | 3/7/2007 | CJR     | 1    |
| o-Xylene                       | < 0.32    | ug/l | 0.32  | 1     | 1   | 8260B  | 3/7/2007 | CJR     | 1    |

**Lab** 5014958C  
**Sample ID** mw 7  
**Sample** Water  
**Sample Date** 2/23/2007

|                        | Result   | Unit | LOD   | LOQ   | Dil | Method | Run      | Analyst | Code |
|------------------------|----------|------|-------|-------|-----|--------|----------|---------|------|
| <b>Organic</b>         |          |      |       |       |     |        |          |         |      |
| <b>PAH SIM</b>         |          |      |       |       |     |        |          |         |      |
| Acenaphthene           | 5.0      | ug/l | 0.075 | 0.245 | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Acenaphthylene         | 1.4      | ug/l | 0.08  | 0.26  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Anthracene             | 2.4      | ug/l | 0.065 | 0.215 | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(a)anthracene     | 0.32     | ug/l | 0.075 | 0.235 | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(a)pyrene         | 0.19 "J" | ug/l | 0.075 | 0.235 | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(b)fluoranthene   | 0.31     | ug/l | 0.07  | 0.22  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(g,h,i)perylene   | 0.14 "J" | ug/l | 0.075 | 0.23  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Benzo(k)fluoranthene   | < 0.115  | ug/l | 0.115 | 0.36  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Chrysene               | 1.3      | ug/l | 0.08  | 0.26  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Dibenzo(a,h)anthracene | < 0.075  | ug/l | 0.075 | 0.24  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Fluoranthene           | 3.1      | ug/l | 0.075 | 0.245 | 5   | M8270  | 3/2/2007 | MJR     | 1    |



**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2806  
**Lab** 5014958C  
**Sample ID** mw 7  
**Sample** Water  
**Sample Date** 2/23/2007

**Invoice #** E14958

|                                | Result   | Unit | LOD   | LOQ   | Dil | Method | Run      | Analyst | Code |
|--------------------------------|----------|------|-------|-------|-----|--------|----------|---------|------|
| Fluorene                       | 7.3      | ug/l | 0.095 | 0.3   | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene         | 0.14 "J" | ug/l | 0.07  | 0.23  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| 1-Methyl naphthalene           | 18       | ug/l | 0.065 | 0.2   | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| 2-Methyl naphthalene           | 2.6      | ug/l | 0.11  | 0.345 | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Naphthalene                    | 1.7      | ug/l | 0.09  | 0.28  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Phenanthrene                   | 3.8      | ug/l | 0.085 | 0.275 | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| Pyrene                         | 10       | ug/l | 0.075 | 0.23  | 5   | M8270  | 3/2/2007 | MJR     | 1    |
| <b>VOC's</b>                   |          |      |       |       |     |        |          |         |      |
| Benzene                        | < 0.47   | ug/l | 0.47  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Bromobenzene                   | < 0.36   | ug/l | 0.36  | 1.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Bromodichloromethane           | < 0.5    | ug/l | 0.5   | 1.6   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Bromoform                      | < 0.38   | ug/l | 0.38  | 1.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| tert-Butylbenzene              | < 0.34   | ug/l | 0.34  | 1.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| sec-Butylbenzene               | < 0.36   | ug/l | 0.36  | 1.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| n-Butylbenzene                 | < 0.52   | ug/l | 0.52  | 1.6   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Carbon Tetrachloride           | < 0.46   | ug/l | 0.46  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chlorobenzene                  | < 0.31   | ug/l | 0.31  | 1     | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chloroethane                   | < 0.47   | ug/l | 0.47  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chloroform                     | < 0.48   | ug/l | 0.48  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Chloromethane                  | < 1      | ug/l | 1     | 3.3   | 1   | 8260B  | 3/6/2007 | CJR     | 4    |
| 2-Chlorotoluene                | < 0.49   | ug/l | 0.49  | 1.6   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 4-Chlorotoluene                | < 0.38   | ug/l | 0.38  | 1.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | < 1.4    | ug/l | 1.4   | 4.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Dibromochloromethane           | < 0.32   | ug/l | 0.32  | 1     | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,4-Dichlorobenzene            | < 0.33   | ug/l | 0.33  | 1.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,3-Dichlorobenzene            | < 0.3    | ug/l | 0.3   | 0.95  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dichlorobenzene            | < 0.35   | ug/l | 0.35  | 1.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Dichlorodifluoromethane        | < 0.46   | ug/l | 0.46  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dichloroethane             | < 0.45   | ug/l | 0.45  | 1.4   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1-Dichloroethane             | < 0.56   | ug/l | 0.56  | 1.8   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1-Dichloroethene             | < 0.64   | ug/l | 0.64  | 2     | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| cis-1,2-Dichloroethene         | < 0.68   | ug/l | 0.68  | 2.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| trans-1,2-Dichloroethene       | < 0.95   | ug/l | 0.95  | 3     | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2-Dichloropropane            | < 0.47   | ug/l | 0.47  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 2,2-Dichloropropane            | < 0.98   | ug/l | 0.98  | 3.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,3-Dichloropropane            | < 0.39   | ug/l | 0.39  | 1.3   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Di-isopropyl ether             | < 1.3    | ug/l | 1.3   | 4.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.49   | ug/l | 0.49  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Ethylbenzene                   | < 0.38   | ug/l | 0.38  | 1.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Hexachlorobutadiene            | < 1.5    | ug/l | 1.5   | 4.9   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Isopropylbenzene               | < 0.48   | ug/l | 0.48  | 1.5   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| p-Isopropyltoluene             | < 0.35   | ug/l | 0.35  | 1.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Methylene chloride             | < 0.69   | ug/l | 0.69  | 2.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52   | ug/l | 0.52  | 1.6   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Naphthalene                    | < 1.8    | ug/l | 1.8   | 5.6   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| n-Propylbenzene                | < 0.38   | ug/l | 0.38  | 1.2   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.75   | ug/l | 0.75  | 2.4   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.65   | ug/l | 0.65  | 2.1   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Tetrachloroethene              | < 0.52   | ug/l | 0.52  | 1.6   | 1   | 8260B  | 3/6/2007 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2200-2806  
**Lab** 5014958C  
**Sample ID** mw 7  
**Sample** Water  
**Sample Date** 2/23/2007

**Invoice #** E14958

|                        | Result | Unit | LOD  | LOQ  | Dil | Method | Run      | Analyst | Code |
|------------------------|--------|------|------|------|-----|--------|----------|---------|------|
| Toluene                | < 0.46 | ug/l | 0.46 | 1.5  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2,4-Trichlorobenzene | < 1.5  | ug/l | 1.5  | 4.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2,3-Trichlorobenzene | < 1.6  | ug/l | 1.6  | 5    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,1-Trichloroethane  | < 0.5  | ug/l | 0.5  | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,1,2-Trichloroethane  | < 0.5  | ug/l | 0.5  | 1.6  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Trichloroethene (TCE)  | < 0.44 | ug/l | 0.44 | 1.4  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Trichlorofluoromethane | < 0.61 | ug/l | 0.61 | 1.9  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,2,4-Trimethylbenzene | < 1.2  | ug/l | 1.2  | 3.8  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| 1,3,5-Trimethylbenzene | < 0.37 | ug/l | 0.36 | 1.2  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| Vinyl Chloride         | < 0.2  | ug/l | 0.2  | 0.63 | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| m&p-Xylene             | < 0.67 | ug/l | 0.67 | 2.1  | 1   | 8260B  | 3/6/2007 | CJR     | 1    |
| o-Xylene               | < 0.32 | ug/l | 0.32 | 1    | 1   | 8260B  | 3/6/2007 | CJR     | 1    |

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

**Code**      **Comment**

- 1      Laboratory QC within limits.
- 4      The continuing calibration standard not within established limits.

**Authorized Signature**      *Michael J. Ricker*

Check office originating request

954 Circle Drive  
Green Bay, WI 54304  
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FAX 920-592-8444

330 South 4th Avenue  
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Lansing, MI 48906  
517-702-0470  
FAX 517-702-0477

|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--------------------------|--|------------------------|--|-------------|--------------------------|--------------------------|------------------------|------------------------|-----------------------|------------------|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Project No: <u>JSC 01-2200-2806</u> Task No: <u>100</u> |                          | Laboratory: <u>Synergy</u>   |                        | Sample Integrity - To be completed by receiving lab  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Project Location: <u>Waukesha</u>                       |                          | Wisconsin DNR Certification #: <u>Synergy</u>  |                        | Seal intact upon receipt <input checked="" type="checkbox"/> yes <input type="checkbox"/> no   |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Project Manager: <u>CCH</u>                             |                          | Laboratory Contact:  |                        | Method of shipment: <u>Overnight</u>   |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampler: (name) <u>Molly McEligott</u>                  |                          | Price Quote: <u>PECPA</u>  |                        | Contents Temperature: <u>On Ice</u> °C Refrigerator No. <u>    </u>  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampler: (Signature) <u>[Signature]</u>                 |                          | TURNAROUND TIME REQUIRED<br><input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush |                        | <b>ANALYSES REQUESTED</b>  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampling Date(s): <u>2/23/07</u>                        |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Reports to be Sent to: <u>MBM</u>                       |                          | Date Needed: <u>    </u>   |                        | <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td>DRO (WI Modified Method)</td> <td>GRO (WI Modified Method)</td> <td>BETX (EPA Method 8020)</td> <td>PVOC (EPA Method 8020)</td> <td>VOC (EPA Method 8021)</td> <td>PAH (EPA Method)</td> <td>Pb (EPA Method)</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> |             | DRO (WI Modified Method) | GRO (WI Modified Method) | BETX (EPA Method 8020) | PVOC (EPA Method 8020) | VOC (EPA Method 8021) | PAH (EPA Method) | Pb (EPA Method) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRO (WI Modified Method)                                | GRO (WI Modified Method) | BETX (EPA Method 8020)   | PVOC (EPA Method 8020) |  |             | VOC (EPA Method 8021)    | PAH (EPA Method)         | Pb (EPA Method)        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lab ID No.  | Sample No.               | Collection Date  | Time                   | No. of Containers, Size & Type   | Description | Preservative             |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  | Water       | Soil                     | Other                    |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <u>501</u>  | <u>4958A MW/EXT-1</u>    | <u>2/23</u>  |                        | <u>3-40mL, 1-1L</u>  | <u>X</u>    |                          | <u>HCL, ice</u>          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | <u>B MW3</u>             | <u>↓</u>   |                        | <u>↓</u>   | <u>↓</u>    |                          | <u>↓</u>                 |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | <u>C MW7</u>             | <u>↓</u>   |                        | <u>↓</u>   | <u>↓</u>    |                          | <u>↓</u>                 |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Packed for Shipping by: <u>Molly McEligott</u>          |                          | Comments:  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Shipment Date: <u>2/26/07</u>                           |                          |  |                        |  |             |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Relinquished By: <u>Molly McEligott</u>                 | Date: <u>2/26</u>        | Relinquished By:   | Date:                  | Relinquished By:   | Date:       |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Company: <u>NETI</u>                                    | Time: <u>1:05</u>        | Company:   | Time:                  | Company:   | Time:       |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Received By: <u>Alexandre Perri</u>                     | Date: <u>2/27</u>        | Received By: <u>[Signature]</u>  | Date: <u>02/27/07</u>  | Received By:   | Date:       |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Company: <u>DuPont</u>                                  | Time: <u>1:05</u>        | Company: <u>Synergy</u>  | Time: <u>08:30</u>     | Company:   | Time:       |                          |                          |                        |                        |                       |                  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Synergy Environmental Lab,

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

CHRIS HATFIELD  
NORTHERN ENVIRONMENTAL  
12075 N. CORPORATE PARKWAY  
MEQUON WI 53092

Report 15-May-07

Project Name WAUKESHA  
Project # JSG 01-2201-2806  
Lab 5015306A  
Sample ID MW1  
Sample Water  
Sample Date 5/8/2007

Invoice # E15306

|                        | Result    | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|------------------------|-----------|------|------|------|-----|--------|-----------|---------|------|
| Organic                |           |      |      |      |     |        |           |         |      |
| PAH SIM                |           |      |      |      |     |        |           |         |      |
| Acenaphthene           | 6.4       | ug/l | 0.15 | 0.49 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Acenaphthylene         | 1.51      | ug/l | 0.16 | 0.52 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Anthracene             | 2.82      | ug/l | 0.13 | 0.43 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(a)anthracene     | 0.79      | ug/l | 0.15 | 0.47 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(a)pyrene         | 0.39 "J"  | ug/l | 0.15 | 0.47 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(b)fluoranthene   | 0.52      | ug/l | 0.14 | 0.44 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(g,h,i)perylene   | 0.223 "J" | ug/l | 0.15 | 0.46 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(k)fluoranthene   | < 0.23    | ug/l | 0.23 | 0.72 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Chrysene               | 1.78      | ug/l | 0.16 | 0.52 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Dibenzo(a,h)anthracene | < 0.15    | ug/l | 0.15 | 0.48 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Fluoranthene           | 2.35      | ug/l | 0.15 | 0.49 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Fluorene               | 11.3      | ug/l | 0.19 | 0.6  | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene | 0.241 "J" | ug/l | 0.14 | 0.46 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| 1-Methyl naphthalene   | 30.8      | ug/l | 0.13 | 0.4  | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| 2-Methyl naphthalene   | 6.3       | ug/l | 0.22 | 0.69 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Naphthalene            | 5.2       | ug/l | 0.18 | 0.56 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Phenanthrene           | 10.1      | ug/l | 0.17 | 0.55 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| Pyrene                 | 8.7       | ug/l | 0.15 | 0.46 | 10  | M8270  | 5/14/2007 | MJR     | 1    |
| VOC's                  |           |      |      |      |     |        |           |         |      |
| Benzene                | < 0.47    | ug/l | 0.47 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Bromobenzene           | < 0.36    | ug/l | 0.36 | 1.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Bromodichloromethane   | < 0.5     | ug/l | 0.5  | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Bromoform              | < 0.38    | ug/l | 0.38 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| tert-Butylbenzene      | < 0.34    | ug/l | 0.34 | 1.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| sec-Butylbenzene       | 2.1       | ug/l | 0.36 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2201-2806  
**Lab** 5015306A  
**Sample ID** MW1  
**Sample** Water  
**Sample Date** 5/8/2007

**Invoice #** E15306

|                                | Result   | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|--------------------------------|----------|------|------|------|-----|--------|-----------|---------|------|
| n-Butylbenzene                 | 1.29 "J" | ug/l | 0.52 | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Carbon Tetrachloride           | < 0.46   | ug/l | 0.46 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chlorobenzene                  | < 0.31   | ug/l | 0.31 | 1    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chloroethane                   | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chloroform                     | < 0.48   | ug/l | 0.48 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chloromethane                  | < 1      | ug/l | 1    | 3.3  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 2-Chlorotoluene                | < 0.49   | ug/l | 0.49 | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 4-Chlorotoluene                | < 0.38   | ug/l | 0.38 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane    | < 1.4    | ug/l | 1.4  | 4.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Dibromochloromethane           | < 0.32   | ug/l | 0.32 | 1    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,4-Dichlorobenzene            | < 0.33   | ug/l | 0.33 | 1.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,3-Dichlorobenzene            | < 0.3    | ug/l | 0.3  | 0.95 | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dichlorobenzene            | < 0.35   | ug/l | 0.35 | 1.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Dichlorodifluoromethane        | < 0.46   | ug/l | 0.46 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dichloroethane             | < 0.45   | ug/l | 0.45 | 1.4  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1-Dichloroethane             | < 0.56   | ug/l | 0.56 | 1.8  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1-Dichloroethene             | < 0.64   | ug/l | 0.64 | 2    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| cis-1,2-Dichloroethene         | 2.57     | ug/l | 0.68 | 2.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| trans-1,2-Dichloroethene       | < 0.95   | ug/l | 0.95 | 3    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dichloropropane            | < 0.47   | ug/l | 0.47 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 2,2-Dichloropropane            | < 0.98   | ug/l | 0.98 | 3.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,3-Dichloropropane            | < 0.39   | ug/l | 0.39 | 1.3  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Di-isopropyl ether             | 48       | ug/l | 1.3  | 4.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.49   | ug/l | 0.49 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Ethylbenzene                   | 1.27     | ug/l | 0.38 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Hexachlorobutadiene            | < 1.5    | ug/l | 1.5  | 4.9  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Isopropylbenzene               | 2.35     | ug/l | 0.48 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| p-Isopropyltoluene             | 1.11     | ug/l | 0.35 | 1.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Methylene chloride             | < 0.69   | ug/l | 0.69 | 2.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Naphthalene                    | 6.6      | ug/l | 1.8  | 5.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| n-Propylbenzene                | 1.98     | ug/l | 0.38 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.75   | ug/l | 0.75 | 2.4  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.65   | ug/l | 0.65 | 2.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Tetrachloroethene              | < 0.52   | ug/l | 0.52 | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Toluene                        | < 0.46   | ug/l | 0.46 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2,4-Trichlorobenzene         | < 1.5    | ug/l | 1.5  | 4.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2,3-Trichlorobenzene         | < 1.6    | ug/l | 1.6  | 5    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,1-Trichloroethane          | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,2-Trichloroethane          | < 0.5    | ug/l | 0.5  | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Trichloroethene (TCE)          | < 0.44   | ug/l | 0.44 | 1.4  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Trichlorofluoromethane         | < 0.61   | ug/l | 0.61 | 1.9  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | < 1.2    | ug/l | 1.2  | 3.8  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 0.37   | ug/l | 0.37 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Vinyl Chloride                 | 0.24 "J" | ug/l | 0.2  | 0.63 | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| m&p-Xylene                     | < 0.67   | ug/l | 0.67 | 2.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| o-Xylene                       | < 0.32   | ug/l | 0.32 | 1    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2201-2806  
**Lab** 5015306B  
**Sample ID** MW 7  
**Sample** Water  
**Sample Date** 5/8/2007

**Invoice #** E15306

|                             | Result    | Unit | LOD   | LOQ   | Dil | Method | Run       | Analyst | Code |
|-----------------------------|-----------|------|-------|-------|-----|--------|-----------|---------|------|
| <b>Organic</b>              |           |      |       |       |     |        |           |         |      |
| <b>PAH SIM</b>              |           |      |       |       |     |        |           |         |      |
| Acenaphthene                | 5.7       | ug/l | 0.075 | 0.245 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Acenaphthylene              | 0.93      | ug/l | 0.08  | 0.26  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Anthracene                  | 6.3       | ug/l | 0.065 | 0.215 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(a)anthracene          | 1.4       | ug/l | 0.075 | 0.235 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(a)pyrene              | 0.40      | ug/l | 0.075 | 0.235 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(b)fluoranthene        | 0.52      | ug/l | 0.07  | 0.22  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(g,h,i)perylene        | 0.248     | ug/l | 0.075 | 0.23  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Benzo(k)fluoranthene        | 0.181 "J" | ug/l | 0.115 | 0.36  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Chrysene                    | 2.86      | ug/l | 0.08  | 0.26  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Dibenzo(a,h)anthracene      | < 0.075   | ug/l | 0.075 | 0.24  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Fluoranthene                | 5.0       | ug/l | 0.075 | 0.245 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Fluorene                    | 8.5       | ug/l | 0.095 | 0.3   | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Indeno(1,2,3-cd)pyrene      | 0.267     | ug/l | 0.07  | 0.23  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| 1-Methyl naphthalene        | 17.5      | ug/l | 0.065 | 0.2   | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| 2-Methyl naphthalene        | 3.6       | ug/l | 0.11  | 0.345 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Naphthalene                 | 1.73      | ug/l | 0.09  | 0.28  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Phenanthrene                | 13.2      | ug/l | 0.085 | 0.275 | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| Pyrene                      | 22.7      | ug/l | 0.075 | 0.23  | 5   | M8270  | 5/14/2007 | MJR     | 1    |
| <b>VOC's</b>                |           |      |       |       |     |        |           |         |      |
| Benzene                     | < 0.47    | ug/l | 0.47  | 1.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Bromobenzene                | < 0.36    | ug/l | 0.36  | 1.1   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Bromodichloromethane        | < 0.5     | ug/l | 0.5   | 1.6   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Bromoform                   | < 0.38    | ug/l | 0.38  | 1.2   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| tert-Butylbenzene           | < 0.34    | ug/l | 0.34  | 1.1   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| sec-Butylbenzene            | < 0.36    | ug/l | 0.36  | 1.2   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| n-Butylbenzene              | < 0.52    | ug/l | 0.52  | 1.6   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Carbon Tetrachloride        | < 0.46    | ug/l | 0.46  | 1.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chlorobenzene               | < 0.31    | ug/l | 0.31  | 1     | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chloroethane                | < 0.47    | ug/l | 0.47  | 1.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chloroform                  | < 0.48    | ug/l | 0.48  | 1.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Chloromethane               | < 1       | ug/l | 1     | 3.3   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 2-Chlorotoluene             | < 0.49    | ug/l | 0.49  | 1.6   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 4-Chlorotoluene             | < 0.38    | ug/l | 0.38  | 1.2   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dibromo-3-chloropropane | < 1.4     | ug/l | 1.4   | 4.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Dibromochloromethane        | < 0.32    | ug/l | 0.32  | 1     | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,4-Dichlorobenzene         | < 0.33    | ug/l | 0.33  | 1.1   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,3-Dichlorobenzene         | < 0.3     | ug/l | 0.3   | 0.95  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dichlorobenzene         | < 0.35    | ug/l | 0.35  | 1.1   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Dichlorodifluoromethane     | < 0.46    | ug/l | 0.46  | 1.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dichloroethane          | < 0.45    | ug/l | 0.45  | 1.4   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1-Dichloroethane          | < 0.56    | ug/l | 0.56  | 1.8   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1-Dichloroethene          | < 0.64    | ug/l | 0.64  | 2     | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| cis-1,2-Dichloroethene      | < 0.68    | ug/l | 0.68  | 2.2   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| trans-1,2-Dichloroethene    | < 0.95    | ug/l | 0.95  | 3     | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2-Dichloropropane         | < 0.47    | ug/l | 0.47  | 1.5   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 2,2-Dichloropropane         | < 0.98    | ug/l | 0.98  | 3.1   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,3-Dichloropropane         | < 0.39    | ug/l | 0.39  | 1.3   | 1   | 8260B  | 5/11/2007 | CJR     | 1    |

**Project Name** WAUKESHA  
**Project #** JSG 01-2201-2806  
**Lab** 5015306B  
**Sample ID** MW 7  
**Sample** Water  
**Sample Date** 5/8/2007

**Invoice #** E15306

|                                | Result | Unit | LOD  | LOQ  | Dil | Method | Run       | Analyst | Code |
|--------------------------------|--------|------|------|------|-----|--------|-----------|---------|------|
| Di-isopropyl ether             | < 1.3  | ug/l | 1.3  | 4.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| EDB (1,2-Dibromoethane)        | < 0.49 | ug/l | 0.49 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Ethylbenzene                   | < 0.38 | ug/l | 0.38 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Hexachlorobutadiene            | < 1.5  | ug/l | 1.5  | 4.9  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Isopropylbenzene               | < 0.48 | ug/l | 0.48 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| p-Isopropyltoluene             | < 0.35 | ug/l | 0.35 | 1.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Methylene chloride             | < 0.69 | ug/l | 0.69 | 2.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Methyl tert-butyl ether (MTBE) | < 0.52 | ug/l | 0.52 | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Naphthalene                    | < 1.8  | ug/l | 1.8  | 5.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| n-Propylbenzene                | < 0.38 | ug/l | 0.38 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,2,2-Tetrachloroethane      | < 0.75 | ug/l | 0.75 | 2.4  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,1,2-Tetrachloroethane      | < 0.65 | ug/l | 0.65 | 2.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Tetrachloroethene              | < 0.52 | ug/l | 0.52 | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Toluene                        | < 0.46 | ug/l | 0.46 | 1.5  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2,4-Trichlorobenzene         | < 1.5  | ug/l | 1.5  | 4.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2,3-Trichlorobenzene         | < 1.6  | ug/l | 1.6  | 5    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,1-Trichloroethane          | < 0.5  | ug/l | 0.5  | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,1,2-Trichloroethane          | < 0.5  | ug/l | 0.5  | 1.6  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Trichloroethene (TCE)          | < 0.44 | ug/l | 0.44 | 1.4  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Trichlorofluoromethane         | < 0.61 | ug/l | 0.61 | 1.9  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,2,4-Trimethylbenzene         | < 1.2  | ug/l | 1.2  | 3.8  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| 1,3,5-Trimethylbenzene         | < 0.37 | ug/l | 0.37 | 1.2  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| Vinyl Chloride                 | < 0.2  | ug/l | 0.2  | 0.63 | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| m&p-Xylene                     | < 0.67 | ug/l | 0.67 | 2.1  | 1   | 8260B  | 5/11/2007 | CJR     | 1    |
| o-Xylene                       | < 0.32 | ug/l | 0.32 | 1    | 1   | 8260B  | 5/11/2007 | CJR     | 1    |

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

**Code**      **Comment**

1      Laboratory QC within limits.

**Authorized Signature** *Michael J. Ricker*

Check office originating request

954 Circle Drive  
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FAX 920-592-8444

330 South 4th Avenue  
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12075 N. Corporate Pkwy, Ste 210  
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203 West Upham Street  
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FAX 715-486-1313

15851 S. U.S. 27 - Bldg. 30, Suite 318  
Lansing, MI 48906  
517-702-0470  
FAX 517-702-0477

| Project No: <u>JS601-2201</u> Task No: <u>2806</u> <u>Task 100</u> |               | Laboratory: <u>Synergy</u>                                    |              | Sample Integrity - To be completed by receiving lab<br>Seal intact upon receipt <input checked="" type="checkbox"/> yes <input type="checkbox"/> no                      |             |      |                      |                 |     |                  |      |      |       |           |           |
|--|---------------|---|--------------|--|-------------|------|----------------------|-----------------|-----|------------------|------|------|-------|-----------|-----------|
| Project Location: <u>Waukesha</u>                                  |               | Wisconsin DNR Certification #:                                |              | Method of shipment: <u>Express</u>   |             |      |                      |                 |     |                  |      |      |       |           |           |
| Project Manager: <u>C. Hatfield</u>                                |               | Laboratory Contact:   |              | Contents Temperature: <u>Ice</u> °C Refrigerator No. _____   |             |      |                      |                 |     |                  |      |      |       |           |           |
| Sampler: (name) <u>Andrew Swaim</u>                                |               | Price Quote: <u>PELCA</u>                                     |              | <b>ANALYSES REQUESTED</b>  |             |      |                      |                 |     |                  |      |      |       |           |           |
| Sampler: (Signature) <u>Andrew Swaim</u>                           |               | <b>TURNAROUND TIME REQUIRED</b>                               |              | DRO (WI Modified Method)    GRO (WI Modified Method)    BETX (EPA Method 8020)    PVOC (EPA Method 8020)    VOC (EPA Method 8021)    PAH (EPA Method)    Pb (EPA Method) |             |      |                      |                 |     |                  |      |      |       |           |           |
| Sampling Date(s): <u>5/8/2007</u>                                  |               | <input type="checkbox"/> Normal <input type="checkbox"/> Rush |              |  |             |      |                      |                 |     |                  |      |      |       |           |           |
| Reports to be Sent to: <u>Andrew Swaim</u>                         |               | Date Needed _____   |              |  |             |      |                      |                 |     |                  |      |      |       |           |           |
| Lab ID No.   | Sample No.    | Collection  |              | No. of Containers, Size & Type   | Description |      |                      | Preservative    | DRO | GRO              | BETX | PVOC | VOC   | PAH       | Pb        |
|  |               | Date  | Time         |  | Water       | Soil | Other                |                 |     |                  |      |      |       |           |           |
| <u>5015306A</u>  | <u>MW1</u>    | <u>5/8</u>  | <u>11:15</u> | <u>3x40ml Amber</u>  | <u>X</u>    |      |                      | <u>HCL, ice</u> |     |                  |      |      |       | <u>XX</u> | <u>XX</u> |
|  | <u>B MW 7</u> | <u>5/8</u>  | <u>12:00</u> | <u>↓</u>   | <u>X</u>    |      |                      | <u>↓</u>        |     |                  |      |      |       | <u>XX</u> | <u>XX</u> |
| Packed for Shipping by: <u>AJS</u>                                 |               | Comments:   |              |  |             |      |                      |                 |     |                  |      |      |       |           |           |
| Shipment Date: <u>5/9/2007</u>                                     |               |   |              |  |             |      |                      |                 |     |                  |      |      |       |           |           |
| Relinquished By: <u>JST</u>  |               | Date: <u>5/9/07</u>   |              | Relinquished By:   |             |      | Date:                |                 |     | Relinquished By: |      |      | Date: |           |           |
| Company: <u>NETI</u>   |               | Time: <u>900</u>  |              | Company:   |             |      | Time:                |                 |     | Company:         |      |      | Time: |           |           |
| Received By: <u>AJS</u>  |               | Date: <u>5/9</u>  |              | Received By: <u>Christopher Rota</u>   |             |      | Date: <u>5/10/07</u> |                 |     | Received By:     |      |      | Date: |           |           |
| Company: <u>SUNHAM EXPRESS</u>                                     |               | Time:   |              | Company: <u>SEL</u>  |             |      | Time: <u>8:15</u>    |                 |     | Company:         |      |      | Time: |           |           |



**ATTACHMENT B**

**MANN-KENDALL  
STATISTICAL TESTS**

**State of Wisconsin  
Department of Natural Resources**

**Mann-Kendall Statistical Test  
Form 4400-215 (2/2001)**

**Remediation and Redevelopment Program**

**Notice:** This form is the DNR supplied spreadsheet referenced in Appendices A of Comm 46 and NR 746, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07, Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

**Instructions:** Do not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al, 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name - Former Johnson Sand and Gravel Site      BRRTS No. = 02-68-259665      Well Number = MW1

| Event Number | Sampling Date (most recent last) | Compound -> Benzo(a) pyrene            | (b) fluoranthene                       | Chrysene                               |  |  |  |
|--------------|----------------------------------|--|--|--|--|--|--|
|              |                                  | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) |
| 1            | 23-Aug-06                        | 0.15                                   | 1.80                                   | 3.00                                   |  |  |  |
| 2            | 30-Nov-06                        | 0.25                                   | 0.34                                   | 1.90                                   |  |  |  |
| 3            | 23-Feb-07                        | 0.15                                   | 0.31                                   | 0.75                                   |  |  |  |
| 4            | 8-May-07                         | 0.39                                   | 0.52                                   | 1.78                                   |  |  |  |
| 5            |                                  |  |  |  |  |  |  |
| 6            |                                  |  |  |  |  |  |  |
| 7            |                                  |  |  |  |  |  |  |
| 8            |                                  |  |  |  |  |  |  |
| 9            |                                  |  |  |  |  |  |  |
| 10           |                                  |  |  |  |  |  |  |

|                               |       |       |       |         |         |         |
|-------------------------------|-------|-------|-------|---------|---------|---------|
| Mann Kendall Statistic (S) =  | 3.0   | -2.0  | -4.0  | 0.0     | 0.0     | 0.0     |
| Number of Rounds (n) =        | 4     | 4     | 4     | 0       | 0       | 0       |
| Average =                     | 0.24  | 0.74  | 1.86  | #DIV/0! | #DIV/0! | #DIV/0! |
| Standard Deviation =          | 0.114 | 0.711 | 0.920 | #DIV/0! | #DIV/0! | #DIV/0! |
| Coefficient of Variation(CV)= | 0.483 | 0.958 | 0.495 | #DIV/0! | #DIV/0! | #DIV/0! |

|  |                          |                          |                   |            |            |            |
|--|--------------------------|--------------------------|-------------------|------------|------------|------------|
| Error Check, Blank if No Errors Detected                   |                          |                          |                   | n<4        | n<4        | n<4        |
| Trend ≥ 80% Confidence Level                               | No Trend                 | No Trend                 | <b>DECREASING</b> | n<4        | n<4        | n<4        |
| Trend ≥ 90% Confidence Level                               | No Trend                 | No Trend                 | No Trend          | n<4        | n<4        | n<4        |
| Stability Test, If No Trend Exists at 80% Confidence Level | <b>CV ≤ 1<br/>STABLE</b> | <b>CV ≤ 1<br/>STABLE</b> | NA                | n<4<br>n<4 | n<4<br>n<4 | n<4<br>n<4 |

Data Entry By = \_\_\_\_\_ Date = \_\_\_\_\_ Checked By = \_\_\_\_\_

**State of Wisconsin  
Department of Natural Resources**

**Mann-Kendall Statistical Test  
Form 4400-215 (2/2001)**

**Remediation and Redevelopment Program**

**Notice:** This form is the DNH supplied spreadsheet referenced in Appendices A of Comm 46 and NR 746, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07, Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

**Instructions:** Do not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al, 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name : Former Johnson Sand and Gravel Site      BRRTS No. = 02-68-259665      Well Number = MW7

| Event Number | Sampling Date (most recent last) | Compound -> Benzo(a) pyrene            | (b) fluoranthene                       | Chrysene                               |  |  |  |
|--------------|----------------------------------|--|--|--|--|--|--|
|              |                                  | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) | Concentration (leave blank if no data) |
| 1            | 23-Aug-06                        | 0.25                                   | 0.37                                   | 1.70                                   |  |  |  |
| 2            | 30-Nov-06                        | 0.12                                   | 0.15                                   | 1.20                                   |  |  |  |
| 3            | 23-Feb-07                        | 0.19                                   | 0.31                                   | 1.30                                   |  |  |  |
| 4            | 8-May-07                         | 0.40                                   | 0.52                                   | 2.86                                   |  |  |  |
| 5            |                                  |  |  |  |  |  |  |
| 6            |                                  |  |  |  |  |  |  |
| 7            |                                  |  |  |  |  |  |  |
| 8            |                                  |  |  |  |  |  |  |
| 9            |                                  |  |  |  |  |  |  |
| 10           |                                  |  |  |  |  |  |  |

|                               |       |       |       |         |         |         |
|-------------------------------|-------|-------|-------|---------|---------|---------|
| Mann Kendall Statistic (S) =  | 2.0   | 2.0   | 2.0   | 0.0     | 0.0     | 0.0     |
| Number of Rounds (n) =        | 4     | 4     | 4     | 0       | 0       | 0       |
| Average =                     | 0.24  | 0.34  | 1.77  | #DIV/0! | #DIV/0! | #DIV/0! |
| Standard Deviation =          | 0.119 | 0.153 | 0.761 | #DIV/0! | #DIV/0! | #DIV/0! |
| Coefficient of Variation(CV)= | 0.497 | 0.453 | 0.431 | #DIV/0! | #DIV/0! | #DIV/0! |

|  |                          |                          |                          |            |            |            |
|--|--------------------------|--------------------------|--------------------------|------------|------------|------------|
| Error Check, Blank if No Errors Detected                   |                          |                          |                          | n<4        | n<4        | n<4        |
| Trend ≥ 80% Confidence Level                               | No Trend                 | No Trend                 | No Trend                 | n<4        | n<4        | n<4        |
| Trend ≥ 90% Confidence Level                               | No Trend                 | No Trend                 | No Trend                 | n<4        | n<4        | n<4        |
| Stability Test, If No Trend Exists at 80% Confidence Level | <b>CV ≤ 1<br/>STABLE</b> | <b>CV ≤ 1<br/>STABLE</b> | <b>CV ≤ 1<br/>STABLE</b> | n<4<br>n<4 | n<4<br>n<4 | n<4<br>n<4 |

Data Entry By =      Date =      Checked By =

**Boyce, Brenda H - DNR**

268 438610

**From:** Michael, Gregory [gmichael@commerce.state.wi.us]  
**Sent:** Tuesday, August 29, 2006 12:33 PM  
**To:** Boyce, Brenda H - DNR  
**Subject:** Reporting for Robert Johnson



PECFA Web Report

**Reporting for Robert Johnson Sand & Gravel Inc**

Based on report id 471  
BRRTS No: **03-68-004228**  
Commerce No: **53186-1661-90-A**

Submitter's Name: **Chris Hatfield**  
Submitter's Phone: **(262)241-3133**  
Submitter's Email: **chatfield@northernenvironmental.com**

- |   |                    |
|---|--------------------|
| 1) What is the status of the site?  | <b>Remediation</b> |
| 2) Estimated amount required to closure:  | <b>\$5,000.00</b>  |
| 3) Have repeated tests shown contaminates in a potable well exceed a preventative action limit (PAL)? | <b>Unknown</b>     |
| 4) Has free product been observed in any wells?   | <b>No</b>          |
| 5) An enforcement standard (ES) is within 1000 feet of a municipal well(s)?                           | <b>Unknown</b>     |
| 6) An ES is within 100 feet of a potable well(s)?   | <b>Unknown</b>     |

- |   |    |
|---|----|
| 7) An ES is in bedrock?   | No |
| 8) Is the petroleum contamination co-mingled with other contaminants?                 | No |
| 9) Is the groundwater plume expanding?  | No |
| 10) Is the groundwater contamination plume discharging to surface water or a wetland? | No |
| 11) Is surface water or a wetland a potential receptor?                               | No |

**No Potable Well Information was found**

**No Groundwater Sample Information was found**

**No Free Product Information was found**

**No Soil Information was found**

**Boyce, Brenda H**

268438610

**From:** Boyce, Brenda H  
**Sent:** Thursday, February 09, 2006 10:52 AM  
**To:** 'mbiller@northernenvironmental.com'  
**Cc:** gregory.michael@commerce.state.wi.us  
**Subject:** RE: Johnson Sand & Gravel

Thank you, Marty, for the update. Please proceed with the scope of work outlined in the bid and report to us your findings at the conclusion of that work.



Hydrogeologist  
 Southeast Region  
 Bureau of Remediation and Redevelopment  
 Wisconsin Department of Natural Resources  
 (☎) phone: (262) 574-2140  
 (☎) fax: (262) 574-2117  
 (✉) e-mail: Brenda.Boyce@dnr.state.wi.us

---

**From:** Marty J Biller [mailto:mbiller@northernenvironmental.com]  
**Sent:** Wednesday, February 08, 2006 8:30 AM  
**To:** Boyce, Brenda H  
**Cc:** gregory.michael@commerce.state.wi.us; 'Marty Biller'  
**Subject:** Johnson Sand & Gravel

Brenda,

Yesterday I was on site at Johnson Sand & Gravel (COMM #53186-1661-90; BRRTS #03-68-004228) to observe groundwater extraction by a "super-sucker" pump truck. No free product was present in the well. Static water level was 26.15 feet below top of casing; depth to bottom is approximately 33 feet. The water level was pumped to the bottom of the well relatively quickly. Once the casing was emptied (the bottom well cap could be seen), water was pumped at the rate at which it entered the well. Approximately 900 gallons was extracted in two hours.

Martin J. Biller, PG  
 Registered Geologist  
 Northern Environmental Technologies, Inc.  
 (262) 643-9175



ENVIRONMENTAL & REGULATORY SERVICES DIVISION  
BUREAU OF PECFA  
101 West Pleasant Street, Suite 100A  
Milwaukee, Wisconsin 53212-3963  
TDD #: (608) 264-8777  
Fax #: (414) 220-5374  
Jim Doyle, Governor  
Mary P. Burke, Secretary

October 27, 2005

Mr. Robert Johnson  
Johnson Sand & Gravel Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

**RE: Scope of Work Cap Modification Approved- Bid Round No 32**

**Commerce # 53186-1661-90**      **WDNR BRRTS # 03-68-004228**  
Robert Johnson Sand & Gravel Inc., N8 W22590 Johnson Dr., Waukesha

*268438610*

On October 13, 2005 the Wisconsin Department of Commerce (Commerce) received a scope of work cost cap modification request from your consultant, Northern Environmental Inc. The existing reimbursement cost cap was established using the Commerce public bid process, to perform activities as specified in the bid document. Commerce has reconsidered it's initial denial and is approving the additional funding for this site.

|                                   |                   |
|-----------------------------------|-------------------|
| <b>Additional Costs Requested</b> | <b>\$1,900.00</b> |
| <b>Additional Costs Approved</b>  | <b>\$1,900.00</b> |

- Comm 47.01(3) INTENT OF PECFA. (a) The PECFA fund does not relieve a responsible party from liability. The individual or organization responsible for a contaminated property shall carry out the remediation of that property. PECFA's role is to provide monetary awards to responsible parties who have completed and paid for PECFA-approved remediation activities and services. The availability or unavailability of PECFA funding shall not be the determining factor as to whether a remediation is completed.
- The approval does not guarantee the reimbursement of costs. Final determination regarding the eligibility of costs will be determined at the time of claim review.

Thank you for your efforts to protect Wisconsin's environment. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5375.

Sincerely,

Greg Michael  
Hydrogeologist  
Site Review Section

cc: Northern Environmental Inc.  
Ms. B. Boyce, Project Manager, WDNR (via email)  
State Bank of Chilton, PECFA Loan Dept., 26 E. Main St., PO Box 149, Chilton WI 53014  
Case File

2005 OCT 13 PM 1:17 www.northernenvironmental.com

October 12, 2005  
(JSG 01-2201-2806)

Mr. Greg Michael  
Wisconsin Department of Commerce  
Environmental & Regulatory Services Division  
Bureau of PECFA  
101 West Pleasant Street, Suite 100A  
Milwaukee, Wisconsin 53212-3963

268438410

RE: Review of Cost Cap Modification Denial, Johnson Sand & Gravel, Incorporated, N8 W22590  
Johnson Drive, Waukesha, Wisconsin; COMM #53186-1661-90, BRRTS# 03-68-004228

Dear Mr. Michael:

On May 12, 2005, Northern Environmental Technologies, Incorporated (Northern Environmental) submitted a request to modify the existing cost cap for remediation activities at the former Johnson Sand & Gravel facility located at N8 W22590 Johnson Drive, Waukesha, Wisconsin (the Site). The additional funds were requested to remove petroleum-contaminated groundwater from MW1/Ext-1 using a "super-sucker"-type truck capable of pumping water from depths greater than 28 feet below grade (fbg). In an August 30, 2005 letter prepared by the Wisconsin Department of Commerce, the request was denied.

Northern Environmental feels that the requested costs are reasonable and justified. Groundwater removal via a vacuum truck was requested in the bid and was previously used by Moraine Environmental (Moraine) to extract groundwater from the Site. However, during previous extraction events performed by Moraine, the depth to groundwater appears to be less than 24 fbg. When Northern Environmental attempted to pump groundwater from MW1/EXT1, groundwater was measured at depths between 28.3 and 29.13 fbg. Northern Environmental requests that the August 30, 2005 denial be reviewed again for approval. If approved, the modified cost cap would be \$11,820.

We appreciate your consideration of this request. Please contact us if you have any questions or comments.

Sincerely,

**Northern Environmental  
Technologies, Incorporated**



Stuart J. Gross, PG  
District Director

SJG/lmh

c: Mr. Randy Johnson  
Ms. Brenda Boyce, WDNR



**Boyce, Brenda H**

---

**From:** Volkert, David G  
**Sent:** Tuesday, August 30, 2005 2:46 PM  
**To:** Boyce, Brenda H; Delwiche, Jim C.  
**Cc:** Michael, Gregory  
**Subject:** FW: Robert Johnson Sand & Gravel 53186-1661-90 DENIED.doc

Brenda and Jim,

I received this from Greg. It is listed as your site Jim, but Brenda put it out for bid. I assume Brenda is handling it.

Dave V.

-----Original Message-----

**From:** Michael, Gregory [mailto:gmichael@commerce.state.wi.us]  
**Sent:** Tuesday, August 30, 2005 2:14 PM  
**To:** Volkert, David G  
**Subject:** Robert Johnson Sand & Gravel 53186-1661-90 DENIED.doc

I guess this is yours now?

---

August 30, 2005

268438610

Mr. Robert Johnson  
 Johnson Sand & Gravel Inc.  
 20685 W. National Ave.  
 New Berlin, WI 53146

**RE: Cost Cap Modification Denied- Bid Round 32**

**Commerce # 53186-1661-90**                      WDNR BRRTS # 03-68-004228  
 Robert Johnson Sand & Gravel Inc., N8 W22590 Johnson Dr., Waukesha

x

Dear Mr. Johnson:

On May 13, 2005, the Wisconsin Department of Commerce (Commerce) received a scope cost cap modification request for the above referenced site. The existing reimbursement cost cap was established using the Commerce public bid process to perform activities as specified in the bid document.

Your request to modify the cost cap for \$1,900.00 is **DENIED**.

The bid document that was prepared jointly by the Departments of Natural Resources and Commerce was specific in depth to water. The depth to water should have been the information needed to size the vehicle needed to extract the water/product from depth. Additionally, the moneys requested would have placed Northern Environmental as 2<sup>nd</sup> to last bidder, thus the work would have been awarded to another consulting firm.

•Comm 47.01(3) INTENT OF PECFA. (a) The PECFA fund does not relieve a responsible party from liability. The individual or organization responsible for a contaminated property shall carry out the remediation of that property. PECFA's role is to provide monetary awards to responsible parties who have completed and paid for PECFA-approved remediation activities and services. The availability or unavailability of PECFA funding

shall not be the determining factor as to whether a remediation is completed.

Thank you for your efforts to protect Wisconsin's environment. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5375.

Sincerely,

Greg Michael  
Hydrogeologist  
Site Review Section

cc: Northern Environmental Technologies, Inc.  
David Volkert, WDNR Project Manager  
Case File

---

2005 MAY 13 PM 1: 25

May 12, 2005  
(JSG01-2201-2806)

Mr. Greg Michael  
Wisconsin Department of Commerce  
Environmental & Regulatory Services Division  
Bureau of PECFA  
101 West Pleasant Street, Suite 100A  
Milwaukee, Wisconsin 53212-3963

RE: Request for Modification of Existing Cost Cap, Johnson Sand & Gravel, Incorporated, N8 W22590 Johnson Drive, Waukesha, Wisconsin; COMM #53186-1661-90, BRRTS# 03-68-004228

Dear Mr. Michael:

268438610

During August 2004, Northern Environmental Technologies Incorporated (Northern Environmental) was notified by the Wisconsin Department of Natural Resources that we were the successful bidder for additional remedial activities at the Johnson Sand & Gravel facility located at N8 W22590 Johnson Drive, Waukesha, Wisconsin (the Site). Northern Environmental was retained by Mr. Randy Johnson during October 2004.

The minimum remedial requirements stated that active free-product removal was required from MW1/Ext-1 and a vacuum truck was to be to recover a minimum of 5000 gallons of groundwater once a month for 4 months. On December 8, 2004, Northern Environmental initiated groundwater recovery activities at the Site using a conventional vacuum truck provided by Lakeland Cartage, Incorporated. Unfortunately, groundwater was present at a depth of approximately 27 feet below grade (fbg) and was unable to be lifted from this depth using a conventional vacuum truck.

On February 3, 2005, Advanced Waste Services attempted to use a "belly" loading pump truck, which is capable of pumping from greater depths than regular vacuum pumping, to recover groundwater. However, no contaminated water was recovered because of the depth to groundwater in MW1/Ext-1.

Removal of petroleum-contaminated groundwater from MW1/Ext-1 will require the use of a "super-sucker" type truck capable of pumping water from depths greater than 30 fbg. Our original cost estimate assumed the use of a conventional vacuum truck at a cost of approximately \$500 per event. Based on information supplied by local pumping contractors, the cost of using this pumping style will increase because of the extra time required to extract the water and the additional size and expense of the equipment. Therefore, Northern Environmental is requesting an additional \$400 per event (total of \$1,600) to cover the additional expense incurred during groundwater recovery activities. In addition, we request an additional \$300 of consulting fees to bid and coordinate the additional pumping activities. A breakdown of proposed additional costs is included below:

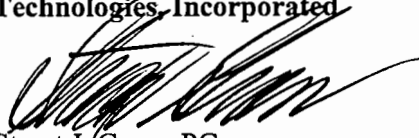
**Groundwater Recovery Activities**

|   |                          |
|---|--------------------------|
| Consulting Services   | \$ 300.00                |
| Pumping Services using a Super-Sucker style truck (\$400 per event) | <u>1,600.00</u>          |
| <b>REQUESTED MODIFICATION TO EXISTING COST CAP</b>                  | <b><u>\$1,900.00</u></b> |

We request the Wisconsin Department of Commerce approve an additional \$1,900 for groundwater pumping activities. If approved, the modified cost cap would be \$11,820.

We appreciate your consideration of this request. Please contact us if you have any questions or comments.

Sincerely,  
**Northern Environmental  
Technologies, Incorporated**



Stuart J. Gross, PG  
Registered Senior Geologist

SJG/lmh

c: Mr. Randy Johnson  
Ms. Brenda Boyce, WDNR



ENVIRONMENTAL & REGULATORY SERVICES DIVISION  
BUREAU OF PECFA  
101 West Pleasant Street, Suite 100A  
Milwaukee, Wisconsin 53212-3963  
TDD #: (608) 264-8777  
Fax #: (414) 220-5374  
Jim Doyle, Governor  
Cory L. Nettles, Secretary

August 31, 2004

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

RE: **Bid Response to Closure - Round 32**

Commerce # 53186-1661-90      WDNR BRRTS # 03-68-004228  
Robert Johnson Sand & Gravel, Inc., N8 W22590 Johnson Dr., Waukesha

**REMEDIAL STRATEGY:**  
Vacuum Extraction, Groundwater Monitoring

**PUBLIC BID END DATE:** August 6, 2004

**CLOSURE STRATEGY:** Free Product Removal and Plume Stability

**\$9,920.00      Approved cost cap to closed remedial action status.**

The Wisconsin Department of Commerce (Commerce) has established the PECFA reimbursement cost cap using the bid responses from the Commerce bid process. *Northern Environmental Technologies, Incorporated* (Northern) proposed the remedial strategy listed above and the lowest total cost to a closed remedial action status. This consulting firm is considered the successful bidder. *Gary Henningsen* of Northern can be contacted at:

|   |                                       |
|---|---------------------------------------|
| Northern Environmental Technologies, Incorporated | Phone: (262) 241-3133                 |
| 12075 N. Corporate Parkway, Suite 210             | Fax: (262) 241-8222                   |
| Mequon, WI 53092                                  | ghenningsen@northernenvironmental.com |

In compliance with the invitation to bid, *Northern* has agreed to contract with the claimant to furnish the items/services quoted. The services and associated costs, as set forth in the bid response, will be held for 90 days from the date of this letter. The work performed must comply with applicable Wisconsin Statutes and Administrative Codes, including, but not limited to Comm 47, NR 700 series, and Comm 46.

Regardless of the service provider you select, the total bid cost of the successful bid establishes your PECFA reimbursement cap. If you select the successful bidder and there are circumstances that prevent them from completing the activities for the approved cost cap, Commerce will consider modifying the cap. Consistent with existing rules, the consultant must notify Commerce prior to exceeding the cost cap.

Be aware that if you select a consulting firm other than the winning bidder to carry out the prescribed scope of work, Commerce will not modify the cost cap.

Commerce may modify the reimbursement cap under the following conditions:

- The successful bidder must be selected by the claimant to perform the remediation through closure,
- The activities through closure, as defined in the successful bid response have been completed, and
- A closure request is denied by the agency with administrative authority prior to exceeding the cap.

Within 90 days of the date of this letter, please complete and return the enclosed form to the Commerce person indicated on the enclosed form, informing Commerce of your intent to either:

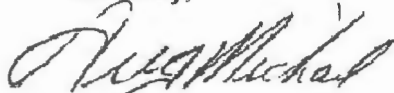
1. Use the successful bidder, or
2. Use another PECFA registered service provider.

Failure to make a service provider decision within the required time period may result in enforcement action.

- Comm 47.33(2)(b) The cost detail for the selected remediation alternative shall establish the total estimated cost (excluding interest) for the remediation up to the point of receiving approval as a closed remedial action.
- Comm 47.337(5) CLAIMANT OPTIONS. (a) After receiving an approval of a remedial action plan from the department, a claimant may elect to either implement the alternative or to select another alternative. If the claimant elects to implement a higher cost remedial strategy, the claimant must notify the department in writing of the intent to use a higher cost alternative. The notification must include the statement that the claimant agrees that the department approved alternative establishes the maximum reimbursable amount for consulting and commodity services under the fund and that additional costs for the occurrence, excluding interest, will not be submitted to the fund.
- Comm 47.01(3) INTENT OF PECFA. (a) The PECFA fund does not relieve a responsible party from liability. The individual or organization responsible for a contaminated property shall carry out the remediation of that property. PECFA's role is to provide monetary awards to responsible parties who have completed and paid for PECFA-approved remediation activities and services. The availability or unavailability of PECFA funding shall not be the determining factor as to whether a remediation is completed.
- The approval does not guarantee the reimbursement of costs. Final determination regarding the eligibility of costs will be determined at the time of claim review. The department's approval is based on the limited information submitted in the remedial alternative cost approval document and does not imply that the department concurs that the recommended remedial alternative will achieve the remedial results anticipated by the consultant or required by law.

If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5375.

Sincerely,



Greg Michael  
Hydrogeologist  
Site Review Section

Enclosures: Copy of successful Bid Response (Claimant only)  
Notification of PECFA Consultant Selection (Claimant only)

CC: Northern Environmental Technologies, Inc.  
Ms. Brenda Boyce, WDNR SE Regional Headquarters  
State Bank of Chilton, PECFA Loan Dept., 26 E. Main St., PO Box 149, Chilton WI 53014  
Case File

268438610

**BID RESPONSE**  
**(1<sup>st</sup> Page)**

**RECEIVED**  
**AUG 06 2004**  
**ERS DIVISION**

Department of Commerce PECFA Program

**SITE NAME:** Robert Johnson Sand & Gravel, Inc  
**COMMERCE NUMBER:** 53186-1661-90  
**BRRTS NUMBER:** 03-68-004228

Submit Bid To: Cathy Voges  
Department of Commerce PECFA Program  
201 W Washington Avenue, Madison, WI 53703-2790 or  
PO Box 8044 Madison, WI 53708-8044

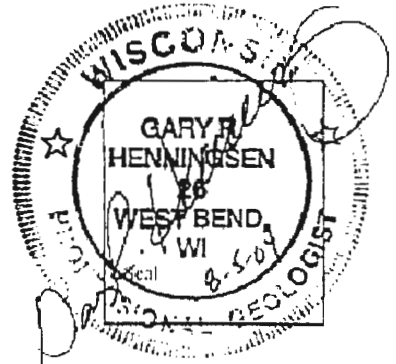
Bidder Company: Northern Environmental Technologies, Incorporated  
Bidder Address: 12075 North Corporate Parkway, Suite 210  
Mequon, Wisconsin 53092

Telephone Number: (262) 241-3133  
Fax Number (262) 241-8222  
E-Mail Address ghenningsen@northernenvironmental.com

Bidder: (check one that applies):

|                                     |                        |       |           |
|-------------------------------------|------------------------|-------|-----------|
| <input type="checkbox"/>            | Professional Engineer  | _____ | License # |
| <input checked="" type="checkbox"/> | Professional Geologist | 26    | License # |
| <input type="checkbox"/>            | Hydrologist            | _____ | License # |
| <input type="checkbox"/>            | Soil Scientist         | _____ | License # |

Signature *Gary R. Henningsen*



I certify that I have the authority to commit my organization or firm to the performance of the bid I have submitted.

Print Name: Gary R. Henningsen, PG

Title: District Director

Total Cost Bid \$9,920.00

Total Consultant Cost (subpart of total bid) \$4,500.00

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m)].

**BID RESPONSE**  
**(2<sup>nd</sup> Page)**

**Department of Commerce PECFA Program**

**SITE NAME:** Robert Johnson Sand & Gravel, Inc  
**COMMERCE NUMBER:** 53186-1661-90  
**BRRTS NUMBER:** 03-68-004228

**Consulting Firm phone number (262) 241-3133**

This response must address all of the site-specific specifications identified in Section 2, and shall support in detail the remedial strategy. Attach additional pages if necessary. *The Commerce Number and Consulting Firm telephone number must be included on all additional pages.* The pages of each Bid Response must be **stapled** together. No paper clips or spiral bindings please.

We will use a vacuum truck, pumping a minimum of 5000 gallons on a monthly basis for 4 months. Free product measurements will be collected at MW-1/Ext-1 before each recovery event. Following 4 months of free product recovery, a 3-month break from activities will allow static groundwater conditions to return.

Groundwater monitoring will consist of the following:

Groundwater elevation data will be collected from each monitoring well and each recovery well will be checked for free product on a quarterly basis. If free product is present, the thickness of the product will be measured and recorded. The private potable well will be sampled once for volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Monitoring wells MW1/EXT-1, MW6, and MW7 will be sampled all four quarters for VOCS and PAHs. MW-3 and MW-4 will be sampled twice (semi-annually) for PVOCS and PAHs.

- ▲ Potential receptors near the site will be further evaluated. All private and municipal water supply wells within 1000 feet of the site will be identified and the risk to them evaluated.
- ▲ A comprehensive report will be prepared and submitted to the WDNR. If closure is appropriate, the required GIS packets and fees will be submitted to the WDNR.





March 25, 2004

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

RE: **Comm 47.338 Redetermination of Costs to Closure Denied - To Bid**

**Commerce # 53186-1661-90**      WDNR BRRTS # 03-68-004228  
Robert Johnson Sand & Gravel, Inc., N8W22590 Johnson Dr., Waukesha

---

**SUBMITTAL DATE:** February 3, 2004

Pursuant to Comm 47.338, the Wisconsin Department of Commerce (Commerce) has reviewed your estimate of additional work and funding required to achieve a closed remedial action status. The costs to case closure are stated in the *Cost Estimate for Remediation & Monitoring* submittal, prepared by Moraine Environmental, Inc. The request for additional funding is **DENIED**.

This site will be listed in the public bid round tentatively scheduled to begin in June 2004. The enclosed PECFA Public Bid Process document provides information about the bidding process. All PECFA-registered consulting firms are eligible to participate in the public bid process.

**THIS LETTER SHALL SERVE AS NOTICE THAT YOUR SITE HAS BEEN DIRECTED TO THE PECFA PUBLIC BID PROCESS.**

Any and all costs incurred for continued work after the date of this letter and prior to the date that an approved cost cap has been established by Commerce are **INELIGIBLE** for PECFA reimbursement and will be **DENIED** at the time of claim review. When an approved cost cap has been established, you will receive a Bid Response Letter that will list the maximum cost cap established by Commerce for the scope of work and the name and contact information for the winning bidder. You will receive a document with the letter that outlines the scope of work that is to be performed by the winning bidder for the amount that Commerce has approved.

During the public bid process you are still responsible for taking protective measures should an environmental emergency or threat arise. You will need to contact Commerce and the Wisconsin Department of Natural Resources before taking any emergency action, or reimbursement of these costs **will be denied**.

Mr. Robert Johnson  
Commerce # 53186-1661-90                      WDNR BRRTS # 03-68-004228  
Robert Johnson Sand & Gravel, Inc., N8W22590 Johnson Dr., Waukesha  
March 25, 2004  
Page 2

• COMM 47.01(3) INTENT OF PECFA. (a) The PECFA fund does not relieve a responsible party from liability. The individual or organization responsible for a contaminated property shall carry out the remediation of that property. PECFA's role is to provide monetary awards to responsible parties who have completed and paid for PECFA-approved remediation activities and services. The availability or unavailability of PECFA funding shall not be the determining factor as to whether a remediation shall be completed.

If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5375.

Sincerely,

Greg Michael  
Hydrogeologist  
Site Review Section

Enclosure: PECFA Public Bid Process

cc:            Moraine Environmental Inc  
                Project Manager, WDNR (via email) Ms. Brenda Boyce  
                State Bank of Chilton, PECFA Loan Dept., 26 E. Main St., PO Box 149, Chilton WI 53014  
                Case File



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Scott Hassett, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
141 NW Barstow St.  
Room 180  
Waukesha, Wisconsin 53188  
Telephone 262-574-2100  
FAX 262-574-2117

August 27, 2003

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

FID# 268438610  
BRRTS# 03-68-004228  
BRRTS# 02-68-259665

Subject: Former Johnson Sand & Gravel, N8 W22590 Johnson Dr., Waukesha

Dear Mr. Johnson:

The Wisconsin Department of Natural Resources (Department or DNR) has reviewed the file along with your recent submittal dated July 3, 2003 regarding the above-referenced site. The Wisconsin Department of Commerce has requested this technical review (fee waived) as the DNR has administrative authority over this site due to the presence of chlorinated compounds and free product.

The Department concurs with your consultant, Moraine Environmental, Inc., that a more aggressive approach to free product recovery is warranted. The pumping of the extraction wells, primarily MW-1/EXT-1, should be more effective in recovering the product as well as extracting a significant amount of impacted groundwater. This should be conducted on a periodic basis until free product is no longer measured in any of the monitoring or extraction wells. Groundwater monitoring should be delayed until the recovery phase of work is complete and static conditions return.

In addition to MW-3, MW-4 and EXT-2, please include MW-6 and MW-7 in your groundwater monitoring plan. Semi-annual sampling of the private on-site well should continue. With the inclusion of these items, the Department approves the recommended scope of work outlined on page 4 and 5 of the July 3, 2003 report.

The Department appreciates the actions you have taken to restore the environment at the site. If you have any questions, you may call me at (262) 574-2140.

Sincerely,

Brenda H. Boyce, P.G.  
Hydrogeologist  
Remediation and Redevelopment Program

C: Dave Jackson – Moraine Environmental, Inc.  
Greg Michaels – Commerce  
SER file

Letter Of Transmittal

To: Program Assistant  
 Remediation & Redevelopment Program  
 Wisconsin Dept. of Natural Resources  
 2300 N. Dr. Martin Luther King Jr., Dr.  
 Milwaukee, WI 53212

Please check the type(s) of documents you have enclosed. Submittals will be tracked and filed based on the information you provide. **Include the FID and BRRTS numbers which have been assigned to this site, and identify the intent of the document(s) you are submitting in order to speed processing.** Please attach any required fees to this checklist.

From: Company Moraine Environmental, Inc.  
 Name Daise Jackson  
 Address 123 1/2th Ave  
Grafton, WI 53024  
 Phone 262-377-9060  
 Date 7/3/03  
 Site Name Johnson Sand & Gravel  
 Address N8 W22590 Johnson Rd  
City of Pewaukee, WI  
 FID# 268438610 BRRTS# 03-68-004228  
and  
02-68-259665

Type of Submittal:  
 LUST  ERP  VPLE  other

**IS THIS RELEASE PECFA-ELIGIBLE?**  
 YES  NO  UNKNOWN AT THIS TIME

| ✓<br>CHECK | TYPE OF DOCUMENT/REPORT  | FEE                           | DNR CODE<br>(office use only)            |
|------------|--|-------------------------------|--|
|            | Notification of Release  | none                          | 01                                       |
|            | Tank Closure/Site Assessment where release(s) have been detected*  | none                          | 33                                       |
|            | Site Investigation Workplan  | \$500 if review is requested~ | 35, 135~                                 |
|            | Site Investigation Report <b>Please Provide the Following Information</b><br>___ petroleum constituents detected<br>___ non-petroleum constituents detected<br>___ groundwater impacts ___ above PAL ___ above ES<br>___ free product<br>___ contamination in fractured bedrock or within 1 meter of fractured bedrock<br>___ pal exceedance in potable well<br>___ groundwater impacts >ES, within 100' of private Well or 1000' of public well | \$750 if review is requested~ | 37, 137~<br>96~<br>(if SI is incomplete) |
|            | Request to Transfer Case to Department of Commerce   | none                          | 76                                       |
|            | Off-Site Determination Request   | \$500 mandatory               | 638~                                     |
|            | Remedial Action Options Plan   | \$750 if review is requested  | 39, 143~                                 |
|            | NR 720.19 Site Specific Clean-Up Goal Proposed   | \$750 if review is requested  | 67, 68~                                  |
|            | NR 718 Landspreading Request   | \$500 mandatory               | 61~                                      |
|            | Copy of Notification to Treat or Dispose of Contaminated Soil or Water   | none                          | 99                                       |
|            | Injection/Infiltration Request   | \$500 mandatory               | 63~                                      |
|            | Quarterly Report or Update   | \$500 if review is requested  | 43~                                      |
|            | O & M Form 4400-194  | \$300 if review is requested  | 92, 192~                                 |
|            | Remedial Action Options Report   | \$750 if review is requested  | 41, 41~                                  |
|            | Closure Review Request   | \$750 mandatory               | 79~                                      |
|            | Closure Form (Mandatory For Review)  |                               |  |
|            | GIS Registry groundwater greater >ES   | \$250 mandatory               | 700                                      |
|            | Request for No Further Action Letter, under ch. NR 708   | \$250 mandatory               | 68, 67~                                  |
|            | Copy of Draft Deed Affidavit, Well Abandonment Form Restriction  | none                          | 99                                       |
|            | Simple Site Process Submittal Under NR700.11   | none                          | 90~                                      |
|            | Remedial Design Report   | \$750 if review is requested  | 147, 148~                                |
|            | Construction Documentation Reports   | \$250 if review is requested  | 151, 152~                                |
|            | Long Term Monitoring Plan  | \$300 if review is requested  | 24, 25~                                  |
|            | Voluntary Party Liability Exemption (VPLE) Application   | \$250 mandatory               | 662~                                     |
|            | VPLE Phase I /II Assessments or Additional Reports   | Computed hourly               | 99                                       |
|            | Tax Cancellation Agreement   | \$500 mandatory               | 654~                                     |
|            | Negotiated Agreement   | \$1000 mandatory              | 630~                                     |
|            | Lender Assessment  | \$500 mandatory               | 686~                                     |
|            | Negotiation and Cost Recovery (municipalities only) Fee for each service   | -mandatory                    | 90~                                      |
|            | General Liability Clarification Request  | \$500 mandatory               | 684                                      |
|            | Lease Letter Request - Single Property   | \$500 mandatory               | 646                                      |
|            | Lease Letter Request -Multiple Properties  | \$1000 mandatory              | 646                                      |
| ✓          | Request for Other Technical Assistance   | \$500 mandatory               | 97~                                      |
|            | Other (please describe)  |                               |  |

• Closure reports for sites where no releases have been detected should be sent directly to "Clean Closures" c/o DNR Remediation & Redevelopment Program, P.O. Box 7921, Madison WI 53707

Remarks: Victoria,  
The WDNR (Jim Delwiche) has waived the review fees.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Scott Hassett, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
141 NW Barstow St.  
Room 180  
Waukesha, Wisconsin 53188  
Telephone 262-574-2100  
FAX 262-574-2117

August 27, 2003

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

FID# 268438610  
BRRTS# 03-68-004228  
BRRTS# 02-68-259665

Subject: Former Johnson Sand & Gravel, N8 W22590 Johnson Dr., Waukesha

Dear Mr. Johnson:

The Wisconsin Department of Natural Resources (Department or DNR) has reviewed the file along with your recent submittal dated July 3, 2003 regarding the above-referenced site. The Wisconsin Department of Commerce has requested this technical review (fee waived) as the DNR has administrative authority over this site due to the presence of chlorinated compounds and free product.

The Department concurs with your consultant, Moraine Environmental, Inc., that a more aggressive approach to free product recovery is warranted. The pumping of the extraction wells, primarily MW-1/EXT-1, should be more effective in recovering the product as well as extracting a significant amount of impacted groundwater. This should be conducted on a periodic basis until free product is no longer measured in any of the monitoring or extraction wells. Groundwater monitoring should be delayed until the recovery phase of work is complete and static conditions return.

In addition to MW-3, MW-4 and EXT-2, please include MW-6 and MW-7 in your groundwater monitoring plan. Semi-annual sampling of the private on-site well should continue. With the inclusion of these items, the Department approves the recommended scope of work outlined on page 4 and 5 of the July 3, 2003 report.

The Department appreciates the actions you have taken to restore the environment at the site. If you have any questions, you may call me at (262) 574-2140.

Sincerely,

Brenda H. Boyce, P.G.  
Hydrogeologist  
Remediation and Redevelopment Program

C: Dave Jackson – Moraine Environmental, Inc.  
Greg Michaels – Commerce  
SER file

Letter Of Transmittal

To: Program Assistant  
 Remediation & Redevelopment Program  
 Wisconsin Dept. of Natural Resources  
 2300 N. Dr. Martin Luther King Jr., Dr.  
 Milwaukee, WI 53212

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From: Company Moraine Environmental, Inc.  
 Name Daise Jackson  
 Address 123 112th Ave  
Grafton, WI 53024  
 Phone 262-377-9060  
 Date 7/3/03  
 Site Name Johnson Sand & Gravel  
 Address N8 W22590 Johnson Rd  
City of Pewaukee, WI  
 FID# 268438610 BRRTS# 03-68-004228  
and  
02-68-259665

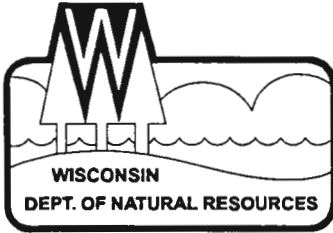
Type of Submittal:  
 LUST  ERP  VPLE  other

**IS THIS RELEASE PECFA-ELIGIBLE?**  
 YES  NO  UNKNOWN AT THIS TIME

| ✓<br>CHECK | TYPE OF DOCUMENT/REPORT   | FEE                           | DNR CODE<br>(office use only) |
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|            | Notification of Release   | none                          | 01                            |
|            | Tank Closure/Site Assessment where release(s) have been detected*                   | none                          | 33                            |
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|            | ___ groundwater impacts ___ above PAL ___ above ES                                  |                               |                               |
|            | ___ free product  |                               |                               |
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|            | ___ groundwater impacts >ES, within 100' of private Well or 1000' of public well    |                               |                               |
|            | Request to Transfer Case to Department of Commerce                                  | none                          | 76                            |
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Remarks: Victoria,  
The WDNR (Jim Delwiche) has waived the review fees.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Regional Headquarters
2300 N. Dr. ML King Drive, PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-263-8500
FAX 414-263-8483
TDD 414-263-8713

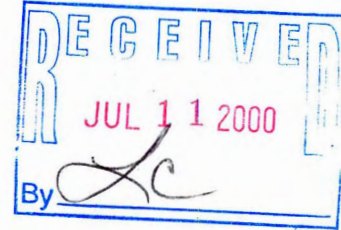
Date: 7-3-2000

1887

JUL 7 2000

Thomas Dveppen, P.E.
Moraine Environmental, Inc.
1234 12th Ave
Grafton, WI 53024

Subject: Fee Notice/Invoice
FID: 268438610 ; BRRTS: 03-68-004228
Site Name: Former Johnson Sand & Gravel



Dear Mr. Dveppen:

On 7-3-2000 the Wisconsin Department of Natural Resources received the following submittal, for which you requested review, or which by code requires a review and fee:

- Site Investigation Work Plan
Site Investigation Report
Remedial Action Options Report
Remedial Design Report
Construction Documentation Report
Injection/Infiltration Request
Landspreading Request
Operation & Maintenance Report
Long-Term Monitoring Plan
Closure Request
NR 720.19/ Soil Standards Report
NR 708 (c) No Further Action Request
Other

This submittal requires a \$750 fee in order to receive review and response from the DNR. Please make the check payable to: State of Wisconsin, Department of Natural Resources, and send it to the Program Assistant's attention at the address shown in the above header.

We will hold your submittal until your check arrives or you notify us that the review is no longer requested. Once we receive the check, we will enter the case on our first-in-first-out (FIFO) review list; effective on the date we receive your request. If we don't hear from you after a month we will place your submittal, unreviewed, in our case file.

Please return this letter with your submittal.

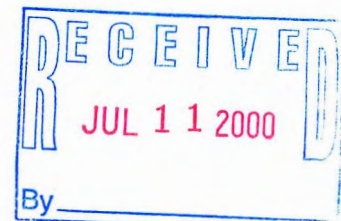
Thank you,

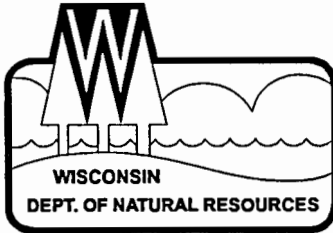
Sincerely,

Lakhonda Crook

Program Assistant
Bureau of Remediation and Redevelopment
414/263-8680

C: WDNR SER Files





State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
Gloria L. McCutcheon, Regional Director

Southeast Regional Headquarters  
2300 N. Dr. ML King Drive, PO Box 12436  
Milwaukee, Wisconsin 53212-0436  
Telephone 414-263-8500  
FAX 414-263-8483  
TDD 414-263-8713

Date: 7-3-2000

Thomas D. Veppen, P.E.  
Moraine Environmental, Inc.  
1234 12th Ave.  
Gratton, WI 53024

Subject: Fee Notice/Invoice  
FID: 268438610 ; BRRTS: 03-68-004228  
Site Name: Former Johnson Sand & Gravel

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- |  |   |
|--|---|
| <input type="checkbox"/> Site Investigation Work Plan      | <input type="checkbox"/> Operation & Maintenance Report       |
| <input type="checkbox"/> Site Investigation Report         | <input type="checkbox"/> Long-Term Monitoring Plan            |
| <input type="checkbox"/> Remedial Action Options Report    | <input checked="" type="checkbox"/> Closure Request           |
| <input type="checkbox"/> Remedial Design Report            | <input type="checkbox"/> NR 720.19/ Soil Standards Report     |
| <input type="checkbox"/> Construction Documentation Report | <input type="checkbox"/> NR 708 (c) No Further Action Request |
| <input type="checkbox"/> Injection/Infiltration Request    | <input type="checkbox"/> Other _____                          |
| <input type="checkbox"/> Landspreading Request             |   |

This submittal requires a \$ 750 fee in order to receive review and response from the DNR. Please make the check payable to: **State of Wisconsin, Department of Natural Resources**, and send it to the Program Assistant's attention at the address shown in the above header.

We will hold your submittal until your check arrives or you notify us that the review is no longer requested. Once we receive the check, we will enter the case on our first-in-first-out (FIFO) review list; effective on the date we receive your request. If we don't hear from you after a month we will place your submittal, un-reviewed, in our case file.

Please return this letter with your submittal.

Thank you,

Sincerely,

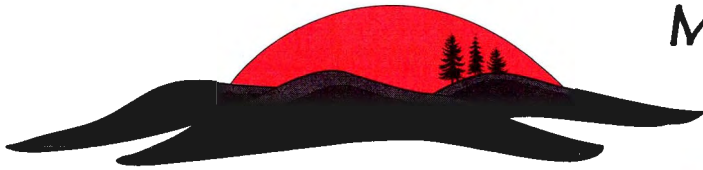
*Lalrhonda Crook*

Program Assistant  
Bureau of Remediation and Redevelopment  
414/263-8680

C: WDNR SER Files



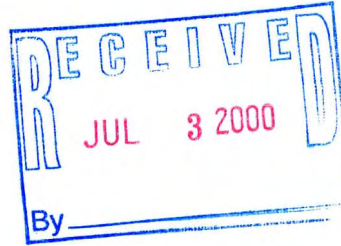




# Moraine Environmental, Inc.

Environmental Management Services

June 23, 2000



Project Reference #1401

Wisconsin Department of Natural Resources  
Southeast Region – Headquarters Office  
P.O. Box 12436  
Milwaukee, Wisconsin 53208

**Re: Remedial Action Summary and Site Closure Request  
Former Johnson Sand and Gravel Site  
N8 W22590 Johnson Road, Town of Pewaukee, WI  
WDNR FID# 268438610 / 0368-004228  
Commerce PECFA# 53186-1661-90**

Dear Program Assistant:

This letter report summarizes the site investigation results and remediation activities conducted by Moraine Environmental, Inc. [MEI] at the above referenced property. These activities are associated with soil/groundwater contamination from a leaking underground storage tank [LUST] system located at the subject property. This report also includes a risk-based assessment of the current contaminant conditions and a request by the responsible party, Mr. Robert Johnson, to consider site closure.

MEI will conduct no further actions at the subject property until your department has reviewed and responded to this site closure request. Enclosed is the \$750 payment for site closure review. If you have any additional questions or comments regarding this matter, please contact us at (262) 377-9060.

Sincerely,

**MORaine ENVIRONMENTAL, INC.**

Thomas Dueppen, P.G.  
Project Hydrogeologist

*Didn't see any check*

Enclosure

cc: Robert Johnson  
PECFA Claim

E:\WORD\MSWTEH14\1401RASumm Intro Letter.doc



ENVIRONMENTAL & REGULATORY SERVICES DIVISION  
BUREAU OF PECFA  
101 West Pleasant Street, Suite 100A  
Milwaukee, Wisconsin 53212-3963  
TDD #: (608) 264-8777  
Fax #: (414) 220-5374  
<http://www.commerce.state.wi.us>  
<http://www.wisconsin.gov>  
Jim Doyle, Governor  
Cory L. Nettles, Secretary

May 12, 2003

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

RE: **Comm 47.338 Redetermination of Costs to Closure**

Commerce # 53186-1661-90      WDNR BRRTS # 03-68-004228  
Robert Johnson Sand & Gravel, Inc., N8W22590 Johnson Dr., Waukesha

**SUBMITTAL DATE:** May 5, 2003



**Costs Denied**

**\$00,000 Approved Cap on total cost to closed remedial action status**

**Comments:** This site is under the jurisdiction of the Wisconsin Department of Natural Resources (WDNR) due to the presence of free product and chlorinated compounds on the site. Therefore, due to the jurisdictional issue, Commerce is requesting that you have the WDNR conduct a technical review of the site. This review should outline the scope of work needed to move this site to closure. After the technical review is completed, have your consultant (Moraine Environmental, Inc.) develop a budget for submission and review at Commerce. Funding decisions will be made after the WDNR has conducted its review and a budget is developed.

• COMM 47.01(3) INTENT OF PECFA. (a) The PECFA fund does not relieve a responsible party from liability. The individual or organization responsible for a contaminated property shall carry out the remediation of that property. PECFA's role is to provide monetary awards to responsible parties who have completed and paid for PECFA-approved remediation activities and services. The availability or unavailability of PECFA funding shall not be the determining factor as to whether a remediation shall be completed.

If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5375.

Sincerely,

Greg Michael  
Hydrogeologist  
Site Review Section

cc: Moraine Environmental, Inc.  
Case File



**Moraine Environmental, Inc.**

Environmental Management Services



July 3, 2003

MEI Project Reference #1401

Mr. Jim Delwiche  
Wisconsin Department of Natural Resources  
141 NW Barstow Street  
Room 180  
Waukesha, WI 53188

**Subject:** Remediation Summary and Proposed Activities  
Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road, City of Pewaukee, WI  
**WDNR BRRTS #03-68-004228 (LUST) and 02-68-259665 (ERP)**  
**COMMERCE#: 53186-1661-90**

Dear Mr. Delwiche:

Moraine Environmental, Inc. (MEI) has prepared this letter report to summarize the remediation efforts at the former Johnson Sand and Gravel site, N8 W22590 Johnson Road, Pewaukee, Wisconsin. On April 30, 2003, MEI submitted a similar summary (with a cost detail for unclaimed PECFA costs and projected costs) to Mr. Greg Michael of the Department of Commerce (COMM). On May 12, 2003, Mr. Michael issued a letter and requested that the Wisconsin Department of Natural Resources (WDNR) conduct a technical review of this project due to the presence of free product and chlorinated compounds beneath the site. Therefore, on behalf of Johnson Sand & Gravel (the responsible party), we respectfully request your review of this summary.

#### **Site Location and Description**

The subject site is located in the northwest 1/4 of the northeast 1/4 of Section 25, Township 7 North, Range 19 East, in the City of Pewaukee, Waukesha County, Wisconsin. The street address is N8 W22590 Johnson Road. The regional setting is presented in Figure 1.

The subject property consists of approximately 2 acres of land and one permanent structure; a one-story cement block building. The subject property was formerly utilized as the headquarters and service area for the Johnson Sand & Gravel Company. Prior to the building construction, between the late-1950's and mid-1970's, the subject and surrounding area was utilized for sand/gravel pit operations. The pits were later backfilled to grade and are currently utilized for commercial purposes within an industrial park site. Schmidt Custom Floors, Inc currently occupy the subject property.

The source of the petroleum impact at the subject site was a release from two former 10,000 gallon underground storage tanks (USTs) located along the east side of the building (refer to

Figure 2). Both UST systems are registered with the Wisconsin Department of Commerce (COMM). The capacities, contents, and Commerce identification numbers are listed below:

| <u>Tank Capacity</u> | <u>Tank Contents</u> | <u>Tank Type</u> | <u>Commerce I.D.#</u> |
|----------------------|----------------------|------------------|-----------------------|
| 10,000 gallons       | Diesel               | Aboveground      | 672700126             |
| 10,000 gallons       | Unleaded Gasoline    | Aboveground      | 672700127             |

The former tank pit area and subsurface contaminants are located beneath asphalt pavement. Surface areas directly adjacent to the building consist of grass lawn to the west; concrete to the north; and asphalt pavement to the east and south. A crushed gravel surface extends from the concrete/asphalt pavement to the north and east property boundaries. The asphalt pavement extends to Johnson Drive and the south side of the property. The site is relatively flat with a slight downward slope to the northwest/west where surface runoff/precipitation is assumed to flow towards the Fox River. The Fox River is approximately 0.5 miles west/northwest of the site.

Underground telephone and natural gas utilities, and overhead electric lines service the site. The current source of drinking water for the subject site is a potable well located near the southwest building corner (approximately 90 feet southwest of the former UST area). The water well has been periodically sampled for volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Based on laboratory analysis, VOCs have not been detected in drinking water samples. Low levels of naphthalene [1.5 micrograms per liter (ug/l)], 1-methylnaphthalene (0.63 ug/l), and 2-methylnaphthalene (1.2 ug/l) were detected during the March 2001 monitoring event; however, the detections are anomalous when compared to the other data. MEI attempted to obtain a well construction report for the private well. The Wisconsin Geological and Natural History Survey did not have any well records for the site.

During the subsurface investigation/groundwater monitoring, chlorinated VOCs (CVOCs) were detected in soil and groundwater samples. This project is under the regulatory jurisdiction of the WDNR due to the CVOCs and free product in soil and groundwater beneath the site. A cost separation methodology for eligible (petroleum contaminants) and ineligible PECFA program costs was submitted to the Department of Commerce for review. On May 20, 1997, COMM approved a separation percentage of 0.54.

#### **Subsurface Investigation Summary**

A subsurface investigation of the site was performed from February 1996 to August 1997. Based on the investigation data, the extent of soil and groundwater impacts was adequately defined. It was determined that contamination was primarily confined to the area of the former UST system; however, high concentrations of petroleum hydrocarbon compounds were found in the soil and groundwater.

Soil types encountered during the investigation consisted of variable fill material of clayey silt and sand to sand and gravel to sandy clay. This material extends to depths ranging from 16 to 25 feet below ground surface (bgs). Sandy silts to sand/gravel with variable amounts of clay, coarse gravel and cobbles underlie the fill material. This native soil material extends to depths ranging from 18 to 38 feet [maximum depth explored].

The soil contamination extends from approximately 10 to 22 feet bgs. It is estimated that 1,100 tons of vadose zone soil was impacted by the petroleum release. Based on the contaminant concentrations in soil samples, MEI estimated that 13,000 pounds of combined Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and VOCs were present in the vadose zone near the former UST systems at the site.

During the investigation, static groundwater levels at the site varied seasonally from 22 to 26 feet bgs. Groundwater flow direction was determined to be toward the north/northwest. A thin sheen of free-phase petroleum product was detected in MW1, and 0.82 feet of product was measured in MW7. The free product and dissolved phase contamination appeared to be isolated to the immediate area around the UST system [MW1 and MW7]. MEI estimated that approximately 55,000 gallons of groundwater was impacted by the gasoline/diesel fuel release.

A Site Investigation Report and Remedial Work Plan (November 17, 1997) was submitted to the Wisconsin Department of Natural Resources for review. Select tables and maps from the report are attached to this letter. A remedial alternative cost evaluation was also submitted to COMM on November 17, 1997. The recommended remedial action plan (RAP) included installing three monitoring/recovery sumps near the former UST systems for periodic groundwater pumping/off-site disposal. A groundwater monitoring program was also recommended. On December 29, 1997, COMM approved the cost to implement the plan.

### **Remediation and Monitoring Activities**

#### **Free Product Removal**

From mid-1998 to mid-1999, MEI attempted to remove free product from the groundwater near the former UST systems by installing and maintaining oil skimmers placed inside monitoring wells MW1 and MW7. This effort was conducted in an attempt to remove free-product without installing more costly monitoring/recovery sumps. However, the constant changes in static groundwater levels [+/- 3 feet] significantly reduced the effectiveness of the skimmers.

The product thickness in MW-1 consistently exceeded 0.01 feet. Therefore, MEI coordinated the installation (in August 1999) of three monitoring/recovery sumps near the former UST basin (see Figure 2). The sumps were drilled to a maximum depth of 35 feet bgs with a screened interval from 20 to 35 feet bgs. To date, 8,000 gallons of impacted groundwater have been pumped from the sumps for off-site treatment (disposal documentation is attached).

#### **Groundwater Monitoring and Site Closure Request**

MEI conducted five rounds of groundwater monitoring (6/16/98, 10/16/98, 1/21/99, 4/15/99, and 7/19/99) prior to installing the recovery sumps. After sump installation, select monitoring wells and recovery sumps were sampled on 10/21/99, 11/19/99, and 1/18/00. The private on-site well was sampled on 4/15/99 and 10/21/99. Due to periodically low groundwater levels [groundwater table below well depth], MW-7 was not consistently sampled.

Based on laboratory analyses (see Table 1), samples from the wells around the perimeter of the former UST area (MW-2, MW-3, MW-4, MW-5, MW-6) and the potable well did not contain contaminant levels above applicable Chapter NR 140 Groundwater Quality Standards. NR 140 Enforcement Standards and/or Preventive Action Limits were exceeded in samples from MW-1/EXT-1, EXT-2, EXT-3, and MW-7. Various polycyclic aromatic hydrocarbons (PAHs), petroleum volatile organic compounds (PVOCs), or chlorinated VOCs (or a combination of the above) were detected in the samples.

The responsible party requested that MEI discontinue remediation/monitoring activities and submit a case closure request to the WDNR. On June 23, 2000, MEI submitted a closure request to the WDNR for review. In October 2000, the WDNR denied closure and requested (in part) that free product abatement continue to the extent practicable, and that additional groundwater monitoring be conducted until stable or decreasing contaminant concentration trends were evident.

**Additional Free Product Abatement and Groundwater Monitoring**

To address free product, MEI periodically measured the product levels in MW-7, and the extraction wells (MW-1/EXT-1, EXT-2 and EXT-3). A limited amount of product was removed during well purging prior to sampling (see Table 2)

From December 2000 through December 2002, five additional rounds of groundwater monitoring were conducted at select locations. Monitoring wells MW-2, MW-5 and MW-6 were not sampled because laboratory analysis consistently detected acceptable (concentrations below applicable NR 140 standards) groundwater quality.

Based on laboratory analyses, contaminant concentrations in MW-1/EXT-1 and EXT-3 were generally decreasing during the early monitoring events; however, measurable free product was identified in the last two events. During the last monitoring event (12/18/02), 0.5 feet of product was measured in MW-1/EXT-1 and 0.21 feet was measured in EXT-3. Product was also found in MW-7 (0.04 feet) prior to purging the well during the last monitoring event.

Low levels (below NR 140 ES) of benzo(b)fluoranthene were found in samples from MW-3 during the June 2001 and March 2002 monitoring events. Several PAHs were found in samples from MW-4 during the last three monitoring events; but the concentrations were below the NR 140 PAL during the last two rounds. The chlorinated VOC (CVOC) concentrations in EXT-2 and EXT-3 have generally declined (see Table 1).

To determine groundwater flow direction, static water levels were measured in each well. Based on elevation data (see Table 3) for the last (12/18/02) monitoring event, the groundwater flow direction was determined to be toward the north. This is generally consistent with historical data. A groundwater elevation map for the 12/18/02 sampling event is included as Figure 2.

**Recommended Scope of Work**

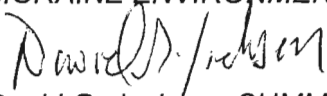
Based on monitoring data, MEI believes that a more aggressive recovery effort regarding free product and CVOCs be conducted. It is our opinion that implementing the following scope of work will help move this site towards closure:

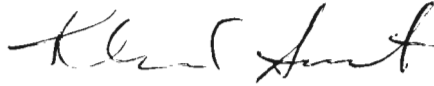
- Bids will be solicited to pump and haul two loads (5,000 gallons minimum per load) of impacted water that contains petroleum product, dissolved PVOCs and dissolved CVOCs. The material will be disposed of at a WDNR licensed facility. MEI believes that two additional recovery events may be necessary to reduce the product level in MW-1/EXT-1.
- A detailed cost estimate of additional remediation efforts will be re-submitted to Mr. Greg Michael of the Department of Commerce.
- A Registered Land Surveyor will be retained to conduct an elevation and boundary survey at the site. The Mean Sea Level elevations for the groundwater monitoring wells (from top of casings) and adjacent ground surfaces shall be determined. State Plane coordinates will also be assigned to each data point. The information will be used to comply with WDNR requirements and prepare a Geographic Information System (GIS) registration packet.
- After the extraction wells are pumped, MW-3, MW-4, and EXT-2 will be sampled. MEI will also sample MW-1/EXT-1 and EXT-3 if product is not present. Samples will be submitted for analyses of VOCs and PAHs.

- The free product levels, additional groundwater monitoring data, and survey data will be evaluated with respect to submitting a case closure request to the WDNR. If the product levels are sufficiently reduced, MEI may petition the WDNR for site closure with residual free product. The closure request will include a GIS registry packet for residual soil and groundwater impacts at the site.
- If site closure is granted, the monitoring and extraction well network will be abandoned per NR 141, and abandonment forms will be submitted to the WDNR.

On behalf of Johnson Sand & Gravel, we look forward to your input regarding this project. We are anxious to move this site toward closure in a cost-effective and expedient manner. Please call us at (262) 377-9060 if you have any questions or to discuss this project. In the future, please address any correspondence to Mr. Wayne Johnson of Johnson Sand & Gravel at 20685 W. National Avenue, New Berlin, Wisconsin, 53146-4920. Thank you for your assistance.

Sincerely,  
MORAINE ENVIRONMENTAL, INC.

  
David G. Jackson, CHMM  
Senior Project Manager

  
Thomas C. Sweet  
President

cc: Mr. Wayne Johnson

enclosures

## TABLES



**TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
FORMER JOHNSON SAND AND GRAVEL SITE  
(Detected VOCs and PAHs)**

| Analyte                   | MW-1 (EXT-1) |            |         |        |         |           |        |        |        |        |        |        |        | MW-2   |        |        |        |        |        |         |        |         |        |         | ES     | PAL    |        |        |
|---------------------------|--------------|------------|---------|--------|---------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|---------|--------|---------|--------|--------|--------|--------|
|                           | Aug-96       | Aug-97     | Jun-98  | Oct-98 | Jan-99  | Apr-99    | Oct-99 | Nov-99 | Jan-00 | Dec-00 | Mar-01 | Jun-01 | Dec-02 | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99  | Oct-99 | Dec-00  | Mar-01 | June-01 |        |        | Mar-02 | Dec-02 |
| GRO                       | 2300         | 3,000      | 1,600   | *      | 160,000 | 700       | *      | *      | *      | *      | *      | FP     | FP     | <50    | <50    | <50    | <50    | <50    | <50    | *       | *      | *       | *      | *       | *      | NSE    | NSE    |        |
| DRO                       | 1,300,000    | 22,000,000 | 330,000 | 48,000 | *       | 1,500,000 | *      | *      | *      | *      | *      | FP     | FP     | 130    | <100   | <100   | <100   | <100   | <100   | *       | *      | *       | *      | *       | *      | NSE    | NSE    |        |
| Lead, Soluble             | 2.6          | *          | *       | <1.8   | *       | *         | *      | *      | *      | *      | *      | FP     | FP     | <2.0   | *      | *      | *      | *      | *      | *       | *      | *       | *      | *       | *      | 15.0   | 1.5    |        |
| <b>VOCs</b>               |              |            |         |        |         |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |        |         |        |         |        |        |        |        |
| Benzene                   | <3.0         | <4.1       | <0.52   | 0.35Q  | <52     | <0.27     | <0.27  | *      | <0.26  | <0.29  | <0.29  | FP     | FP     | <0.6   | <0.41  | <0.26  | <0.27  | <0.26  | <0.27  | *       | <0.26  | <0.29   | <0.29  | <0.48   | <0.48  | <0.25  | 5.0    | 0.5    |
| s-Butylbenzene            | 28           | 33         | *       | 7.3    | *       | 9.1       | 13     | *      | *      | 6.8    | 2.8    | FP     | FP     | <1.0   | <0.23  | *      | <0.29  | *      | <0.29  | *       | *      | <0.20   | <0.20  | <0.49   | <0.49  | <0.62  | NSE    | NSE    |
| t-Butylbenzene            | <5.0         | <2.4       | *       | 0.52Q  | *       | 0.57Q     | 0.57Q  | *      | *      | 0.35 Q | 0.29 Q | FP     | FP     | <1.0   | <0.24  | *      | <0.32  | *      | <0.32  | *       | *      | <0.23   | <0.23  | <0.50   | <0.50  | <0.96  | NSE    | NSE    |
| n-Butylbenzene            | 28.0         | 33.0       | *       | 8.5    | *       | 8.8       | 14.0   | *      | *      | 9.0    | <0.28  | FP     | FP     | <1.0   | <0.31  | *      | <0.29  | *      | <0.29  | *       | *      | <0.28   | <0.28  | <0.61   | <0.61  | <0.65  | NSE    | NSE    |
| Chloromethane             | <5.0         | <1.5       | *       | <0.61  | *       | <0.61     | <0.61  | *      | *      | <0.42  | <0.42  | FP     | FP     | <1.0   | <0.15  | *      | <0.61  | *      | <0.61  | *       | *      | <0.42   | <0.42  | <0.62   | <0.62  | <0.27  | 3.0    | 0.3    |
| cis-1,2-Dichloroethene    | 11           | 24         | *       | 21     | *       | 32        | 17     | *      | *      | 11     | 9.7    | FP     | FP     | <1.0   | <0.28  | *      | <0.28  | *      | <0.28  | *       | *      | <0.27   | <0.27  | <0.73   | <0.73  | <0.81  | 70     | 7.0    |
| trans-1,2-Dichloroethene  | <5.0         | <2.5       | *       | <0.79  | *       | <0.79     | <0.79  | *      | *      | <0.35  | <0.35  | FP     | FP     | <1.0   | <0.25  | *      | <0.79  | *      | <0.43  | *       | *      | <0.35   | <0.35  | <0.79   | <0.79  | <0.80  | 100    | 20     |
| Diisopropyl ether         | 50           | 99         | *       | 46     | *       | 52        | 42     | *      | *      | 40     | 41     | FP     | FP     | <1.0   | <0.43  | *      | <0.55  | *      | <0.55  | *       | *      | <0.23   | <0.23  | <0.60   | <0.60  | <0.60  | NSE    | NSE    |
| Ethylbenzene              | 36           | 54         | 8.7     | 2.9    | 140Q    | 3.8       | 11     | *      | 6.6    | 4.2    | 0.99 Q | FP     | FP     | <1.0   | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | *       | <0.24  | <0.57   | <0.57  | <0.43   | <0.43  | <0.53  | 700    | 140    |
| Isopropylbenzene          | 29           | 36         | *       | 3.8    | *       | 4.8       | 8.9    | *      | *      | 3.5    | 0.79   | FP     | FP     | <1.0   | <0.27  | *      | <0.26  | *      | <0.26  | *       | *      | <0.19   | <0.19  | <0.43   | <0.43  | <0.66  | NSE    | NSE    |
| p-Isopropyltoluene        | 85           | 26         | *       | 6.7    | *       | 6.1       | 10     | *      | *      | 7.4    | 12     | FP     | FP     | <1.0   | <0.22  | *      | <0.24  | *      | <0.24  | *       | *      | <0.25   | <0.25  | <0.57   | <0.57  | <0.58  | NSE    | NSE    |
| Methylene chloride        | <5.0         | <2.2       | *       | <0.36  | *       | <0.36     | <0.36  | *      | *      | 0.46 Q | <0.36  | FP     | FP     | <1.0   | <0.22  | *      | 0.56Q  | *      | 0.39Q  | *       | *      | <0.36   | <0.36  | <0.85   | <0.85  | <0.47  | 5.0    | 0.5    |
| Methyl tert butyl ether   | <5.0         | <5.3       | 1.6     | 0.3    | <44     | 0.43Q     | <0.32  | *      | 0.4    | <0.20  | <0.20  | FP     | FP     | <1.0   | <0.53  | <0.22  | <0.32  | <0.22  | <0.32  | *       | <0.22  | <0.20   | <0.20  | <0.67   | <0.67  | <0.87  | 60     | 12     |
| Naphthalene               | 97           | 130        | *       | 24     | <180    | 32        | 140    | *      | 2600   | 60     | 43     | FP     | FP     | <1.0   | <0.66  | *      | <0.35  | <0.89  | <0.35  | *       | *      | <0.27   | <0.27  | <0.59   | <0.59  | <0.63  | 40     | 8.0    |
| n-Propylbenzene           | 18           | 43         | *       | 2.7    | *       | 4.9       | 9.8    | *      | *      | 3.5    | 0.88   | FP     | FP     | <1.0   | <0.27  | *      | <0.76  | *      | <0.76  | *       | *      | <0.17   | <0.17  | <0.64   | <0.64  | <0.95  | NSE    | NSE    |
| Tetrachloroethene         | 8.5          | 7.8Q       | *       | 1.6    | *       | 1.1Q      | 2.1    | *      | *      | 1.3 Q  | <0.85  | FP     | FP     | <1.0   | <0.27  | *      | <0.43  | *      | <0.43  | *       | *      | <0.85   | <0.85  | <0.57   | <0.57  | <0.63  | 5.0    | 0.5    |
| Toluene                   | <5.0         | <2.8       | <0.42   | 0.40Q  | <42     | <0.27     | <0.27  | *      | <0.21  | <1.1   | <0.13  | FP     | FP     | <1.0   | <0.28  | <0.21  | 0.28Q  | 0.46Q  | 0.46Q  | *       | 0.23Q  | <1.1    | <0.13  | <0.47   | <0.47  | <0.84  | 1000.0 | 200    |
| Trimethylbenzenes (total) | 70           | 44         | 37      | 11     | 2,590   | 18.3      | 34     | *      | 90     | 15.3   | 7.6    | FP     | FP     | <1.0   | <0.55  | <1.40  | <0.49  | <1.4   | <0.49  | *       | <1.40  | <0.34   | <0.34  | <0.52   | <0.52  | <0.69  | 480    | 96     |
| Trichloroethene           | <5.0         | 2.5Q       | *       | <0.37  | *       | <0.37     | 0.91Q  | *      | *      | <0.32  | <0.32  | FP     | FP     | <1.0   | <0.20  | *      | <0.37  | *      | <0.37  | *       | *      | <0.32   | <0.32  | <0.89   | <0.89  | <0.39  | 5.0    | 0.5    |
| Vinyl Chloride            | <5.0         | <2.3       | *       | <0.20  | *       | 0.36Q     | <0.20  | *      | *      | <0.19  | <0.19  | FP     | FP     | <1.0   | <0.23  | *      | <0.20  | *      | <0.20  | *       | *      | <0.19   | <0.19  | <0.18   | <0.18  | <0.11  | 0.2    | 0.02   |
| Xylenes (total)           | 8.7          | 10.7Q      | 1       | 0.72Q  | 77Q     | 0.77      | 3.53Q  | *      | <7.87  | 0.40 Q | <0.35  | FP     | FP     | <1.0   | <0.79  | <1.34  | <0.67  | <1.34  | <0.67  | *       | <1.34  | <0.35   | <0.35  | <1.4    | <1.4   | <1.1   | 10000  | 1000   |
| <b>PAHs</b>               |              |            |         |        |         |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |        |         |        |         |        |        |        |        |
| Acenaphthene              | *            | 4,300      | 77      | <47    | *       | 990       | *      | <94    | <2400  | <43    | 200 Q  | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.47   | *      | <0.027  | <0.027 | <0.018  | <0.018 | <0.018 | NSE    | NSE    |
| Acenaphthylene            | *            | <830       | 21      | <41    | *       | <120      | *      | <82    | <2100  | 1.5 Q  | <130   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.41   | *      | <0.032  | <0.032 | 0.047 Q | <0.023 | <0.019 | NSE    | NSE    |
| Anthracene                | *            | <410       | 17      | <2.1   | *       | <420      | *      | <42    | 310    | <43    | <110   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.027  | <0.027 | <0.020  | <0.020 | <0.020 | 3000   | 600    |
| Benzo(a)anthracene        | *            | 2,900      | 72      | 38     | *       | 670Q      | *      | 81     | 1800   | 9.4    | 24     | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.014  | *      | <0.026  | 0.053Q | 0.027 Q | <0.019 | <0.012 | NSE    | NSE    |
| Benzo(a)pyrene            | *            | 21Q        | 2.2     | <1.5   | *       | 9.9Q      | *      | <3.0   | <78    | 0.72 Q | 5.6    | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.014  | 0.061  | 0.020 Q | <0.012 | <0.014 | 0.20   | 0.02   |
| Benzo (b) fluoranthene    | *            | <110       | 19      | 6.8    | *       | 140       | *      | 13     | 540    | <0.60  | 4.1 Q  | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.030  | 0.066Q | 0.035 Q | <0.014 | <0.013 | 0.20   | 0.02   |
| Benzo (ghi) perylene      | *            | <20        | <1.1    | <2.1   | *       | <6.3      | *      | <4.2   | <110   | <0.30  | <1.6   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.015  | 0.040Q | 0.063   | <0.015 | <0.016 | NSE    | NSE    |
| Benzo(k)fluoranthene      | *            | 130        | <0.45   | <0.90  | *       | <2.7      | *      | <1.8   | <47    | 0.49 Q | 2.7 Q  | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.0090 | *      | <0.019  | 0.059Q | 0.022 Q | <0.013 | <0.019 | NSE    | NSE    |
| Indeno (123-cd) pyrene    | *            | <22        | <1.2    | <2.5   | *       | 9.8Q      | *      | <5.0   | <130   | <0.44  | <2.3   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.025  | *      | <0.022  | 0.039Q | 0.071   | <0.014 | <0.021 | NSE    | NSE    |
| Chrysene                  | *            | 790        | <64     | 60     | *       | 1,100     | *      | 98     | 3100   | 4.3    | 27     | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.016  | *      | <0.017  | 0.062  | 0.021 Q | <0.018 | <0.014 | 0.20   | 0.02   |
| Dibenzo (ah) anthracene   | *            | <130       | <10     | 3.7Q   | *       | <20       | *      | <4.0   | <100   | <0.40  | <2.1   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.020  | *      | <0.020  | <0.020 | 0.048 Q | <0.017 | <0.016 | NSE    | NSE    |
| Fluoranthene              | *            | 310        | 150     | 5.8Q   | *       | 83Q       | *      | <30    | <1600  | <34    | <88    | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.021  | 0.12   | <0.028  | <0.028 | <0.013 | 400    | 80     |
| Fluorene                  | *            | 6,700      | <230    | 44Q    | *       | 700Q      | *      | 130    | <6,000 | 83 Q   | 370 Q  | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.058  | *      | <0.029  | <0.029 | <0.021  | <0.021 | <0.017 | 400    | 80     |
| 2-Methylnaphthalene       | *            | 56,000     | 1,000   | 110    | *       | 8,800     | *      | 740    | 24,000 | 430    | 1400   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.36   | *      | <0.033  | 0.049Q | <0.028  | <0.028 | <0.017 | NSE    | NSE    |
| 1-Methylnaphthalene       | *            | 46,000     | 950     | 240    | *       | 7,300     | *      | 680    | 20,000 | 450    | 1500   | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.36   | *      | 0.068 Q | 0.046Q | <0.027  | <0.027 | <0.017 | NSE    | NSE    |
| Naphthalene               | *            | 7,600      | 220     | <42    | *       | 420       | *      | 120    | 2600   | 85 Q   | 180 Q  | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.42   | *      | 0.055 Q | 0.033Q | <0.027  | <0.027 | <0.024 | 40     | 8.0    |
| Phenanthrene              | *            | 14,000     | 1,600   | 500    | *       | 14,000    | *      | 1500   | 40,000 | 130 Q  | 530    | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.046  | *      | <0.028  | 0.049Q | <0.019  | <0.019 | <0.016 | NSE    | NSE    |
| Pyrene                    | *            | 430        | 31      | 13Q    | *       | 410       | *      | 82     | 2100   | 39 Q   | 170 Q  | FP     | FP     | *      | *      | *      | *      | *      | *      | <0.017  | *      | <0.024  | 0.083  | <0.020  | <0.020 | <0.017 | 250    | 50     |

Concentrations Expressed as micrograms per Liter (ug/l)  
**Bold Print** Indicates Concentration Above NR 140 Preventive Action Limit (PAL)  
**Bold and Boxed Print** Indicates Concentration Above NR 140 Enforcement Standard (ES)  
 NSE - No Standard Established  
 <0.0 - Concentration Below Detection Limit  
 Q - Concentration Detected Between Detection Limit and Quantification Limit  
 \* = Not Tested  
 FP= Free Product (see Table 2, Groundwater Elevations/Free Product Actions)

**TABLE 1**  
**GROUNDWATER ANALYTICAL RESULTS**  
 FORMER JOHNSON SAND AND GRAVEL SITE (cont)  
 (Detected VOCs and PAHs)

| Analyte                   | MW-3   |        |        |        |        |        |         |        |         |         |         |         |        | MW-4   |        |        |        |        |         |        |        |         |         | ES     | PAL   |        |
|---------------------------|--------|--------|--------|--------|--------|--------|---------|--------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|---------|--------|--------|---------|---------|--------|-------|--------|
|                           | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99  | Oct-99 | Dec-00  | Mar-01  | June-01 | Mar-02  | Dec-02 | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Apr-99 | Jul-99  | Oct-99 | Dec-00 | June-01 | Mar-02  |        |       | Dec-02 |
| GRO                       | <50    | <50    | <50    | <50    | <50    | <50    | *       | *      | *       | *       | *       | *       | *      | <50    | <50    | <50    | <50    | <50    | <50     | *      | *      | *       | *       | NSE    | NSE   |        |
| DRO                       | <100   | <100   | <100   | <100   | <100   | <100   | *       | *      | *       | *       | *       | *       | *      | 140    | <100   | <100   | 140    | <100   | *       | *      | *      | *       | *       | NSE    | NSE   |        |
| Lead, Soluble             | <2.0   | *      | *      | *      | *      | *      | *       | *      | *       | *       | *       | *       | *      | 3.9    | *      | *      | *      | *      | *       | 3.0Q   | *      | *       | *       | *      | 15    | 1.5    |
| VOCs                      |        |        |        |        |        |        |         |        |         |         |         |         |        |        |        |        |        |        |         |        |        |         |         |        |       |        |
| Benzene                   | <0.6   | <0.41  | <0.26  | <0.27  | <0.26  | <0.27  | *       | <0.26  | <0.29   | <0.29   | <0.48   | <0.48   | <0.25  | <0.6   | <0.41  | <0.26  | <0.27  | <0.27  | <0.26   | <0.26  | <0.29  | <0.48   | <0.48   | <0.25  | 5.0   | 0.5    |
| s-Butylbenzene            | <1.0   | <0.23  | *      | <0.29  | *      | <0.29  | *       | *      | <0.20   | <0.20   | <0.49   | <0.49   | <0.62  | <1.0   | <0.23  | *      | <0.29  | <0.29  | *       | *      | <0.20  | <0.49   | <0.49   | <0.62  | NSE   | NSE    |
| t-Butylbenzene            | <1.0   | <0.24  | *      | <0.32  | *      | <0.32  | *       | *      | <0.23   | <0.23   | <0.50   | <0.50   | <0.96  | <1.0   | <0.24  | *      | <0.32  | <0.32  | *       | *      | <0.23  | <0.50   | <0.50   | <0.96  | NSE   | NSE    |
| n-Butylbenzene            | <1.0   | <0.31  | *      | <0.29  | *      | <0.29  | *       | *      | <0.28   | <0.28   | <0.61   | <0.61   | <0.65  | <1.0   | <0.31  | *      | <0.29  | <0.29  | *       | *      | <0.28  | <0.61   | <0.61   | <0.65  | NSE   | NSE    |
| Chloromethane             | <1.0   | <0.15  | *      | <0.61  | *      | <0.61  | *       | *      | <0.42   | <0.42   | <0.62   | <0.62   | <0.27  | <1.0   | <0.15  | *      | <0.61  | <0.61  | *       | *      | <0.42  | <0.62   | <0.62   | <0.27  | 3.0   | 0.3    |
| cis-1,2-Dichloroethene    | <1.0   | <0.28  | *      | <0.28  | *      | <0.28  | *       | *      | <0.27   | <0.27   | <0.73   | <0.73   | <0.81  | <1.0   | <0.28  | *      | <0.28  | <0.28  | *       | *      | <0.27  | <0.73   | <0.73   | <0.81  | 70    | 7.0    |
| trans-1,2-Dichloroethene  | <1.0   | <0.25  | *      | <0.79  | *      | <0.79  | *       | *      | <0.35   | <0.35   | <0.79   | <0.79   | <0.80  | <1.0   | <0.25  | *      | <0.79  | <0.79  | *       | *      | <0.35  | <0.79   | <0.79   | <0.80  | 100   | 20     |
| Diisopropyl ether         | <1.0   | <0.43  | *      | <0.55  | *      | <0.55  | *       | *      | <0.23   | <0.23   | <0.60   | <0.60   | <0.64  | <1.0   | 2      | *      | 2.2    | 2.2    | *       | *      | 0.9    | 0.73 Q  | 0.80 Q  | 0.73Q  | NSE   | NSE    |
| Ethylbenzene              | <1.0   | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | *       | <0.24  | <0.57   | <0.57   | <0.43   | <0.43   | <0.53  | <1.0   | <0.23  | <0.24  | <0.32  | <0.32  | <0.24   | <0.24  | <0.57  | <0.43   | <0.43   | <0.53  | 700   | 140    |
| Isopropylbenzene          | <1.0   | <0.27  | *      | <0.26  | *      | <0.26  | *       | *      | <0.19   | <0.19   | <0.43   | <0.43   | <0.66  | <1.0   | <0.27  | *      | <0.26  | <0.26  | *       | *      | <0.19  | <0.43   | <0.43   | <0.66  | NSE   | NSE    |
| p-Isopropyltoluene        | <1.0   | <0.22  | *      | <0.24  | *      | <0.24  | *       | *      | <0.25   | <0.25   | <0.57   | <0.57   | <0.58  | <1.0   | <0.22  | *      | <0.24  | <0.24  | *       | *      | <0.25  | <0.57   | <0.57   | <0.58  | NSE   | NSE    |
| Methylene chloride        | <1.0   | <0.22  | *      | 0.59Q  | *      | <0.36  | *       | *      | <0.36   | <0.36   | <0.85   | <0.85   | <0.47  | <1.0   | <0.22  | *      | 0.54Q  | <0.36  | *       | *      | <0.36  | <0.85   | <0.85   | <0.47  | 5.0   | 0.5    |
| Methyl tert butyl ether   | <1.0   | <0.53  | <0.22  | <0.32  | *      | <0.32  | *       | <0.22  | <0.20   | <0.20   | <0.67   | <0.67   | <0.87  | <1.0   | <0.53  | <0.22  | <0.32  | <0.32  | <0.22   | <0.22  | <0.20  | <0.67   | <0.67   | <0.87  | 60    | 12     |
| Naphthalene               | <1.0   | <0.66  | *      | <0.35  | <0.89  | <0.35  | *       | *      | <0.27   | <0.27   | <0.59   | <0.59   | <0.63  | <1.0   | <0.66  | *      | <0.35  | <0.35  | *       | *      | <0.27  | <0.59   | <0.59   | <0.63  | 40    | 3.0    |
| n-Propylbenzene           | <1.0   | <0.27  | *      | <0.76  | *      | <0.76  | *       | *      | <0.17   | <0.17   | <0.64   | <0.64   | <0.95  | <1.0   | <0.27  | *      | <0.76  | <0.76  | *       | *      | <0.17  | <0.64   | <0.64   | <0.95  | NSE   | NSE    |
| Toluene                   | <1.0   | <0.28  | <0.21  | 0.32Q  | 0.37Q  | 0.36Q  | *       | 0.51Q  | <1.1    | 0.41    | <0.47   | <0.47   | <0.84  | <1.0   | <0.28  | <0.21  | <0.27  | <0.27  | <0.21   | <0.21  | <1.1   | <0.47   | <0.47   | <0.84  | 1000  | 200    |
| Tetrachloroethene         | <1.0   | <0.27  | *      | <0.43  | *      | <0.43  | *       | *      | <0.85   | <0.85   | <0.57   | <0.57   | <0.63  | <1.0   | <0.27  | *      | <0.43  | <0.43  | *       | *      | <0.85  | <0.57   | <0.57   | <0.63  | 5.0   | 0.5    |
| Trimethylbenzenes (total) | <1.0   | <0.55  | <1.40  | <0.49  | <1.40  | <0.47  | *       | <1.40  | <0.34   | <0.34   | <0.52   | <0.52   | <0.69  | <1.0   | <0.55  | <1.40  | <0.49  | <0.49  | <1.40   | <1.40  | <0.34  | <0.52   | <0.52   | <0.69  | 480   | 96     |
| Trichloroethene           | <1.0   | <0.20  | *      | <0.37  | *      | <0.37  | *       | *      | <0.32   | <0.32   | <0.89   | <0.89   | <0.39  | <1.0   | <0.20  | *      | <0.37  | <0.37  | *       | *      | <0.32  | <0.89   | <0.89   | <0.39  | 5.0   | 0.5    |
| Vinyl Chloride            | <1.0   | <0.23  | *      | <0.2   | *      | <0.20  | *       | *      | <0.19   | <0.19   | <0.18   | <0.18   | <0.11  | <1.0   | <0.23  | *      | <0.20  | <0.20  | *       | *      | <0.19  | <0.18   | <0.18   | <0.11  | 0.2   | 0.02   |
| Xylenes (total)           | <1.0   | <0.79  | <1.34  | <0.67  | <1.34  | <0.67  | *       | <1.34  | <0.35   | <0.35   | <1.4    | <1.4    | <1.1   | <1.0   | <0.79  | <1.34  | <0.67  | <0.67  | <1.34   | <1.34  | <0.35  | <1.4    | <1.4    | <1.1   | 10000 | 1000   |
| PAHs                      |        |        |        |        |        |        |         |        |         |         |         |         |        |        |        |        |        |        |         |        |        |         |         |        |       |        |
| Acenaphthene              | *      | *      | *      | *      | *      | *      | <0.47   | *      | <0.027  | <0.027  | <0.018  | <0.018  | <0.018 | *      | *      | *      | *      | *      | <0.47   | *      | <0.027 | <0.018  | <0.018  | <0.018 | NSE   | NSE    |
| Acenaphthylene            | *      | *      | *      | *      | *      | *      | <0.41   | *      | <0.032  | <0.032  | <0.023  | <0.023  | <0.019 | *      | *      | *      | *      | *      | <0.41   | *      | <0.032 | <0.023  | <0.023  | <0.019 | NSE   | NSE    |
| Anthracene                | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.027  | <0.027  | <0.020  | <0.020  | <0.020 | *      | *      | *      | *      | *      | <0.021  | *      | <0.027 | <0.020  | <0.020  | <0.020 | 3000  | 600    |
| Benzo(a)anthracene        | *      | *      | *      | *      | *      | *      | <0.014  | *      | <0.026  | <0.026  | 0.023 Q | 0.036 Q | <0.012 | *      | *      | *      | *      | *      | <0.014  | *      | <0.026 | 0.20    | 0.072   | 0.028Q | NSE   | NSE    |
| Benzo(a)pyrene            | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.014  | <0.014  | 0.024 Q | 0.096   | <0.014 | *      | *      | *      | *      | *      | <0.015  | *      | <0.014 | 0.21    | 0.13    | 0.037Q | 0.20  | 0.02   |
| Benzo (b) fluoranthene    | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.030  | <0.030  | 0.050   | 0.11    | <0.013 | *      | *      | *      | *      | *      | <0.015  | *      | <0.030 | 0.35    | 0.15    | 0.050  | 0.20  | 0.02   |
| Benzo (ghi) perylene      | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.015  | <0.015  | 0.030 Q | 0.17    | <0.016 | *      | *      | *      | *      | *      | <0.021  | *      | <0.015 | 0.19    | 0.11    | 0.044Q | NSE   | NSE    |
| Benzo(k)fluoranthene      | *      | *      | *      | *      | *      | *      | <0.0090 | *      | <0.019  | <0.019  | 0.023 Q | 0.13    | <0.019 | *      | *      | *      | *      | *      | <0.0090 | *      | <0.019 | 0.14    | 0.13    | 0.042Q | NSE   | NSE    |
| Indeno (123-cd) pyrene    | *      | *      | *      | *      | *      | *      | <0.025  | *      | <0.022  | <0.022  | 0.030 Q | 0.17    | <0.021 | *      | *      | *      | *      | *      | <0.025  | *      | <0.022 | 0.21    | 0.11    | 0.036Q | NSE   | NSE    |
| Chrysene                  | *      | *      | *      | *      | *      | *      | <0.016  | *      | <0.017  | <0.017  | 0.025 Q | 0.049 Q | <0.014 | *      | *      | *      | *      | *      | <0.016  | *      | <0.017 | 0.18    | 0.13    | 0.045  | 0.20  | 0.02   |
| Dibenzo (ah) anthracene   | *      | *      | *      | *      | *      | *      | <0.020  | *      | <0.020  | <0.020  | <0.017  | 0.11    | <0.016 | *      | *      | *      | *      | *      | <0.020  | *      | <0.020 | 0.086   | 0.035 Q | <0.016 | NSE   | NSE    |
| Fluoranthene              | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.021  | <0.021  | 0.046 Q | <0.028  | <0.013 | *      | *      | *      | *      | *      | <0.015  | *      | <0.021 | 0.41    | 0.25    | 0.075  | 400   | 80     |
| Fluorene                  | *      | *      | *      | *      | *      | *      | <0.058  | *      | <0.029  | <0.029  | <0.021  | <0.021  | <0.017 | *      | *      | *      | *      | *      | <0.058  | *      | <0.029 | <0.021  | <0.021  | <0.017 | 400   | 80     |
| 2-Methylnaphthalene       | *      | *      | *      | *      | *      | *      | <0.36   | *      | 0.080 Q | 0.11    | <0.028  | <0.028  | <0.017 | *      | *      | *      | *      | *      | <0.36   | *      | <0.033 | <0.028  | <0.028  | <0.017 | NSE   | NSE    |
| 1-Methylnaphthalene       | *      | *      | *      | *      | *      | *      | <0.36   | *      | <0.030  | 0.097   | <0.027  | <0.027  | <0.017 | *      | *      | *      | *      | *      | <0.36   | *      | <0.030 | <0.027  | <0.027  | <0.017 | NSE   | NSE    |
| Naphthalene               | *      | *      | *      | *      | *      | *      | <0.42   | *      | <0.031  | 0.034 Q | <0.027  | <0.027  | <0.024 | *      | *      | *      | *      | *      | <0.42   | *      | <0.031 | <0.027  | <0.027  | 0.05Q  | 40    | 3.0    |
| Phenanthrene              | *      | *      | *      | *      | *      | *      | <0.046  | *      | <0.028  | <0.028  | <0.019  | <0.019  | <0.016 | *      | *      | *      | *      | *      | <0.046  | *      | <0.028 | 0.093   | 0.082   | 0.033Q | NSE   | NSE    |
| Pyrene                    | *      | *      | *      | *      | *      | *      | <0.017  | *      | <0.024  | <0.024  | 0.028 Q | <0.020  | <0.017 | *      | *      | *      | *      | *      | <0.017  | *      | <0.024 | 0.25    | 0.18    | 0.071  | 250   | 50     |

Concentrations Expressed as micrograms per Liter (ug/l)  
**Bold Print** Indicates Concentration Above NR 140 Preventive Action Limit (PAL)  
**Bold and Boxed Print** Indicates Concentration Above NR 140 Enforcement Standard (ES)  
 NSE - No Standard Established  
 <0.0 - Concentration Below Detection Limit  
 Q - Concentration Detected Between Detection Limit and Quantification Limit  
 \* = Not Tested

**TABLE 1**  
**GROUNDWATER ANALYTICAL RESULTS**  
**FORMER JOHNSON SAND AND GRAVEL SITE**  
(Detected VOCs and PAHs)

| Analyte                   | MW-5   |        |        |        |        |        |         |        |         |        | MW-6   |        |        |        |        |         |        |        |        |         | ES     | PAL   |        |     |
|---------------------------|--------|--------|--------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|---------|--------|-------|--------|-----|
|                           | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99  | Oct-99 | June-01 | Dec-02 | Sep-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99  | Oct-99 | Dec-00 | Mar-01 | June-01 |        |       | Mar-02 |     |
| GRO                       | <50    | <50    | <50    | <50    | <50    | <50    | *       | *      | *       | *      | 100    | 79     | <50    | 120    | 60     | <50     | *      | *      | *      | *       | *      | NSE   | NSE    |     |
| DRO                       | 150    | 170    | <100   | 150    | 110    | <100   | *       | *      | *       | <100   | 150    | 42,000 | 110    | *      | <100   | <100    | *      | *      | *      | *       | *      | NSE   | NSE    |     |
| Lead, Soluble             | <2.0   | *      | *      | *      | *      | *      | *       | *      | *       | *      | *      | *      | *      | *      | *      | *       | *      | *      | *      | *       | *      | *     | 15.0   | 1.5 |
| <b>VOCs</b>               |        |        |        |        |        |        |         |        |         |        |        |        |        |        |        |         |        |        |        |         |        |       |        |     |
| Benzene                   | <0.6   | <0.41  | <0.26  | <0.27  | <0.26  | <0.27  | *       | <0.26  | <0.48   | <0.25  | <0.41  | 0.27   | <0.27  | <0.26  | <0.27  | <0.26   | <0.26  | <0.29  | <0.29  | <0.48   | <0.48  | 5.0   | 0.5    |     |
| s-Butylbenzene            | <1.0   | <0.23  | *      | <0.29  | *      | <0.29  | *       | *      | <0.49   | <0.62  | <0.23  | *      | <0.29  | *      | <0.29  | *       | *      | <0.20  | <0.20  | <0.49   | <0.49  | NSE   | NSE    |     |
| t-Butylbenzene            | <1.0   | <0.24  | *      | <0.32  | *      | <0.32  | *       | *      | <0.50   | <0.96  | <0.24  | *      | <0.32  | *      | <0.32  | *       | *      | <0.23  | <0.23  | <0.50   | <0.50  | NSE   | NSE    |     |
| n-Butylbenzene            | <1.0   | <0.31  | *      | <0.29  | *      | <0.29  | *       | *      | <0.61   | <0.65  | <0.31  | *      | <0.29  | *      | <0.29  | *       | *      | <0.28  | <0.28  | <0.61   | <0.61  | NSE   | NSE    |     |
| Chloromethane             | <1.0   | <0.15  | *      | <0.61  | *      | <0.61  | *       | *      | <0.62   | <0.27  | <0.15  | *      | <0.61  | *      | <0.61  | *       | *      | 23     | <0.42  | <0.62   | <0.62  | 3.0   | 0.3    |     |
| cis-1,2-Dichloroethene    | <1.0   | <0.28  | *      | <0.28  | *      | <0.28  | *       | *      | <0.73   | <0.81  | 1.5    | *      | 0.72Q  | *      | 0.9    | *       | *      | 1.1    | 1.3    | 1.4     | 1.7Q   | 70    | 7.0    |     |
| trans-1,2-Dichloroethene  | <1.0   | <0.25  | *      | <0.79  | *      | <0.79  | *       | *      | <0.79   | <0.80  | <0.25  | *      | <0.79  | *      | <0.79  | *       | *      | <0.35  | <0.35  | <0.79   | <0.79  | 100   | 20     |     |
| Diisopropyl ether         | <1.0   | 1.3Q   | *      | 5.2    | *      | 1.9    | *       | *      | <0.60   | 0.66Q  | 130    | *      | 62     | *      | 74     | *       | *      | 68     | 70     | 58      | 89     | NSE   | NSE    |     |
| Ethylbenzene              | <1.0   | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | *       | <0.24  | <0.43   | <0.53  | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | <0.24   | <0.24  | <0.57  | <0.57  | <0.43   | <0.43  | 700   | 140    |     |
| Isopropylbenzene          | <1.0   | <0.27  | *      | <0.26  | *      | <0.26  | *       | *      | <0.43   | <0.66  | <0.27  | *      | <0.26  | *      | <0.26  | *       | *      | <0.19  | <0.19  | <0.43   | <0.43  | NSE   | NSE    |     |
| p-isopropyltoluene        | <1.0   | <0.22  | *      | <0.24  | *      | <0.24  | *       | *      | <0.57   | <0.58  | <0.22  | *      | <0.24  | *      | <0.24  | *       | *      | <0.25  | <0.25  | <0.57   | <0.57  | NSE   | NSE    |     |
| Methylene chloride        | <1.0   | <0.22  | *      | <0.36  | *      | <0.36  | *       | *      | <0.85   | 1.6    | <0.22  | *      | <0.36  | *      | <0.36  | *       | *      | <0.36  | <0.36  | <0.85   | <0.85  | 5.0   | 0.5    |     |
| Methyl tert butyl ether   | <1.0   | <0.53  | <0.22  | <0.32  | <0.22  | <0.32  | *       | <0.22  | <0.67   | <0.87  | <0.53  | 0.36   | <0.32  | 0.41Q  | <0.32  | <0.22   | 0.57Q  | <0.20  | <0.20  | <0.67   | <0.67  | 60    | 12     |     |
| Naphthalene               | <1.0   | <0.66  | *      | <0.35  | <0.89  | <0.35  | *       | *      | <0.59   | <0.63  | <0.66  | *      | <0.35  | <0.89  | <0.35  | *       | *      | <0.27  | <0.27  | <0.59   | <0.59  | 40    | 8.0    |     |
| n-Propylbenzene           | <1.0   | <0.27  | *      | <0.76  | *      | <0.76  | *       | *      | <0.64   | <0.95  | <0.27  | *      | <0.76  | *      | <0.76  | *       | *      | <0.17  | <0.17  | <0.64   | <0.64  | NSE   | NSE    |     |
| Toluene                   | <1.0   | <0.28  | <0.21  | <0.27  | <0.21  | <0.27  | *       | <0.21  | <0.47   | <0.84  | <0.28  | 0.4    | 0.30Q  | 0.32Q  | 0.29Q  | <0.21   | <0.21  | <1.1   | <0.13  | <0.47   | <0.47  | 1000  | 200    |     |
| Tetrachloroethene         | <1.0   | <0.27  | *      | <0.43  | *      | <0.43  | *       | *      | <0.57   | <0.63  | <0.27  | *      | <0.43  | *      | <0.43  | *       | *      | <0.85  | <0.85  | <0.57   | <0.57  | 5.0   | 0.5    |     |
| Trimethylbenzenes (total) | <1.0   | <0.55  | <1.40  | 1.09Q  | <1.40  | 0.92Q  | *       | <1.40  | <0.52   | <0.69  | <0.55  | <1.40  | <0.49  | <1.40  | <0.49  | <1.40   | <1.40  | <0.34  | <0.34  | <0.72   | <0.52  | 480   | 96     |     |
| Trichloroethene           | <1.0   | <0.20  | *      | <0.37  | *      | <0.37  | *       | *      | <0.89   | <0.39  | <0.20  | *      | <0.37  | *      | <0.37  | *       | *      | <0.32  | <0.85  | <0.72   | <0.89  | 5.0   | 0.5    |     |
| Vinyl Chloride            | <1.0   | <0.23  | *      | <0.20  | *      | <0.20  | *       | *      | <0.18   | <0.11  | <0.23  | *      | <0.20  | *      | <0.20  | *       | *      | <0.19  | <0.19  | <0.18   | <0.18  | 0.2   | 0.02   |     |
| Xylenes (total)           | <1.0   | <0.79  | <1.34  | 0.46Q  | <1.34  | 0.45Q  | *       | <1.34  | <1.4    | <1.1   | <0.79  | <1.34  | <0.67  | <1.34  | <0.67  | <1.34   | <1.34  | <0.35  | <0.35  | <1.4    | <1.4   | 10000 | 1000   |     |
| <b>PAHs</b>               |        |        |        |        |        |        |         |        |         |        |        |        |        |        |        |         |        |        |        |         |        |       |        |     |
| Acenaphthene              | *      | *      | *      | *      | *      | *      | <0.47   | *      | <0.018  | <0.018 | *      | *      | *      | *      | *      | <0.47   | *      | <0.027 | <0.027 | <0.018  | <0.018 | NSE   | NSE    |     |
| Acenaphthylene            | *      | *      | *      | *      | *      | *      | <0.41   | *      | <0.023  | <0.019 | *      | *      | *      | *      | *      | <0.41   | *      | <0.032 | <0.032 | <0.023  | <0.023 | NSE   | NSE    |     |
| Anthracene                | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.020  | <0.020 | *      | *      | *      | *      | *      | <0.021  | *      | <0.027 | <0.027 | <0.020  | <0.020 | 3000  | 600    |     |
| Benzo(a)anthracene        | *      | *      | *      | *      | *      | *      | <0.014  | *      | <0.019  | 0.013Q | *      | *      | *      | *      | *      | <0.014  | *      | <0.026 | <0.026 | <0.019  | <0.019 | NSE   | NSE    |     |
| Benzo(a)pyrene            | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.012  | 0.02Q  | *      | *      | *      | *      | *      | <0.015  | *      | <0.022 | 0.019Q | <0.012  | <0.012 | 0.20  | 0.02   |     |
| Benzo (b) fluoranthene    | *      | *      | *      | *      | *      | *      | <0.015  | *      | 0.025 Q | 0.031Q | *      | *      | *      | *      | *      | <0.015  | *      | <0.030 | <0.030 | <0.014  | <0.014 | 0.20  | 0.02   |     |
| Benzo (ghi) perylene      | *      | *      | *      | *      | *      | *      | <0.021  | *      | 0.018 Q | 0.025Q | *      | *      | *      | *      | *      | <0.021  | *      | <0.015 | <0.015 | <0.015  | <0.015 | NSE   | NSE    |     |
| Benzo(k)fluoranthene      | *      | *      | *      | *      | *      | *      | <0.0090 | *      | 0.015 Q | 0.024Q | *      | *      | *      | *      | *      | <0.0090 | *      | <0.030 | 0.022Q | <0.013  | <0.013 | NSE   | NSE    |     |
| Indeno (123-cd) pyrene    | *      | *      | *      | *      | *      | *      | <0.025  | *      | 0.017 Q | <0.021 | *      | *      | *      | *      | *      | <0.025  | *      | <0.022 | <0.022 | <0.014  | <0.014 | NSE   | NSE    |     |
| Chrysene                  | *      | *      | *      | *      | *      | *      | <0.016  | *      | 0.018 Q | 0.032Q | *      | *      | *      | *      | *      | <0.016  | *      | <0.017 | 0.022Q | <0.018  | <0.018 | 0.20  | 0.02   |     |
| Dibenzo (ah) anthracene   | *      | *      | *      | *      | *      | *      | <0.020  | *      | <0.017  | <0.016 | *      | *      | *      | *      | *      | <0.020  | *      | <0.020 | <0.020 | <0.017  | <0.017 | NSE   | NSE    |     |
| Fluoranthene              | *      | *      | *      | *      | *      | *      | 0.021Q  | *      | 0.034 Q | 0.051  | *      | *      | *      | *      | *      | <0.015  | *      | <0.021 | 0.053Q | <0.028  | <0.028 | 400   | 80     |     |
| Fluorene                  | *      | *      | *      | *      | *      | *      | <0.058  | *      | <0.021  | <0.017 | *      | *      | *      | *      | *      | <0.058  | *      | <0.029 | <0.029 | <0.021  | <0.021 | 400   | 80     |     |
| 2-Methylnaphthalene       | *      | *      | *      | *      | *      | *      | <0.36   | *      | <0.028  | <0.017 | *      | *      | *      | *      | *      | <0.36   | *      | 0.040Q | <0.033 | <0.028  | <0.028 | NSE   | NSE    |     |
| 1-Methylnaphthalene       | *      | *      | *      | *      | *      | *      | <0.36   | *      | <0.027  | <0.017 | *      | *      | *      | *      | *      | <0.36   | *      | <0.030 | <0.030 | <0.027  | <0.027 | NSE   | NSE    |     |
| Naphthalene               | *      | *      | *      | *      | *      | *      | <0.42   | *      | <0.027  | 0.034Q | *      | *      | *      | *      | *      | <0.42   | *      | <0.031 | <0.031 | 0.034Q  | <0.027 | 40    | 8.0    |     |
| Phenanthrene              | *      | *      | *      | *      | *      | *      | <0.046  | *      | 0.020 Q | 0.027Q | *      | *      | *      | *      | *      | <0.046  | *      | <0.028 | <0.028 | <0.019  | <0.019 | NSE   | NSE    |     |
| Pyrene                    | *      | *      | *      | *      | *      | *      | 0.018Q  | *      | 0.022 Q | 0.051Q | *      | *      | *      | *      | *      | <0.017  | *      | <0.024 | 0.034  | <0.020  | <0.020 | 250   | 50     |     |

Concentrations Expressed as micrograms per Liter (ug/l)

**Bold Print** Indicates Concentration Above NR 140 Preventive Action Limit (PAL)

**Bold and Boxed Print** Indicates Concentration Above NR 140 Enforcement Standard (ES)

NSE - No Standard Established

<0.0 - Concentration Below Detection Limit

Q - Concentration Detected Between Detection Limit and Quantification Limit

\* = Not Tested



**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

| MW - 1 / EXT - 1           |              |                        |                 |                     |                   |
|----------------------------|--------------|------------------------|-----------------|---------------------|-------------------|
| Surface Elevation          | 99.69        | Free Product Abatement |                 |                     |                   |
| Top of Casing Elevation    | 99.12/99.17  |                        |                 |                     |                   |
| Top of Screen Elevation    | 76.69/79.69  |                        |                 |                     |                   |
| Bottom of Screen Elevation | 66.69/64.69  |                        |                 |                     |                   |
| Measurement                | DTW          | Groundwater            | Product         | Product             | Cumulative        |
| Date                       | (Casing)     | Elevation              | Thickness (ft.) | Removed (Gallons)   | Removal (Gallons) |
| 1/9/1998                   | 28.04        | 71.12                  | 0.06            | sock installed      |                   |
| 6/16/1998                  | 24.14        | 76.69                  | 2.14            | sock replaced       |                   |
| 7/10/1998                  | 24.91        | 74.35                  | 0.17            | EZ skimmer          | 2 oz.             |
| 10/16/1998                 | 26.30        | 72.82                  | sheen only      | 5 gals H2O purged   | say 1             |
| 1/21/1999                  | 28.65        | 70.55                  | 0.10            | 2.8 gals H2O purged | 1.25              |
| 4/15/1999                  | 24.81        | 74.49                  | 0.23            | 5 gals H2O purged   | 1.50              |
| 7/19/1999                  | 23.30        | 76.98                  | 1.45            | socks installed     | 1.50              |
| 10/21/1999                 | 27.05        | 72.28                  | 0.20            | 20 gals H2O purged  | 2.50              |
| 11/19/1999                 | 28.77        | 70.62                  | 0.28            | 16 gals H2O purged  | 3.25              |
| 1/18/2000                  | 29.63        | 69.61                  | 0.09            | 14 gals H2O purged  | 3.25              |
| 3/21/2000                  | 28.23        | 71.19                  | 0.31            | --                  | 3.25              |
| 12/13/2000                 | 27.28        | 72.11                  | 0.27            | 3.5 gals H2O purged | 3.50              |
| 3/12/2001                  | 24.41        | 74.76                  | sheen only      | --                  | 3.50              |
| 6/26/2001                  | 22.52        | 76.65                  | 0.02            | .5 gals purged      | 3.50              |
| 12/18/2002                 | not measured | --                     | 0.50            | --                  | 3.50              |

**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

| EXT - 2                    |              |                        |           |                   |                   |
|----------------------------|--------------|------------------------|-----------|-------------------|-------------------|
| Surface Elevation          | 99.69        | Free Product Abatement |           |                   |                   |
| Top of Casing Elevation    | 99.30        |                        |           |                   |                   |
| Top of Screen Elevation    | 79.69        |                        |           |                   |                   |
| Bottom of Screen Elevation | 64.69        |                        |           |                   |                   |
| Measurement                | DTW          | Groundwater            | Product   | Product           | Cumulative        |
| Date                       | (Casing)     | Elevation              | Thickness | Removed (Gallons) | Removal (Gallons) |
| 10/21/1999                 | 27.03        | 72.27                  | --        | --                | --                |
| 1/18/2000                  | 29.45        | 69.85                  | --        | --                | --                |
| 3/21/2000                  | 28.41        | 70.90                  | 0.01      | --                | --                |
| 12/13/2000                 | 27.18        | 72.12                  | --        | --                | --                |
| 3/12/2001                  | 24.49        | 74.81                  | --        | --                | --                |
| 6/26/2001                  | 22.69        | 76.61                  | --        | --                | --                |
| 12/18/2002                 | not measured | --                     | --        | --                | --                |

Note: On 9/7/99 (800 gallons) and 9/30/99 (1,200 gallons), Taylor Industrial Vac pumped water from the extraction wells for disposal at Great Lakes Recovery Systems. On 9/30/99, an additional 6,000 gallons was pumped by WSK Service Company, Inc. for disposal at the Port Washington POTW.

\* GW elevations are corrected for free product (assumed product density of 0.80)

**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

**EXT - 3**

|                            |              |                        |                      |                     |            |
|----------------------------|--------------|------------------------|----------------------|---------------------|------------|
| Surface Elevation          | 99.69        | Free Product Abatement |                      |                     |            |
| Top of Casing Elevation    | 99.07        |                        |                      |                     |            |
| Top of Screen Elevation    | 79.69        |                        |                      |                     |            |
| Bottom of Screen Elevation | 64.69        |                        |                      |                     |            |
|                            |              |                        |                      | Product             | Cumulative |
| Measurement                | DTW          | Groundwater            | Product              | Removed             | Removal    |
| Date                       | (Casing)     | Elevation              | Thickness            | (Gallons)           | (Gallons)  |
| 10/21/1999                 | 26.82        | 72.26                  | 0.01                 | --                  | --         |
| 1/18/2000                  | 29.19        | 69.88                  | --                   | --                  | --         |
| 12/13/2000                 | 27.10        | 72.11                  | 0.18                 | 20 gals H2O purged  | Say 1      |
| 3/12/2001                  | 24.31        | 74.76                  | --                   | --                  | --         |
| 6/26/2001                  | 22.41        | 76.66                  | 0.04 (after purging) | 3 gals H2O purged   | --         |
| 12/18/2002                 | not measured | --                     | 0.21                 | 4.5 gals H2O purged | 1.25       |

**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

**MW - 7**

|                            |              |                        |            |                     |            |
|----------------------------|--------------|------------------------|------------|---------------------|------------|
| Surface Elevation          | 99.92        | Free Product Abatement |            |                     |            |
| Top of Casing Elevation    | 99.55        |                        |            |                     |            |
| Top of Screen Elevation    | 80.22        |                        |            |                     |            |
| Bottom of Screen Elevation | 69.85        |                        |            |                     |            |
|                            |              |                        |            | Product             | Cumulative |
| Measurement                | DTW          | Groundwater            | Product    | Removed             | Removal    |
| Date                       | (Casing)     | Elevation              | Thickness  | (Gallons)           | (Gallons)  |
| 6/16/1998                  | 24.85        | 75.09                  | 0.02       | --                  | --         |
| 10/16/1998                 | 26.60        | 73.32                  | sheen only | 5 gals H2O purged   | say 1      |
| 1/21/1999                  | 29.18        | 70.86                  | 0.15       | .5 gals H2O purged  | 1          |
| 4/15/1999                  | 25.06        | 74.86                  | sheen only | 3.2 gals H2O purged | 1          |
| 7/19/1999                  | 22.51        | 77.43                  | 0.03       | 4.7 gals H2O purged | 1          |
| 10/21/1999                 | 27.45        | 72.59                  | 0.16       | 5 gals H2O purged   | 1.25       |
| 11/19/1999                 | 29.52        | 70.96                  | 0.70       | .12 gals H2O purged | 1.25       |
| 1/18/2000                  | 29.48        | 70.44                  | --         | --                  | 1.25       |
| 3/12/2001                  | 24.77        | 75.15                  | --         | --                  | 1.25       |
| 6/26/2001                  | 22.91        | 77.01                  | --         | --                  | --         |
| 3/10/2002                  | 26.68        | 73.24                  | --         | --                  | --         |
| 12/18/2002                 | not measured | --                     | 0.04       | 5 gals H2O purged   | 1.50       |

Note: On 9/7/99 (800 gallons) and 9/30/99 (1,200 gals.), Taylor Industrial Vac pumped water from the extraction wells for disposal at Great Lakes Recovery Systems. On 9/30/99, an additional 6,000 gallons was pumped by WSK Service Company, Inc. for disposal at the Port Washington POTW.

\* GW elevations are corrected for free product (assumed product density of 0.80)

**TABLE 3  
GROUNDWATER ELEVATIONS  
FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
TOWN OF PEWAUKEE, WI**

| <b>MW - 1 / EXT - 1</b>    |              |                       | <b>MW - 2</b>              |              |                       |
|----------------------------|--------------|-----------------------|----------------------------|--------------|-----------------------|
| Surface Elevation          |              |                       | Surface Elevation          |              |                       |
|                            |              |                       | 99.77                      |              |                       |
| Top of Casing Elevation    |              |                       | Top of Casing Elevation    |              |                       |
|                            |              |                       | 99.34                      |              |                       |
| Top of Screen Elevation    |              |                       | Top of Screen Elevation    |              |                       |
|                            |              |                       | 76.77                      |              |                       |
| Bottom of Screen Elevation |              |                       | Bottom of Screen Elevation |              |                       |
|                            |              |                       | 61.77                      |              |                       |
| Measurement Date           | DTW (Casing) | Groundwater Elevation | Measurement Date           | DTW (Casing) | Groundwater Elevation |
| SEE TABLE 2                |              |                       | 6/16/1998                  | 21.48        | 77.86                 |
|                            |              |                       | 10/14/1998                 | 22.78        | 76.56                 |
|                            |              |                       | 1/21/1999                  | 25.83        | 73.51                 |
|                            |              |                       | 4/15/1999                  | 22.45        | 76.89                 |
|                            |              |                       | 7/19/1999                  | 21.20        | 78.14                 |
|                            |              |                       | 10/21/1999                 | 24.82        | 74.52                 |
|                            |              |                       | 1/18/2000                  | 26.68        | 72.66                 |
|                            |              |                       | 12/13/2000                 | 23.96        | 75.38                 |
|                            |              |                       | 3/12/2001                  | 22.98        | 76.33                 |
|                            |              |                       | 6/26/2001                  | 20.75        | 78.59                 |
|                            |              |                       | 3/10/2002                  | 24.73        | 74.61                 |
|                            |              |                       | 12/18/2002                 | 25.41        | 73.93                 |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |

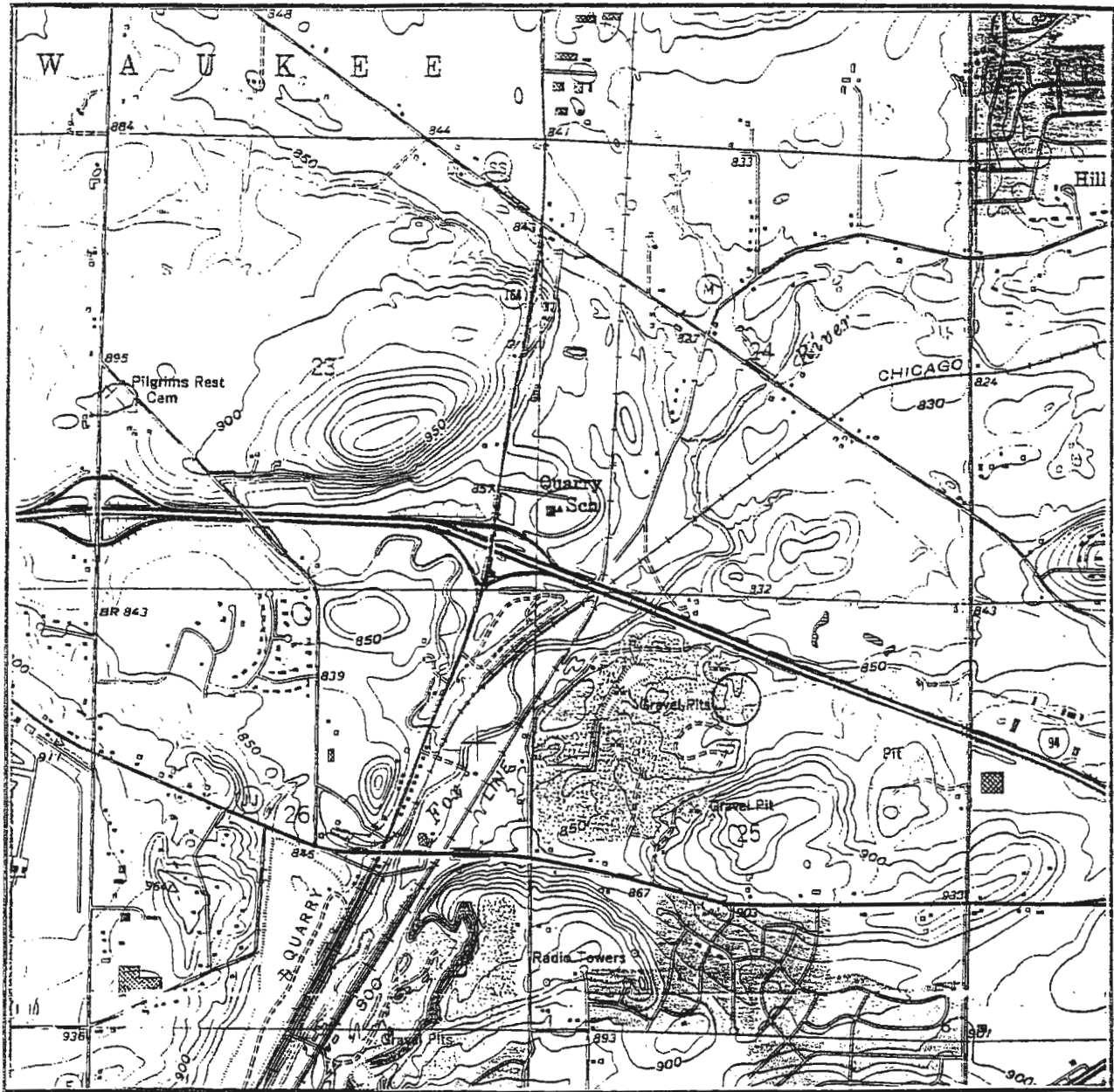
**TABLE 3  
GROUNDWATER ELEVATIONS  
FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
TOWN OF PEWAUKEE, WI**

| <b>MW - 3</b>              |              |                       | <b>MW - 4</b>              |              |                       |
|----------------------------|--------------|-----------------------|----------------------------|--------------|-----------------------|
| Surface Elevation          |              |                       | Surface Elevation          |              |                       |
| 99.27                      |              |                       | 99.20                      |              |                       |
| Top of Casing Elevation    |              |                       | Top of Casing Elevation    |              |                       |
| 98.81                      |              |                       | 98.78                      |              |                       |
| Top of Screen Elevation    |              |                       | Top of Screen Elevation    |              |                       |
| 79.27                      |              |                       | 79.20                      |              |                       |
| Bottom of Screen Elevation |              |                       | Bottom of Screen Elevation |              |                       |
| 69.27                      |              |                       | 69.20                      |              |                       |
| Measurement Date           | DTW (Casing) | Groundwater Elevation | Measurement Date           | DTW (Casing) | Groundwater Elevation |
| 6/16/1998                  | 23.74        | 75.07                 | 6/16/1998                  | 23.97        | 74.81                 |
| 10/14/1998                 | 25.10        | 73.71                 | 10/14/1998                 | 25.26        | 73.52                 |
| 1/21/1999                  | 28.22        | 70.59                 | 1/21/1999                  | 28.20        | 70.58                 |
| 4/15/1999                  | 24.10        | 74.71                 | 4/15/1999                  | 24.27        | 74.51                 |
| 7/19/1999                  | 21.65        | 77.16                 | 7/19/1999                  | 21.76        | 77.02                 |
| 10/21/1999                 | 26.43        | 72.38                 | 10/21/1999                 | 26.43        | 72.35                 |
| 1/18/2000                  | 28.58        | 70.23                 | 1/18/2000                  | 28.65        | 70.13                 |
| 12/13/2000                 | 26.60        | 72.21                 | 12/13/2000                 | 26.58        | 72.20                 |
| 3/12/2001                  | 23.90        | 74.91                 | 3/12/2001                  | no access    | --                    |
| 6/26/2001                  | 22.03        | 76.78                 | 6/26/2001                  | 22.12        | 76.66                 |
| 3/10/2002                  | 25.75        | 73.06                 | 3/10/2002                  | 25.86        | 72.92                 |
| 12/18/2002                 | 28.21        | 70.60                 | 12/18/2002                 | 28.14        | 70.64                 |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |





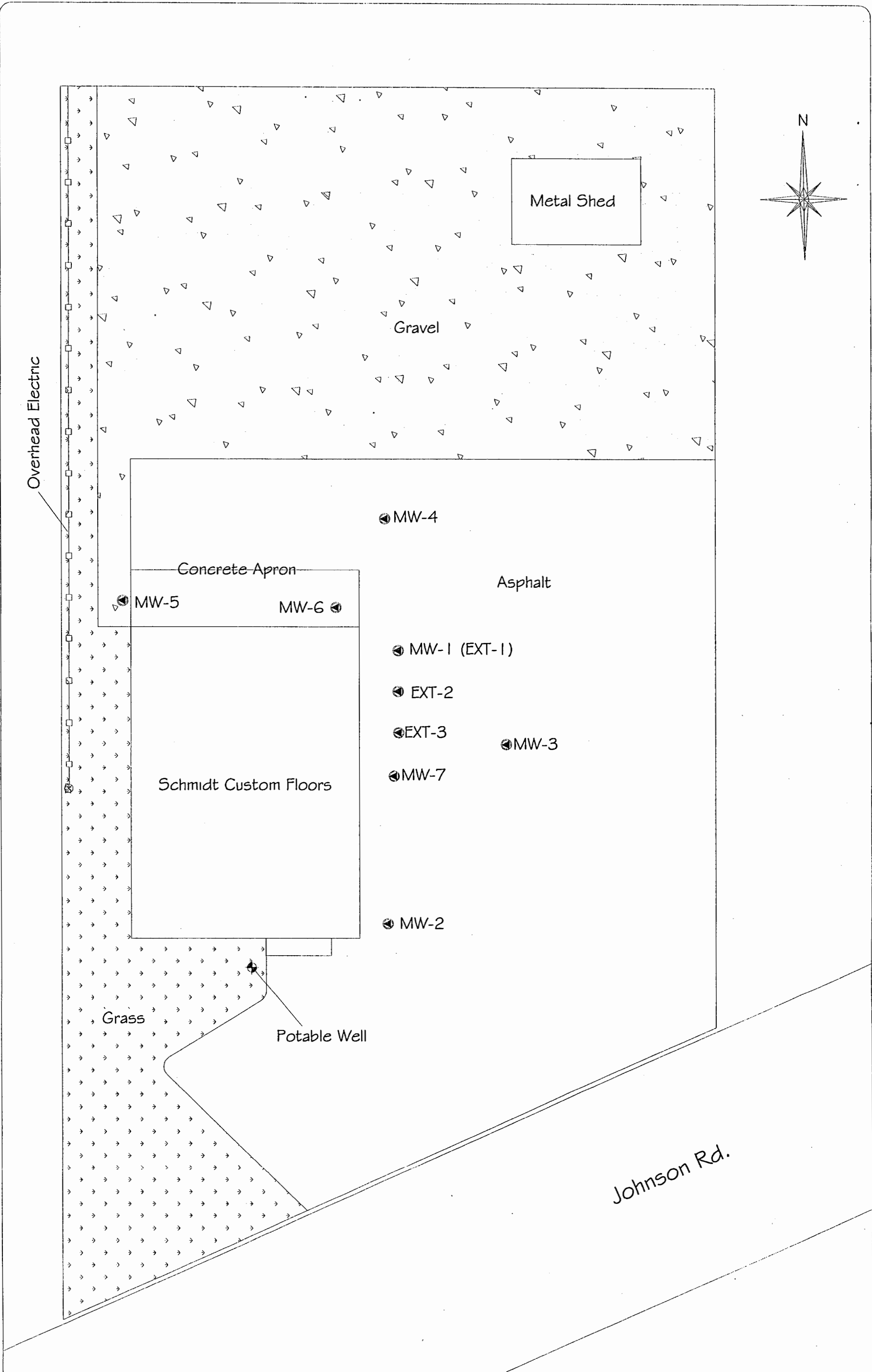
## FIGURES



Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

○ — SITE LOCATION

|                 |   |               |
|-----------------|---|---------------|
| Drawing Title   | <b>Site Location Map</b>  |               |
| Project Name    | Former Johnson Sand and Gravel<br>N8 W22590 Johnson Road<br>Waukesha, Wisconsin |               |
| Drawing Company | Moraine Environmental, Inc.   |               |
| Project Number  | MEI #0305   | Page Figure 1 |



Graphic Scale  
 0' 40'  
 Scale: 1 Inch = 40 Feet  
 Drawn By Andrew Malsom  
 Date: 6/6/03  
 Project No: 1401  
 \*Note: Not a legal survey,  
 adapted from field notes

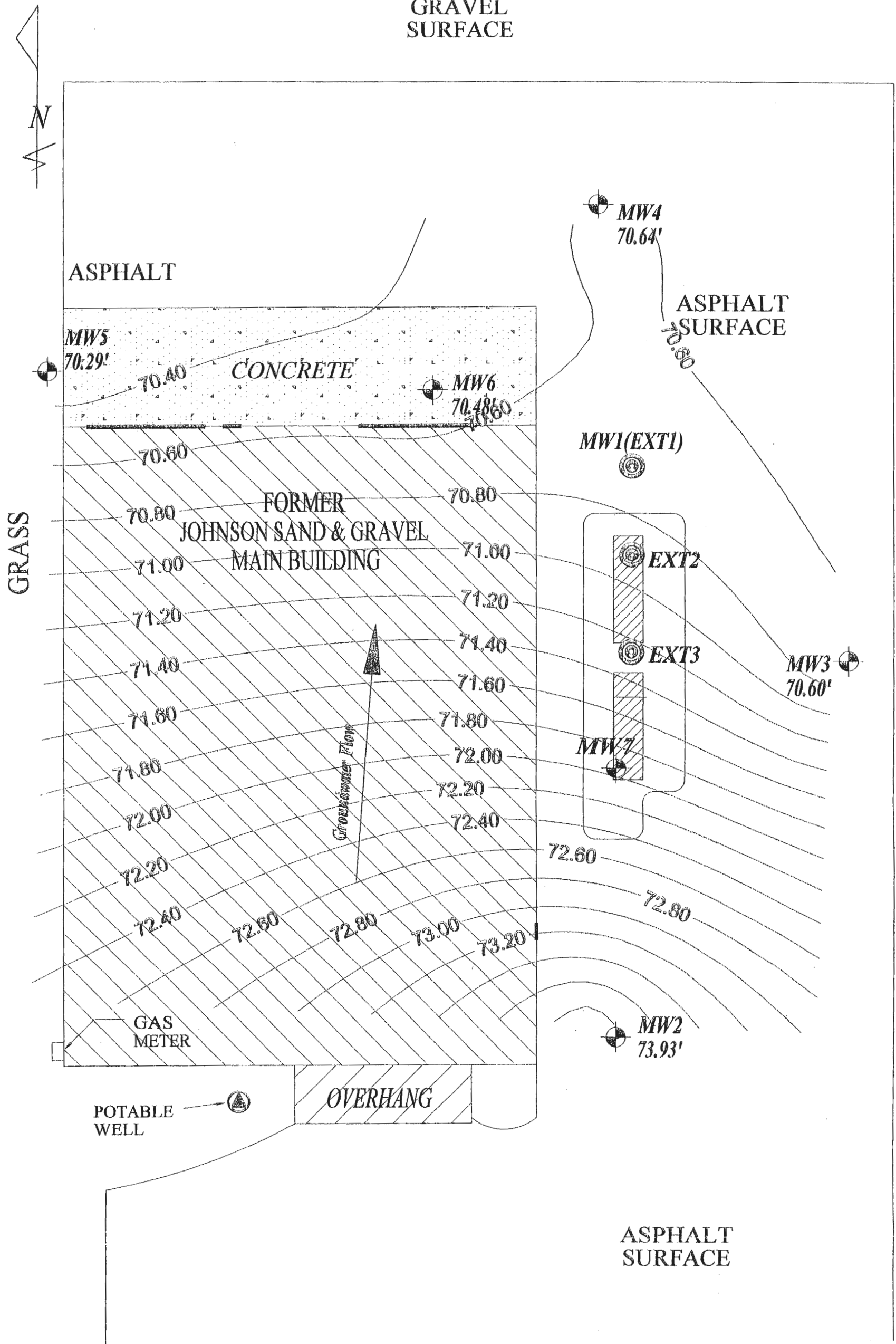
Former Johnson Sand and Gravel Property

N8 W22590 Johnson Road Pewaukee, WI

Moraine Environmental, Inc.  
 Environmental Management Services

1234 12th Avenue Grafton, WI 53024-1924  
 262-377-9060 / Fax 262-377-9770

GRAVEL SURFACE



**MEI - Legend**

- Potable Well Location
- Groundwater Monitoring Well Location
- Extraction Sunps

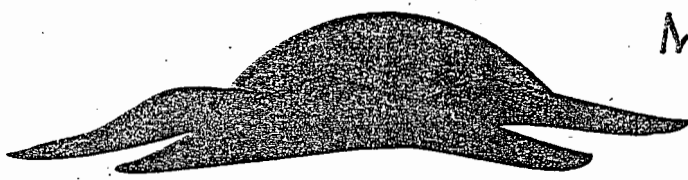


\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                                |
|--|--------------------------------|
| FIGURE NAME<br><b>Groundwater Elevation Map</b><br>December 18, 2002 Data  |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site</b><br><b>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #1401</b>  | FIGURE NAME<br><b>Figure 2</b> |

**SUPPLEMENTAL DATA FROM INVESTIGATION AND REMEDIATION WORK**

F



Moraine Environmental, Inc.

Environmental Management Services

SITE INVESTIGATION REPORT AND  
REMEDIAL WORK PLAN FOR

*FORMER JOHNSON SAND AND GRAVEL SITE  
N8 W22590 JOHNSON ROAD  
TOWN OF PEWAUKEE, WISCONSIN  
WDNR FILE REF: 268438610 ERR-LUST*

PREPARED FOR:

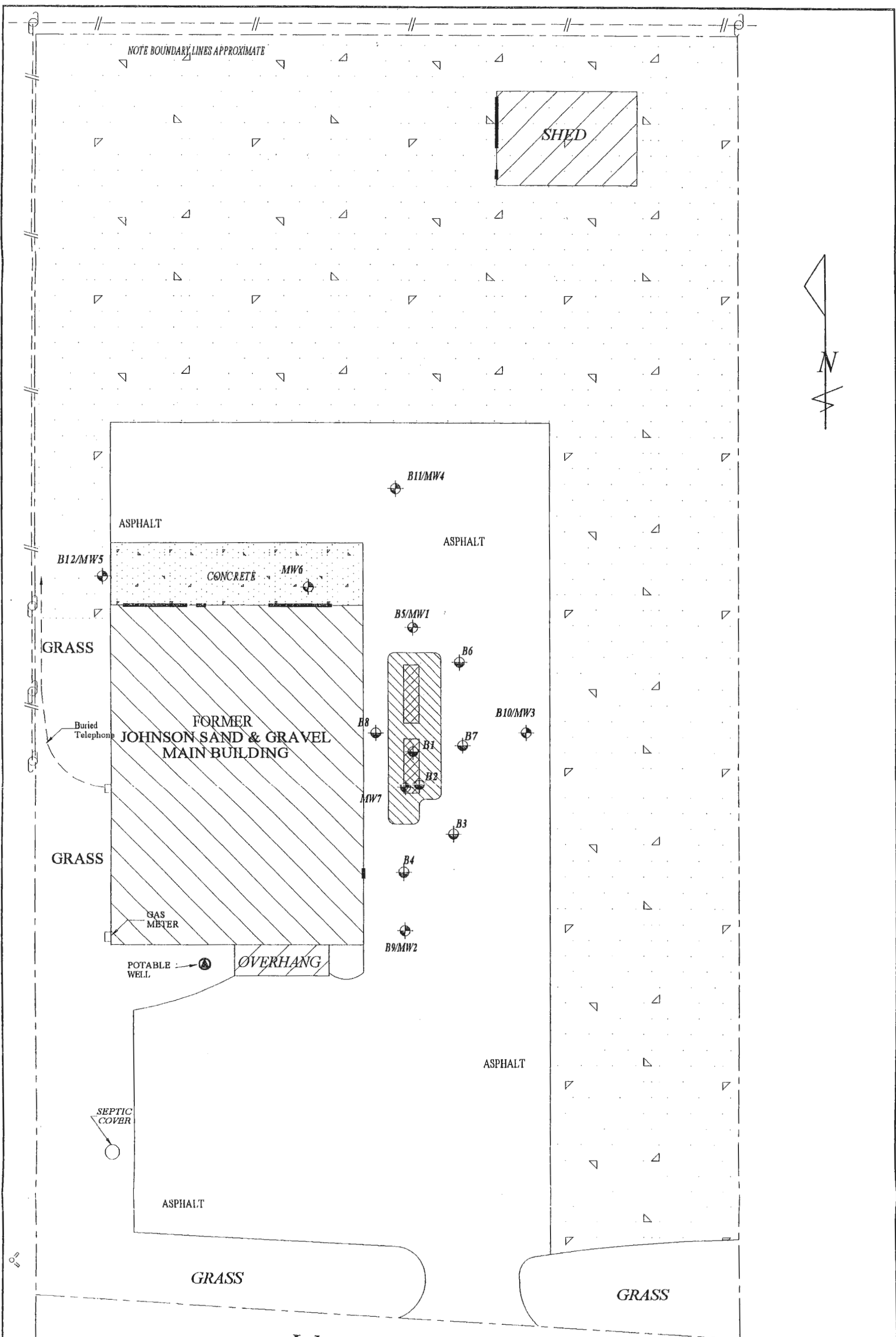
MR. ROBERT JOHNSON  
JOHNSON SAND AND GRAVEL  
20685 WEST NATIONAL AVENUE  
NEW BERLIN, WISCONSIN 53186

PREPARED BY:

MORAINE ENVIRONMENTAL, INC  
1234 12TH AVENUE  
GRAFTON, WISCONSIN 53024  
(414) 377-9060

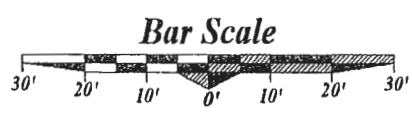
PROJECT REFERENCE #0305

November 17, 1997



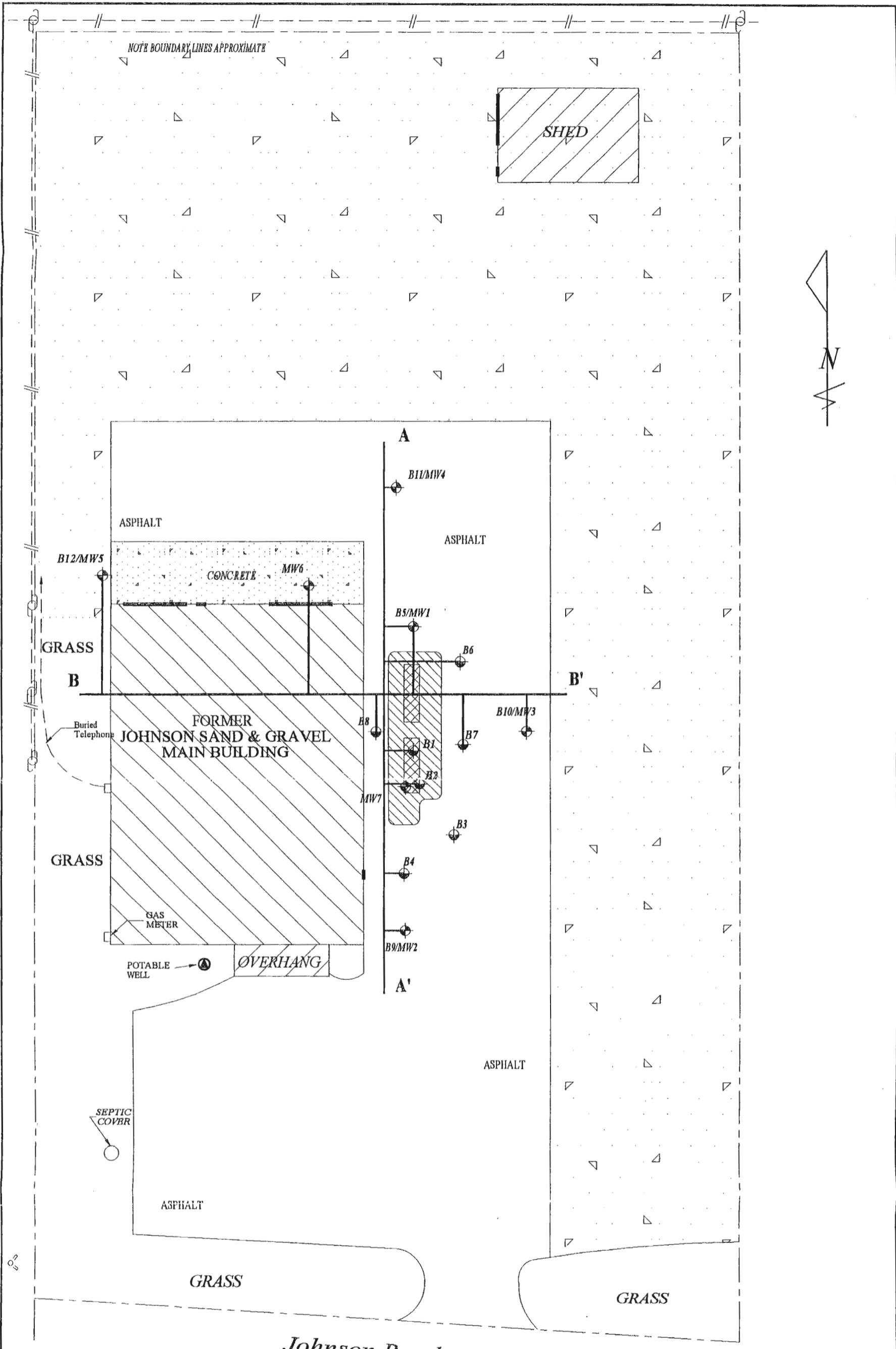
**MEI - Legend**

|  |                          |
|--|--------------------------|
|  | --Potable Well Location  |
|  | --Soil Boring Location   |
|  | --Hydrant                |
|  | --Overhead Electric Line |
|  | --Monitoring Well        |
|  | --Utility Pole           |
|  | --Property Line          |
|  | --Buried Line            |



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |             |
|--|-------------|
| FIGURE NAME  |             |
| Site Layout and Boring/Well Location Map                                 |             |
| SITE NAME AND LOCATION   |             |
| Former Johnson Sand & Gravel Site<br>N8 W22590 Johnson Road Waukesha, WI |             |
| PROJECT REFERENCE  | FIGURE NAME |
| MEI #0305  | Figure 2    |



**MEI - Legend**

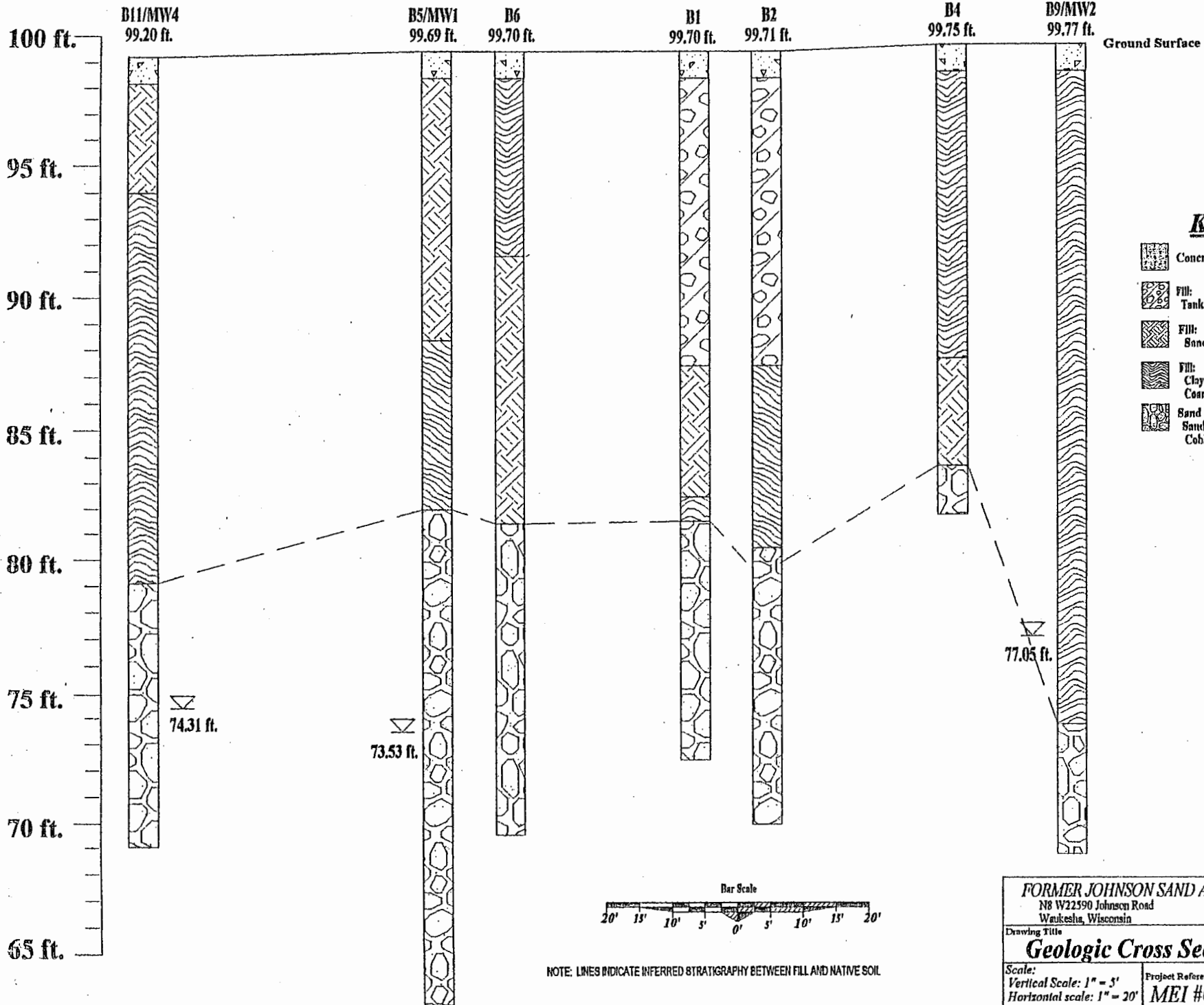
- ⊕ --Potable Well Location
- ⊙ --Soil Boring Location
- ⊗ --Hydrant
- //--- Overhead Electric Line
- ⊕ --Monitoring Well
- ⊕ --Utility Pole
- Property Line
- Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                 |
|--|-----------------|
| FIGURE NAME  |                 |
| <b>Geologic Cross-Section Location Map</b>   |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 3</b> |





B11/MW4  
99.20 ft.

B5/MW1  
99.69 ft.

B6  
99.70 ft.

B1  
99.70 ft.

B2  
99.71 ft.

B4  
99.75 ft.

B9/MW2  
99.77 ft.

100 ft.

95 ft.

90 ft.

85 ft.

80 ft.

75 ft.

70 ft.

65 ft.

74.31 ft.

73.53 ft.

77.05 ft.

FORMER JOHNSON SAND AND GRAVEL  
N8 W22590 Johnson Road  
Waukesha, Wisconsin

Drawing Title

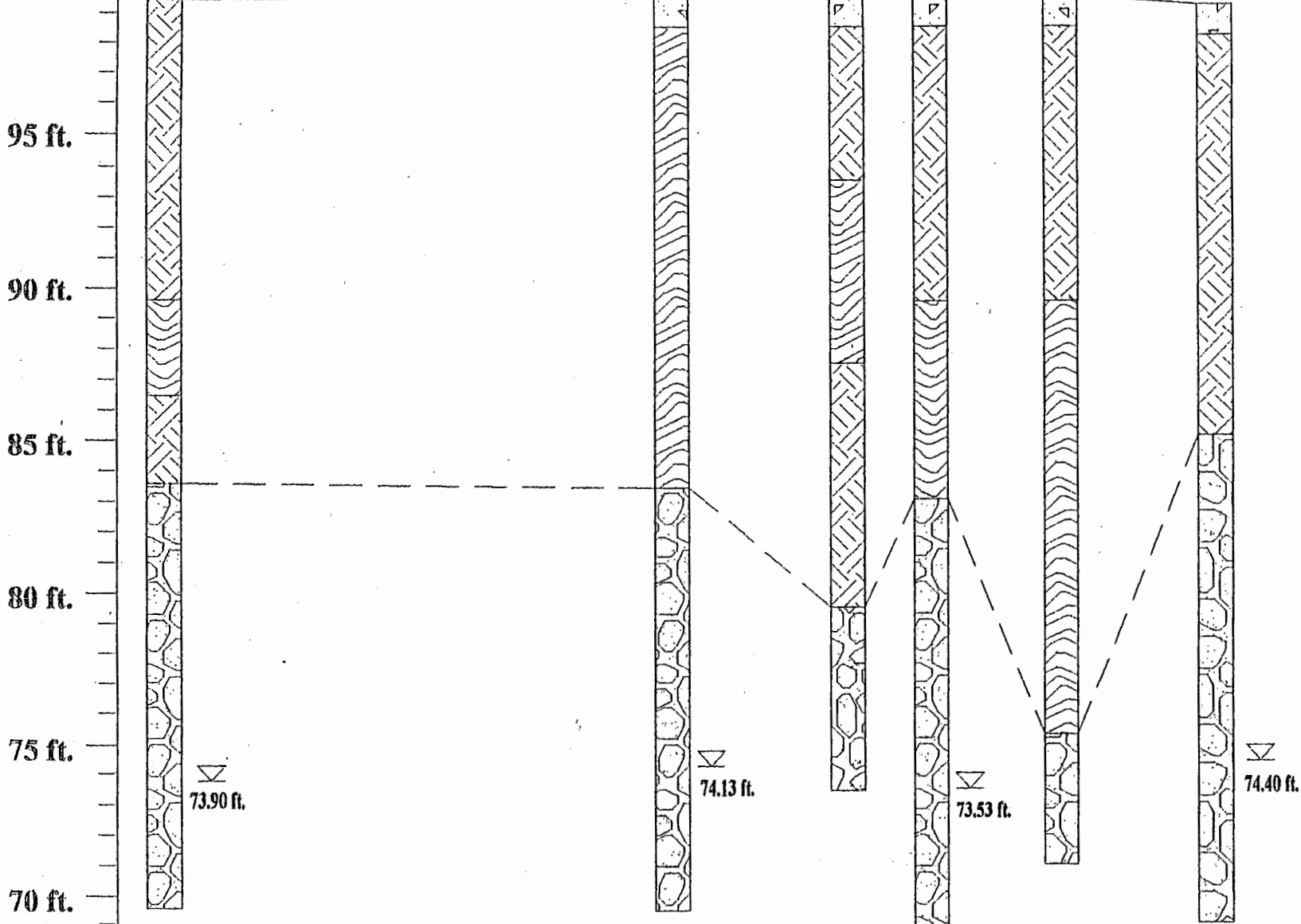
**Geologic Cross Section A - A'**

Scale:  
Vertical Scale: 1" = 5'  
Horizontal Scale: 1" = 20'

Project Reference  
**MEI #0305**

Figure  
**Figure 4**

100 ft. B12/MW5 99.62 ft. MW6 99.68 ft. B8 99.70 ft. B5/MW1 99.69 ft. B7 99.70 ft. B10/MW3 99.27 ft. Ground Surface



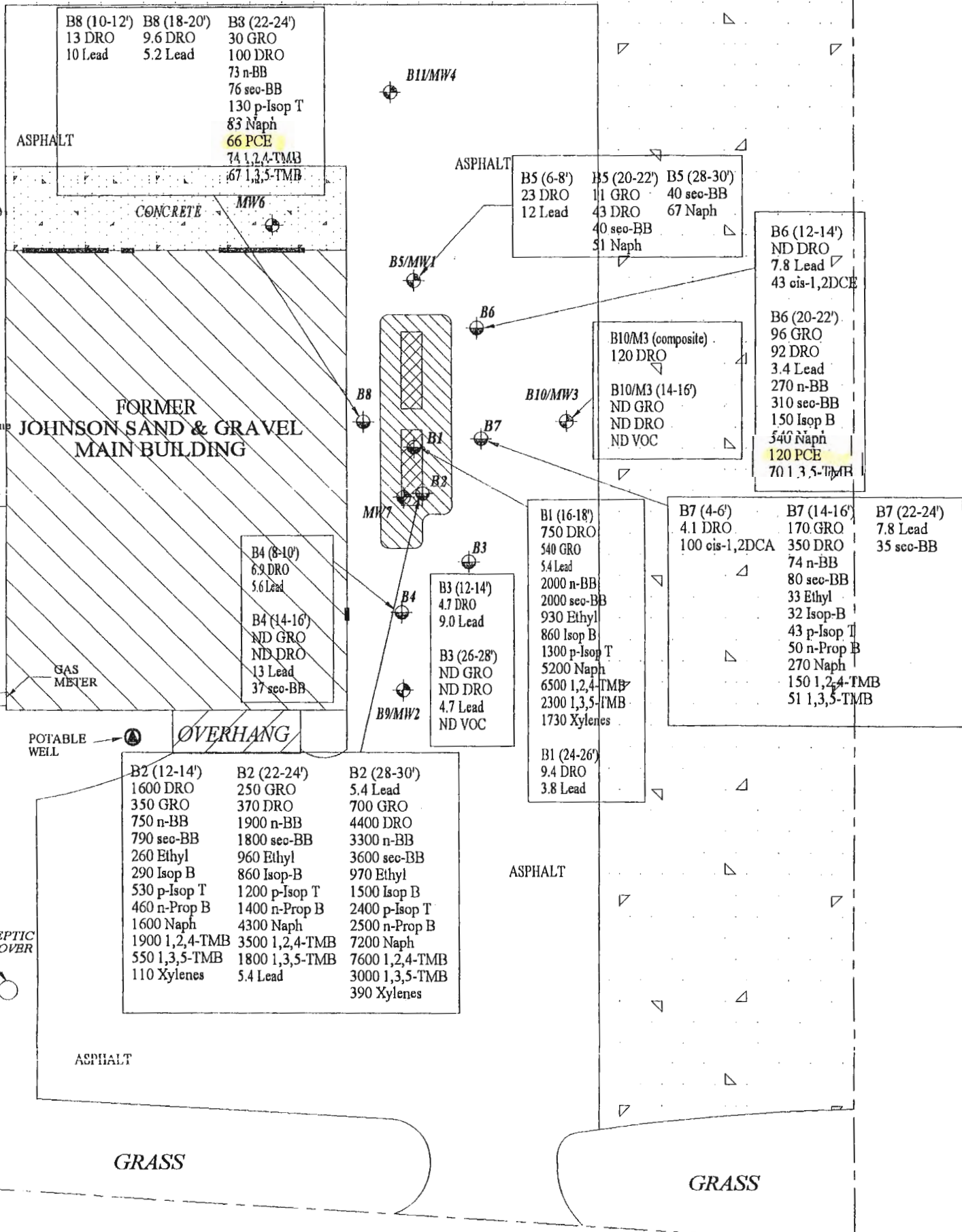
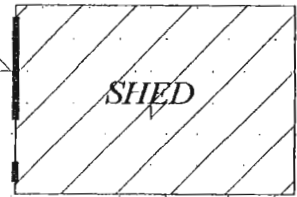
- KEY**
- Concrete and Base
  - Fill: Tank Excavation/Flt Stone
  - Fill: Sandy Silt, Silt, Sand-Gravel
  - Fill: Clayey Silt, Silty Clay w/ Coarse Sand and Gravel
  - Sand and Gravel: Sand-Gravel, Silt-Sand and Cobbles



NOTE: LINES INDICATE INFERRED STRATIGRAPHY BETWEEN FILL AND NATIVE SOIL

|   |                                       |                           |
|---|---------------------------------------|---------------------------|
| FORMER JOHNSON SAND AND GRAVEL<br>N8 W22590 Johnson Road<br>Waukesha, Wisconsin |                                       |                           |
| Drawing Title<br><b>Geologic Cross Section B - B'</b>                           |                                       |                           |
| Scale:<br>Vertical Scale: 1" = 3'<br>Horizontal Scale: 1" = 20'                 | Project Reference<br><b>MEI #0305</b> | Figure<br><b>Figure 5</b> |

NOTE BOUNDARY LINES APPROXIMATE



|             |             |              |
|-------------|-------------|--------------|
| B8 (10-12') | B8 (18-20') | B8 (22-24')  |
| 13 DRO      | 9.6 DRO     | 30 GRO       |
| 10 Lead     | 5.2 Lead    | 100 DRO      |
|             |             | 73 n-BB      |
|             |             | 76 sec-BB    |
|             |             | 130 p-Isop T |
|             |             | 83 Naph      |
|             |             | 66 PCE       |
|             |             | 74 1,2,4-TMB |
|             |             | 67 1,3,5-TMB |

|           |             |             |
|-----------|-------------|-------------|
| B5 (6-8') | B5 (20-22') | B5 (28-30') |
| 23 DRO    | 11 GRO      | 40 sec-BB   |
| 12 Lead   | 43 DRO      | 67 Naph     |
|           | 40 sec-BB   |             |
|           | 51 Naph     |             |

|               |
|---------------|
| B6 (12-14')   |
| ND DRO        |
| 7.8 Lead      |
| 43 cis-1,2DCE |

|              |
|--------------|
| B6 (20-22')  |
| 96 GRO       |
| 92 DRO       |
| 3.4 Lead     |
| 270 n-BB     |
| 310 sec-BB   |
| 150 Isop B   |
| 540 Naph     |
| 120 PCE      |
| 70 1,3,5-TMB |

|                |
|----------------|
| B1 (16-18')    |
| 750 DRO        |
| 54 GRO         |
| 54 Lead        |
| 2000 n-BB      |
| 2000 sec-BB    |
| 930 Ethyl      |
| 860 Isop B     |
| 1300 p-Isop T  |
| 5200 Naph      |
| 6500 1,2,4-TMB |
| 2300 1,3,5-TMB |
| 1730 Xylenes   |

|                |
|----------------|
| B7 (4-6')      |
| 4.1 DRO        |
| 100 cis-1,2DCA |

|               |
|---------------|
| B7 (14-16')   |
| 170 GRO       |
| 350 DRO       |
| 74 n-BB       |
| 80 sec-BB     |
| 33 Ethyl      |
| 32 Isop-B     |
| 43 p-Isop T   |
| 50 n-Prop B   |
| 270 Naph      |
| 150 1,2,4-TMB |
| 51 1,3,5-TMB  |

|             |
|-------------|
| B7 (22-24') |
| 7.8 Lead    |
| 35 sec-BB   |

|                |                |                |
|----------------|----------------|----------------|
| B2 (12-14')    | B2 (22-24')    | B2 (28-30')    |
| 1600 DRO       | 250 GRO        | 5.4 Lead       |
| 350 GRO        | 370 DRO        | 700 GRO        |
| 750 n-BB       | 1900 n-BB      | 4400 DRO       |
| 790 sec-BB     | 1800 sec-BB    | 3300 n-BB      |
| 260 Ethyl      | 960 Ethyl      | 3600 sec-BB    |
| 290 Isop B     | 860 Isop-B     | 970 Ethyl      |
| 530 p-Isop T   | 1200 p-Isop T  | 1500 Isop B    |
| 460 n-Prop B   | 1400 n-Prop B  | 2400 p-Isop T  |
| 1600 Naph      | 4300 Naph      | 2500 n-Prop B  |
| 1900 1,2,4-TMB | 3500 1,2,4-TMB | 7200 Naph      |
| 550 1,3,5-TMB  | 1800 1,3,5-TMB | 7600 1,2,4-TMB |
| 110 Xylenes    | 5.4 Lead       | 3000 1,3,5-TMB |
|                |                | 390 Xylenes    |

|             |
|-------------|
| B1 (24-26') |
| 9.4 DRO     |
| 3.8 Lead    |

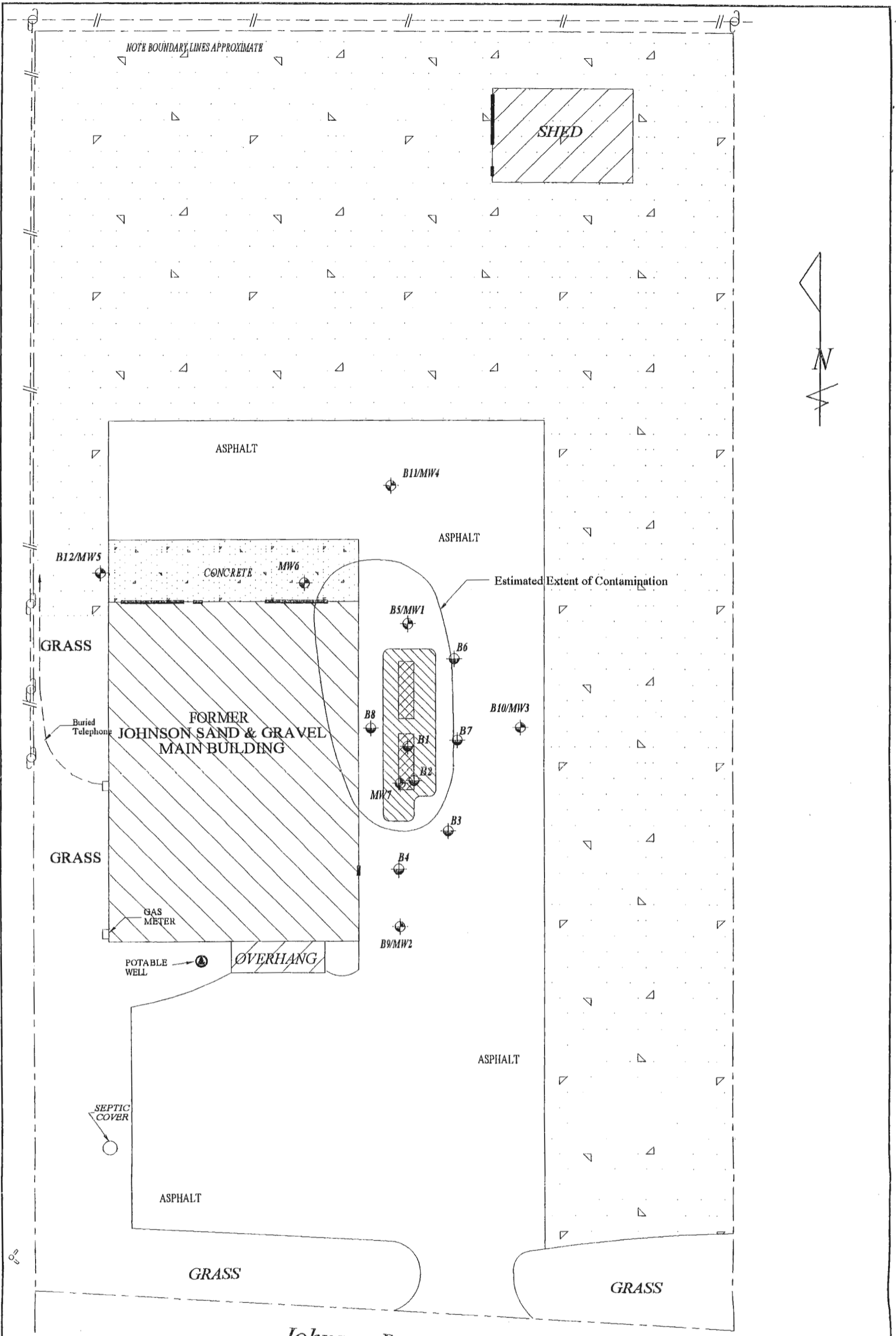
**MEI - Legend**

- Potable Well Location
- Soil Boring Location
- Hydrant
- Overhead Electric Line
- Monitoring Well
- Utility Pole
- Property Line
- Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                 |
|--|-----------------|
| FIGURE NAME  |                 |
| <b>Soil Analytical Test Results</b>  |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 7</b> |



**MEI - Legend**

- Potable Well Location
- Soil Boring Location
- Hydrant
- Overhead Electric Line
- Monitoring Well
- Utility Pole
- Property Line
- Buried Line



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|  |                 |
|--|-----------------|
| FIGURE NAME  |                 |
| <b>Contamination Extent Map</b>  |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 9</b> |

**TABLE 3**  
**SOIL QUALITY RESULTS**  
**Former Johnson Sand and Gravel Site**

|                        | B1<br>(16-18') | B1<br>(24-26') | B2<br>(12-14') | B2<br>(22-24') | B2<br>(28-30') | B3<br>(12-14') | B3<br>(26-28') | B4<br>(8-10') | B4<br>(14-16') | B5<br>(6-8') | B5<br>(20-22') | B5<br>(28-30') | B6<br>(12-14') | B6<br>(20-22') | B7<br>(4-6') | B7<br>(14-16') | B7<br>(22-24') | B8<br>(10-12') | B8<br>(18-20') | B8<br>(22-24') | M3<br>composite | M3<br>(14-16') | Generic<br>RCL's |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|--------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|------------------|
| GRO (mg/kg)            | 540            | ND             | 350            | 250            | 700            | ND             | ND             | ND            | ND             | ND           | 11             | ND             | ND             | 96             | ND           | 170            | ND             | ND             | ND             | 30             | NA              | ND             | 100              |
| DRO (mg/kg)            | 750            | 9.4            | 1600           | 370            | 4400           | 4.7            | ND             | 6.9           | ND             | 23           | 43             | ND             | ND             | 92             | 4.1          | 350            | ND             | 13             | 9.6            | 100            | 120             | ND             | 100              |
| Lead (mg/kg)           | 5.4            | 3.8            | ND             | 5.4            | 5.4            | 9.0            | 4.7            | 5.6           | 13             | 12           | ND             | ND             | 7.8            | 3.4            | ND           | ND             | 7.8            | 10             | 5.2            | ND             | NA              | NA             | 50               |
| Detected VOCs (ug/kg)  |                |                |                |                |                |                |                |               |                |              |                |                |                |                |              |                |                |                |                |                |                 |                |                  |
| Benzene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 5.5              |
| n-Butylbenzene         | 2000           | ND             | 750            | 1900           | 3300           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 270            | ND           | 74             | ND             | ND             | ND             | 73             | NA              | ND             | NSE              |
| sec-Butylbenzene       | 2000           | ND             | 790            | 1800           | 3600           | ND             | ND             | ND            | 37             | ND           | 40             | 40             | ND             | 310            | ND           | 80             | 35             | ND             | ND             | 76             | NA              | ND             | NSE              |
| cis-1,2 Dichloroethene | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | 43             | ND             | 100          | ND             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| Ethylbenzene           | 930            | ND             | 260            | 960            | 970            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 33             | ND             | ND             | ND             | ND             | NA              | ND             | 2900             |
| Isopropylbenzene       | 860            | ND             | 290            | 860            | 1500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 150            | ND           | 32             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| p-Isopropyltoluene     | 1300           | ND             | 530            | 1200           | 2400           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 43             | ND             | ND             | ND             | 130            | NA              | ND             | NSE              |
| n-Propylbenzene        | ND             | ND             | 460            | 1400           | 2500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 50             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| Naphthalene            | 5200           | ND             | 1600           | 4300           | 7200           | ND             | ND             | ND            | ND             | ND           | 51             | 67             | ND             | 540            | ND           | 270            | ND             | ND             | ND             | 83             | NA              | ND             | NSE              |
| Tetrachloroethene      | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 120            | ND           | ND             | ND             | ND             | ND             | 66             | NA              | ND             | NSE              |
| Toluene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 1500             |
| 1,2,4-Trimethylbenzene | 6500           | ND             | 1900           | 3500           | 7600           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | 150            | ND             | ND             | ND             | 74             | NA              | ND             | NSE              |
| 1,3,5-Trimethylbenzene | 2300           | ND             | 550            | 1800           | 3000           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 70             | ND           | 51             | ND             | ND             | ND             | 67             | NA              | ND             | NSE              |
| Total Xylenes          | 1730           | ND             | 110            | ND             | 390            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 4100             |

Notes:

mg/kg - milligrams per kilogram

ug/kg - micrograms per kilogram

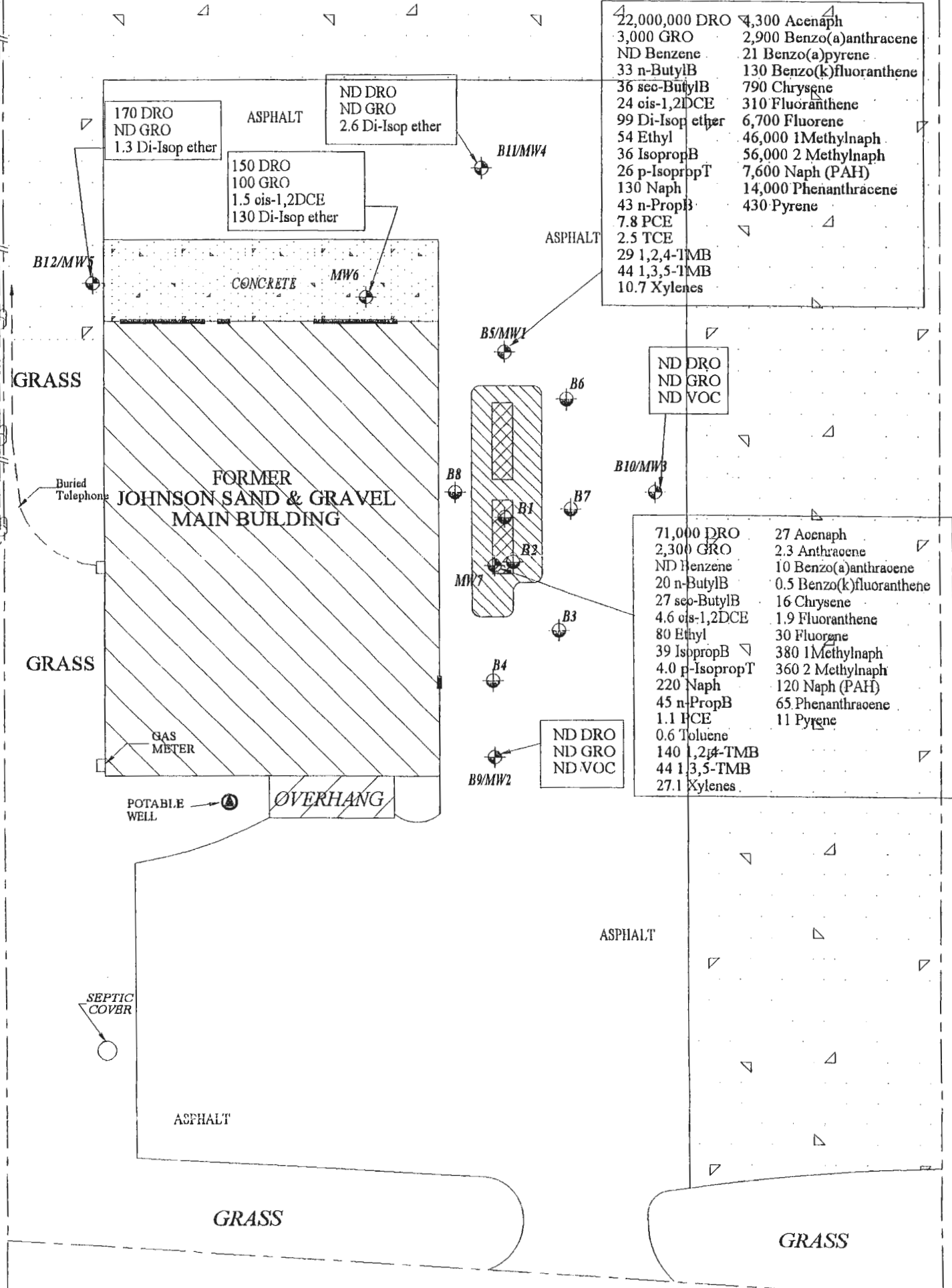
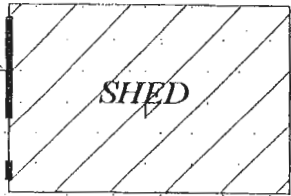
NA - Not Analyzed

ND - Not Detected

NSE - No Standard Established

00.00 - Shaded numbers indicate concentrations exceeding WDNR soil cleanup guidelines in NR720

NOTE BOUNDARY LINES APPROXIMATE



|                  |                          |
|------------------|--------------------------|
| 22,000,000 DRO   | 4,300 Acenaph            |
| 3,000 GRO        | 2,900 Benzo(a)anthracene |
| ND Benzene       | 21 Benzo(a)pyrene        |
| 33 n-ButylB      | 130 Benzo(k)fluoranthene |
| 36 sec-ButylB    | 790 Chrysene             |
| 24 cis-1,2DCE    | 310 Fluoranthene         |
| 99 Di-Isop ether | 6,700 Fluorene           |
| 54 Ethyl         | 46,000 1Methylnaph       |
| 36 IsopropB      | 56,000 2 Methylnaph      |
| 26 p-IsopropT    | 7,600 Naph (PAH)         |
| 130 Naph         | 14,000 Phenanthracene    |
| 43 n-PropB       | 430 Pyrene               |
| 7.8 PCE          |                          |
| 2.5 TCE          |                          |
| 29 1,2,4-TMB     |                          |
| 44 1,3,5-TMB     |                          |
| 10.7 Xylenes     |                          |

ND DRO  
ND GRO  
ND VOC

|                |                          |
|----------------|--------------------------|
| 71,000 DRO     | 27 Acenaph               |
| 2,300 GRO      | 2.3 Anthracene           |
| ND Benzene     | 10 Benzo(a)anthracene    |
| 20 n-ButylB    | 0.5 Benzo(k)fluoranthene |
| 27 sec-ButylB  | 16 Chrysene              |
| 4.6 cis-1,2DCE | 1.9 Fluoranthene         |
| 80 Ethyl       | 30 Fluorene              |
| 39 IsopropB    | 380 1Methylnaph          |
| 4.0 p-IsopropT | 360 2 Methylnaph         |
| 220 Naph       | 120 Naph (PAH)           |
| 45 n-PropB     | 65 Phenanthraene         |
| 1.1 PCE        | 11 Pyrene                |
| 0.6 Toluene    |                          |
| 140 1,2,4-TMB  |                          |
| 44 1,3,5-TMB   |                          |
| 27.1 Xylenes   |                          |

ND DRO  
ND GRO  
ND VOC

**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- — — Property Line
- - - Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

FIGURE NAME  
**Groundwater Analytical Test Results**

SITE NAME AND LOCATION  
**Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road Waukesha, WI**

PROJECT REFERENCE  
**MEI #0305**

FIGURE NAME  
**Figure 8**

**TABLE 4  
GROUNDWATER QUALITY RESULTS  
Former Johnson Sand and Gravel Site**

| Chemical                      | M1        |            | M2      |         | M3      |         | M4      |         | M5      |         | M6     | M7     | Enforcement Standard (ES) | Preventive Action Limit (PAL) |
|-------------------------------|-----------|------------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|---------------------------|-------------------------------|
|                               | 8-23-96   | 8-29-97    | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 9-8-97 | 9-8-97 |                           |                               |
| Gasoline Range Organics (GRO) | 2,300     | 3,000      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | 100    | 2,300  | NSE                       | NSE                           |
| Diesel Range Organics (DRO)   | 1,300,000 | 22,000,000 | 130     | ND      | ND      | ND      | 140     | ND      | 150     | 170     | 150    | 71,000 | NSE                       | NSE                           |
| Soluble Lead                  | 2.6       | NA         | ND      | NA      | ND      | NA      | 3.9     | NA      | ND      | NA      | NA     | NA     | 15.0                      | 1.5                           |
| Detected VOCs/PAHs            |           |            |         |         |         |         |         |         |         |         |        |        |                           |                               |
| Benzene                       | ND        | ND         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | ND     | 5.0                       | 0.5                           |
| n-Butylbenzene                | 28        | 33         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 20     | NSE                       | NSE                           |
| sec-Butylbenzene              | 37        | 36         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 27     | NSE                       | NSE                           |
| cis-1,2 Dichloroethene        | 11        | 24         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | 1.5    | 4.6    | 70                        | 7                             |
| Di-Isopropyl ether            | 50        | 99         | ND      | ND      | ND      | ND      | ND      | 2.6     | 4.4     | 1.3     | 130    | ND     | NSE                       | NSE                           |
| Ethylbenzene                  | 36        | 54         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 80     | 700                       | 140                           |
| Isopropylbenzene              | 29        | 36         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 39     | NSE                       | NSE                           |
| p-Isopropyltoluene            | 85        | 26         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 4.0    | NSE                       | NSE                           |
| Naphthalene                   | 97        | 130        | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 220    | 40                        | 8.0                           |
| n-Propylbenzene               | 18        | 43         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 45     | NSE                       | NSE                           |
| Tetrachloroethene             | 8.5       | 7.8        | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 1.1    | 5.0                       | 0.5                           |
| Toluene                       | ND        | ND         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 0.60   | 343                       | 68.6                          |
| Trichloroethene               | ND        | 2.5        | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | ND     | 5.0                       | 0.5                           |
| 1,2,4-Trimethylbenzene        | 27        | 29         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 140    | NSE                       | NSE                           |
| 1,3,5-Trimethylbenzene        | 43        | 44         | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 44     | NSE                       | NSE                           |
| Xylenes, Total                | 8.7       | 10.7       | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND      | ND     | 27.1   | 620                       | 124                           |

**Key:**  
 ND - Indicates no detectable analyte at or above the listed detection limit  
 (a) - M1 sampled for PAH on 9-6-96  
 All results reported in ug/l  
 NA - Not Analyzed

NSE - No Standard Established  
 Highlighted and Bold results exceed NR140 Enforcement Standards.  
 Bold results exceed Preventive Action Limits.

**TABLE 4 (cont.)  
GROUNDWATER QUALITY RESULTS  
Former Johnson Sand and Gravel Site**

| Chemical               | M1           |              | M2      |         | M3      |         | M4      |         | M5      |         | M6     | M7         | Enforcement Standard (ES) | Preventive Action Limit (PAL) |
|------------------------|--------------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|--------|------------|---------------------------|-------------------------------|
|                        | 8-23-96      | 8-29-97      | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 9-8-97 | 9-8-97     |                           |                               |
| Acenaphthalene         | 530          | 4,300        | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 27         | NSE                       | NSE                           |
| Anthracene             | ND           | ND           | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 2.3        | NSE                       | NSE                           |
| Benzo (a) anthracene   | ND           | 2,900        | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 10         | NSE                       | NSE                           |
| Benzo (a) pyrene       | ND           | <b>21</b>    | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | ND         | 0.2                       | 0.02                          |
| Benzo (k) Fluoranthene | ND           | 130          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 0.5        | NSE                       | NSE                           |
| Chrysene               | ND           | 790          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 16         | NSE                       | NSE                           |
| Fluoranthene           | ND           | 310          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 1.9        | NSE                       | NSE                           |
| Fluorene               | <b>1,000</b> | <b>6,700</b> | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 30         | 400                       | 80                            |
| 1 Methyl naphthalene   | 6,900        | 46,000       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 380        | NSE                       | NSE                           |
| 2 Methyl naphthalene   | 7,500        | 56,000       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 360        | NSE                       | NSE                           |
| Naphthalene as PAH     | <b>610</b>   | <b>7,600</b> | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | <b>120</b> | 40                        | 8                             |
| Phenanthracene         | 2,300        | 14,000       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 65         | NSE                       | NSE                           |
| Pyrene                 | ND           | 430          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 11         | NSE                       | NSE                           |

**Key:**

ND - Indicates no detectable analyte at or above the listed detection limit  
(a) - M1 sampled for PAH on 9-6-96  
All results reported in ug/l  
NA - Not Analyzed

NSE - No Standard Established  
Highlighted and Bold results exceed NR140 Enforcement Standards.  
Bold results exceed Preventive Action Limits.



**TABLE 1**  
**STATIC WATER LEVEL MEASUREMENTS**  
**Former Johnson Sand and Gravel Site**

| Monitoring Well | Top of Casing Elevation | Ground Surface Elevation | Depth to Water (feet) | Water Table Elevation | Date Measured |
|-----------------|-------------------------|--------------------------|-----------------------|-----------------------|---------------|
| MW1             | 99.12                   | 99.69                    | 25.61 (fp)            | 73.51 (fp)            | 8-13-96       |
|                 |                         |                          | 25.94                 | 73.18                 | 9-13-96       |
|                 |                         |                          | 27.20 (fp)            | 71.92 (fp)            |               |
|                 |                         |                          | 27.32                 | 71.80                 |               |
|                 |                         |                          | 24.77 (fp)            | 74.35 (fp)            | 9-8-97        |
| 25.59           | 73.53                   |                          |                       |                       |               |
| MW2             | 99.34                   | 99.77                    | 22.79                 | 76.55                 | 8-13-96       |
|                 |                         |                          | 23.78                 | 75.56                 | 9-13-96       |
|                 |                         |                          | 22.29                 | 77.05                 | 9-8-97        |
| MW3             | 98.81                   | 99.27                    | 25.88                 | 72.93                 | 8-13-96       |
|                 |                         |                          | 26.50                 | 72.31                 | 9-13-96       |
|                 |                         |                          | 24.41                 | 74.40                 | 9-8-97        |
| MW4             | 98.78                   | 99.20                    | 26.20                 | 72.58                 | 8-13-96       |
|                 |                         |                          | 26.84                 | 71.94                 | 9-13-96       |
|                 |                         |                          | 24.47                 | 74.31                 | 9-8-97        |
| MW5             | 99.32                   | 99.62                    | 26.92                 | 72.40                 | 8-13-96       |
|                 |                         |                          | 27.82                 | 71.50                 | 9-13-96       |
|                 |                         |                          | 25.42                 | 73.90                 | 9-8-97        |
| MW6             | 99.53                   | --                       | 25.40                 | 74.13                 | 9-8-97        |
| MW7             | 99.55                   | --                       | 25.36                 | 74.19                 | 9-8-97        |

(fp) = free product non-aqueous phase liquid (diesel fuel)

\*All elevations referenced to local benchmark (northeast building corner -E1.100')

FID.#  
268438610

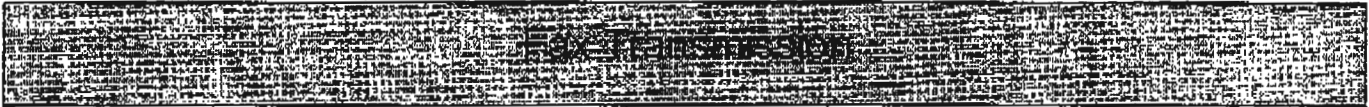
# Moraine Environmental, Inc.

## Environmental Management Services

1234 12th Avenue, Grafton, Wisconsin 53024-1924

Phone: (262) 377-9060 Fax: (262) 377-9770 Toll Free: 1(800) 666-2205

www.moraineenvironmental.com



|                          |          |                       |
|--------------------------|----------|-----------------------|
| From: Dave Jackson       | # Pgs: 6 | Date: 3/28/3          |
| To: Dave Volkert         |          | Fax #: 262-574-2117   |
| Company: WJNR - Waukesha |          | Phone #: 262-574-2166 |

Re: Johnson Sand & Gravel  
BRTS# 0368004228

Dave,

I am sending the tabulated GW data and a site map for the Johnson Sand & Gravel Site. We are currently working to address some of the items in the WJNR's denial of closure letter (10/17/00). We are also communicating with Greg Michael at Comm regarding project costs to date and future costs.

Please call me with any questions.

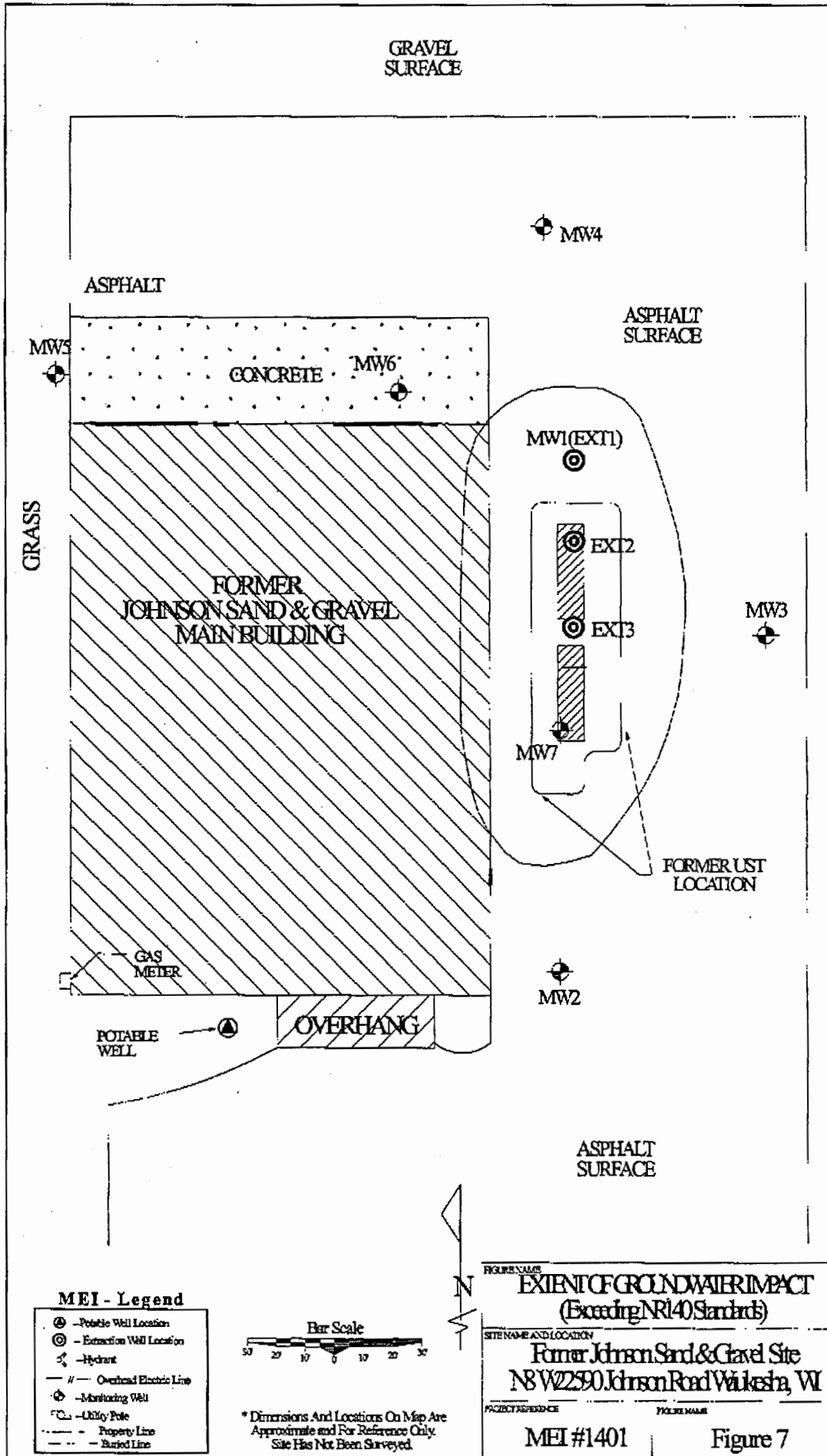


TABLE 2  
GROUNDWATER MONITORING RESULTS  
FORMER JOHNSON SAND AND GRAVEL SITE  
(Detected VOC and PAH constituents)

| Chemical                 | MW-1 (EXT-1) |            |         |        |         |           |        |        |        |        | MW-2   |        |        |        |        |        |        |         |        |         | ES     | PAL    |        |        |
|--------------------------|--------------|------------|---------|--------|---------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|
|                          | Aug-98       | Aug-97     | Jun-98  | Oct-98 | Jan-99  | Apr-99    | Oct-99 | Dec-00 | Mar-01 | Aug-98 | Aug-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-98 | Oct-99 | Dec-00  | Mar-01 | June-01 |        |        | Mar-02 | Dec-02 |
| GRO                      | 2300         | 3,000      | 1,600   | *      | 160,000 | 700       | *      | *      | *      | <50    | <50    | <50    | <50    | <50    | <50    | <50    | *      | *       | *      | *       | *      | *      | NSE    | NSE    |
| DRO                      | 1,300,000    | 22,000,000 | 330,000 | 48,000 | *       | 1,500,000 | *      | *      | *      | 130    | <100   | <100   | <100   | <100   | <100   | *      | *      | *       | *      | *       | *      | *      | NSE    | NSE    |
| Lead, Soluble            | 2.6          | *          | *       | <1.8   | *       | *         | *      | *      | *      | <2.0   | *      | *      | *      | *      | *      | *      | *      | *       | *      | *       | *      | *      | 15.0   | 1.6    |
| VOCs                     |              |            |         |        |         |           |        |        |        |        |        |        |        |        |        |        |        |         |        |         |        |        |        |        |
| Benzene                  | <3.0         | <4.1       | <0.62   | 0.35Q  | <62     | <0.27     | <0.27  | <0.29  | <0.29  | <0.6   | <0.41  | <0.26  | <0.27  | <0.26  | <0.27  | *      | <0.26  | <0.29   | <0.29  | <0.48   | <0.48  | <0.26  | 5.0    | 0.6    |
| n-Butylbenzene           | 28           | 33         | *       | 7.3    | *       | 9.1       | 13     | 6.8    | 2.8    | <1.0   | <0.23  | *      | <0.29  | *      | <0.29  | *      | *      | <0.20   | <0.20  | <0.48   | <0.48  | <0.62  | NSE    | NSE    |
| t-Butylbenzene           | <5.0         | <2.4       | *       | 0.62Q  | *       | 0.57Q     | 0.57Q  | 0.36 Q | 0.29 Q | <1.0   | <0.24  | *      | <0.32  | *      | <0.32  | *      | *      | <0.23   | <0.23  | <0.50   | <0.50  | <0.86  | NSE    | NSE    |
| n-Butylbenzene           | 28.0         | 33.0       | *       | 8.5    | *       | 8.8       | 14.0   | 9.0    | <0.28  | <1.0   | <0.31  | *      | <0.29  | *      | <0.29  | *      | *      | <0.28   | <0.28  | <0.61   | <0.61  | <0.65  | NSE    | NSE    |
| Chloromethane            | <5.0         | <1.5       | *       | <0.61  | *       | <0.61     | <0.61  | <0.42  | <0.42  | <1.0   | <0.15  | *      | <0.61  | *      | <0.61  | *      | *      | <0.42   | <0.42  | <0.82   | <0.82  | <0.27  | 3.0    | 0.3    |
| cis-1,2-Dichloroethane   | 11           | 24         | *       | 21     | *       | 32        | 17     | 11     | 8.7    | <1.0   | <0.28  | *      | <0.28  | *      | <0.28  | *      | *      | <0.27   | <0.27  | <0.73   | <0.73  | <0.81  | 70     | 7.0    |
| trans-1,2-Dichloroethane | <5.0         | <2.5       | *       | <0.79  | *       | <0.79     | <0.79  | <0.35  | <0.35  | <1.0   | <0.25  | *      | <0.79  | *      | <0.43  | *      | *      | <0.35   | <0.35  | <0.79   | <0.79  | <0.80  | 100    | 20     |
| Dibromopropane           | 50           | 90         | *       | 46     | *       | 52        | 42     | 40     | 41     | <1.0   | <0.43  | *      | <0.55  | *      | <0.55  | *      | *      | <0.29   | <0.23  | <0.60   | <0.60  | <0.60  | NSE    | NSE    |
| Ethylbenzene             | 36           | 54         | 8.7     | 2.9    | 140Q    | 3.8       | 11     | 4.2    | 0.89 Q | <1.0   | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | *      | <0.24  | <0.57   | <0.43  | <0.43   | <0.53  | 700    | 140    |        |
| Isopropylbenzene         | 29           | 36         | *       | 3.8    | *       | 4.8       | 8.9    | 3.5    | 0.79   | <1.0   | <0.27  | *      | <0.28  | *      | <0.28  | *      | *      | <0.19   | <0.19  | <0.43   | <0.43  | <0.66  | NSE    | NSE    |
| p-Isopropyltoluene       | 85           | 28         | *       | 8.7    | *       | 6.1       | 10     | 7.4    | 12     | <1.0   | <0.22  | *      | <0.24  | *      | <0.24  | *      | *      | <0.26   | <0.26  | <0.57   | <0.57  | <0.68  | NSE    | NSE    |
| Methylene chloride       | <5.0         | <2.2       | *       | <0.36  | *       | <0.36     | <0.36  | 0.46 Q | <0.36  | <1.0   | <0.22  | *      | 0.69Q  | *      | 0.36Q  | *      | *      | <0.36   | <0.36  | <0.86   | <0.86  | <0.47  | 5.0    | 0.5    |
| Methyl tert butyl ether  | <5.0         | <5.3       | 1.6     | 0.3    | <44     | 0.43Q     | <0.32  | <0.20  | <0.20  | <1.0   | <0.63  | <0.22  | <0.32  | <0.22  | <0.32  | *      | <0.22  | <0.20   | <0.20  | <0.67   | <0.67  | <0.87  | 60     | 12     |
| Naphthalene              | 87           | 130        | *       | 24     | <180    | 32        | 148    | 80     | 43     | <1.0   | <0.66  | *      | <0.36  | <0.69  | <0.36  | *      | *      | <0.27   | <0.27  | <0.59   | <0.59  | <0.63  | 40     | 8.0    |
| n-Propylbenzene          | 19           | 43         | *       | 2.7    | *       | 4.9       | 8.8    | 3.5    | 0.88   | <1.0   | <0.27  | *      | <0.78  | *      | <0.78  | *      | *      | <0.17   | <0.17  | <0.64   | <0.64  | <0.65  | NSE    | NSE    |
| Tetrachloroethene        | 8.6          | 7.8Q       | *       | 1.6    | *       | 1.1Q      | 2.1    | 1.3 Q  | <0.85  | <1.0   | <0.27  | *      | <0.43  | *      | <0.43  | *      | *      | <0.65   | <0.65  | <0.57   | <0.57  | <0.63  | 5.0    | 0.5    |
| Toluene                  | <5.0         | <2.8       | <0.42   | 0.40Q  | <42     | <0.27     | <0.27  | <1.1   | *      | <1.0   | <0.28  | <0.21  | 0.28Q  | 0.46Q  | 0.46Q  | *      | 0.23Q  | <1.1    | <0.13  | <0.47   | <0.47  | <0.84  | 1000.0 | 200    |
| Triethylbenzenes (total) | 70           | 44         | 37      | 11     | 2,590   | 18.3      | 34     | 16.3   | 7.6    | <1.0   | <0.55  | <1.40  | <0.49  | <1.4   | <0.49  | *      | <1.40  | <0.34   | <0.34  | <0.62   | <0.62  | <0.66  | 480    | 86     |
| Trichloroethene          | <5.0         | 2.5Q       | *       | <0.37  | *       | <0.37     | 0.91Q  | <0.32  | <0.32  | <1.0   | <0.20  | *      | <0.37  | *      | <0.37  | *      | *      | <0.32   | <0.32  | <0.69   | <0.69  | <0.39  | 5.0    | 0.5    |
| Vinyl Chloride           | <5.0         | <2.3       | *       | <0.20  | *       | 0.88Q     | <0.20  | <0.18  | <0.18  | <1.0   | <0.23  | *      | <0.20  | *      | <0.20  | *      | *      | <0.19   | <0.19  | <0.18   | <0.18  | <0.11  | 0.3    | 0.02   |
| Xylenes (total)          | 8.7          | 10.7Q      | 1       | 0.72Q  | 77Q     | 0.77      | 3.63Q  | 0.40 Q | <0.35  | <1.0   | <0.78  | <1.34  | <0.67  | <1.34  | <0.67  | *      | <1.34  | <0.36   | <0.36  | <1.4    | <1.4   | <1.1   | 10000  | 1800   |
| PAHs                     |              |            |         |        |         |           |        |        |        |        |        |        |        |        |        |        |        |         |        |         |        |        |        |        |
| Acenaphthene             | *            | 4,300      | 77      | <47    | *       | 890       | *      | <43    | 200 Q  | *      | *      | *      | *      | *      | *      | <0.47  | *      | <0.027  | <0.027 | <0.018  | <0.018 | <0.018 | NSE    | NSE    |
| Acenaphthylene           | *            | <830       | 21      | <41    | *       | <120      | *      | 1.5 Q  | <130   | *      | *      | *      | *      | *      | *      | <0.41  | *      | <0.032  | <0.032 | 0.047 Q | <0.029 | <0.019 | NSE    | NSE    |
| Anthracene               | *            | <410       | 17      | <2.1   | *       | <420      | *      | <43    | <110   | *      | *      | *      | *      | *      | *      | <0.021 | *      | <0.027  | <0.027 | <0.020  | <0.020 | <0.020 | 3900   | 600    |
| Benzo(a)anthracene       | *            | 2,800      | 72      | 38     | *       | 870Q      | *      | 9.4    | 24     | *      | *      | *      | *      | *      | *      | <0.014 | *      | <0.028  | 0.059Q | 0.027 Q | <0.019 | <0.012 | NSE    | NSE    |
| Benzo(a)pyrene           | *            | 21Q        | 2.3     | <1.5   | *       | 9.9Q      | *      | 0.72 Q | 8.8    | *      | *      | *      | *      | *      | *      | <0.015 | *      | <0.014  | 0.081  | 0.020 Q | <0.012 | <0.014 | 0.20   | 0.02   |
| Benzo(b)fluoranthene     | *            | <110       | 18      | 6.8    | *       | 140       | *      | <0.60  | 4.1 Q  | *      | *      | *      | *      | *      | *      | <0.015 | *      | <0.030  | 0.068Q | 0.096 Q | <0.014 | <0.013 | 0.20   | 0.02   |
| Benzo(b)h)perylene       | *            | <20        | <1.1    | <2.1   | *       | <8.3      | *      | <0.30  | <1.6   | *      | *      | *      | *      | *      | *      | <0.021 | *      | <0.015  | 0.048Q | 0.083   | <0.015 | <0.016 | NSE    | NSE    |
| Benzo(k)fluoranthene     | *            | 130        | <0.46   | <0.90  | *       | <2.7      | *      | 0.49 Q | 2.7 Q  | *      | *      | *      | *      | *      | *      | <0.030 | *      | <0.019  | 0.058Q | 0.022 Q | <0.019 | <0.019 | NSE    | NSE    |
| Indeno(123-cd)pyrene     | *            | <22        | <1.2    | <2.5   | *       | 8.8Q      | *      | <0.44  | <2.3   | *      | *      | *      | *      | *      | *      | <0.025 | *      | <0.022  | 0.039Q | 0.071   | <0.014 | <0.021 | NSE    | NSE    |
| Chrysenes                | *            | 780        | <84     | 60     | *       | 1,100     | *      | 4.3    | 27     | *      | *      | *      | *      | *      | *      | <0.016 | *      | <0.017  | 0.082  | 0.021 Q | <0.016 | <0.014 | 0.20   | 0.02   |
| Dibenzo(a,h)anthracene   | *            | <130       | <10     | 3.7Q   | *       | <20       | *      | <0.40  | <2.1   | *      | *      | *      | *      | *      | *      | <0.020 | *      | <0.020  | <0.020 | 0.048 Q | <0.017 | <0.016 | NSE    | NSE    |
| Fluoranthene             | *            | 310        | 180     | 5.6Q   | *       | 83Q       | *      | <34    | <88    | *      | *      | *      | *      | *      | *      | <0.015 | *      | <0.021  | 0.12   | <0.028  | <0.028 | <0.013 | 480    | 80     |
| Fluorene                 | *            | 6,700      | <290    | 44Q    | *       | 700Q      | *      | 85 Q   | 370 Q  | *      | *      | *      | *      | *      | *      | <0.058 | *      | <0.029  | <0.029 | <0.021  | <0.021 | <0.017 | 400    | 80     |
| 2-Methylnaphthalene      | *            | 68,000     | 1,000   | 110    | *       | 8,800     | *      | 430    | 1400   | *      | *      | *      | *      | *      | *      | <0.39  | *      | <0.033  | 0.048Q | <0.028  | <0.028 | <0.017 | NSE    | NSE    |
| 1-Methylnaphthalene      | *            | 48,000     | 850     | 240    | *       | 7,300     | *      | 490    | 1500   | *      | *      | *      | *      | *      | *      | <0.36  | *      | 0.088 Q | 0.046Q | <0.027  | <0.027 | <0.017 | NSE    | NSE    |
| Naphthalene              | *            | 7,800      | 230     | <42    | *       | 420       | *      | 85 Q   | 180 Q  | *      | *      | *      | *      | *      | *      | <0.42  | *      | 0.055 Q | 0.033Q | <0.027  | <0.027 | <0.024 | 40     | 6.0    |
| Phenanthrene             | *            | 14,000     | 1,800   | 500    | *       | 14,000    | *      | 130 Q  | 590    | *      | *      | *      | *      | *      | *      | <0.046 | *      | <0.028  | 0.049Q | <0.019  | <0.019 | <0.016 | NSE    | NSE    |
| Pyrene                   | *            | 430        | 31      | 13Q    | *       | 410       | *      | 39 Q   | 170 Q  | *      | *      | *      | *      | *      | *      | <0.017 | *      | <0.024  | 0.083  | <0.020  | <0.020 | <0.017 | 280    | 60     |

Concentrations Expressed as Micrograms per Liter (µg/L)  
**Bold Print** Indicates Concentration Above NR 145 Preventive Action Limit (PAL)  
**Bold Print / Shaded Cell** Indicates Concentration Above NR 140 Enforcement Standard (ES)  
 NSE - No Standard Established  
 <0.0 - Concentration Below Detection Limit  
 Q - Concentration Detected Between Detection Limit and Quantification Limit  
 \* Indicates Analysis For Particular Constituent Not Requested

TABLE 2  
GROUNDWATER MONITORING RESULTS  
FORMER JOHNSON SAND AND GRAVEL SITE (cont)  
(Detected VOC and PAH constituents)

| Chemical                 | MW-3   |        |        |        |        |        |         |        |         |         |         |         | MW-1   |        |        |        |        |         |        |        |        |         |        |        | EA     | PAL  |     |
|--------------------------|--------|--------|--------|--------|--------|--------|---------|--------|---------|---------|---------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|---------|--------|--------|--------|------|-----|
|                          | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99  | Oct-99 | Dec-00  | Mar-01  | June-01 | Mar-02  | Dec-02 | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Apr-99  | Jul-99 | Oct-99 | Dec-00 | June-01 | Mar-02 | Dec-02 |        |      |     |
| GRO                      | <50    | <50    | <50    | <80    | <50    | <50    | *       | *      | *       | *       | *       | *       | *      | <50    | <50    | <50    | <50    | <50     | <50    | *      | *      | *       | *      | *      | NSE    | NSE  |     |
| DRO                      | <100   | <100   | <100   | <100   | <100   | <100   | *       | *      | *       | *       | *       | *       | *      | 140    | <100   | <100   | 140    | <100    | *      | *      | *      | *       | *      | *      | NSE    | NSE  |     |
| Lead, Soluble            | <2.0   | *      | *      | *      | *      | *      | *       | *      | *       | *       | *       | *       | *      | 3.8    | *      | *      | *      | *       | *      | 3.00   | *      | *       | *      | *      | *      | 16   | 4.5 |
| VOCs                     |        |        |        |        |        |        |         |        |         |         |         |         |        |        |        |        |        |         |        |        |        |         |        |        |        |      |     |
| Benzene                  | <0.8   | <0.41  | <0.26  | <0.27  | <0.28  | <0.27  | *       | <0.28  | <0.28   | <0.29   | <0.46   | <0.48   | <0.25  | <0.6   | <0.41  | <0.28  | <0.27  | <0.27   | <0.26  | <0.28  | <0.28  | <0.48   | <0.48  | <0.28  | <0.28  | 6.0  | 0.5 |
| n-Butylbenzene           | <1.0   | <0.28  | *      | <0.29  | *      | <0.29  | *       | <0.29  | <0.20   | <0.20   | <0.49   | <0.49   | <0.82  | <1.0   | <0.23  | *      | <0.29  | <0.29   | *      | *      | <0.20  | <0.48   | <0.48  | <0.62  | NSE    | NSE  |     |
| i-Butylbenzene           | <1.0   | <0.24  | *      | <0.32  | *      | <0.32  | *       | *      | <0.28   | <0.23   | <0.50   | <0.50   | <0.88  | <1.0   | <0.24  | *      | <0.32  | <0.32   | *      | *      | <0.23  | <0.50   | <0.50  | <0.96  | NSE    | NSE  |     |
| n-Butylbenzene           | <1.0   | <0.31  | *      | <0.29  | *      | <0.29  | *       | *      | <0.28   | <0.28   | <0.61   | <0.61   | <0.88  | <1.0   | <0.31  | *      | <0.29  | <0.29   | *      | *      | <0.28  | <0.61   | <0.61  | <0.65  | NSE    | NSE  |     |
| Chlorobenzene            | <1.0   | <0.16  | *      | <0.61  | *      | <0.61  | *       | *      | <0.42   | <0.42   | <0.62   | <0.62   | <0.27  | <1.0   | <0.16  | *      | <0.61  | <0.61   | *      | *      | <0.42  | <0.62   | <0.62  | <0.27  | 3.0    | 0.3  |     |
| cis-1,2-Dichloroethane   | <1.0   | <0.26  | *      | <0.28  | *      | <0.28  | *       | *      | <0.27   | <0.27   | <0.73   | <0.73   | <0.81  | <1.0   | <0.28  | *      | <0.28  | <0.28   | *      | *      | <0.27  | <0.73   | <0.73  | <0.81  | 76     | 7.0  |     |
| trans-1,2-Dichloroethane | <1.0   | <0.25  | *      | <0.78  | *      | <0.79  | *       | *      | <0.35   | <0.35   | <0.79   | <0.79   | <0.60  | <1.0   | <0.25  | *      | <0.79  | <0.79   | *      | *      | <0.35  | <0.76   | <0.79  | <0.80  | 150    | 20   |     |
| Diisopropyl ether        | <1.0   | <0.43  | *      | <0.66  | *      | <0.65  | *       | *      | <0.23   | <0.23   | <0.80   | <0.80   | <0.64  | <1.0   | 2      | *      | 2.2    | 2.2     | *      | *      | 0.8    | 0.73 Q  | 0.80 Q | 0.73 Q | NSE    | NSE  |     |
| Ethylbenzene             | <1.0   | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | *       | <0.24  | <0.57   | <0.57   | <0.43   | <0.43   | <0.53  | <1.0   | <0.23  | <0.24  | <0.32  | <0.32   | <0.24  | <0.24  | <0.57  | <0.43   | <0.43  | <0.43  | 700    | 140  |     |
| Isopropylbenzene         | <1.0   | <0.27  | *      | <0.26  | *      | <0.28  | *       | *      | <0.19   | <0.19   | <0.43   | <0.43   | <0.66  | <1.0   | <0.27  | *      | <0.26  | <0.26   | *      | *      | <0.19  | <0.43   | <0.43  | <0.66  | NSE    | NSE  |     |
| p-Isopropylbenzene       | <1.0   | <0.22  | *      | <0.24  | *      | <0.24  | *       | *      | <0.25   | <0.25   | <0.57   | <0.57   | <0.58  | <1.0   | <0.22  | *      | <0.24  | <0.24   | *      | *      | <0.25  | <0.57   | <0.57  | <0.58  | NSE    | NSE  |     |
| Methylene chloride       | <1.0   | <0.22  | *      | 0.89Q  | *      | <0.36  | *       | *      | <0.36   | <0.36   | <0.85   | <0.85   | <0.47  | <1.0   | <0.22  | *      | 0.64Q  | <0.36   | *      | *      | <0.36  | <0.85   | <0.85  | <0.47  | 6.0    | 0.5  |     |
| Methyl tert butyl ether  | <1.0   | <0.53  | <0.22  | <0.32  | *      | <0.32  | *       | <0.22  | <0.20   | <0.20   | <0.67   | <0.67   | <0.87  | <1.0   | <0.53  | <0.22  | <0.32  | <0.32   | <0.22  | <0.22  | <0.20  | <0.67   | <0.67  | <0.87  | 80     | 12   |     |
| Naphthalene              | <1.0   | <0.68  | *      | <0.38  | <0.89  | <0.38  | *       | *      | <0.27   | <0.27   | <0.59   | <0.59   | <0.83  | <1.0   | <0.68  | *      | <0.36  | <0.36   | *      | *      | <0.27  | <0.59   | <0.59  | <0.83  | 40     | 8.0  |     |
| m-Propylbenzene          | <1.0   | <0.27  | *      | <0.78  | *      | <0.76  | *       | *      | <0.17   | <0.17   | <0.64   | <0.64   | <0.95  | <1.0   | <0.27  | *      | <0.76  | <0.76   | *      | *      | <0.17  | <0.64   | <0.64  | <0.65  | NSE    | NSE  |     |
| Toluene                  | <1.0   | <0.26  | <0.21  | 0.32Q  | 0.37Q  | 0.36Q  | *       | 0.51Q  | <1.1    | 0.41    | <0.47   | <0.47   | <0.84  | <1.0   | <0.28  | <0.21  | <0.27  | <0.27   | <0.21  | <0.21  | <1.1   | <0.47   | <0.47  | <0.84  | 1000   | 200  |     |
| Tetrachloroethene        | <1.0   | <0.27  | *      | <0.43  | *      | <0.43  | *       | *      | <0.68   | <0.68   | <0.57   | <0.57   | <0.68  | <1.0   | <0.27  | *      | <0.43  | <0.43   | *      | *      | <0.68  | <0.57   | <0.57  | <0.68  | 8.0    | 0.5  |     |
| Trichlorobenzene (total) | <1.0   | <0.65  | <1.40  | <0.49  | <1.40  | <0.47  | *       | <1.40  | <0.34   | <0.34   | <0.52   | <0.52   | <0.69  | <1.0   | <0.55  | <1.40  | <0.49  | <0.49   | <1.40  | <1.40  | <0.34  | <0.52   | <0.52  | <0.69  | 480    | 96   |     |
| Trichloroethene          | <1.0   | <0.20  | *      | <0.37  | *      | <0.37  | *       | *      | <0.32   | <0.32   | <0.88   | <0.88   | <0.36  | <1.0   | <0.20  | *      | <0.37  | <0.37   | *      | *      | <0.32  | <0.88   | <0.88  | <0.39  | 8.0    | 0.5  |     |
| Vinyl Chloride           | <1.0   | <0.23  | *      | <0.2   | *      | <0.20  | *       | *      | <0.18   | <0.18   | <0.18   | <0.18   | <0.11  | <1.0   | <0.23  | *      | <0.20  | <0.20   | *      | *      | <0.18  | <0.18   | <0.18  | <0.11  | 0.2    | 0.02 |     |
| Xylenes (total)          | <1.0   | <0.79  | <1.34  | <0.67  | <1.34  | <0.67  | *       | <1.34  | <0.35   | <0.35   | <1.4    | <1.4    | <1.1   | <1.0   | <0.78  | <1.34  | <0.67  | <0.67   | <1.34  | <1.34  | <0.35  | <1.4    | <1.4   | <1.1   | 1000   | 1000 |     |
| PAHs                     |        |        |        |        |        |        |         |        |         |         |         |         |        |        |        |        |        |         |        |        |        |         |        |        |        |      |     |
| Acenaphthene             | *      | *      | *      | *      | *      | *      | <0.47   | *      | <0.027  | <0.027  | <0.018  | <0.018  | <0.018 | *      | *      | *      | *      | *       | *      | <0.47  | *      | <0.027  | <0.018 | <0.018 | <0.018 | NSE  | NSE |
| Acenaphthylene           | *      | *      | *      | *      | *      | *      | <0.41   | *      | <0.032  | <0.032  | <0.023  | <0.023  | <0.019 | *      | *      | *      | *      | *       | *      | <0.41  | *      | <0.032  | <0.023 | <0.023 | <0.019 | NSE  | NSE |
| Anthracene               | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.027  | <0.027  | <0.020  | <0.020  | <0.020 | *      | *      | *      | *      | *       | <0.021 | *      | <0.027 | <0.020  | <0.020 | <0.020 | 8000   | 800  |     |
| Benzo(a)anthracene       | *      | *      | *      | *      | *      | *      | <0.014  | *      | <0.028  | <0.028  | 0.023 Q | 0.036 Q | <0.012 | *      | *      | *      | *      | *       | <0.014 | *      | <0.028 | 0.20    | 0.072  | 0.026Q | NSE    | NSE  |     |
| Benzo(a)pyrene           | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.014  | <0.014  | 0.024 Q | 0.096 Q | <0.014 | *      | *      | *      | *      | *       | <0.015 | *      | <0.014 | 0.21    | 0.13   | 0.057Q | 0.20   | 0.02 |     |
| Benzo(b)fluoranthene     | *      | *      | *      | *      | *      | *      | <0.015  | *      | <0.030  | <0.030  | 0.060 Q | 0.11    | <0.013 | *      | *      | *      | *      | *       | <0.015 | *      | <0.080 | 0.26    | 0.15   | 0.090  | 0.20   | 0.02 |     |
| Benzo(g)perylene         | *      | *      | *      | *      | *      | *      | <0.021  | *      | <0.015  | <0.015  | 0.030 Q | 0.17    | <0.016 | *      | *      | *      | *      | *       | <0.021 | *      | <0.016 | 0.19    | 0.11   | 0.044Q | NSE    | NSE  |     |
| Benzo(k)fluoranthene     | *      | *      | *      | *      | *      | *      | <0.0090 | *      | <0.019  | <0.019  | 0.023 Q | 0.13    | <0.019 | *      | *      | *      | *      | <0.0090 | *      | <0.019 | 0.14   | 0.13    | 0.042Q | NSE    | NSE    |      |     |
| Indeno(1,2,3-cd)pyrene   | *      | *      | *      | *      | *      | *      | <0.028  | *      | <0.022  | <0.022  | 0.030 Q | 0.17    | <0.021 | *      | *      | *      | *      | <0.025  | *      | <0.022 | 0.21   | 0.11    | 0.090Q | NSE    | NSE    |      |     |
| Chrysene                 | *      | *      | *      | *      | *      | *      | <0.016  | *      | <0.017  | <0.017  | 0.025 Q | 0.048 Q | <0.014 | *      | *      | *      | *      | <0.016  | *      | <0.017 | 0.19   | 0.13    | 0.048  | 0.20   | 0.02   |      |     |
| Dibenzo(ah)anthracene    | *      | *      | *      | *      | *      | *      | <0.020  | *      | <0.020  | <0.020  | <0.017  | 0.11    | <0.018 | *      | *      | *      | *      | <0.020  | *      | <0.020 | 0.066  | 0.035 Q | <0.018 | NSE    | NSE    |      |     |
| Fluoranthene             | *      | *      | *      | *      | *      | *      | <0.016  | *      | <0.021  | <0.021  | 0.048 Q | <0.028  | <0.013 | *      | *      | *      | *      | <0.016  | *      | <0.021 | 0.41   | 0.25    | 0.076  | 400    | 80     |      |     |
| Fluorene                 | *      | *      | *      | *      | *      | *      | <0.059  | *      | <0.029  | <0.029  | <0.021  | <0.021  | <0.017 | *      | *      | *      | *      | <0.059  | *      | <0.029 | <0.021 | <0.021  | <0.017 | 400    | 80     |      |     |
| 2-Methylnaphthalene      | *      | *      | *      | *      | *      | *      | <0.36   | *      | 0.080 Q | 0.11    | <0.028  | <0.028  | <0.017 | *      | *      | *      | *      | <0.36   | *      | <0.03  | <0.026 | <0.028  | <0.017 | NSE    | NSE    |      |     |
| 1-Methylnaphthalene      | *      | *      | *      | *      | *      | *      | <0.36   | *      | <0.090  | <0.097  | <0.027  | <0.027  | <0.017 | *      | *      | *      | *      | <0.36   | *      | <0.090 | <0.027 | <0.027  | <0.017 | NSE    | NSE    |      |     |
| Naphthalene              | *      | *      | *      | *      | *      | *      | <0.42   | *      | <0.031  | 0.034 Q | <0.027  | <0.027  | <0.024 | *      | *      | *      | *      | <0.42   | *      | <0.031 | <0.027 | <0.027  | 0.05Q  | 40     | 8.0    |      |     |
| Phenanthrene             | *      | *      | *      | *      | *      | *      | <0.046  | *      | <0.028  | <0.028  | <0.016  | <0.016  | <0.016 | *      | *      | *      | *      | <0.046  | *      | <0.028 | 0.088  | 0.082   | 0.033Q | NSE    | NSE    |      |     |
| Pyrene                   | *      | *      | *      | *      | *      | *      | <0.017  | *      | <0.024  | <0.024  | 0.028 Q | <0.020  | <0.017 | *      | *      | *      | *      | <0.017  | *      | <0.024 | 0.25   | 0.18    | 0.071  | 250    | 80     |      |     |

Concentrations Expressed as Micrograms per Liter (µg/l)  
 Bold Print Indicates Concentration Above NR 140 Preventive Action Limit (PAL)  
 Bold Print / Shaded Cell Indicates Concentration Above NR 140 Enforcement Standard (ES)  
 NSE - No Standard Established  
 <0.0 - Concentration Below Detection Limit  
 Q - Concentration Detected Between Detection Limit and Quantification Limit  
 \* Indicates Analysis For Particular Constituent Not Requested

**TABLE 2  
GROUNDWATER MONITORING RESULTS  
FORMER JOHNSON SAND AND GRAVEL SITE (cont II)  
(Detected VOC and PAH constituents)**

| Chemical                 | MW-5   |        |        |        |        |        |        |        |         |        | MW-6   |        |        |        |        |        |        |        |        |         | ES     | PAL   |        |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|-------|--------|
|                          | Aug-96 | Aug-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99 | Oct-99 | June-01 | Dec-02 | Sep-97 | Jun-98 | Oct-98 | Jan-99 | Apr-99 | Jul-99 | Oct-99 | Dec-00 | Mar-01 | June-01 |        |       | Mar-02 |
| GRO                      | <50    | <50    | <50    | <50    | <50    | <50    | *      | *      | *       | *      | 100    | 79     | <50    | 120    | 80     | <50    | *      | *      | *      | *       | NSE    | NSE   |        |
| DRO                      | 150    | 170    | <100   | 150    | 110    | <100   | *      | *      | *       | <100   | 150    | 42,000 | 110    | *      | <100   | <100   | *      | *      | *      | *       | NSE    | NSE   |        |
| Lead, Soluble            | <2.0   | *      | *      | *      | *      | *      | *      | *      | *       | *      | *      | *      | *      | *      | *      | *      | *      | *      | *      | *       | *      | 18.0  | 1.5    |
| <b>VOCs</b>              |        |        |        |        |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |         |        |       |        |
| Benzene                  | <0.8   | <0.41  | <0.26  | <0.27  | <0.29  | <0.27  | *      | <0.26  | <0.48   | <0.25  | <0.41  | 0.27   | <0.27  | <0.26  | <0.27  | <0.26  | <0.26  | <0.26  | <0.29  | <0.48   | <0.48  | 5.0   | 0.5    |
| n-Butylbenzene           | <1.0   | <0.23  | *      | <0.29  | *      | <0.29  | *      | *      | <0.49   | <0.62  | <0.23  | *      | <0.29  | *      | <0.29  | *      | *      | <0.20  | <0.20  | <0.49   | <0.49  | NSE   | NSE    |
| o-Butylbenzene           | <1.0   | <0.24  | *      | <0.32  | *      | <0.32  | *      | *      | <0.50   | <0.96  | <0.24  | *      | <0.32  | *      | <0.32  | *      | *      | <0.23  | <0.23  | <0.50   | <0.50  | NSE   | NSE    |
| n-Butylbenzene           | <1.0   | <0.31  | *      | <0.29  | *      | <0.29  | *      | *      | <0.61   | <0.65  | <0.31  | *      | <0.29  | *      | <0.29  | *      | *      | <0.28  | <0.28  | <0.61   | <0.61  | NSE   | NSE    |
| Chloromethane            | <1.0   | <0.15  | *      | <0.61  | *      | <0.61  | *      | *      | <0.62   | <0.27  | <0.15  | *      | <0.61  | *      | <0.61  | *      | *      | 23     | <0.42  | <0.62   | <0.62  | 3.0   | 0.3    |
| cis-1,2-Dichloroethene   | <1.0   | <0.28  | *      | <0.28  | *      | <0.28  | *      | *      | <0.73   | <0.81  | 1.5    | *      | 0.72Q  | *      | 0.9    | *      | *      | 1.1    | 1.9    | 1.4     | 1.70   | 70    | 7.0    |
| trans-1,2-Dichloroethene | <1.0   | <0.25  | *      | <0.79  | *      | <0.79  | *      | *      | <0.79   | <0.80  | <0.25  | *      | <0.79  | *      | <0.79  | *      | *      | <0.95  | <0.95  | <0.79   | <0.79  | 100   | 20     |
| Diisopropyl ether        | <1.0   | 1.3Q   | *      | 5.2    | *      | 1.9    | *      | *      | <0.60   | 0.69Q  | 130    | *      | 62     | 74     | *      | *      | 88     | 70     | 56     | 89      | NSE    | NSE   |        |
| Ethylbenzene             | <1.0   | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | *      | <0.24  | <0.43   | <0.53  | <0.23  | <0.24  | <0.32  | <0.24  | <0.32  | <0.24  | <0.24  | <0.57  | <0.57  | <0.43   | <0.43  | 700   | 140    |
| Isopropylbenzene         | <1.0   | <0.27  | *      | <0.26  | *      | <0.26  | *      | *      | <0.45   | <0.86  | <0.27  | *      | <0.26  | *      | <0.26  | *      | *      | <0.18  | <0.18  | <0.43   | <0.43  | NSE   | NSE    |
| p-Isopropyltoluene       | <1.0   | <0.22  | *      | <0.24  | *      | <0.24  | *      | *      | <0.57   | <0.58  | <0.22  | *      | <0.24  | *      | <0.24  | *      | *      | <0.25  | <0.25  | <0.57   | <0.57  | NSE   | NSE    |
| Methylene chloride       | <1.0   | <0.22  | *      | <0.36  | *      | <0.36  | *      | *      | <0.85   | 1.6    | <0.22  | *      | <0.36  | *      | <0.36  | *      | *      | <0.36  | <0.36  | <0.85   | <0.85  | 8.0   | 0.5    |
| Methyl tert butyl ether  | <1.0   | <0.53  | <0.22  | <0.32  | <0.22  | <0.32  | *      | <0.22  | <0.67   | <0.87  | <0.53  | 0.38   | <0.32  | 0.41Q  | <0.32  | <0.22  | 0.57Q  | <0.20  | <0.20  | <0.67   | <0.67  | 60    | 12     |
| Naphthalene              | <1.0   | <0.66  | *      | <0.35  | <0.89  | <0.35  | *      | *      | <0.59   | <0.83  | <0.66  | *      | <0.35  | <0.89  | <0.35  | *      | *      | <0.27  | <0.27  | <0.59   | <0.59  | 40    | 8.0    |
| n-Propylbenzene          | <1.0   | <0.27  | *      | <0.76  | *      | <0.76  | *      | *      | <0.64   | <0.95  | <0.27  | *      | <0.76  | *      | <0.76  | *      | *      | <0.17  | <0.17  | <0.64   | <0.64  | NSE   | NSE    |
| Toluene                  | <1.0   | <0.28  | <0.21  | <0.27  | <0.21  | <0.27  | *      | <0.21  | <0.47   | <0.84  | <0.28  | 0.4    | 0.90Q  | 0.92Q  | 0.29Q  | <0.21  | <0.21  | <1.1   | <0.13  | <0.47   | <0.47  | 1000  | 200    |
| Tetrachloroethene        | <1.0   | <0.27  | *      | <0.43  | *      | <0.43  | *      | *      | <0.57   | <0.63  | <0.27  | *      | <0.43  | *      | <0.43  | *      | *      | <0.85  | <0.85  | <0.57   | <0.57  | 8.0   | 0.5    |
| Triethylbenzene (total)  | <1.0   | <0.55  | <1.40  | 1.09Q  | <1.40  | 0.92Q  | *      | <1.40  | <0.52   | <0.89  | <0.55  | <1.40  | <0.49  | <1.40  | <0.49  | <1.40  | <1.40  | <0.34  | <0.34  | <0.72   | <0.72  | 480   | 98     |
| Trichloroethene          | <1.0   | <0.20  | *      | <0.37  | *      | <0.37  | *      | *      | <0.89   | <0.39  | <0.20  | *      | <0.37  | *      | <0.37  | *      | *      | <0.32  | <0.32  | <0.85   | <0.85  | 5.0   | 0.6    |
| Vinyl Chloride           | <1.0   | <0.23  | *      | <0.20  | *      | <0.20  | *      | *      | <0.18   | <0.11  | <0.23  | *      | <0.20  | *      | <0.20  | *      | *      | <0.19  | <0.19  | <0.18   | <0.18  | 0.2   | 0.02   |
| Xylenes (total)          | <1.0   | <0.79  | <1.34  | 0.46Q  | <1.34  | 0.45Q  | *      | <1.34  | <1.4    | <1.1   | <0.79  | <1.34  | <0.67  | <1.34  | <0.67  | <1.34  | <1.34  | <0.35  | <0.35  | <1.4    | <1.4   | 10000 | 1000   |
| <b>PAHs</b>              |        |        |        |        |        |        |        |        |         |        |        |        |        |        |        |        |        |        |        |         |        |       |        |
| Acenaphthene             | *      | *      | *      | *      | *      | *      | *      | <0.47  | <0.018  | <0.018 | *      | *      | *      | *      | *      | <0.47  | *      | <0.027 | <0.027 | <0.018  | <0.018 | NSE   | NSE    |
| Acenaphthylene           | *      | *      | *      | *      | *      | *      | *      | <0.41  | <0.028  | <0.019 | *      | *      | *      | *      | *      | <0.41  | *      | <0.032 | <0.032 | <0.023  | <0.023 | NSE   | NSE    |
| Anthracene               | *      | *      | *      | *      | *      | *      | *      | <0.021 | <0.020  | <0.020 | *      | *      | *      | *      | *      | <0.021 | *      | <0.027 | <0.027 | <0.020  | <0.020 | 3000  | 800    |
| Benzo(a)anthracene       | *      | *      | *      | *      | *      | *      | *      | <0.014 | <0.019  | 0.013Q | *      | *      | *      | *      | *      | <0.014 | *      | <0.026 | <0.026 | <0.019  | <0.019 | NSE   | NSE    |
| Benzo(a)pyrene           | *      | *      | *      | *      | *      | *      | *      | <0.015 | <0.012  | 0.02Q  | *      | *      | *      | *      | *      | <0.015 | *      | <0.022 | 0.019Q | <0.012  | <0.012 | 0.20  | 0.02   |
| Benzo(b)fluoranthene     | *      | *      | *      | *      | *      | *      | *      | <0.015 | 0.025Q  | 0.031Q | *      | *      | *      | *      | *      | <0.015 | *      | <0.030 | <0.030 | <0.014  | <0.014 | 0.20  | 0.02   |
| Benzo(ghi)perylene       | *      | *      | *      | *      | *      | *      | *      | <0.021 | 0.016Q  | 0.026Q | *      | *      | *      | *      | *      | <0.021 | *      | <0.016 | <0.016 | <0.016  | <0.016 | NSE   | NSE    |
| Benzo(k)fluoranthene     | *      | *      | *      | *      | *      | *      | *      | <0.030 | 0.015Q  | 0.024Q | *      | *      | *      | *      | *      | <0.030 | *      | <0.030 | 0.022Q | <0.013  | <0.013 | NSE   | NSE    |
| Indeno(1,23-cd)pyrene    | *      | *      | *      | *      | *      | *      | *      | <0.025 | 0.017Q  | <0.021 | *      | *      | *      | *      | *      | <0.025 | *      | <0.022 | <0.022 | <0.014  | <0.014 | NSE   | NSE    |
| Chrysene                 | *      | *      | *      | *      | *      | *      | *      | <0.016 | 0.018Q  | 0.032Q | *      | *      | *      | *      | *      | <0.016 | *      | <0.017 | 0.022Q | <0.018  | <0.018 | 0.20  | 0.02   |
| Dibenzo(ah)anthracene    | *      | *      | *      | *      | *      | *      | *      | <0.020 | <0.017  | <0.016 | *      | *      | *      | *      | *      | <0.020 | *      | <0.020 | <0.020 | <0.017  | <0.017 | NSE   | NSE    |
| Fluoranthene             | *      | *      | *      | *      | *      | *      | *      | 0.021Q | 0.034Q  | 0.051  | *      | *      | *      | *      | *      | <0.015 | *      | <0.021 | 0.053Q | <0.028  | <0.028 | 400   | 80     |
| Fluorene                 | *      | *      | *      | *      | *      | *      | *      | <0.058 | <0.021  | <0.017 | *      | *      | *      | *      | *      | <0.058 | *      | <0.029 | <0.029 | <0.021  | <0.021 | 400   | 80     |
| 2-Methylnaphthalene      | *      | *      | *      | *      | *      | *      | *      | <0.36  | <0.028  | <0.017 | *      | *      | *      | *      | *      | <0.36  | *      | 0.040Q | <0.033 | <0.026  | <0.026 | NSE   | NSE    |
| 1-Methylnaphthalene      | *      | *      | *      | *      | *      | *      | *      | <0.36  | <0.027  | <0.017 | *      | *      | *      | *      | *      | <0.36  | *      | <0.030 | <0.027 | <0.027  | <0.027 | NSE   | NSE    |
| Naphthalene              | *      | *      | *      | *      | *      | *      | *      | <0.42  | <0.027  | 0.034Q | *      | *      | *      | *      | *      | <0.42  | *      | <0.031 | <0.031 | 0.034Q  | <0.027 | 60    | 8.0    |
| Phenanthrene             | *      | *      | *      | *      | *      | *      | *      | <0.048 | 0.020Q  | 0.027Q | *      | *      | *      | *      | *      | <0.048 | *      | <0.028 | <0.028 | <0.019  | <0.019 | NSE   | NSE    |
| Pyrene                   | *      | *      | *      | *      | *      | *      | *      | 0.018Q | 0.022Q  | 0.051Q | *      | *      | *      | *      | *      | <0.017 | *      | <0.024 | 0.034  | <0.020  | <0.020 | 280   | 80     |

Concentrations Expressed as Micrograms per Liter (ug/l)  
**Bold Print** Indicates Concentration Above NR 140 Preventive Action Limit (PAL)  
**Bold Print / Shaded Cell** Indicates Concentration Above NR 140 Enforcement Standard (ES)  
 NSE - No Standard Established  
 <0.0 - Concentration Below Detection Limit  
 Q - Concentration Detected Between Detection Limit and Quantification Limit  
 \* Indicates Analysis For Particular Constituent Not Requested

MAR-28-2003 02:50PM TEL)

IDUWI DNR WAIKESHA

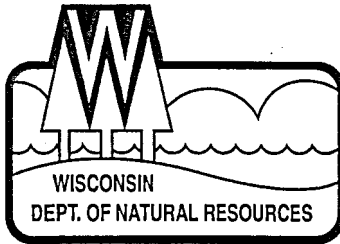
PAGE: 006 R:77X

MAR-28-2003 11:56AM MORA:VA:007 - 5:05PM DEC-07-0770 VC:0076 2: 6

TABLE 2  
GROUNDWATER MONITORING RESULTS  
FORMER JOHNSON SAND AND GRAVEL SITE (cont III)  
(Detected VOC and PAH constituents)

Table with columns for Chemical, sampling dates (Sep-87 to Dec-02), Potable Well, EXT-2, EXT-3, ES, and PAL. Rows include VOCs (Benzene, Chloroethane, etc.) and PAHs (Aceanthrene, Benzo(a)pyrene, etc.).

Concentrations Expressed as Micrograms per Liter (ug/l)  
**Bold Print** Indicates Concentration Above NR 140 Preventive Action Limit (PAL)  
**Bold Print / Shaded Cell** Indicates Concentration Above NR 140 Enforcement Standard (ES)  
NSE - No Standard Established  
**<0.5** - Concentration Below Detection Limit  
**Q** - Concentration Detected Between Detection Limit and Quantification Limit  
**\*** Indicates Analyte For Particular Constituent Not Requested



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor  
Darrell Bazzell, Secretary  
Gloria L. McCutcheon, Regional Director

Waukesha Service Center  
407 Pilot Court, Suite 100  
Waukesha, Wisconsin 53188  
Telephone 262-574-2166  
FAX 262-574-2117

August 12, 2002

Mr. Robert Johnson  
Johnson Sand & Gravel  
20685 West National Avenue  
New Berlin, WI 53146-4920

Subject: Former Johnson Sand & Gravel/Schmidt Custom Floors  
N8 W22590 Johnson Road, Town of Pewaukee, WI  
FID# 268438610, BRRTS# 02-68-259665 & 03-68-004228

Dear Mr. Johnson:

On October 17, 2000, the Department of Natural Resources (DNR) sent a letter to your attention, describing your responsibility to address soil and/or groundwater contamination that was detected at the site referenced above. A release of chlorinated solvents at the site was documented in a November 17, 1997 report. The DNR's tracking number for this release is BRRTS# 02-68-259665. In a recent audit of case files, the Department found no indication that any action had been taken at the site, since the contamination was reported. It was also noted that another release was discovered at the site on March 31, 1994. The DNR's tracking number for the 1994 release is BRRTS# 03-68-004228. A partial investigation was conducted for the 1991 release, but apparently the investigation was not completed and a remedial action was not taken for that release.

In a conversation with Steve Benton with Moraine Environmental, Inc. on July 25, 2002, we were informed that investigative actions have been taken and a report will be forthcoming.

Within the next **60 days**, please have your consultant forward to the Department a brief progress report for the site investigation. The consultant must follow the WDNR administrative codes and technical guidance documents. To facilitate prompt agency review of your reports, your consultant should use the site investigation and closure formats which are available on-line at [www.dnr.state.wi.us](http://www.dnr.state.wi.us).

Within 30 days of completion of the site investigation, you or your consultant must provide a site investigation report per s. NR 716.15. As the remedial activities proceed, you or your consultant should also provide a brief progress report at least every 90 days per s. NR 724.13(3). Should conditions at your site warrant, we may require more frequent contacts.



All correspondence regarding this site should be sent to:

Ms. Victoria Stovall  
Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
Box 12436  
Milwaukee, WI 53212

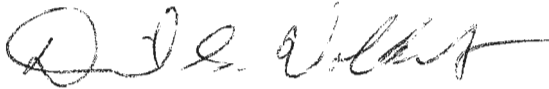
Correspondence should reference the "Subject" name and file reference numbers listed above.

Upon receipt of your documentation, we will update your case status within our database. If you would like to receive Department review of your documentation, please be aware that a review fee is required in accordance with ch. NR 749, Wis. Adm. Code. If a fee is not submitted with your reports, you should proceed under the advice of your consultant to complete the site investigation to maintain your compliance with the spills law and chs. NR 700 through NR 749.

Because the release of contaminants into soil and groundwater may have significant environmental or health implications, it is important that the extent and degree of the released contaminants be determined and that the contamination be remediated to the extent practicable. If you have questions on your responsibilities in this matter, I can be reached at (262) 574-2166.

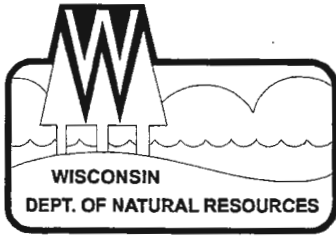
We appreciate your prompt response to our request.

Sincerely,



David G. Volkert, P.G.  
Hydrogeologist  
Bureau for Remediation & Redevelopment

cc: Steve Benton, Moraine Environmental, Inc.  
SER File



## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
Gloria L. McCutcheon, Regional Director

Southeast Region Annex  
4041 North Richards Street  
PO Box 12436  
Milwaukee, Wisconsin 53212-0436  
Telephone 414-229-0800  
FAX 414-229-0810

October 17, 2000

Mr. Robert Johnson  
Johnson Sand & Gravel  
20685 W. National Avenue  
New Berlin, WI 53146-4920

Subject: Closure request for the Former Johnson Sand & Gravel site, N8 W22590 Johnson Road, Town of Pewaukee, WI (1-10,000 gallon diesel underground storage tank, 1-10,000 gallon gasoline underground storage tank) **WDNR FID#268438610**  
**BRRTS#0368004228**

Dear Mr. Johnson:

The Wisconsin Department of Natural Resources (the Department) has received a request for closure for petroleum releases related to the above-referenced underground storage tanks (USTs). Based on a review of the information submitted, the Department is not able to grant closure at this time. The following issues need to be addressed prior to reconsideration of site closure:

- Please provide groundwater elevations for all wells, all monitoring events. Include data on product thickness.
- Describe groundwater extraction procedures, including dates of extraction, volume extracted and disposition of extracted groundwater/product.

Closure under NR 726.05(2)(b) requires that free product has been removed to the maximum extent practicable in order to minimize the spread of contamination into previously uncontaminated zones. Current contaminant concentrations in groundwater monitored at MW1/EXT1 indicate an increasing contaminant trend. Sites will not be considered for closure until stable or decreasing trends have been established in all groundwater monitoring wells.

- Additional source control will be required if free product is still present and may be necessary to achieve a stable or decreasing trend. Groundwater monitoring for PAHs should continue until you can document that contaminant concentrations are stable or decreasing in all site wells. Sampling should occur from all wells on the same date.

In addition to petroleum related contaminants, chlorinated hydrocarbons have been detected in unsaturated soil (B-6), soil sampled near the water table interface, and in groundwater monitored from onsite wells.

- Please provide information regarding potential sources of chlorinated solvents from current or historic practices onsite. Identify source areas and continue groundwater monitoring for

volatile organic compounds to establish contaminant trends and determine whether degree and extent of chlorinated compounds has been adequately defined.

Please be aware that costs related to investigation and cleanup of chlorinated compounds are not eligible for PECFA reimbursement. The Department has issued a new activity number (BRRTS #0268259665) for the chlorinated release. Enclosed is a letter that outlines your responsibilities to investigate and remediate chlorinated solvent contamination.

The Department will reconsider closure for the two separate releases once the above-referenced concerns have been satisfactorily addressed. If you have any questions regarding this letter, please do not hesitate to contact me at the letterhead address, or at (414) 229-0874.

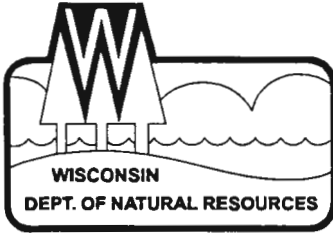
Sincerely,



Nancy D. Ryan, Hydrogeologist  
Remediation and Redevelopment

Cc: SER site file  
Thomas Dueppen, Moraine Environmental

Enclosure



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, Regional Director

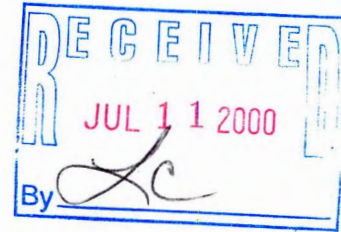
Southeast Regional Headquarters
2300 N. Dr. ML King Drive, PO Box 12436
Milwaukee, Wisconsin 53212-0436
Telephone 414-263-8500
FAX 414-263-8483
TDD 414-263-8713

Date: 7-3-2000

1887

JUL 7 2000

Thomas Dveppen, P.E.
Moraine Environmental, Inc.
1234 12th Ave
Grafton, WI 53024



Subject: Fee Notice/Invoice
FID: 268438610 ; BRRTS: 03-68-004228
Site Name: Former Johnson Sand & Gravel

Dear Mr. Dveppen:

On 7-3-2000 the Wisconsin Department of Natural Resources received the following submittal, for which you requested review, or which by code requires a review and fee:

- Site Investigation Work Plan
Site Investigation Report
Remedial Action Options Report
Remedial Design Report
Construction Documentation Report
Injection/Infiltration Request
Landspreading Request
Operation & Maintenance Report
Long-Term Monitoring Plan
Closure Request
NR 720.19/ Soil Standards Report
NR 708 (c) No Further Action Request
Other

This submittal requires a \$750 fee in order to receive review and response from the DNR. Please make the check payable to: State of Wisconsin, Department of Natural Resources, and send it to the Program Assistant's attention at the address shown in the above header.

We will hold your submittal until your check arrives or you notify us that the review is no longer requested. Once we receive the check, we will enter the case on our first-in-first-out (FIFO) review list; effective on the date we receive your request. If we don't hear from you after a month we will place your submittal, unreviewed, in our case file.

Please return this letter with your submittal.

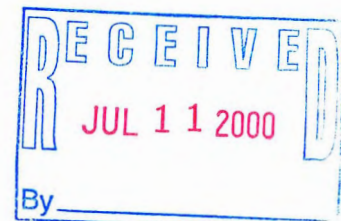
Thank you,

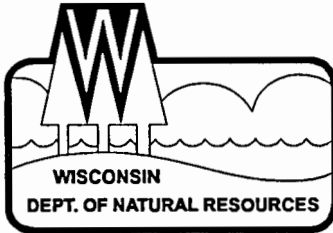
Sincerely,

Lakhonda Crook

Program Assistant
Bureau of Remediation and Redevelopment
414/263-8680

C: WDNR SER Files





State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
Gloria L. McCutcheon, Regional Director

Southeast Regional Headquarters  
2300 N. Dr. ML King Drive, PO Box 12436  
Milwaukee, Wisconsin 53212-0436  
Telephone 414-263-8500  
FAX 414-263-8483  
TDD 414-263-8713

Date: 7-3-2000

Thomas D. Veppen, P.E.  
Moraine Environmental, Inc.  
1234 12th Ave.  
Gratton, WI 53024

Subject: Fee Notice/Invoice  
FID: 268438610 ; BRRTS: 03-68-004228  
Site Name: Former Johnson Sand & Gravel

Dear Mr. Veppen:

On 7-3-2000 the Wisconsin Department of Natural Resources received the following submittal, for which you requested review, or which by code requires a review and fee:

- |  |   |
|--|---|
| <input type="checkbox"/> Site Investigation Work Plan      | <input type="checkbox"/> Operation & Maintenance Report       |
| <input type="checkbox"/> Site Investigation Report         | <input type="checkbox"/> Long-Term Monitoring Plan            |
| <input type="checkbox"/> Remedial Action Options Report    | <input checked="" type="checkbox"/> Closure Request           |
| <input type="checkbox"/> Remedial Design Report            | <input type="checkbox"/> NR 720.19/ Soil Standards Report     |
| <input type="checkbox"/> Construction Documentation Report | <input type="checkbox"/> NR 708 (c) No Further Action Request |
| <input type="checkbox"/> Injection/Infiltration Request    | <input type="checkbox"/> Other _____                          |
| <input type="checkbox"/> Landspreading Request             |   |

This submittal requires a \$ 750 fee in order to receive review and response from the DNR. Please make the check payable to: **State of Wisconsin, Department of Natural Resources**, and send it to the Program Assistant's attention at the address shown in the above header.

We will hold your submittal until your check arrives or you notify us that the review is no longer requested. Once we receive the check, we will enter the case on our first-in-first-out (FIFO) review list; effective on the date we receive your request. If we don't hear from you after a month we will place your submittal, un-reviewed, in our case file.

Please return this letter with your submittal.

Thank you,

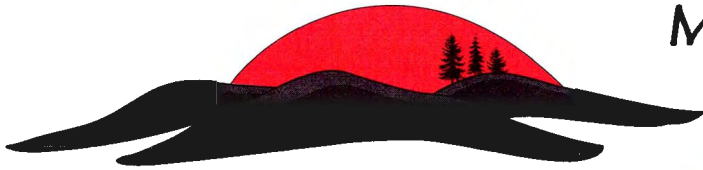
Sincerely,

*Lakhonda Crook*

Program Assistant  
Bureau of Remediation and Redevelopment  
414/263-8680

C: WDNR SER Files

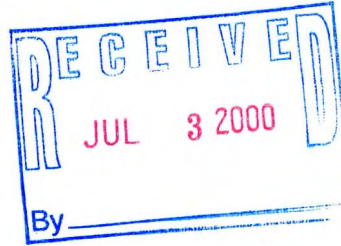




# Moraine Environmental, Inc.

Environmental Management Services

June 23, 2000



Project Reference #1401

Wisconsin Department of Natural Resources  
Southeast Region – Headquarters Office  
P.O. Box 12436  
Milwaukee, Wisconsin 53208

**Re: Remedial Action Summary and Site Closure Request  
Former Johnson Sand and Gravel Site  
N8 W22590 Johnson Road, Town of Pewaukee, WI  
WDNR FID# 268438610 / 0368-004228  
Commerce PECFA# 53186-1661-90**

Dear Program Assistant:

This letter report summarizes the site investigation results and remediation activities conducted by Moraine Environmental, Inc. [MEI] at the above referenced property. These activities are associated with soil/groundwater contamination from a leaking underground storage tank [LUST] system located at the subject property. This report also includes a risk-based assessment of the current contaminant conditions and a request by the responsible party, Mr. Robert Johnson, to consider site closure.

MEI will conduct no further actions at the subject property until your department has reviewed and responded to this site closure request. Enclosed is the \$750 payment for site closure review. If you have any additional questions or comments regarding this matter, please contact us at (262) 377-9060.

Sincerely,

**MORaine ENVIRONMENTAL, INC.**

Thomas Dueppen, P.G.  
Project Hydrogeologist

*Didn't see any check*

Enclosure

cc: Robert Johnson  
PECFA Claim

E:\WORD\MSWTEH14\1401RASumm Intro Letter.doc



ENVIRONMENTAL & REGULATORY SERVICES DIVISION  
BUREAU OF PECFA  
101 West Pleasant Street, Suite 100A  
Milwaukee, Wisconsin 53212-3963  
TDD #: (608) 264-8777  
Fax #: (414) 220-5374  
<http://www.commerce.state.wi.us>  
<http://www.wisconsin.gov>  
Jim Doyle, Governor  
Cory L. Nettles, Secretary

May 12, 2003

Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
20685 W. National Ave.  
New Berlin, WI 53146

RE: **Comm 47.338 Redetermination of Costs to Closure**

Commerce # 53186-1661-90      WDNR BRRTS # 03-68-004228  
Robert Johnson Sand & Gravel, Inc., N8W22590 Johnson Dr., Waukesha

**SUBMITTAL DATE:** May 5, 2003



**Costs Denied**

**\$00,000 Approved Cap on total cost to closed remedial action status**

**Comments:** This site is under the jurisdiction of the Wisconsin Department of Natural Resources (WDNR) due to the presence of free product and chlorinated compounds on the site. Therefore, due to the jurisdictional issue, Commerce is requesting that you have the WDNR conduct a technical review of the site. This review should outline the scope of work needed to move this site to closure. After the technical review is completed, have your consultant (Moraine Environmental, Inc.) develop a budget for submission and review at Commerce. Funding decisions will be made after the WDNR has conducted its review and a budget is developed.

• COMM 47.01(3) INTENT OF PECFA. (a) The PECFA fund does not relieve a responsible party from liability. The individual or organization responsible for a contaminated property shall carry out the remediation of that property. PECFA's role is to provide monetary awards to responsible parties who have completed and paid for PECFA-approved remediation activities and services. The availability or unavailability of PECFA funding shall not be the determining factor as to whether a remediation shall be completed.

If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5375.

Sincerely,

Greg Michael  
Hydrogeologist  
Site Review Section

cc: Moraine Environmental, Inc.  
Case File



**Moraine Environmental, Inc.**

Environmental Management Services



July 3, 2003

MEI Project Reference #1401

Mr. Jim Delwiche  
Wisconsin Department of Natural Resources  
141 NW Barstow Street  
Room 180  
Waukesha, WI 53188

**Subject:** Remediation Summary and Proposed Activities  
Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road, City of Pewaukee, WI  
**WDNR BRRTS #03-68-004228 (LUST) and 02-68-259665 (ERP)**  
**COMMERCE#: 53186-1661-90**

Dear Mr. Delwiche:

Moraine Environmental, Inc. (MEI) has prepared this letter report to summarize the remediation efforts at the former Johnson Sand and Gravel site, N8 W22590 Johnson Road, Pewaukee, Wisconsin. On April 30, 2003, MEI submitted a similar summary (with a cost detail for unclaimed PECFA costs and projected costs) to Mr. Greg Michael of the Department of Commerce (COMM). On May 12, 2003, Mr. Michael issued a letter and requested that the Wisconsin Department of Natural Resources (WDNR) conduct a technical review of this project due to the presence of free product and chlorinated compounds beneath the site. Therefore, on behalf of Johnson Sand & Gravel (the responsible party), we respectfully request your review of this summary.

#### **Site Location and Description**

The subject site is located in the northwest 1/4 of the northeast 1/4 of Section 25, Township 7 North, Range 19 East, in the City of Pewaukee, Waukesha County, Wisconsin. The street address is N8 W22590 Johnson Road. The regional setting is presented in Figure 1.

The subject property consists of approximately 2 acres of land and one permanent structure; a one-story cement block building. The subject property was formerly utilized as the headquarters and service area for the Johnson Sand & Gravel Company. Prior to the building construction, between the late-1950's and mid-1970's, the subject and surrounding area was utilized for sand/gravel pit operations. The pits were later backfilled to grade and are currently utilized for commercial purposes within an industrial park site. Schmidt Custom Floors, Inc currently occupy the subject property.

The source of the petroleum impact at the subject site was a release from two former 10,000 gallon underground storage tanks (USTs) located along the east side of the building (refer to



Figure 2). Both UST systems are registered with the Wisconsin Department of Commerce (COMM). The capacities, contents, and Commerce identification numbers are listed below:

| <u>Tank Capacity</u> | <u>Tank Contents</u> | <u>Tank Type</u> | <u>Commerce I.D.#</u> |
|----------------------|----------------------|------------------|-----------------------|
| 10,000 gallons       | Diesel               | Aboveground      | 672700126             |
| 10,000 gallons       | Unleaded Gasoline    | Aboveground      | 672700127             |

The former tank pit area and subsurface contaminants are located beneath asphalt pavement. Surface areas directly adjacent to the building consist of grass lawn to the west; concrete to the north; and asphalt pavement to the east and south. A crushed gravel surface extends from the concrete/asphalt pavement to the north and east property boundaries. The asphalt pavement extends to Johnson Drive and the south side of the property. The site is relatively flat with a slight downward slope to the northwest/west where surface runoff/precipitation is assumed to flow towards the Fox River. The Fox River is approximately 0.5 miles west/northwest of the site.

Underground telephone and natural gas utilities, and overhead electric lines service the site. The current source of drinking water for the subject site is a potable well located near the southwest building corner (approximately 90 feet southwest of the former UST area). The water well has been periodically sampled for volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Based on laboratory analysis, VOCs have not been detected in drinking water samples. Low levels of naphthalene [1.5 micrograms per liter (ug/l)], 1-methylnaphthalene (0.63 ug/l), and 2-methylnaphthalene (1.2 ug/l) were detected during the March 2001 monitoring event; however, the detections are anomalous when compared to the other data. MEI attempted to obtain a well construction report for the private well. The Wisconsin Geological and Natural History Survey did not have any well records for the site.

During the subsurface investigation/groundwater monitoring, chlorinated VOCs (CVOCs) were detected in soil and groundwater samples. This project is under the regulatory jurisdiction of the WDNR due to the CVOCs and free product in soil and groundwater beneath the site. A cost separation methodology for eligible (petroleum contaminants) and ineligible PECFA program costs was submitted to the Department of Commerce for review. On May 20, 1997, COMM approved a separation percentage of 0.54.

#### **Subsurface Investigation Summary**

A subsurface investigation of the site was performed from February 1996 to August 1997. Based on the investigation data, the extent of soil and groundwater impacts was adequately defined. It was determined that contamination was primarily confined to the area of the former UST system; however, high concentrations of petroleum hydrocarbon compounds were found in the soil and groundwater.

Soil types encountered during the investigation consisted of variable fill material of clayey silt and sand to sand and gravel to sandy clay. This material extends to depths ranging from 16 to 25 feet below ground surface (bgs). Sandy silts to sand/gravel with variable amounts of clay, coarse gravel and cobbles underlie the fill material. This native soil material extends to depths ranging from 18 to 38 feet [maximum depth explored].

The soil contamination extends from approximately 10 to 22 feet bgs. It is estimated that 1,100 tons of vadose zone soil was impacted by the petroleum release. Based on the contaminant concentrations in soil samples, MEI estimated that 13,000 pounds of combined Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and VOCs were present in the vadose zone near the former UST systems at the site.

During the investigation, static groundwater levels at the site varied seasonally from 22 to 26 feet bgs. Groundwater flow direction was determined to be toward the north/northwest. A thin sheen of free-phase petroleum product was detected in MW1, and 0.82 feet of product was measured in MW7. The free product and dissolved phase contamination appeared to be isolated to the immediate area around the UST system [MW1 and MW7]. MEI estimated that approximately 55,000 gallons of groundwater was impacted by the gasoline/diesel fuel release.

A Site Investigation Report and Remedial Work Plan (November 17, 1997) was submitted to the Wisconsin Department of Natural Resources for review. Select tables and maps from the report are attached to this letter. A remedial alternative cost evaluation was also submitted to COMM on November 17, 1997. The recommended remedial action plan (RAP) included installing three monitoring/recovery sumps near the former UST systems for periodic groundwater pumping/off-site disposal. A groundwater monitoring program was also recommended. On December 29, 1997, COMM approved the cost to implement the plan.

### **Remediation and Monitoring Activities**

#### **Free Product Removal**

From mid-1998 to mid-1999, MEI attempted to remove free product from the groundwater near the former UST systems by installing and maintaining oil skimmers placed inside monitoring wells MW1 and MW7. This effort was conducted in an attempt to remove free-product without installing more costly monitoring/recovery sumps. However, the constant changes in static groundwater levels [+/- 3 feet] significantly reduced the effectiveness of the skimmers.

The product thickness in MW-1 consistently exceeded 0.01 feet. Therefore, MEI coordinated the installation (in August 1999) of three monitoring/recovery sumps near the former UST basin (see Figure 2). The sumps were drilled to a maximum depth of 35 feet bgs with a screened interval from 20 to 35 feet bgs. To date, 8,000 gallons of impacted groundwater have been pumped from the sumps for off-site treatment (disposal documentation is attached).

#### **Groundwater Monitoring and Site Closure Request**

MEI conducted five rounds of groundwater monitoring (6/16/98, 10/16/98, 1/21/99, 4/15/99, and 7/19/99) prior to installing the recovery sumps. After sump installation, select monitoring wells and recovery sumps were sampled on 10/21/99, 11/19/99, and 1/18/00. The private on-site well was sampled on 4/15/99 and 10/21/99. Due to periodically low groundwater levels [groundwater table below well depth], MW-7 was not consistently sampled.

Based on laboratory analyses (see Table 1), samples from the wells around the perimeter of the former UST area (MW-2, MW-3, MW-4, MW-5, MW-6) and the potable well did not contain contaminant levels above applicable Chapter NR 140 Groundwater Quality Standards. NR 140 Enforcement Standards and/or Preventive Action Limits were exceeded in samples from MW-1/EXT-1, EXT-2, EXT-3, and MW-7. Various polycyclic aromatic hydrocarbons (PAHs), petroleum volatile organic compounds (PVOCs), or chlorinated VOCs (or a combination of the above) were detected in the samples.

The responsible party requested that MEI discontinue remediation/monitoring activities and submit a case closure request to the WDNR. On June 23, 2000, MEI submitted a closure request to the WDNR for review. In October 2000, the WDNR denied closure and requested (in part) that free product abatement continue to the extent practicable, and that additional groundwater monitoring be conducted until stable or decreasing contaminant concentration trends were evident.

**Additional Free Product Abatement and Groundwater Monitoring**

To address free product, MEI periodically measured the product levels in MW-7, and the extraction wells (MW-1/EXT-1, EXT-2 and EXT-3). A limited amount of product was removed during well purging prior to sampling (see Table 2)

From December 2000 through December 2002, five additional rounds of groundwater monitoring were conducted at select locations. Monitoring wells MW-2, MW-5 and MW-6 were not sampled because laboratory analysis consistently detected acceptable (concentrations below applicable NR 140 standards) groundwater quality.

Based on laboratory analyses, contaminant concentrations in MW-1/EXT-1 and EXT-3 were generally decreasing during the early monitoring events; however, measurable free product was identified in the last two events. During the last monitoring event (12/18/02), 0.5 feet of product was measured in MW-1/EXT-1 and 0.21 feet was measured in EXT-3. Product was also found in MW-7 (0.04 feet) prior to purging the well during the last monitoring event.

Low levels (below NR 140 ES) of benzo(b)fluoranthene were found in samples from MW-3 during the June 2001 and March 2002 monitoring events. Several PAHs were found in samples from MW-4 during the last three monitoring events; but the concentrations were below the NR 140 PAL during the last two rounds. The chlorinated VOC (CVOC) concentrations in EXT-2 and EXT-3 have generally declined (see Table 1).

To determine groundwater flow direction, static water levels were measured in each well. Based on elevation data (see Table 3) for the last (12/18/02) monitoring event, the groundwater flow direction was determined to be toward the north. This is generally consistent with historical data. A groundwater elevation map for the 12/18/02 sampling event is included as Figure 2.

**Recommended Scope of Work**

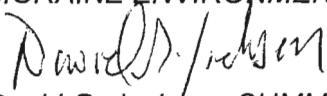
Based on monitoring data, MEI believes that a more aggressive recovery effort regarding free product and CVOCs be conducted. It is our opinion that implementing the following scope of work will help move this site towards closure:

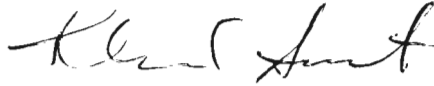
- Bids will be solicited to pump and haul two loads (5,000 gallons minimum per load) of impacted water that contains petroleum product, dissolved PVOCs and dissolved CVOCs. The material will be disposed of at a WDNR licensed facility. MEI believes that two additional recovery events may be necessary to reduce the product level in MW-1/EXT-1.
- A detailed cost estimate of additional remediation efforts will be re-submitted to Mr. Greg Michael of the Department of Commerce.
- A Registered Land Surveyor will be retained to conduct an elevation and boundary survey at the site. The Mean Sea Level elevations for the groundwater monitoring wells (from top of casings) and adjacent ground surfaces shall be determined. State Plane coordinates will also be assigned to each data point. The information will be used to comply with WDNR requirements and prepare a Geographic Information System (GIS) registration packet.
- After the extraction wells are pumped, MW-3, MW-4, and EXT-2 will be sampled. MEI will also sample MW-1/EXT-1 and EXT-3 if product is not present. Samples will be submitted for analyses of VOCs and PAHs.

- The free product levels, additional groundwater monitoring data, and survey data will be evaluated with respect to submitting a case closure request to the WDNR. If the product levels are sufficiently reduced, MEI may petition the WDNR for site closure with residual free product. The closure request will include a GIS registry packet for residual soil and groundwater impacts at the site.
- If site closure is granted, the monitoring and extraction well network will be abandoned per NR 141, and abandonment forms will be submitted to the WDNR.

On behalf of Johnson Sand & Gravel, we look forward to your input regarding this project. We are anxious to move this site toward closure in a cost-effective and expedient manner. Please call us at (262) 377-9060 if you have any questions or to discuss this project. In the future, please address any correspondence to Mr. Wayne Johnson of Johnson Sand & Gravel at 20685 W. National Avenue, New Berlin, Wisconsin, 53146-4920. Thank you for your assistance.

Sincerely,  
MORAINE ENVIRONMENTAL, INC.

  
David G. Jackson, CHMM  
Senior Project Manager

  
Thomas C. Sweet  
President

cc: Mr. Wayne Johnson

enclosures

## TABLES











**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

**MW - 1 / EXT - 1**

|                            |              |                        |                 |                     |            |
|----------------------------|--------------|------------------------|-----------------|---------------------|------------|
| Surface Elevation          | 99.69        | Free Product Abatement |                 |                     |            |
| Top of Casing Elevation    | 99.12/99.17  |                        |                 |                     |            |
| Top of Screen Elevation    | 76.69/79.69  |                        |                 |                     |            |
| Bottom of Screen Elevation | 66.69/64.69  |                        |                 |                     |            |
|                            |              |                        |                 | Product             | Cumulative |
| Measurement                | DTW          | Groundwater            | Product         | Removed             | Removal    |
| Date                       | (Casing)     | Elevation              | Thickness (ft.) | (Gallons)           | (Gallons)  |
| 1/9/1998                   | 28.04        | 71.12                  | 0.06            | sock installed      |            |
| 6/16/1998                  | 24.14        | 76.69                  | 2.14            | sock replaced       |            |
| 7/10/1998                  | 24.91        | 74.35                  | 0.17            | EZ skimmer          | 2 oz.      |
| 10/16/1998                 | 26.30        | 72.82                  | sheen only      | 5 gals H2O purged   | say 1      |
| 1/21/1999                  | 28.65        | 70.55                  | 0.10            | 2.8 gals H2O purged | 1.25       |
| 4/15/1999                  | 24.81        | 74.49                  | 0.23            | 5 gals H2O purged   | 1.50       |
| 7/19/1999                  | 23.30        | 76.98                  | 1.45            | socks installed     | 1.50       |
| 10/21/1999                 | 27.05        | 72.28                  | 0.20            | 20 gals H2O purged  | 2.50       |
| 11/19/1999                 | 28.77        | 70.62                  | 0.28            | 16 gals H2O purged  | 3.25       |
| 1/18/2000                  | 29.63        | 69.61                  | 0.09            | 14 gals H2O purged  | 3.25       |
| 3/21/2000                  | 28.23        | 71.19                  | 0.31            | --                  | 3.25       |
| 12/13/2000                 | 27.28        | 72.11                  | 0.27            | 3.5 gals H2O purged | 3.50       |
| 3/12/2001                  | 24.41        | 74.76                  | sheen only      | --                  | 3.50       |
| 6/26/2001                  | 22.52        | 76.65                  | 0.02            | .5 gals purged      | 3.50       |
| 12/18/2002                 | not measured | --                     | 0.50            | --                  | 3.50       |

**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

**EXT - 2**

|                            |              |                        |           |           |            |
|----------------------------|--------------|------------------------|-----------|-----------|------------|
| Surface Elevation          | 99.69        | Free Product Abatement |           |           |            |
| Top of Casing Elevation    | 99.30        |                        |           |           |            |
| Top of Screen Elevation    | 79.69        |                        |           |           |            |
| Bottom of Screen Elevation | 64.69        |                        |           |           |            |
|                            |              |                        |           | Product   | Cumulative |
| Measurement                | DTW          | Groundwater            | Product   | Removed   | Removal    |
| Date                       | (Casing)     | Elevation              | Thickness | (Gallons) | (Gallons)  |
| 10/21/1999                 | 27.03        | 72.27                  | --        | --        | --         |
| 1/18/2000                  | 29.45        | 69.85                  | --        | --        | --         |
| 3/21/2000                  | 28.41        | 70.90                  | 0.01      | --        | --         |
| 12/13/2000                 | 27.18        | 72.12                  | --        | --        | --         |
| 3/12/2001                  | 24.49        | 74.81                  | --        | --        | --         |
| 6/26/2001                  | 22.69        | 76.61                  | --        | --        | --         |
| 12/18/2002                 | not measured | --                     | --        | --        | --         |

Note: On 9/7/99 (800 gallons) and 9/30/99 (1,200 gallons), Taylor Industrial Vac pumped water from the extraction wells for disposal at Great Lakes Recovery Systems. On 9/30/99, an additional 6,000 gallons was pumped by WSK Service Company, Inc. for disposal at the Port Washington POTW.

\* GW elevations are corrected for free product (assumed product density of 0.80)

**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

**EXT - 3**

|                            |              |                        |                      |                     |            |
|----------------------------|--------------|------------------------|----------------------|---------------------|------------|
| Surface Elevation          | 99.69        | Free Product Abatement |                      |                     |            |
| Top of Casing Elevation    | 99.07        |                        |                      |                     |            |
| Top of Screen Elevation    | 79.69        |                        |                      |                     |            |
| Bottom of Screen Elevation | 64.69        |                        |                      |                     |            |
|                            |              |                        |                      | Product             | Cumulative |
| Measurement                | DTW          | Groundwater            | Product              | Removed             | Removal    |
| Date                       | (Casing)     | Elevation              | Thickness            | (Gallons)           | (Gallons)  |
| 10/21/1999                 | 26.82        | 72.26                  | 0.01                 | --                  | --         |
| 1/18/2000                  | 29.19        | 69.88                  | --                   | --                  | --         |
| 12/13/2000                 | 27.10        | 72.11                  | 0.18                 | 20 gals H2O purged  | Say 1      |
| 3/12/2001                  | 24.31        | 74.76                  | --                   | --                  | --         |
| 6/26/2001                  | 22.41        | 76.66                  | 0.04 (after purging) | 3 gals H2O purged   | --         |
| 12/18/2002                 | not measured | --                     | 0.21                 | 4.5 gals H2O purged | 1.25       |

**TABLE 2**  
**GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS**  
 FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
 TOWN OF PEWAUKEE, WI

**MW - 7**

|                            |              |                        |            |                     |            |
|----------------------------|--------------|------------------------|------------|---------------------|------------|
| Surface Elevation          | 99.92        | Free Product Abatement |            |                     |            |
| Top of Casing Elevation    | 99.55        |                        |            |                     |            |
| Top of Screen Elevation    | 80.22        |                        |            |                     |            |
| Bottom of Screen Elevation | 69.85        |                        |            |                     |            |
|                            |              |                        |            | Product             | Cumulative |
| Measurement                | DTW          | Groundwater            | Product    | Removed             | Removal    |
| Date                       | (Casing)     | Elevation              | Thickness  | (Gallons)           | (Gallons)  |
| 6/16/1998                  | 24.85        | 75.09                  | 0.02       | --                  | --         |
| 10/16/1998                 | 26.60        | 73.32                  | sheen only | 5 gals H2O purged   | say 1      |
| 1/21/1999                  | 29.18        | 70.86                  | 0.15       | .5 gals H2O purged  | 1          |
| 4/15/1999                  | 25.06        | 74.86                  | sheen only | 3.2 gals H2O purged | 1          |
| 7/19/1999                  | 22.51        | 77.43                  | 0.03       | 4.7 gals H2O purged | 1          |
| 10/21/1999                 | 27.45        | 72.59                  | 0.16       | 5 gals H2O purged   | 1.25       |
| 11/19/1999                 | 29.52        | 70.96                  | 0.70       | .12 gals H2O purged | 1.25       |
| 1/18/2000                  | 29.48        | 70.44                  | --         | --                  | 1.25       |
| 3/12/2001                  | 24.77        | 75.15                  | --         | --                  | 1.25       |
| 6/26/2001                  | 22.91        | 77.01                  | --         | --                  | --         |
| 3/10/2002                  | 26.68        | 73.24                  | --         | --                  | --         |
| 12/18/2002                 | not measured | --                     | 0.04       | 5 gals H2O purged   | 1.50       |

Note: On 9/7/99 (800 gallons) and 9/30/99 (1,200 gals.), Taylor Industrial Vac pumped water from the extraction wells for disposal at Great Lakes Recovery Systems. On 9/30/99, an additional 6,000 gallons was pumped by WSK Service Company, Inc. for disposal at the Port Washington POTW.

\* GW elevations are corrected for free product (assumed product density of 0.80)

**TABLE 3  
GROUNDWATER ELEVATIONS  
FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
TOWN OF PEWAUKEE, WI**

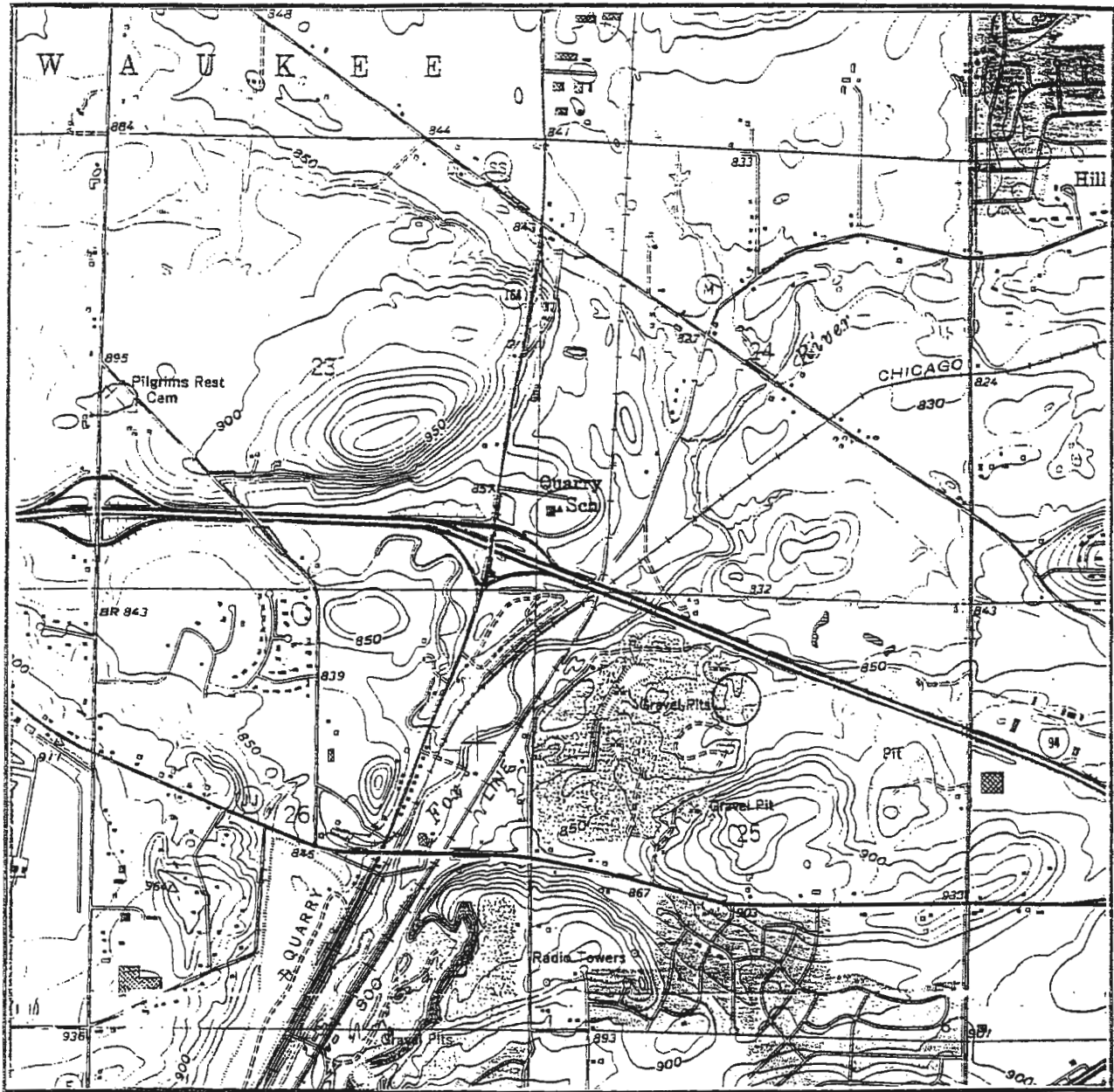
| <b>MW - 1 / EXT - 1</b>    |              |                       | <b>MW - 2</b>              |              |                       |
|----------------------------|--------------|-----------------------|----------------------------|--------------|-----------------------|
| Surface Elevation          |              |                       | Surface Elevation          |              |                       |
|                            |              |                       | 99.77                      |              |                       |
| Top of Casing Elevation    |              |                       | Top of Casing Elevation    |              |                       |
|                            |              |                       | 99.34                      |              |                       |
| Top of Screen Elevation    |              |                       | Top of Screen Elevation    |              |                       |
|                            |              |                       | 76.77                      |              |                       |
| Bottom of Screen Elevation |              |                       | Bottom of Screen Elevation |              |                       |
|                            |              |                       | 61.77                      |              |                       |
| Measurement Date           | DTW (Casing) | Groundwater Elevation | Measurement Date           | DTW (Casing) | Groundwater Elevation |
| <b>SEE TABLE 2</b>         |              |                       | 6/16/1998                  | 21.48        | 77.86                 |
|                            |              |                       | 10/14/1998                 | 22.78        | 76.56                 |
|                            |              |                       | 1/21/1999                  | 25.83        | 73.51                 |
|                            |              |                       | 4/15/1999                  | 22.45        | 76.89                 |
|                            |              |                       | 7/19/1999                  | 21.20        | 78.14                 |
|                            |              |                       | 10/21/1999                 | 24.82        | 74.52                 |
|                            |              |                       | 1/18/2000                  | 26.68        | 72.66                 |
|                            |              |                       | 12/13/2000                 | 23.96        | 75.38                 |
|                            |              |                       | 3/12/2001                  | 22.98        | 76.33                 |
|                            |              |                       | 6/26/2001                  | 20.75        | 78.59                 |
|                            |              |                       | 3/10/2002                  | 24.73        | 74.61                 |
|                            |              |                       | 12/18/2002                 | 25.41        | 73.93                 |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |

**TABLE 3  
GROUNDWATER ELEVATIONS  
FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401  
TOWN OF PEWAUKEE, WI**

| <b>MW - 3</b>              |              |                       | <b>MW - 4</b>              |              |                       |
|----------------------------|--------------|-----------------------|----------------------------|--------------|-----------------------|
| Surface Elevation          |              |                       | Surface Elevation          |              |                       |
| 99.27                      |              |                       | 99.20                      |              |                       |
| Top of Casing Elevation    |              |                       | Top of Casing Elevation    |              |                       |
| 98.81                      |              |                       | 98.78                      |              |                       |
| Top of Screen Elevation    |              |                       | Top of Screen Elevation    |              |                       |
| 79.27                      |              |                       | 79.20                      |              |                       |
| Bottom of Screen Elevation |              |                       | Bottom of Screen Elevation |              |                       |
| 69.27                      |              |                       | 69.20                      |              |                       |
| Measurement Date           | DTW (Casing) | Groundwater Elevation | Measurement Date           | DTW (Casing) | Groundwater Elevation |
| 6/16/1998                  | 23.74        | 75.07                 | 6/16/1998                  | 23.97        | 74.81                 |
| 10/14/1998                 | 25.10        | 73.71                 | 10/14/1998                 | 25.26        | 73.52                 |
| 1/21/1999                  | 28.22        | 70.59                 | 1/21/1999                  | 28.20        | 70.58                 |
| 4/15/1999                  | 24.10        | 74.71                 | 4/15/1999                  | 24.27        | 74.51                 |
| 7/19/1999                  | 21.65        | 77.16                 | 7/19/1999                  | 21.76        | 77.02                 |
| 10/21/1999                 | 26.43        | 72.38                 | 10/21/1999                 | 26.43        | 72.35                 |
| 1/18/2000                  | 28.58        | 70.23                 | 1/18/2000                  | 28.65        | 70.13                 |
| 12/13/2000                 | 26.60        | 72.21                 | 12/13/2000                 | 26.58        | 72.20                 |
| 3/12/2001                  | 23.90        | 74.91                 | 3/12/2001                  | no access    | --                    |
| 6/26/2001                  | 22.03        | 76.78                 | 6/26/2001                  | 22.12        | 76.66                 |
| 3/10/2002                  | 25.75        | 73.06                 | 3/10/2002                  | 25.86        | 72.92                 |
| 12/18/2002                 | 28.21        | 70.60                 | 12/18/2002                 | 28.14        | 70.64                 |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |
|                            |              |                       |                            |              |                       |



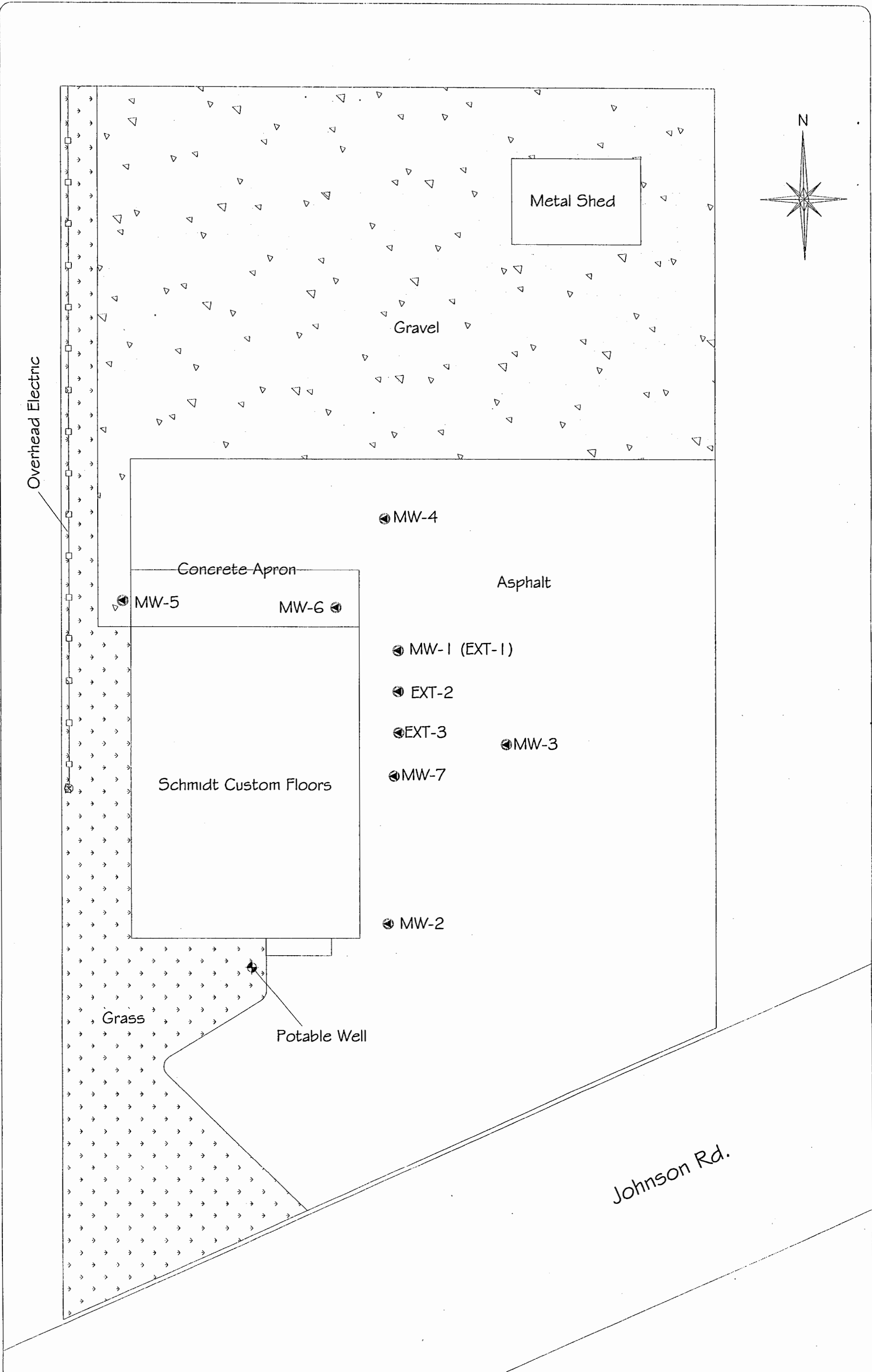
## FIGURES



Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

○ SITE LOCATION

|                 |   |               |
|-----------------|---|---------------|
| Drawing Title   | <b>Site Location Map</b>  |               |
| Project Name    | Former Johnson Sand and Gravel<br>N8 W22590 Johnson Road<br>Waukesha, Wisconsin |               |
| Drawing Company | Moraine Environmental, Inc.   |               |
| Project Number  | MEI #0305   | Page Figure 1 |



Graphic Scale  
 0' 40'  
 Scale: 1 Inch = 40 Feet  
 Drawn By Andrew Malsom  
 Date: 6/6/03  
 Project No: 1401  
 \*Note: Not a legal survey, adapted from field notes

Former Johnson Sand and Gravel Property

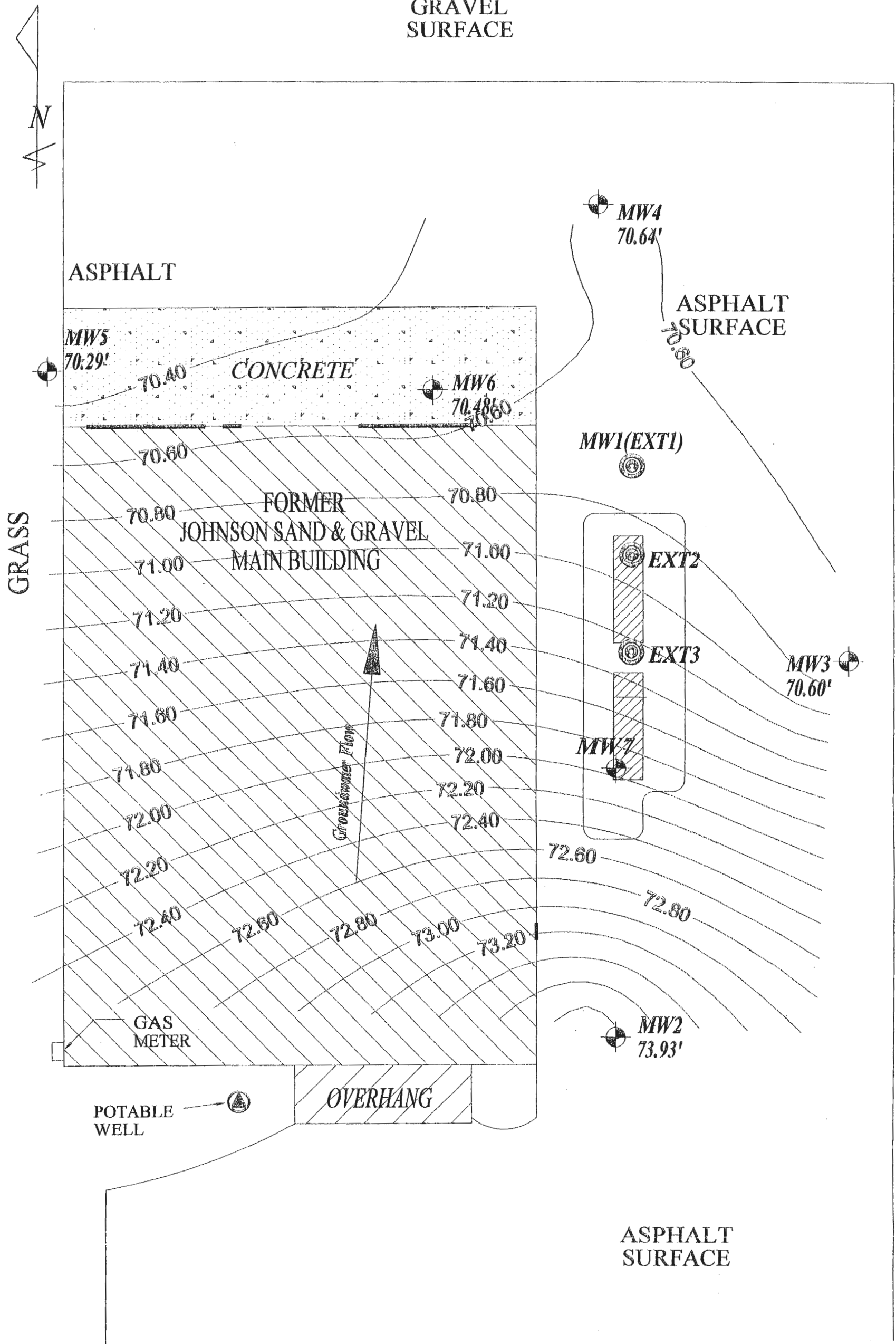
N8 W22590 Johnson Road Pewaukee, WI

Moraine Environmental, Inc.  
 Environmental Management Services

1234 12th Avenue Grafton, WI 53024-1924  
 262-377-9060 / Fax 262-377-9770



GRAVEL SURFACE



**MEI - Legend**

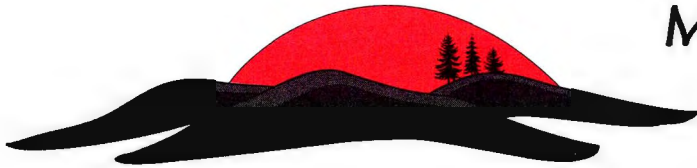
- Potable Well Location
- Groundwater Monitoring Well Location
- Extraction Sunps



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

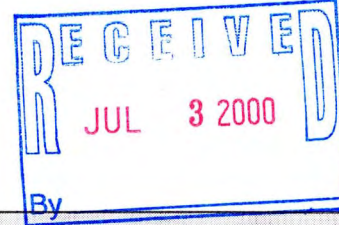
|   |                 |
|---|-----------------|
| FIGURE NAME   |                 |
| <b>Groundwater Elevation Map</b><br>December 18, 2002 Data                          |                 |
| SITE NAME AND LOCATION  |                 |
| <b>Former Johnson Sand &amp; Gravel Site</b><br>N8 W22590 Johnson Road Waukesha, WI |                 |
| PROJECT REFERENCE   | FIGURE NAME     |
| <b>MEI #1401</b>  | <b>Figure 2</b> |

**SUPPLEMENTAL DATA FROM INVESTIGATION AND REMEDIATION WORK**



# Moraine Environmental, Inc.

Environmental Management Services



REMEDIAL ACTION SUMMARY  
SITE CLOSURE REQUEST  
AT

FORMER JOHNSON SAND AND GRAVEL SITE  
N8 W22590 JOHNSON ROAD  
Town of Pewaukee, Wisconsin 53186

PREPARED FOR:

Mr. Robert Johnson  
Johnson Sand and Gravel  
20685 W. National Avenue  
New Berlin, Wisconsin 53146

PREPARED BY:

MORAINE ENVIRONMENTAL, INC  
1234 12TH AVENUE  
GRAFTON, WISCONSIN 53024  
(262) 377-9060

PECFA Claim #53186-1661-90  
WDNR FID #268438610

MEI PROJECT REF. #1401

June 23, 2000



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- B. Figures and Tables
- C. MEI Sampling Protocol, Sump Design, and Waste Manifest
- D. Laboratory Results – Groundwater

## EXECUTIVE SUMMARY

The subject property consists of a 2 acre lot with a one story building that is utilized as office and storage space by the current property owners, Schmidt Custom Floors, Inc. (Figure 1). The eastern building exterior previously contained two 10,000 gallon Underground Storage Tanks (USTs) utilized for bulk storage / distribution of petroleum products. The USTs were removed on March 30, 1994 and the Wisconsin Department of Natural Resources (WDNR) was notified of obvious petroleum impacts associated with releases from these USTs. Moraine Environmental, Inc. (MEI) conducted a site investigation of soil/groundwater impacts between February 1996 and August 1997. Results of the site investigation and recommendations for a remedial action plan (RAP) are included in MEI's *Site Investigation Report and Remedial Work Plan*, dated November 17, 1997. ~~AST?~~

The Wisconsin Department of Commerce (Commerce), administrators of the Petroleum Environmental Cleanup Fund Act (PECFA) program, reviewed and approved the following RAP for the subject site on November 25, 1997: installation of free product recovery sumps; periodic pumping and off-site disposal of impacted groundwater; and a groundwater monitoring program to assess natural attenuation. From mid-1998 to mid-1999, MEI was partially successful in removing free product from the groundwater surface utilizing oil skimmers in the monitoring wells. However, the thickness of free product in monitoring well MW-1 consistently exceeded the product thickness in groundwater [ $>0.1$  feet] defined as an Environmental Factor [per Comm 47]. MEI continued with the original RAP and installed three recovery sumps along the east side of the building in August 1999 (Figure 2). Approximately 6,800 gallons of impacted groundwater has currently been pumped-out and treated off-site.

At the request of the responsible party, Mr. Robert Johnson, MEI has discontinued remedial actions and is requesting a WDNR review for site closure. Lab analysis and field measurement from 3.5 years of groundwater monitoring indicate that the contaminant plume remains isolated near the former UST area, however, the PAH constituent levels in the contaminant plume are either non-stable or increasing over time. Even though a "flexible closure" [per NR 726.05(2)(b)] by demonstrating natural attenuation of residual impacts is not possible, the contaminant plume at the subject site does not appear to pose a significant threat to human health or the environment at this time. On behalf of Mr. Johnson, MEI is requesting a "restricted closure" from the WDNR in conjunction with an institutional control to address the contaminant conditions remaining at the subject site. These controls include soil and groundwater use restrictions added to the property deed.

## LIMITS OF INVESTIGATION

Our assessment was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by Professional Consultants practicing in this or similar localities. No other warranty or guarantee, expressed or implied, is made as to the conclusion and professional advice included in this report.

The findings of this report are valid as of the present date of the assessment. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the work of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, from the broadening of knowledge, or from other reasons. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control.

The interpretations and conclusions contained in this report are based upon the result of independent laboratory tests and analysis intended to detect the presence and/or concentrations of certain chemical constituents in samples taken from the subject property. Moraine Environmental, Inc. has no control over such testing and analysis and therefore, disclaims any responsibility for any errors and omissions arising therefrom.

A subsurface exploration was performed and presented in this report. Depending upon the sampling method and frequency, every soil condition may not be observed, and some materials or layers that are present in the subsurface may not be noted.

This report is issued with the understanding that it is the responsibility of the owner(s) to ensure that the information and recommendations contained herein are brought to the attention of the appropriate regulatory agency(ies).



## **1.0 INTRODUCTION**

The subject property, located at N8 W22590 Johnson Road, in the Town of Pewaukee, Wisconsin, was formerly the corporate headquarters for Johnson Sand and Gravel Company and quarry equipment and trucks were stored on the property. Two 10,000 gallon Underground Storage Tanks (USTs), located along the east side of the existing building, were used to store gasoline and diesel for refueling fleet vehicles and equipment (refer to Figure 2). The two USTs were removed from the site on March 30, 1994 and the Wisconsin Department of Natural Resources (WDNR) was notified of obvious petroleum impacts associated with a release from the USTs. Accordingly, the WDNR designated the property owner, Mr. Robert Johnson, as the responsible party for restoring the environment at this site. Mr. Johnson contracted with Moraine Environmental, Inc. (MEI) to conduct investigation and remediation activities associated with these petroleum impacts.

The purpose of this report is to summarize investigation activities associated with this petroleum release and document the activities performed to remediate / monitor the contaminant conditions at the subject property. This report also includes a risk assessment of the residual impacts remaining at the property and a request for site closure with institutional controls.

## **2.0 CONTRACTORS PERFORMING WORK**

The following companies were involved in remedial activities at the site:

### **ENVIRONMENTAL CONSULTING FIRM:**

Moraine Environmental, Inc.  
1234 12th Avenue  
Grafton, Wisconsin 53024  
Phone: (262) 377-9060

### **REMEDICATION CONTRACTORS:**

[Sump Installation]  
Midwest Engineering, Inc.  
205 Wilmont Drive  
Waukesha, Wisconsin  
Phone: (262) 521-2125

[Groundwater Disposal]  
WSK Service Co., Inc.  
W4970 Kohler Drive  
Fredonia, Wisconsin 53021  
Phone: (262) 692-9742

LABORATORY SERVICES:

EnChem, Inc.  
1241 Bellevue St. Suite 9  
Green Bay, WI 54302  
Phone: (920) 569-2436

**3.0 SITE AND AREA DESCRIPTION**

**3.1 Site Location**

The subject site is located in the northwest 1/4 of the northeast 1/4 of Section 25, Township 7 North, Range 19 East, in the Town of Pewaukee, Waukesha County, Wisconsin. The street address is N8 W22590 Johnson Road. The regional setting is presented in Figure 1.

**3.2 Site Description**

The subject property consists of approximately 2 acres of land and one permanent structure; a one-story cement block building. The subject property was formerly utilized as headquarters and service area for Johnson Sand and Gravel Company. Prior to the building construction, between the late-1950's and mid-1970's, the subject and surrounding area was utilized for sand/gravel pit operations that were later backfilled to level grade and are currently utilized for commercial purposes within an industrial park site. The subject property is currently owned and operated by Schmidt Custom Floors, Inc.

**3.3 Physical Site Characteristics**

The source of the petroleum impact at the subject site was leakage from two former 10,000 gallon USTs located along the east side of the building (refer to Figure 2). Both UST systems are registered with the Wisconsin Department of Commerce (Commerce) Tank Records Division. The capacities, contents, and Commerce identification numbers are detailed below:

| <u>Tank Capacity</u> | <u>Tank Contents</u> | <u>Tank Type</u> | <u>Commerce I.D.#</u> |
|----------------------|----------------------|------------------|-----------------------|
| 10,000 gallons       | Diesel               | Aboveground      | 672700126             |
| 10,000 gallons       | Unleaded Gasoline    | Aboveground      | 672700127             |

USTs !!!  
UST

The site is serviced by underground telephone, natural gas, and overhead electric. The land surface directly adjacent to the building is a mixture of grass lawn to the west; concrete to the north; and asphalt pavement to the east and south. A crushed gravel surface extends from the concrete / asphalt pavement to the north and east property boundaries. The asphalt pavement extends to Johnson Drive and the south side of the property. The site is relatively flat with a slight downward slope to the northwest/west where surface runoff/precipitation is assumed to flow towards the Fox River. The Fox River is approximately 0.5 miles west/northwest of the site.

The current source of drinking water for the subject site is a potable well located near the southwest building exterior and is approximately 90 feet southwest of the former UST area. The building is also serviced by a private septic system [holding tank] located approximately 60 feet southwest of the private wellhead (Refer to Figure 2). No detectable levels of Volatile Organic Compound (VOC) constituents have been measured in drinking water samples. No Well Construction Reports, from the UW Extension – Geological and Natural History Survey, were available for this potable well.

**4.0 SUBSURFACE INVESTIGATION SUMMARY**

MEI’s subsurface investigation was performed from February 1996 to August 1997. Investigation results adequately defined the extent of groundwater and soil contamination at the subject site. Limited soil contamination exists in the area of the former UST system, however, high concentrations of dissolved petroleum compounds were encountered within the shallow groundwater and saturated soils.

Soil types encountered during the investigation consisted of variable fill material of clayey silt and sand to sand and gravel to sandy clay which extends to depths ranging from 16 to 25 feet below ground surface (bgs). The fill material is underlain by sandy silts to sand / gravel

with variable amounts of clay, coarse gravel and cobbles. This native soil material extends to depths ranging from 18 to 38 feet [maximum depth explored]. The soil contamination extends from approximately 10 to 22 feet bgs. Static groundwater levels at the site vary seasonally from 22 to 26 feet bgs and flow direction is toward the north/northwest. A thin sheen of free product or Non-Aqueous Phase Liquid (NAPL) was encountered in MW1 and a 0.82 foot thick layer of NAPL was measured in MW7. The NAPL and dissolved phase contamination appears to be isolated to the immediate area around the UST system [MW1 and MW7].

It is estimated that 1,100 tons of vadose zone soil has been impacted by this petroleum release. Based on the concentrations of petroleum hydrocarbons within the soil situated in the vadose zone and the extent of the soil impacts, conservatively 13,000 pounds of combined Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and VOC are present within the vadose zone around the UST system at the site. It has been estimated that approximately 55,000 gallons of groundwater have been contaminated by the gasoline/diesel fuel release.

These site investigation results and recommendations for a Remedial Action Plan (RAP) were presented in MEI's *Site Investigation Report and Remedial Work Plan* report, dated November 17, 1997.

Based on information collected during the site investigation, MEI recommended the following RAP:

- Installation of three recovery sumps near the former UST systems [MW1 and MW7] with pump-out and off-site treatment of approximately 100,000 gallons of contaminated groundwater;
- the installation of three piezometers to a depth of approximately 60 feet bgs to evaluate piezometric conditions and to abide by current requirements for natural attenuation monitoring;
- measure the natural attenuation of residual soil and groundwater impacts by

implementing a two year groundwater monitoring program [water samples collected and analyzed quarterly];

- if MEI can confirm that “natural attenuation” is effectively reducing the mass and concentration of petroleum impacts and demonstrate that groundwater quality will be restored within a reasonable period of time, a “flexible closure” [per NR 726.05(2)(b) guidelines] will be requested.

MEI’s report was submitted to WDNR and Commerce for review and approval. Commerce approval was granted on December 29, 1997.

## **5.0 REMEDIATION ACTIVITIES – FIELD OBSERVATIONS**

### **5.1 Free Product Removal**

From mid-1998 to mid-1999, MEI attempted to remove free product from the groundwater near the former UST systems by installing and maintaining oil skimmers placed inside the most highly impacted monitoring wells [MW1 and MW7]. However, the constant changes in static groundwater levels [+/- 3 feet] over time significantly decreased the effectiveness of the skimmers. Based on the measured thickness of free product remaining in wells MW1 and MW7, the oil skimmers were not effectively removing free product (refer to Table 1).

Since MW-1 consistently exceeded the product thickness in groundwater [ $>0.1$  feet] defined as an Environmental Factor [per Comm 47], MEI continued with the original RAP to install three recovery sumps along the east side of the building. Midwest Engineering Services, Inc. (MES) installed the three recovery sumps near the former UST systems in August 1999 (refer to Figure 2, Appendix B). The sumps were drilled to a maximum depth of 35 feet bgs with a screened interval from 20 to 35 feet bgs (see Sump Design Specifications, Appendix C). Approximately 10 tons of impacted drill cuttings were disposed of at Waste Management of Wisconsin BioPile® site at Orchard Ridge Landfill in Franklin, Wisconsin (see Waste Manifest, Appendix C).

Approximately 6,800 gallons of impacted groundwater have currently been pumped-out of the recovery sumps and treated off-site. MEI has continued quarterly groundwater monitoring events at the site, to assess natural attenuation of the residual soil/groundwater impacts. The only monitoring well not consistently sampled at the subject site has been MW-7, due to reoccurring low groundwater levels [groundwater table below well depth].

## **6.0 LABORATORY ANALYTICAL RESULTS**

Four rounds of groundwater samples were collected, prior to the recovery well installation, and two rounds were collected following the installation. The pre- and post-recovery well groundwater sampling results are presented in Table 1, and the groundwater sampling reports are included in Appendix D.

The wells around the perimeter of the former UST area [MW-2, MW-3, MW-4, MW-5, MW-6] continue to have non-detectable and/or only low levels of petroleum impacts well below NR140 Preventative Action Levels (PALs) for groundwater quality. Lab analysis of the private well confirms that drinking water to the subject building has not been impacted.

Based on the most recent groundwater sampling event, groundwater flow direction continues to converge near the northeast side of the former UST area, and NR140 Enforcement Standards (ES) and PALs for groundwater quality are exceeded at locations MW-1(EXT-1), EXT-2, EXT-3, and MW-7. These wells contain various Polycyclic Aromatic Hydrocarbons (PAH) constituent levels of Benzo(a)pyrene, Benzo(b)fluoranthene, Chrysene, Fluoranthene, Fluorene, Naphthalene, and Pyrene that currently exceed NR140 ES. EXT-2 and EXT-3 also contain levels of a chlorinated solvent, Tetrachloroethene (TCE), that exceeds NR140 ES, including a PAL excellence for Trichloroethene in MW-1(EXT-1) and MW-7. None of these four wells contain lighter-based petroleum contaminant levels exceeding ES or PAL, except for cis-1,2-Dichloroethene levels in MW-1(EXT-1) and EXT-3 exceed PAL. No detected contaminant levels at the subject property currently exceed Comm 46 / NR 746 groundwater contaminant concentrations for sites with low permeable soils. ?

## **7.0 WISCONSIN SOIL AND GROUNDWATER QUALITY STANDARDS**

### **7.1 Overview of Wisconsin Regulations**

Chapter Natural Resources (NR) 720 of the Wisconsin Administrative Code, effective April 1, 1995 was the guidance used for closing sites with contaminated soil. The guidelines in ch. NR 720 were designed to protect groundwater. On January 27, 1999 the NR Board approved Comm 46, the rule promulgated by the Wisconsin Dept. of Commerce (Commerce), administrators of the Petroleum Environmental Cleanup Fund Act (PECFA) program. Twin administrative rules Comm 46 / NR 746 were developed by the Departments of Administration, Natural Resources, and Commerce to codify the jurisdiction of petroleum contaminated sites between Commerce and the WDNR and to set a framework to incorporate additional risk based assessments into the remediation and site closure process.

The rule changes were enacted to advance the PECFA program into a situation where the level of remediation funding spent on a site more directly reflects the environmental risks at the site.

On October 29, 1999 Wisconsin Act 9 (Act 9) was enacted. Act 9 adds to the state statutes a definition of "high risk" sites in order to differentiate those PECFA sites that are to be administrated by the WDNR (high risk sites) and those that are to be administrated by Commerce (non-high risk sites).

High risk sites are defined by s.101.44(1)(aq) as discharges of a petroleum product from a petroleum storage tank if at least one of the following applies:

1. Repeated tests show that the discharge has resulted in a concentration of contaminants in a well used to provide water for human consumption that exceeds a Preventive Action Limit (PAL) as defined in s.160.01(6).
2. Petroleum product that is not in dissolved phase is present with a thickness of 0.01 feet or more, as shown by repeated measurements.
3. An Enforcement Standard (ES) is exceeded in groundwater within 1,000 feet of a well operated by a public utility, as defined in s.196.01(5), or within 100 feet of any other well

used to provide water for human consumption.

4. An ES is exceeded in fractured bedrock.

The on-site “risk factors” that would maintain this site under WDNR jurisdiction are the following:

- *A layer of free phase product, greater than 0.01 feet thick, has been continuously present in MW-1(EXT-1).*
- *The current source of drinking water for the commercial property is a potable well located approximately 90 feet side-gradient of MW-7 which has ES groundwater exceedances.*

Based on Wisconsin Act 9 definitions of “high risk” factors and the current soil/groundwater contaminant conditions at the subject site, MEI concludes that the subject property is a high risk site and is under jurisdiction of the WDNR.

## 7.2 Soil and Groundwater Quality

As discussed in Section 7.1, Comm 46 / NR 746 are the administrative rules currently relating to sites contaminated with petroleum products from petroleum storage tanks. Under Comm 46.05/746.05, jointly created risk assessment protocols are to be used to measure the environmental, safety and health risks associated with petroleum contamination and to determine required remedial action levels. Decisions regarding the remediation and closure of sites are based on site-specific risk criteria. The following risk criteria are used by the two agencies to identify sites that are eligible for closure:

1. No Environmental Factors (EF) as listed in Comm 47.337(3) are present at the site.  
These EF are:
  - a) documented expansion of a plume margin;
  - b) groundwater contaminant concentrations in private or public potable wells that exceed the PALs;
  - c) contamination within bedrock or within 1.0 meter of bedrock;
  - d) petroleum product with a thickness of > 0.01 feet on two or more sampling events, and/or;
  - e) contaminant discharges to surface water or wetlands.
2. No soil contamination is present at the site that exceeds any of the soil screening levels in Comm 46 / NR 746 , Table 1.

Naph. @ w.t 4300 22-24'  
7200 28-30'



| <b>COMM 46 / NR 746 Table 1 Indicators of Residual Petroleum Product in Soil Pores</b> |                                      |
|--|--------------------------------------|
| <b>Substance</b>   | <b>Soil Screening Levels (ug/kg)</b> |
| Benzene  | 8,500                                |
| 1,2-DCA  | 600                                  |
| Ethylbenzene   | 4,600                                |
| Toluene  | 38,000                               |
| Xylene   | 42,000                               |
| 1,2,4-Trimethylbenzene   | 83,000                               |
| 1,3,5-Trimethylbenzene   | 11,000                               |
| Naphthalene  | 2,700                                |
| ug/kg – micrograms per kilogram (equivalent to parts per billion – ppb)                |                                      |

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3. No soil contamination exists within 4 feet of the ground surface that exceeds the direct contact soil concentrations listed in Comm 46 / NR 746 , Table 2.

| <b>COMM 46 / NR 746 Table 2 Soil Contaminant Concentrations</b>         |  |              |
|---|--|--------------|
| <b>Substance</b>  | <b>Direct-Contact Contaminant Concentrations (ug/kg)</b> | <b>Basis</b> |
| Benzene   | 1,100  | Cancer Risk  |
| 1,2-DCA   | 540  | Cancer Risk  |
| ug/kg – micrograms per kilogram (equivalent to parts per billion – ppb) |  |              |

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4. For substances not listed in Table 2 that are present within 4 feet of ground surface and have been approved by the agency with administrative authority for the site as contaminant of concern as defined in s. NR 720.03 (2), any potential human health risk from direct contact has been addressed.

5. If there are petroleum-product contaminants in soil or groundwater, the most recent release that caused or contributed to the contamination is more than 10 years old.
6. There is no evidence of migration of petroleum product contamination within a utility corridor or within a permeable material or soil along which vapors, free product, or contaminated water may flow.
7. There is no evidence of migration or imminent migration of petroleum product contamination to building foundation drain tile, sumps, or other points of entry into a basement or other enclosed structure where petroleum vapors could collect and create odors or an adverse impact on indoor air quality or where the contaminants may pose an explosion hazard.
8. No enforcement standard is attained or exceeded in any groundwater within 1,000 feet of a well operated by a public utility, as defined in s. 196.01 (5), Stats., or within 100 feet of any other well used to provide water for human consumption.

Specific to the former Johnson Sand & Gravel site, one EF is currently present – petroleum product with a thickness of >0.01 feet on two or more sampling events. Several inches of free phase product have been continuously detected in MW-1(EXT-1). There does not appear to be any soil impacts within 4 feet of the ground surface. The petroleum release that caused the contamination is more than 10 years old. Lab analysis results of soil samples collected during MEI's 1997 site investigation, indicate that naphthalene levels below the southern UST may still exceed Comm 46 / NR 746 Table 1 Soil Screening Levels (SSLs) for naphthalene. The predominant fill materials and native sediments at the site [sandy silts to sand / gravel with variable amounts of clay, coarse gravel and cobbles] would be considered a permeable material [ $K > 1 \times 10^{-5}$  cm/sec], therefore, a risk factor may also be present if groundwater contaminants migrate. These groundwater impacts are also present within 100 feet of a private well.

The results of groundwater monitoring events confirm that groundwater continues to converge near the northeast side of the former UST area, and NR140 ES and PALs for groundwater quality are exceeded at locations MW-1(EXT-1), EXT-2, EXT-3, and MW-7. MW-7 is the closest well to the on-site private well with an NR140 ES exceedance in groundwater quality. The location of MW-7 is approximately 80 feet northeast of the private well and side-gradient of the contaminant plume, indicating that groundwater quality within 100 feet of the potable wellhead should not exceed NR140 ES levels.

## **8.0 NATURAL ATTENUATION ASSESSMENT**

“Natural attenuation” or intrinsic bioremediation is the reduction and/or degradation of contaminants in soil / groundwater through naturally occurring physical, chemical, and biological processes without human intervention or enhancement. Implementation of natural attenuation is appropriate when contaminant concentrations are moderate to low level, confined to unsaturated soils, local groundwater supplies or surface water bodies that are not threatened, and groundwater quality standards that are not exceeded.

Based on the continued non-detect and/or low levels of petroleum impacts in the perimeter wells [MW-2, MW-3, MW-4, MW-5, MW-6], the groundwater contaminant plume appears to remain isolated near the former UST area.

The only unsaturated soil impacts, with levels exceeding NR 720 soil clean-up standards, remain directly below and adjacent to the former USTs (refer to Figures 4, 5, and 6). Based on the depth and location of the remaining unsaturated soil impacts, the contaminants should not pose a direct contact concern. However, the petroleum products leaching from the estimated 2,200 tons of impacted soil remaining in the unsaturated zone may continue to impact local groundwater conditions.

Utilizing the Mann-Kendall Analysis Spreadsheet for assessing contaminant trends in the impacted wells, MEI concludes that the PAH constituents exceeding NR140 ES are either non-stable or have an increasing trend (refer to Appendix B). Laboratory analysis results from 3.5 years of groundwater monitoring indicate that the contaminant plume remains isolated, but decreasing concentrations over time in groundwater [natural attenuation] can not be confirmed at this time.

## 9.0 PROJECT SUMMARY

The following summary is based on observations, field data and laboratory data collected during subsurface investigations and remediation activities at the former Johnson Sand & Gravel Site, located at N8 W22590 Johnson Road, in the Town of Pewaukee, Wisconsin:

Investigative activities conducted by MEI in 1996 and 1997 identified gasoline/diesel impacted soil and groundwater beneath the site. The greatest impacts to the subsurface were identified near the former UST area. MEI recommended a RAP consisting of installation of free product recovery sumps; periodic pumping and off-site disposal of impacted groundwater; and a groundwater monitoring program to assess natural attenuation.

The RAP was approved by Commerce in late 1997. From mid-1998 to mid-1999, MEI was partially successful in removing free product from the groundwater surface utilizing oil skimmers in the monitoring wells. However, the thickness of free product in monitoring well MW-1 consistently exceeded the product thickness in groundwater [ $>0.1$  feet] defined as an Environmental Factor [per Comm 47]. MEI continued with the original RAP and installed three recovery sumps along the east side of the building in August 1999 (Figure 2). Approximately 6,800 gallons of impacted groundwater has currently been pumped-out and treated off-site.

Comm 46 / NR 746 regulations would define the subject property as a "high risk" site under the jurisdiction of the WDNR. The fill material and native soil at the subject property would also be defined as a "permeable soil" and the remaining unsaturated soil impacts [2,200 tons estimated] do not appear to pose any direct contact concerns. One EF is currently present, consisting of petroleum product with a thickness of  $>0.01$  feet on two or more groundwater sampling events [MW-1(EXT-1)]. The subject site also has two Comm 46 / NR 746 risk factors associated with groundwater contaminants exceeding NR140 ES within permeable material and within 100 feet of a private well.

Lab analysis confirms that the private well water has not been impacted. Lab analysis and field measurement from 3.5 years of groundwater monitoring indicate that the contaminant plume remains isolated near the former UST area, and the contaminant plume should not impact groundwater quality near the potable wellhead. However, the PAH constituent levels in the contaminant plume are either non-stable or increasing over time and natural attenuation can not be confirmed.

At the request of the responsible party, Mr. Robert Johnson, MEI has discontinued remedial actions and is requesting a WDNR review for site closure. Even though a “flexible closure” [per NR 726.05(2)(b)] by demonstrating natural attenuation of residual impacts is not possible at this time, the contaminant plume at the subject site does not appear to pose a significant threat to human health or the environment at this time.

## **10.0 RECOMMENDATIONS**

Based on information collected during remedial activities and the current regulations on risk assessment, MEI recommends the following for the former Johnson Sand & Gravel Site:

- Submit a request for a “restricted closure” from the WDNR in conjunction with institutional controls, including soil and groundwater use restrictions added to the property deed.

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**APPENDIX A**

**UST REMOVAL DOCUMENTATION  
AND  
CASE CLOSE OUT FORM  
(4400-202)**

[Safety, Buildings, and  
the Environment Home](#)
[Search Instructions](#)
[Search by Site, Owner,  
or Tank Characteristics](#)
[Search by Tank ID](#)

# Tank Detail

## Tank 369602

TANK\_REG\_OBJECT\_ID : 369602  
TANK\_WANG\_OBJECT\_ID : 672700127

### Site Information

SITE\_ID : 97031  
SITE\_FORMATTED\_ADDRESS : N8 W22590 JOHNSON DR  
: WAUKESHA WI 53186  
  
SITE\_COUNTY : 67 WAUKESHA  
SITE\_FIREDEPT\_ID : 6727 Pewaukee Twp  
SITE\_MUNICIPALITY\_NAME : PEWAUKEE  
SITE\_MUNI\_TYPE : Village  
GEO\_LATITUDE :  
GEO\_LONGITUDE :

### Owner Information

OWNER\_NAME : JOHNSON SAND & GRAVEL  
TANK\_OWNER\_CUST\_ID : 329461  
TANK\_OWNER\_FORMATTED\_STREET\_ADDR : N8 W22590 JOHNSON DR  
: WAUKESHA WI 53186-0  
SITE\_LAND\_OWNER\_TYPE : Private

### Tank Information

REG\_OBJ\_TYPE\_ID : UST  
TANK\_STATUS\_CODE : Closed/Removed  
TANK\_STATUS\_DATE : 3/31/94  
TANK\_MARKETER : N  
TANK\_FED\_REG\_UST : Federally Regulated  
TANK\_CONST\_MATERIAL\_ID : Coated Steel  
TANK\_WALL\_SIZE : Single  
TANK\_CORROSION\_PROTECT\_TYPE\_ID :  
TANK\_OVERFILL\_PROTECTION : N  
TANK\_SPILL\_CONTAINMENT : N  
TANK\_LEAK\_DETECTION\_TYPE\_ID : Not Required  
TANK\_CONTENTS\_ID : Unleaded Gasoline  
TANK\_SIZE\_GALLONS : 10000  
TANK\_CAS\_NUMBER :  
TANK\_OCCUPANCY\_TYPE\_ID : Industrial  
TANK\_DATE\_OF\_LINING :

### Piping Information

UNDERGROUND PIPING : Y  
PIPING\_CONST\_MATERIAL\_ID : Coated Steel  
ABOVEGROUND\_PIPING :  
ABOVEGROUND\_PIPING\_CONSTR\_TYPE :  
PIPE\_WALL\_SIZE\_CODE : Single

[Safety, Buildings, and  
the Environment Home](#)
[Search Instructions](#)
[Search by Site, Owner,  
or Tank Characteristics](#)
[Search by Tank ID](#)

# Tank Detail

## Tank 369601

TANK\_REG\_OBJECT\_ID : 369601  
TANK\_WANG\_OBJECT\_ID : 672700126

### Site Information

SITE\_ID : 97031  
SITE\_FORMATTED\_ADDRESS : N8 W22590 JOHNSON DR  
: WAUKESHA WI 53186  
  
SITE\_COUNTY : 67 WAUKESHA  
SITE\_FIREDEPT\_ID : 6727 Pewaukee Twp  
SITE\_MUNICIPALITY\_NAME : PEWAUKEE  
SITE\_MUNI\_TYPE : Village  
GEO\_LATITUDE :  
GEO\_LONGITUDE :

### Owner Information

OWNER\_NAME : JOHNSON SAND & GRAVEL  
TANK\_OWNER\_CUST\_ID : 329461  
TANK\_OWNER\_FORMATTED\_STREET\_ADDR : N8 W22590 JOHNSON DR  
: WAUKESHA WI 53186-0  
SITE\_LAND\_OWNER\_TYPE : Private

### Tank Information

REG\_OBJ\_TYPE\_ID : UST  
TANK\_STATUS\_CODE : Closed/Removed  
TANK\_STATUS\_DATE : 3/31/94  
TANK\_MARKETER : N  
TANK\_FED\_REG\_UST : Federally Regulated  
TANK\_CONST\_MATERIAL\_ID : Coated Steel  
TANK\_WALL\_SIZE : Single  
TANK\_CORROSION\_PROTECT\_TYPE\_ID :  
TANK\_OVERFILL\_PROTECTION : N  
TANK\_SPILL\_CONTAINMENT : N  
TANK\_LEAK\_DETECTION\_TYPE\_ID : Not Required  
TANK\_CONTENTS\_ID : Diesel  
TANK\_SIZE\_GALLONS : 10000  
TANK\_CAS\_NUMBER :  
TANK\_OCCUPANCY\_TYPE\_ID : Industrial  
TANK\_DATE\_OF\_LINING :

### Piping Information

UNDERGROUND\_PIPING : Y  
PIPING\_CONST\_MATERIAL\_ID : Coated Steel  
ABOVEGROUND\_PIPING :  
ABOVEGROUND\_PIPING\_CONSTR\_TYPE :  
PIPE\_WALL\_SIZE\_CODE : Single



WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
CASE SUMMARY AND CLOSE OUT FORM

Form 4400 - 202  
Rev. 5/98

**FOR DEPARTMENT USE ONLY**

Type of Case: LUST Spill ER Land Recycling Other \_\_\_\_\_ DNR Reviewer: \_\_\_\_\_

WDNR Site Name: Former Johnson Sand & Gravel Site

Complete Site Address: N8 W22590 Johnson Road, Town of Pewaukee 53186

WDNR BRRTS Case #: \_\_\_\_\_ FID #: 268438610

PECFA Claim #: 53186-1661-90

Responsible Party Name: Mr. Robert Johnson

Complete Responsible Party Address: Johnson Sand & Gravel, 20685 W. National Avenue, New Berlin, Wisconsin 53146-4920

Site Legal Description : 1/4, NW 1/4, NE 1/4, Sec 25, T 7 N, R 19 (E/W) Town: Pewaukee

County: Waukesha Latitude: 43 ° 2 ' 30 . " Longitude: 88 ° 12 ' 00 . "

Type Of Closure Requested: Soil Groundwater  
\_\_\_\_ < NR 720.09/720.11 Generic RCLs \_\_\_\_ < NR 140.10 Table 1 & Table 2 Values  
\_\_\_\_ NR 720.19(2) Soil Performance Stds. \_\_\_\_ NR 140.28(2) PAL Exemption  
X NR 720.19(3) Site Specific Stds. X NR 726.05(2)(b) Natural Attenuation

Contaminant Type(s): Diesel / Unleaded Gasoline Quantity Released: unknown

Date of Incident/Discovery: March 30, 1994 Zoning of Property: Commercial

Enforcement Actions Closed Out? \_\_ Yes \_\_ No X NA Permits Closed Out? \_\_ Yes \_\_ No X NA

Form 4 Pending? \_\_ Yes X No \_\_\_\_ NA Date Closure Submitted to DNR: June 20, 2000

I certify that, to the best of my knowledge, the information presented on and attached to this form is true and accurate. This recommendation for case closure is based upon all available data as of June 20, 2000 (date). I have read the Case Summary and Close Out Form Instructions and all required information has been included.

**Form Completed By:**

(Signature)

(Date)

Printed Name: Thomas Dueppen Company Name: Moraine Environmental, Inc.

If not site owner, relationship to site owner: N/A Environmental Consultant Moraine Environmental, Inc.

Address: 1234 12th Avenue, Grafton, Wisconsin 53024

Telephone Number: ( 262 ) 377-9060 FAX Number: ( 262 ) 377-9770

Environmental Consultant (if different then above): Same as Above

Address: \_\_\_\_\_

Telephone Number: ( \_\_\_\_\_ ) \_\_\_\_\_ FAX Number: ( \_\_\_\_\_ ) \_\_\_\_\_

WDNR FID Case #: 268438610 WDNR Site Name: Former Johnson Sand & Gravel Site

1. CASE HISTORY AND JUSTIFICATION FOR CLOSURE ATTACHED?  Yes  No

2. SOIL PRE-REMEDIAL ANALYTICAL RESULTS

Extent Defined?  Yes  No Soil Type(s): Silty Sand Depth to Bedrock: unknown

Potential Receptors for Direct Contact (i.e. vapor migration, contaminated soil left in place): contaminated soil left in place

Tables of Pre-remedial Analytical Results Attached?  Yes  No Maps of Pre-remedial Sample Locations Attached?  Yes  No

3. SOIL POST REMEDIATION ANALYTICAL RESULTS

Remedial Action Completed?  Yes  No 720.19 Analysis?  Yes  No (If yes, attach supporting documentation)

Were Soils Excavated?  Yes  No Quantity:  Disposal Method:

Final Confirmation Sampling Methods: Hollow Stem Auger borings

Soil Disposal Form Attached?  Yes  No Final Disposal Location: Drill cuttings disposed at Metro Landfill, Franklin

Estimated volume of insitu soils exceeding NR 720 RCLs: 1,466 cu. yd.

Tables for Post Remedial Analytical Results Attached?  Yes  No Maps of Post Remedial Sample Locations Attached?  Yes  No

Brief Description of Remedial Action Taken: Groundwater extraction to remove free product and monitor groundwater conditions to assess contaminants leaching from impacted soil

4. GROUNDWATER ANALYTICAL RESULTS

Potential Receptors for Groundwater Migration Pathway: Fox River (approx. 1/2 miles northwest of site)

Extent of Contamination Defined?  Yes  No  NA Remedial Action Completed?  Yes  No  NA

# of Sample Rounds: 7 Depth(s) to Groundwater/Flow Direction(s): 25 +/- 3 feet / northwest

Field Analyses?  Yes  No Lab Analyses?  Yes  No # of Sampling Points: 9

# NR 141 Monitoring Wells Sampled: 6 # Temporary Groundwater Sampling Points Sampled: 0

# Recovery Sumps Sampled: 3 # Municipal Wells Sampled: 0 Sampled:

Has DNR Been Notified of Substances in Groundwater w/o Standards?  Yes  No

Any Potable Wells Within 1200 Feet of Site?  Yes  No If Yes, How Many? Several, one well within 100 feet

Have They Been Sampled?  Yes  No Have Well Owners/Occupants Been Notified of Results?  Yes  No

Preventive Action Limit Exceeded?  Yes  No (If Yes, identify location(s) MW-1(EXT-1), EXT-2, EXT-3, MW-7)

Enforcement Standard Exceeded?  Yes  No (If Yes, identify location(s) MW-1(EXT-1), EXT-2, EXT-3, MW-7)

Tables of Analytical Results Attached?  Yes  No Map of Groundwater Sample Locations Attached?  Yes  No

Brief Description of Remedial Action Taken: periodic groundwater pump-out and sampling for assessment of natural attenuation

**FOR DEPARTMENT USE ONLY**

**FIRST REVIEW DATE:** \_\_\_\_\_ [ ] Approved [ ] Denied

\_\_\_\_\_  
(Signature)                      (Signature)                      (Signature)                      (Signature)

**SECOND REVIEW DATE:** \_\_\_\_\_ [ ] Approved [ ] Denied

\_\_\_\_\_  
(Signature)                      (Signature)                      (Signature)                      (Signature)

**COMMITTEE RECOMMENDATION:**

\_\_\_\_\_ **Closure Approved Per:**

- \_\_\_\_\_ Restrictions
- \_\_\_\_\_ Groundwater Use Restriction
- \_\_\_\_\_ Zoning Verification
- \_\_\_\_\_ Deed Restriction
- \_\_\_\_\_ Deed Affidavit
- \_\_\_\_\_ Site Specific Close Out Letter Necessary
- \_\_\_\_\_ Well Abandonment Documentation
- \_\_\_\_\_ Soil Disposal Documentation
- \_\_\_\_\_ Public Notice Needed
- \_\_\_\_\_ NR 140 Exemption For: \_\_\_\_\_

\_\_\_\_\_ Specific Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ **Closure Denied, Needs More:**

- \_\_\_\_\_ Investigation
- \_\_\_\_\_ Groundwater Monitoring
- \_\_\_\_\_ Soil Remediation
- \_\_\_\_\_ Groundwater Remediation
- \_\_\_\_\_ Documentation Of Soil Landspreading Or Biopile Destiny
- \_\_\_\_\_ Specific Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
Case Summary and Close Out Form Instructions

Form 4400 -202  
5/98

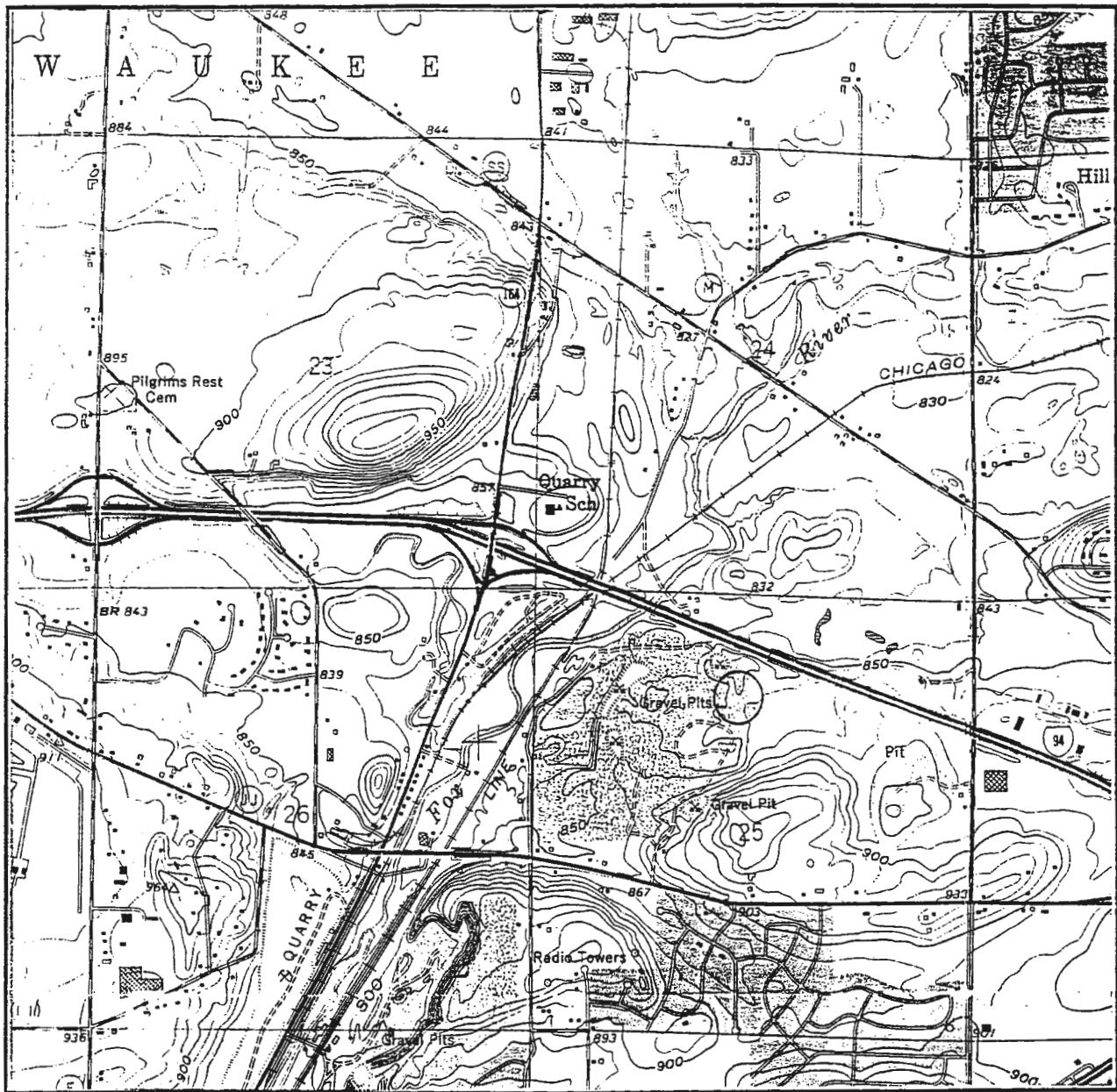
The Case Summary and Close Out Form and attached instructions have been designed by staff in the Bureau for Remediation and Redevelopment to provide responsible parties, environmental consultants, Department staff, and other interested parties with a checklist of information that must be evaluated prior to case closure. The closure of a case means that the Department has determined that no further response is required at that time. Various closure options are available within Department codes. Responsible parties and their consultants should specify the options sought for closure for the soils and groundwater at their site. Groundwater quality standards found in NR 140 and soil standards found in NR 720 must generally be met. However, some closure options allow closure where groundwater or soil standards are not met provided that deed or groundwater use restrictions are imposed on the subject property. A previously closed case may be reopened by the Department if information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety or welfare or the environment.

In order to expedite the closure process for your case, you should submit a complete and accurate submittal according to the following instructions. Submit the Case Summary and Close Out Form and required attachments as a stand alone document and **please do not** submit the close out request in a bound report. The information supplied should succinctly summarize the chronological history of the entire case and should reinforce the justification for closure. Submission of tabulated analytical results from previous reports are acceptable (i.e. it is not necessary to create new tables). However, do not submit previously submitted reports themselves as attachments. **Submittals with incomplete forms and/or documentation will be returned.** The following should be included in the order shown:

- \_\_\_\_\_ (A) **Case Summary and Close Out Form** must be complete. A brief, written case history, justification for case closure and description of the remedial action taken must be included. The type of closure requested for both the soil and groundwater must be indicated.
- \_\_\_\_\_ (B) **Site Map**, per NR 716.15(2)(d)5-6, to scale showing the layout of the buildings, roads, tank and/or discharge locations, utilities, receptors, monitoring and potable wells, property lines and other relevant features of the site. If possible, the scale should be 1 inch = 10 or 20 feet.
- \_\_\_\_\_ (C) **Pre-Remedial Soil Analytical Results Table(s)** which show the analytical results and sample depths of all of the pre-remedial soil samples (i.e. tank pull, site investigation, etc.). If more than one table, please put them in chronological order. Highlight those results which exceed the NR 720 soil standards. Provide the level of detection for results which are below the detection level (i.e. don't just list as ND). Identify the depth of the water table. All data must be in table format as identified in NR 716.15(2)(g)3 and 716.15(2)(h)3, (i.e. do not submit lab data sheets)
- \_\_\_\_\_ (D) **Pre-Remedial Soil Sample Location Map(s)** which show the locations of the items from B, above, and the soil sample locations from C, above. Highlight those sample locations which exceed NR 720. Maps should be prepared according to the applicable portions of NR 716.15(2)(h)1. You may submit more than one map.
- \_\_\_\_\_ (E) **Pre-Remedial Geologic Cross Section(s)** including source location(s), extent of soil and groundwater contamination, soil sample locations, water table elevation, and bedrock elevation, if encountered. Maps should be prepared according to NR 716.15(2)(g)5-8 and NR 716.15(2)(h)1-2.
- \_\_\_\_\_ (F) **Post-Remedial Soil Analytical Results Table(s)** which show the analytical results and sample depths of all of the post-remedial soil samples. Highlight the analyses which exceed NR 720 soil standards. Provide the level of detection for analytical results which are below the detection level (i.e. don't just list as ND). Identify the depth of the water table. All data must be in table format as identified in NR 716.15(2)(g)3 and 716.15(2)(h)3, (i.e. do not submit lab data sheets).
- \_\_\_\_\_ (G) **Post-Remedial Soil Sample Location Map(s)** which show the locations of items from B, above, and the soil sample locations from F, above. Highlight those sample locations which exceed NR 720. Maps should be prepared according to the applicable portions of NR 716.15(2)(h)1. You may submit more than one map.
- \_\_\_\_\_ (H) **Post-Remedial Geologic Cross Section(s)** including former source location(s), remaining soil contamination, soil sample locations, extent of excavation, water table elevation, and bedrock elevation, if encountered. Maps should be prepared according to NR 716.15(2)(g)5-8 and NR 716.15(2)(h)1-2.
- \_\_\_\_\_ (I) **Groundwater Analytical Results Table(s)** showing all of the site's historical groundwater analytical results in chronological order. Highlight those results which exceeded NR 140 (differentiate between PAL and ES exceedances). All data must be in table format as identified in NR 716.15(2)(g)3 and 716.15(2)(h)3, (i.e. do not submit lab data sheets). Differentiate between pre-remedial, remedial and post-remedial samples (i.e. identify when the groundwater remediation system was active/inactive).
- \_\_\_\_\_ (J) **Groundwater Sample Location Map(s)** which show the locations of the items from B, above, and all of the monitoring wells/sumps/extraction wells/potable wells. Highlight those wells which have PAL or ES exceedances (in the most recent round of sampling, differentiate between PAL and ES). Maps should be prepared according to the applicable portions of NR 716.15(2)(h)1. You may submit more than one map.
- \_\_\_\_\_ (K) **Groundwater Contour Map(s)** which show the historical changes in direction, elevation and/or gradient. Provide one map if data is consistent. Maps should be prepared according to the applicable portions of NR 716.15(2)(g)5-8 and NR 716.15(2)(h)1-2.

## **APPENDIX B**

### **FIGURES AND TABLES**

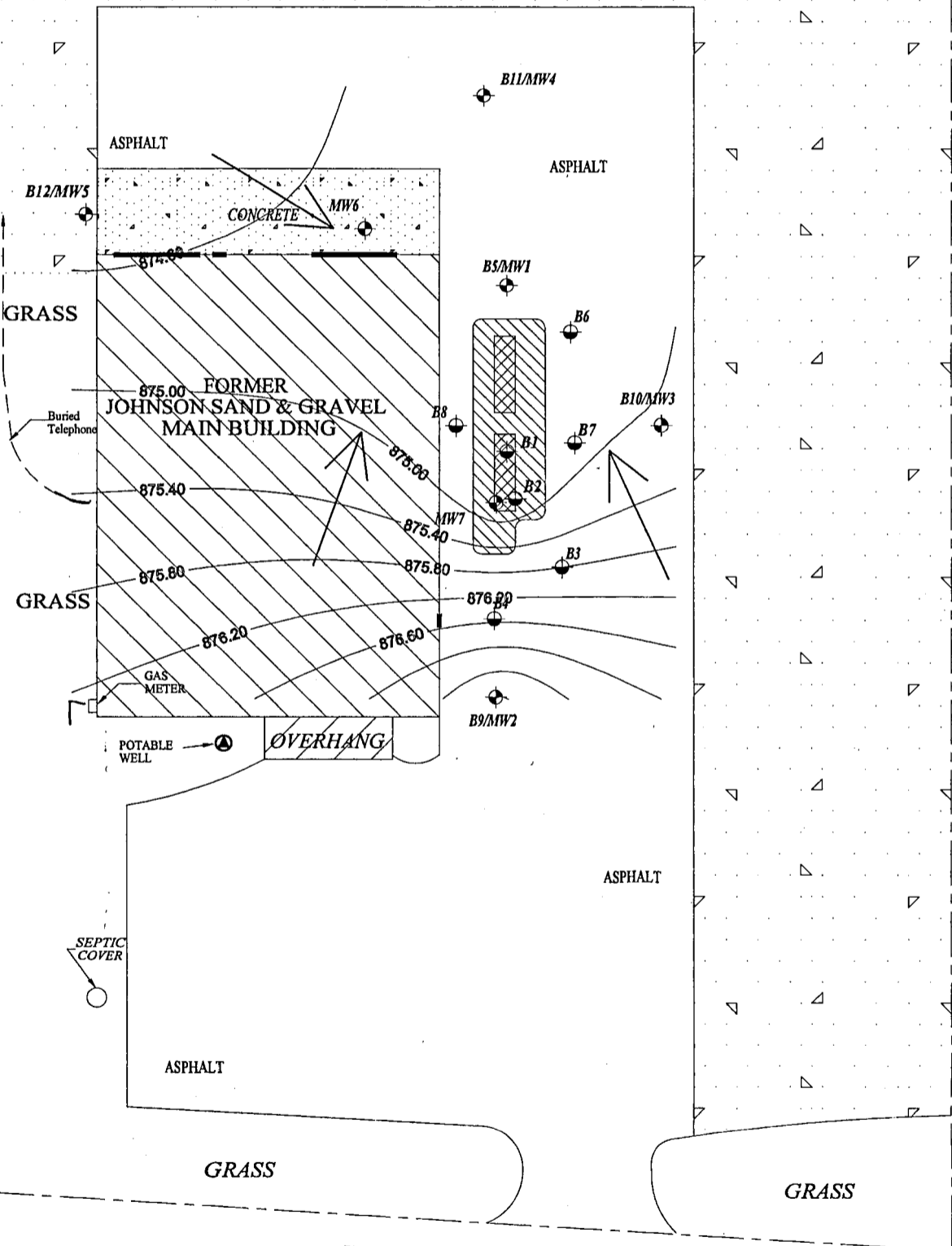
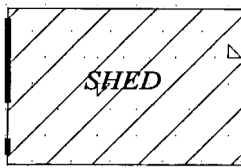


Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

○ SITE LOCATION

|                 |   |                  |
|-----------------|---|------------------|
| Drawing File    | <b>Site Location Map</b>  |                  |
| Project Name    | Former Johnson Sand and Gravel<br>N8 W22590 Johnson Road<br>Waukesha, Wisconsin |                  |
| Drawing Company | Moraine Environmental, Inc.   |                  |
| Project Number  | MEI #0305   | Page<br>Figure 1 |

NOTE BOUNDARY LINES APPROXIMATE



Johnson Road

**MEI - Legend**

- Potable Well Location
- Soil Boring Location
- Hydrant
- Overhead Electric Line
- Monitoring Well
- Utility Pole
- Property Line
- Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

FIGURE NAME

Groundwater Gradient Map [06/16/98]

SITE NAME AND LOCATION

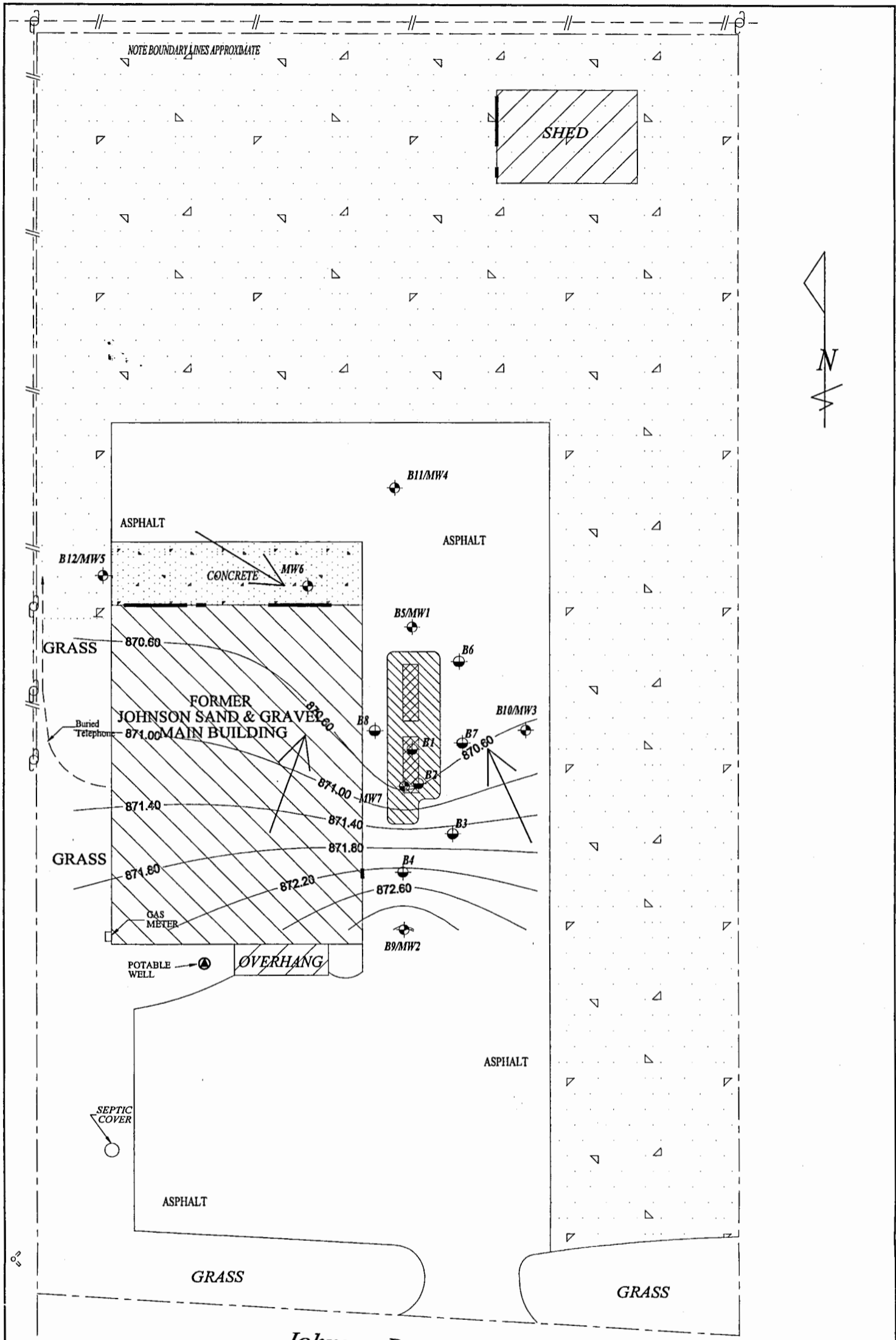
Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road Waukesha, WI

PROJECT REFERENCE

MEI #0305

FIGURE NAME

Figure 2



**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊙ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊙ - Utility Pole
- — — Property Line
- - - Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |             |
|--|-------------|
| FIGURE NAME  |             |
| Groundwater Gradient Map [01/21/99]                                      |             |
| SITE NAME AND LOCATION   |             |
| Former Johnson Sand & Gravel Site<br>N8 W22590 Johnson Road Waukesha, WI |             |
| PROJECT REFERENCE  | FIGURE NAME |
| MEI #0305  | Figure 3    |



GRAVEL SURFACE

ASPHALT

ASPHALT SURFACE

B12/MW5

CONCRETE

MW6

GRASS

FORMER JOHNSON SAND & GRAVEL MAIN BUILDING

B5/MW1

B6

B10/MW3

B8

B1

B7

MW7

B2

B3

B4

GAS METER

B9/MW2

POTABLE WELL

OVERHANG

ASPHALT SURFACE

**MEI - Legend**

- ▲ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊙ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- - - - Property Line
- — — Buried Line



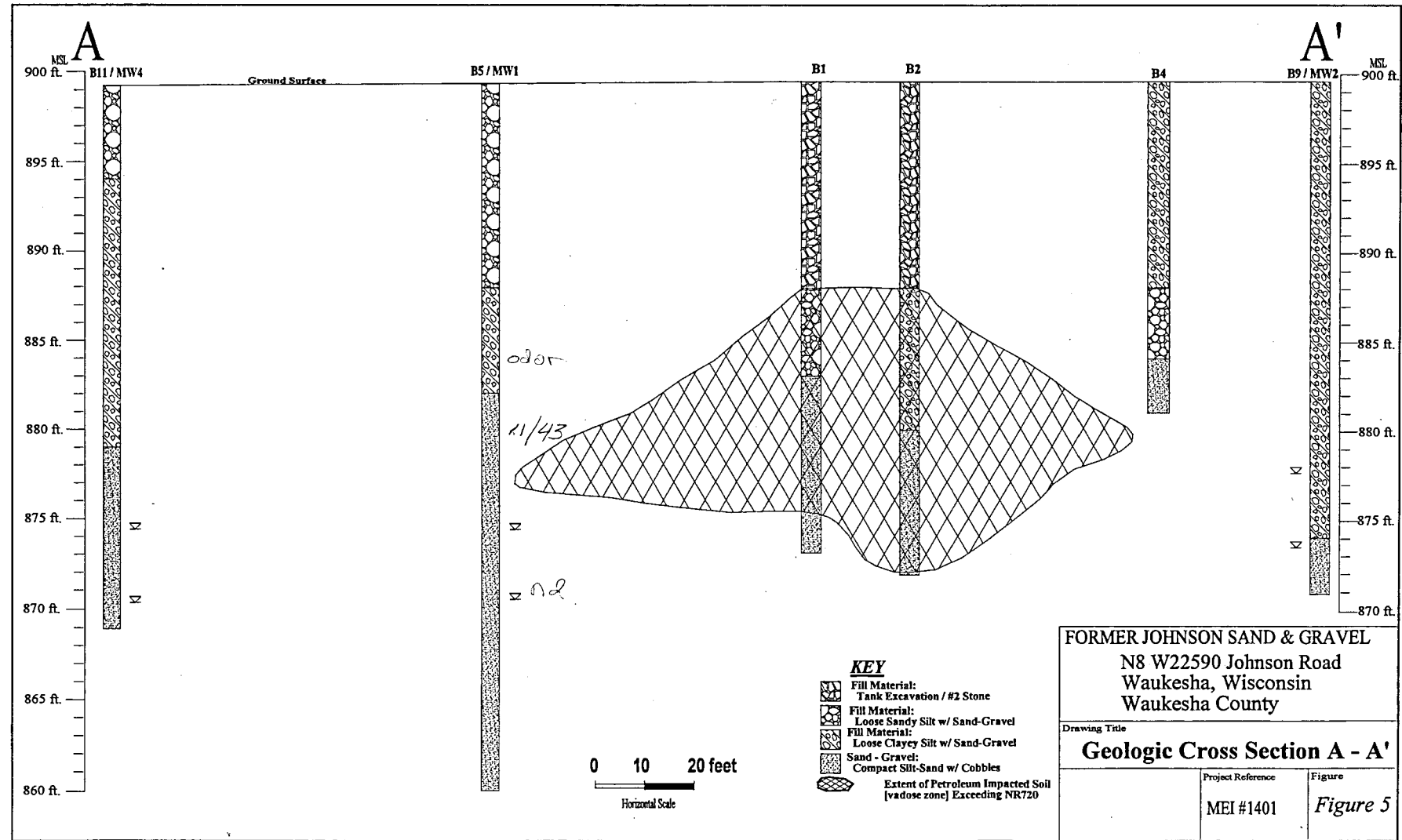
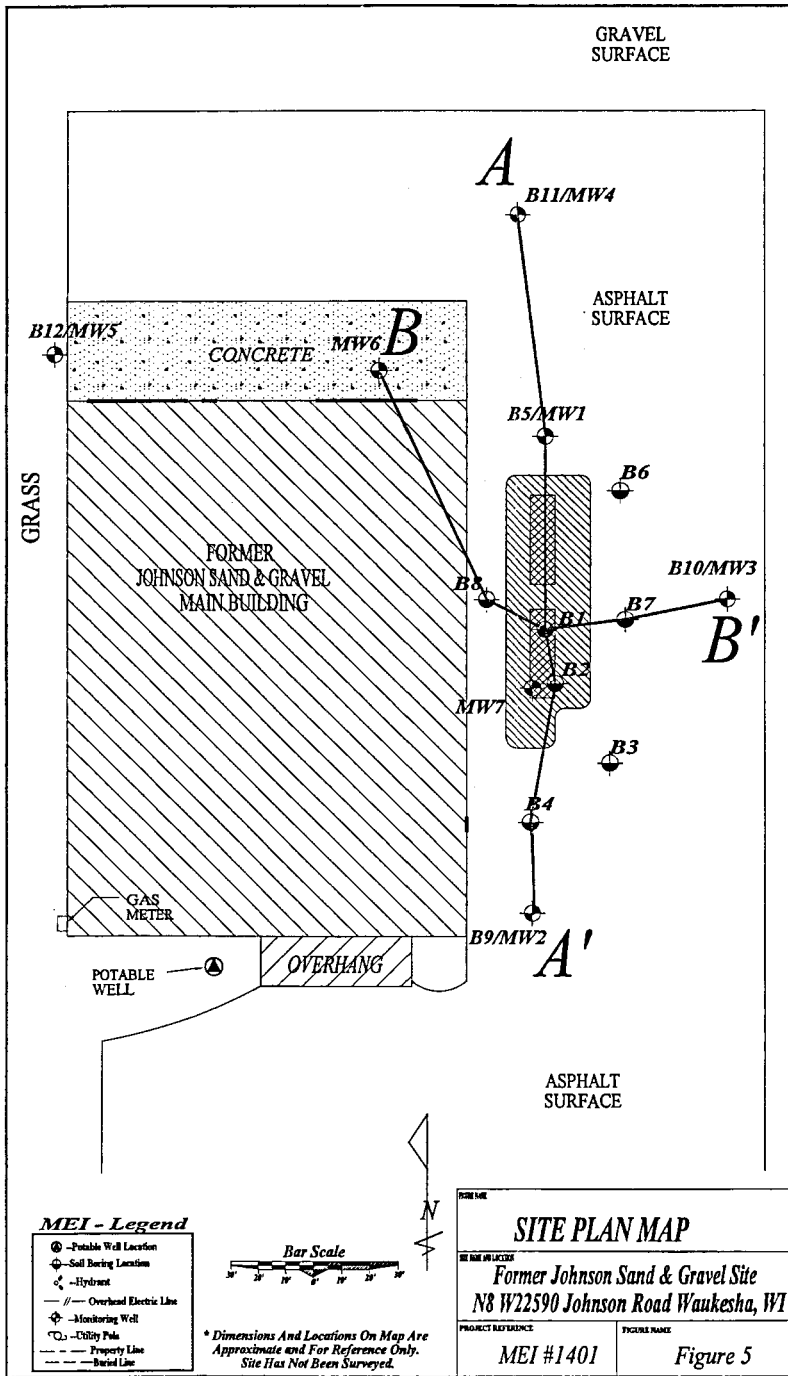
*\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.*

FIGURE NAME  
**EXTENT OF SOIL CONTAMINATION  
(Exceeding NR720 Soil Standards)**

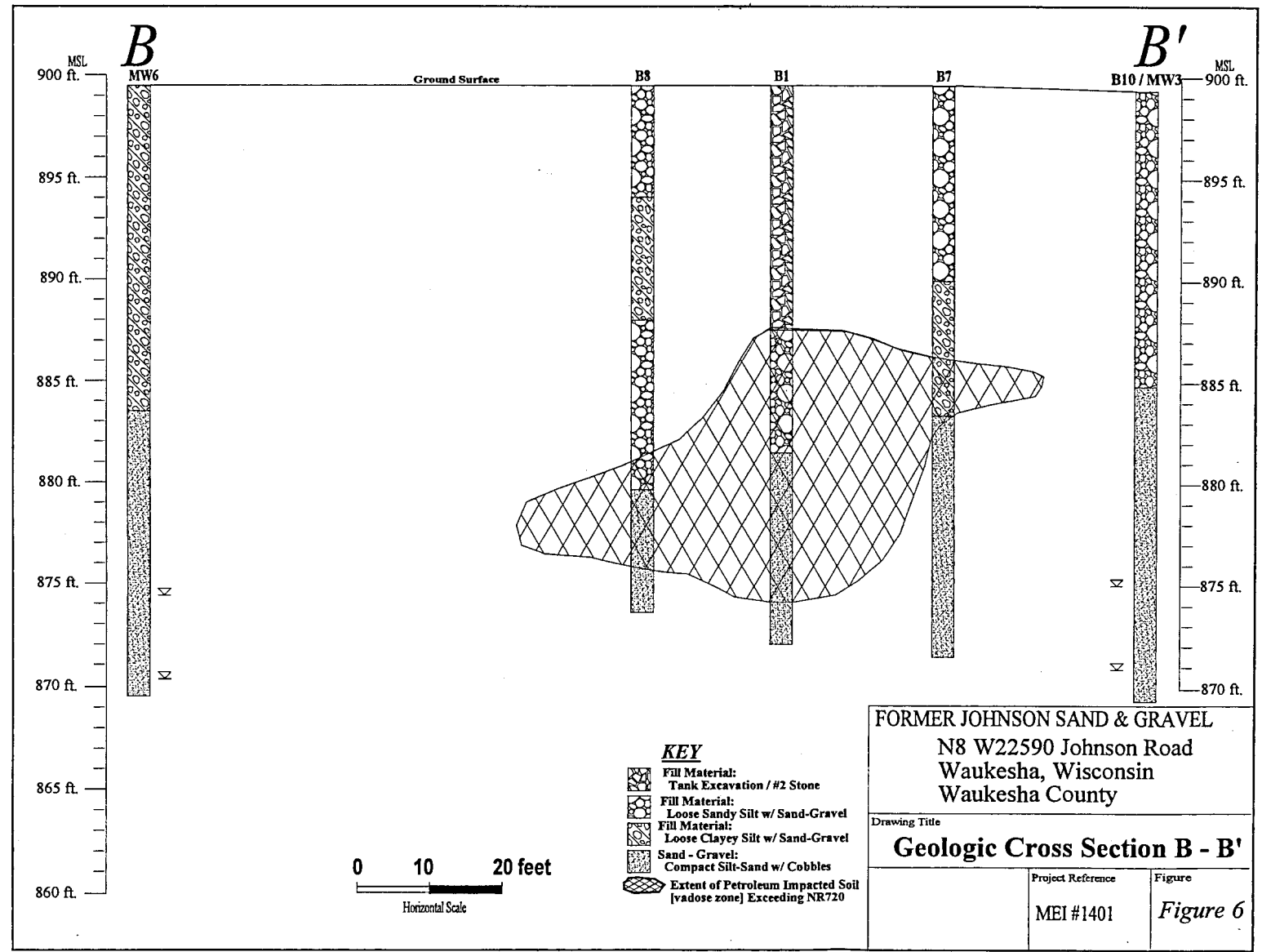
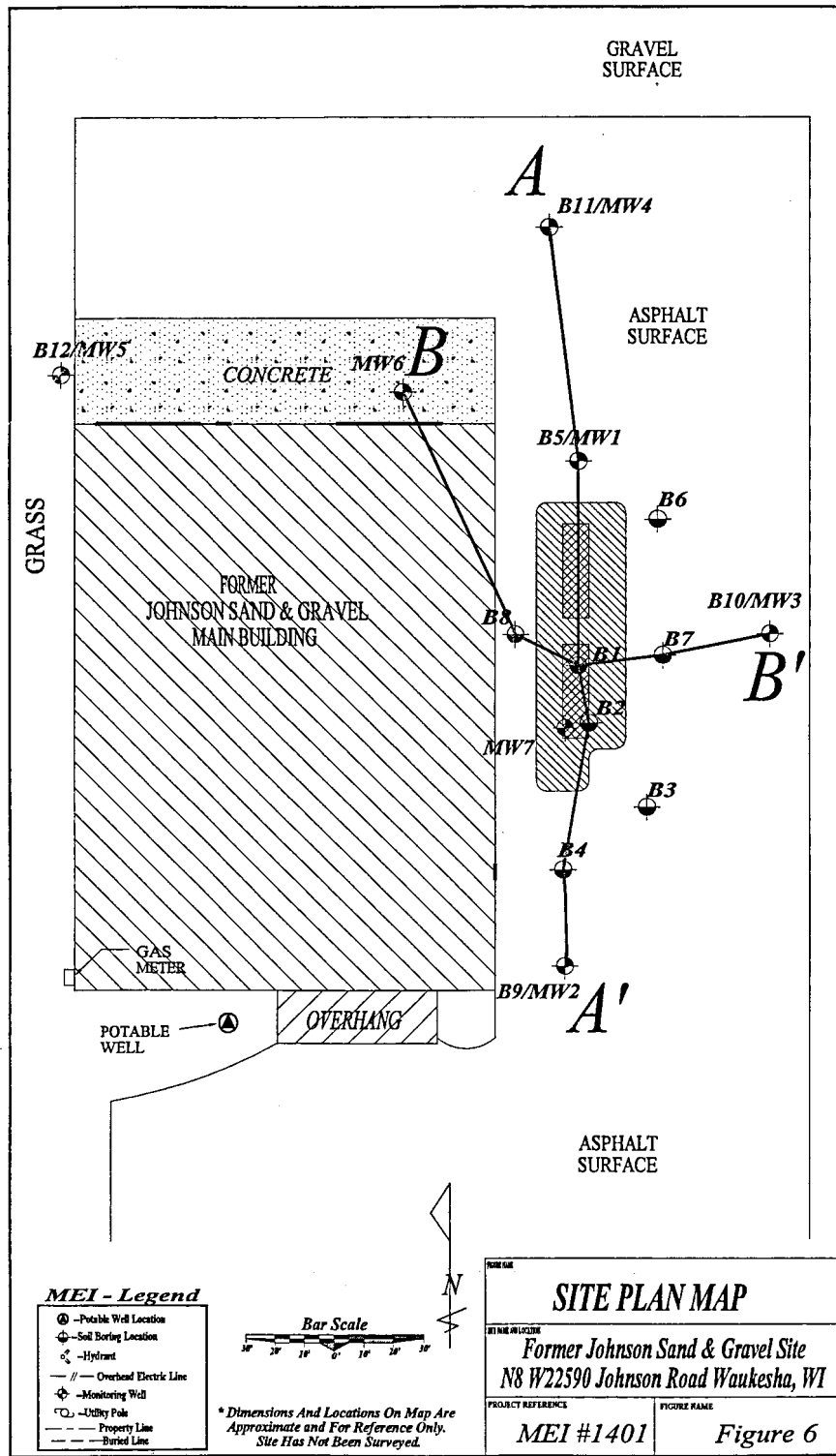
SITE NAME AND LOCATION  
**Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road Waukesha, WI**

PROJECT REFERENCE  
**MEI #1401**

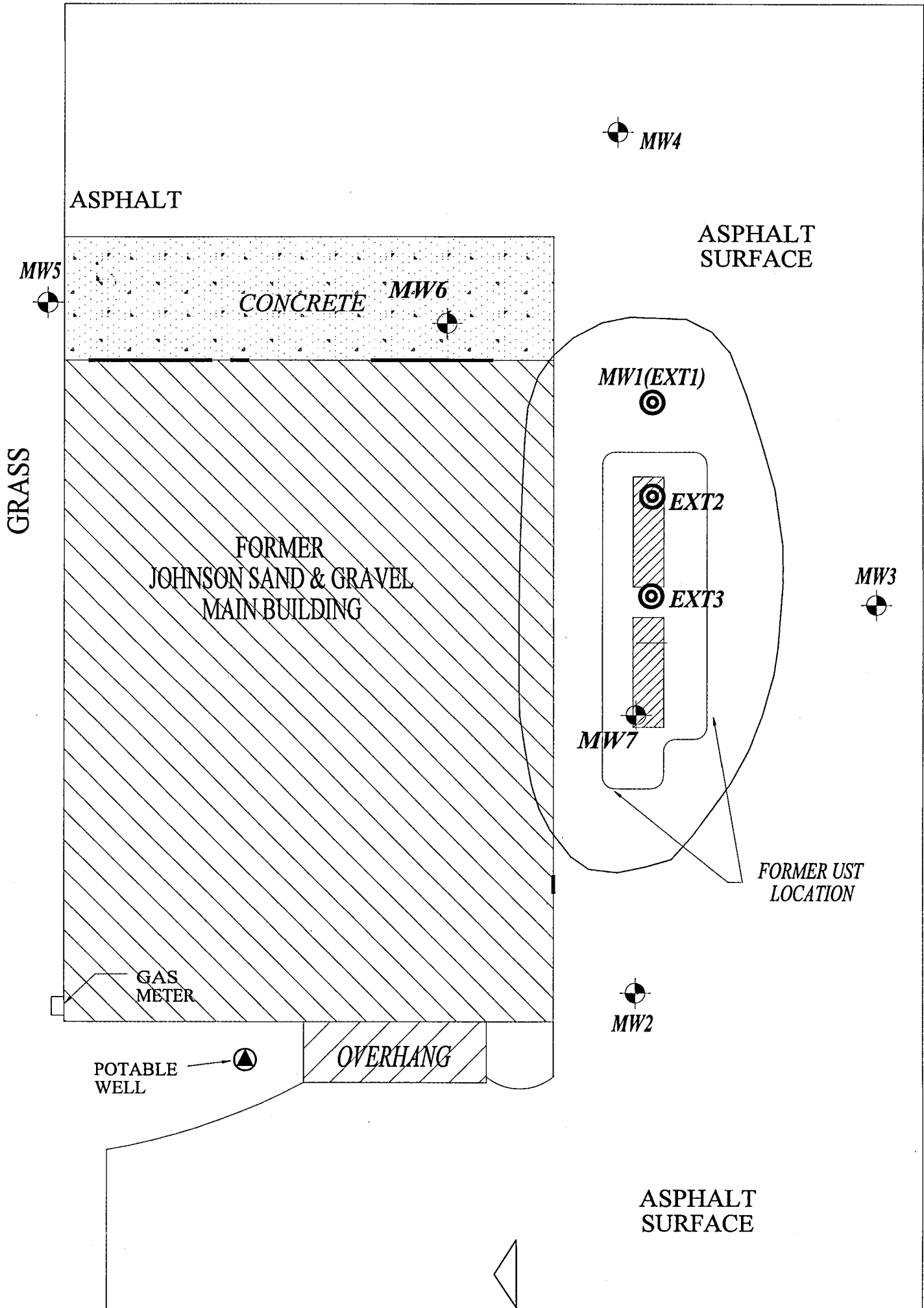
FIGURE NAME  
**Figure 4**



GRO/DRO



GRAVEL SURFACE



**MEI - Legend**

- ⊙ - Potable Well Location
- ⊙ - Extraction Well Location
- ⊕ - Hydrant
- — — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- — — Property Line
- — — Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

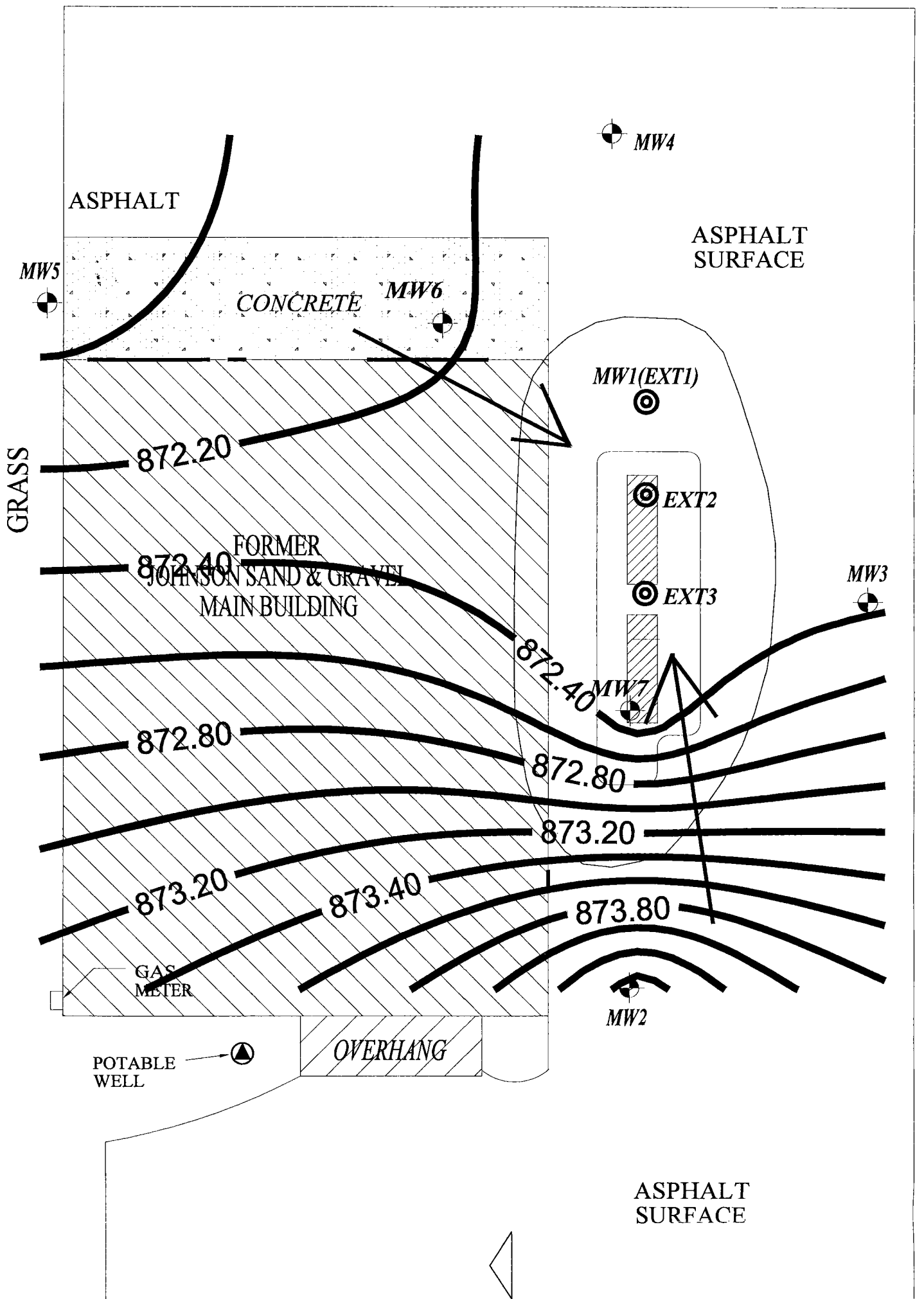
FIGURE NAME  
**EXTENT OF GROUNDWATER IMPACT  
(Exceeding NR140 Standards)**

SITE NAME AND LOCATION  
**Former Johnson Sand & Gravel Site  
N8 W22590 Johnson Road Waukesha, WI**

PROJECT REFERENCE  
**MEI #1401**

FIGURE NAME  
**Figure 7**

GRAVEL  
SURFACE



**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊗ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊙ - Utility Pole
- — — Property Line
- — — Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                                |
|--|--------------------------------|
| FIGURE NAME<br>GROUNDWATER GRADIENT MAP [10/21/99]   |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #1401</b>  | FIGURE NAME<br><b>Figure 8</b> |

**TABLE 1  
GROUNDWATER QUALITY RESULTS, PRE-REMEDATION  
FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample I.D.<br>Collection Date   | MW-1      |            |         |          |         |           | MW-7   |         |          |           |         |         | NR140<br>ES | NR140<br>PAL |
|----------------------------------|-----------|------------|---------|----------|---------|-----------|--------|---------|----------|-----------|---------|---------|-------------|--------------|
|                                  | 8/23/96   | 8/29/97    | 6/16/98 | 10/16/98 | 1/21/99 | 4/15/99   | 9/8/97 | 6/16/98 | 10/16/98 | 1/21/99   | 4/15/99 | 7/19/99 |             |              |
| GRO (mg/L)                       | 2,300     | 3,000      | 1,600   | NA       | 160,000 | 700       | 2,300  | 1,900   | NA       | 27,000    | 1,400   | 790     | NSE         | NSE          |
| DRO (mg/L)                       | 1,300,000 | 22,000,000 | 330,000 | 48,000   | NA      | 1,500,000 | 71,000 | 220,000 | 76,000   | 5,900,000 | 290,000 | 310,000 | NSE         | NSE          |
| Lead, soluble (ug/L)             | 2.6       | NA         | NA      | <1.8     | NA      | NA        | NA     | NA      | NA       | NA        | NA      | <2.8    | 15.0        | 1.5          |
| Detected VOC's (ug/L)            |           |            |         |          |         |           |        |         |          |           |         |         |             |              |
| Benzene                          | ND        | ND         | <0.52   | 0.4      | <52     | <0.27     | ND     | 0.63    | <0.27    | <13       | <0.27   | <0.26   | 5           | 0.5          |
| n-Butylbenzene                   | 28        | 33         | NA      | 8.5      | NA      | 8.8       | 20     | NA      | 12       | NA        | 2.9     | NA      | NSE         | NSE          |
| sec-Butylbenzene                 | 37        | 36         | NA      | 7.3      | NA      | 9.1       | 27     | NA      | 19       | NA        | 3.5     | NA      | NSE         | NSE          |
| cis-1,2-Dichloroethene           | 11        | 24         | NA      | 21.0     | NA      | 32        | 4.6    | NA      | 5.0      | NA        | 1.8     | NA      | 70          | 7            |
| Di-Isopropyl ether               | 50        | 99         | NA      | 46.0     | NA      | 52        | ND     | NA      | 0.89     | NA        | 0.63Q   | NA      | NSE         | NSE          |
| Ethylbenzene                     | 36        | 54         | 8.7     | 2.9      | 140     | 3.8       | 80     | 28.0    | 3.5      | 19        | 0.71Q   | 9.2     | 700         | 140          |
| Isopropylbenzene                 | 29        | 36         | NA      | 3.8      | NA      | 4.8       | 39     | NA      | 12       | NA        | 0.85    | NA      | NSE         | NSE          |
| p-Isopropyltoluene               | 85        | 26         | NA      | 6.7      | NA      | 6.1       | 4      | NA      | 16       | NA        | 6.7     | NA      | NSE         | NSE          |
| Methyl-tert-butyl-ether          | ND        | ND         | 1.6     | 0.3      | <44     | 0.43Q     | ND     | 0.4     | <0.32    | <11       | <0.32   | 0.48Q   | 60          | 12           |
| Naphthalene                      | 97        | 130        | NA      | 24.0     | <180    | 32.0      | 220.0  | NA      | 1.7      | <44       | <0.35   | NA      | 40          | 8            |
| n-Propylbenzene                  | 18        | 43         | NA      | 2.7      | NA      | 4.9       | 45     | NA      | 17       | NA        | 1.1     | NA      | NSE         | NSE          |
| Tetrachloroethene                | 8.5       | 7.8        | NA      | 1.6      | NA      | 1.1       | 1.1    | NA      | 0.56     | NA        | <0.43   | NA      | 5           | 0.5          |
| Toluene                          | ND        | ND         | <0.42   | 0        | <42     | <0.27     | 0.6    | 0.4     | <0.27    | <10       | <0.27   | <0.21   | 343         | 68.6         |
| Trichloroethene                  | ND        | 2.5        | NA      | <0.37    | NA      | <0.37     | ND     | NA      | <0.37    | NA        | <0.37   | NA      | 5           | 0.5          |
| Trimethylbenzenes (1,2,4-1,3,5-) | 70        | 73         | 37      | 16       | 2,590   | 18        | 184    | 92      | 44       | 427       | 4.2     | 42      | 480         | 96           |
| Total Xylenes (m,p,o)            | 8.7       | 10.7       | 1.0     | 0.7      | 77.0    | 0.8       | 27     | 10      | 0.85     | <66       | <0.67   | 7.58    | 620         | 124          |

Notes:

mg/L = milligrams per liter = parts per million (ppm)  
ug/L = micrograms per liter = parts per billion (ppb)  
NA - Not Analyzed; Q - parameter detected below quantitative limit (qualified results)  
NSE - No Standard Established; ND - No Detect  
ES = NR140.10 Enforcement Standard  
PAL = NR140.10 Preventative Action Limit  
**Highlighted and Bold** results indicate concentrations exceeding WDNR NR140 ES  
**Bold** results indicate concentrations exceeding WDNR NR140 PAL

**TABLE 1  
GROUNDWATER QUALITY RESULTS, POST-REMEDIATION  
FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample ID                      | MW-1 (EXT-1)          |         |  |  | EXT-2   |  |  |  | EXT-5   |  |  |  | MW-7     |  |  |  | NR140<br>ES | NR140<br>PAL |
|--------------------------------|-----------------------|---------|--|--|---------|--|--|--|---------|--|--|--|----------|--|--|--|-------------|--------------|
|                                | 1/12/98               | 1/19/98 |  |  | 1/18/00 |  |  |  | 11/8/00 |  |  |  | 10/21/98 |  |  |  |             |              |
| Concentration                  | Detected VOC's (µg/L) |         |  |  |         |  |  |  |         |  |  |  |          |  |  |  |             |              |
| Benzene                        | <0.27                 | <0.28   |  |  | <0.27   |  |  |  | 0.33Q   |  |  |  | <0.27    |  |  |  | 5           | 0.5          |
| n-Butylbenzene                 | 14                    | NA      |  |  | <0.29   |  |  |  | 3.5     |  |  |  | 3        |  |  |  | NSE         | NSE          |
| sec-Butylbenzene               | 18                    | NA      |  |  | 0.41Q   |  |  |  | 8.8     |  |  |  | 2.5      |  |  |  | NSE         | NSE          |
| cis-1,2-Dichloroethene         | 17                    | NA      |  |  | 3.7     |  |  |  | 15      |  |  |  | 1.1      |  |  |  | 70          | 7            |
| Di-Isopropyl ether             | 42                    | NA      |  |  | 170     |  |  |  | 140     |  |  |  | 0.98Q    |  |  |  | NSE         | NSE          |
| Ethylbenzene                   | 11                    | 5.6     |  |  | <0.32   |  |  |  | 0.54Q   |  |  |  | 4.5      |  |  |  | 700         | 140          |
| Isopropylbenzene               | 9                     | NA      |  |  | <0.26   |  |  |  | 2.4     |  |  |  | 1.6      |  |  |  | NSE         | NSE          |
| p-Isopropyltoluene             | 10                    | NA      |  |  | <0.24   |  |  |  | <0.24   |  |  |  | 3.1      |  |  |  | NSE         | NSE          |
| Methyl-tert-butyl-ether        | <0.32                 | 0.46Q   |  |  | 0.35Q   |  |  |  | 0.38Q   |  |  |  | <0.32    |  |  |  | 80          | 12           |
| Naphthalene                    | 1.80                  | NA      |  |  | 0.68Q   |  |  |  | 3.2     |  |  |  | 58       |  |  |  | 40          | 8            |
| n-Propylbenzene                | 10                    | NA      |  |  | <0.75   |  |  |  | 4.0     |  |  |  | 1.30     |  |  |  | NSE         | NSE          |
| Tetrachloroethene              | 2.1                   | NA      |  |  | 12      |  |  |  | 12      |  |  |  | 0.64Q    |  |  |  | 5           | 0.5          |
| Toluene                        | <0.27                 | <0.21   |  |  | 0.35Q   |  |  |  | 0.28Q   |  |  |  | <0.27    |  |  |  | 343         | 68.6         |
| Trichloroethene                | 0.91Q                 | NA      |  |  | 2.8     |  |  |  | 1.7     |  |  |  | <0.27    |  |  |  | 5           | 0.5          |
| Triethylbenzene (1,2,4-1,2,5-) | 34                    | 80      |  |  | <0.48   |  |  |  | 3.0     |  |  |  | 33       |  |  |  | 480         | 96           |
| Total Xylenes (m,p,o)          | 3.53                  | 8.8     |  |  | <0.67   |  |  |  | <0.67   |  |  |  | 5.04     |  |  |  | 620         | 124          |

**Notes:**

- ng/L = micrograms per liter = parts per billion (ppb)
- µg/L = micrograms per liter = parts per billion (ppb)
- NA = Not Analyzed (Q = Quantities Reported Below Reporting Limit (unlabeled results))
- ESL = (R) Standard Exceedance Limit (M) Default
- ES = (R) (M) (O) Exceedance Scenario
- ESL = (R) (M) (O) Exceedance Action Limit
- Lightning bolt symbol indicates detection of benzene (grounding WDWB NR140 ES)
- NAF results indicate concentrations exceeding WDWB NR140 PAL

**TABLE 1  
GROUNDWATER QUALITY RESULTS  
FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample I.D.                      | MW-2            |         |         |          |                  |         |          | MW-3            |         |         |          |                  |         |          | NR140<br>ES | NR140<br>PAL |
|----------------------------------|-----------------|---------|---------|----------|------------------|---------|----------|-----------------|---------|---------|----------|------------------|---------|----------|-------------|--------------|
|                                  | PRE-REMEDIATION |         |         |          | POST-REMEDIATION |         |          | PRE-REMEDIATION |         |         |          | POST-REMEDIATION |         |          |             |              |
| Collection Date                  | 8/23/96         | 8/29/97 | 6/16/98 | 10/14/98 | 1/21/99          | 4/15/99 | 10/21/99 | 8/23/96         | 8/29/97 | 6/16/98 | 10/14/98 | 1/21/99          | 4/15/99 | 10/21/99 |             |              |
| GRO (mg/L)                       | ND              | ND      | <50     | <50      | <50              | <50     | NA       | ND              | ND      | <50     | <50      | <50              | <50     | NA       | NSE         | NSE          |
| DRO (mg/L)                       | 130             | ND      | <100    | <100     | <100             | <100    | NA       | ND              | ND      | <100    | <100     | <100             | <100    | NA       |             |              |
| Lead, soluble (ug/L)             | ND              | NA      | NA      | NA       | NA               | NA      | NA       | ND              | NA      | NA      | NA       | NA               | NA      | NA       | 15.0        | 1.5          |
| Detected VOC's (ug/L)            |                 |         |         |          |                  |         |          |                 |         |         |          |                  |         |          |             |              |
| Benzene                          | ND              | ND      | <0.26   | <0.27    | <0.26            | <0.27   | <0.26    | ND              | ND      | <0.26   | <0.27    | <0.26            | <0.27   | <0.26    | 5           | 0.5          |
| n-Butylbenzene                   | ND              | ND      | NA      | <0.29    | NA               | <0.29   | NA       | ND              | ND      | NA      | <0.29    | NA               | <0.29   | NA       | NSE         | NSE          |
| sec-Butylbenzene                 | ND              | ND      | NA      | <0.29    | NA               | <0.29   | NA       | ND              | ND      | NA      | <0.29    | NA               | <0.29   | NA       | NSE         | NSE          |
| cis-1,2-Dichloroethene           | ND              | ND      | NA      | <0.28    | NA               | <0.28   | NA       | ND              | ND      | NA      | <0.28    | NA               | <0.28   | NA       | 70          | 7            |
| Di-Isopropyl ether               | ND              | ND      | NA      | <0.55    | NA               | <0.55   | NA       | ND              | ND      | NA      | <0.55    | NA               | <0.55   | NA       | NSE         | NSE          |
| Ethylbenzene                     | ND              | ND      | <0.24   | <0.32    | <0.24            | <0.32   | <0.24    | ND              | ND      | <0.24   | <0.32    | <0.24            | <0.32   | <0.24    | 700         | 140          |
| Isopropylbenzene                 | ND              | ND      | NA      | <0.26    | NA               | <0.26   | NA       | ND              | ND      | NA      | <0.26    | NA               | <0.26   | NA       | NSE         | NSE          |
| p-Isopropyltoluene               | ND              | ND      | NA      | <0.24    | NA               | <0.24   | NA       | ND              | ND      | NA      | <0.24    | NA               | <0.24   | NA       | NSE         | NSE          |
| Methyl-tert-butyl-ether          | ND              | ND      | <0.22   | <0.32    | <0.22            | <0.32   | <0.22    | ND              | ND      | <0.22   | <0.32    | <0.22            | <0.32   | <0.22    | 60          | 12           |
| Naphthalene                      | ND              | ND      | NA      | <0.35    | <0.89            | <0.35   | NA       | ND              | ND      | NA      | <0.35    | <0.89            | <0.35   | NA       | 40          | 8            |
| n-Propylbenzene                  | ND              | ND      | NA      | <0.76    | NA               | <0.76   | NA       | ND              | ND      | NA      | <0.76    | NA               | <0.76   | NA       | NSE         | NSE          |
| Tetrachloroethene                | ND              | ND      | NA      | <0.43    | NA               | <0.43   | NA       | ND              | ND      | NA      | <0.43    | NA               | <0.43   | NA       | 5           | 0.5          |
| Toluene                          | ND              | ND      | <0.21   | 0.28Q    | 0.46Q            | 0.46Q   | 0.23Q    | ND              | ND      | <0.21   | 0.32Q    | 0.37Q            | 0.36Q   | 0.51Q    | 343         | 68.6         |
| Trichloroethene                  | ND              | ND      | NA      | <0.37    | NA               | <0.37   | NA       | ND              | ND      | NA      | <0.37    | NA               | <0.37   | NA       | 5           | 0.5          |
| Trimethylbenzenes (1,2,4-1,3,5-) | ND              | ND      | <1.40   | <0.49    | <1.40            | <0.49   | <1.40    | ND              | ND      | <1.40   | <0.49    | <1.40            | <0.49   | <1.40    | 480         | 96           |
| Total Xylenes (m,p,o)            | ND              | ND      | <1.34   | <0.67    | <1.34            | <0.67   | <1.34    | ND              | ND      | <1.34   | <0.67    | <1.34            | <0.67   | <1.34    | 620         | 124          |

**Notes:**

mg/L = milligrams per liter = parts per million (ppm)  
 ug/L = micrograms per liter = parts per billion (ppb)  
 NA - Not Analyzed ; Q - parameter detected below quantitative limit (qualified results)  
 NSE - No Standard Established ; ND - No Detect  
 ES = NR140.10 Enforcement Standard  
 PAL = NR140.10 Preventative Action Limit  
 Highlighted and Bold results indicate concentrations exceeding WDNR NR140 ES  
 Bold results indicate concentrations exceeding WDNR NR140 PAL



**TABLE 1  
GROUNDWATER QUALITY RESULTS  
FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample I.D.                      | MW-4            |         |         |          |         |                  |         |          |  | MW-5            |         |         |         |                  |         |         |          | NR140<br>ES | NR140<br>PAL |      |      |
|----------------------------------|-----------------|---------|---------|----------|---------|------------------|---------|----------|--|-----------------|---------|---------|---------|------------------|---------|---------|----------|-------------|--------------|------|------|
|                                  | PRE-REMEDIATION |         |         |          |         | POST-REMEDIATION |         |          |  | PRE-REMEDIATION |         |         |         | POST-REMEDIATION |         |         |          |             |              |      |      |
| Collection Date                  | 8/23/96         | 8/29/97 | 8/18/98 | 10/14/98 | 1/21/99 | 4/15/99          | 7/19/99 | 10/21/99 |  |                 | 8/23/96 | 8/29/97 | 8/18/98 | 10/14/98         | 1/21/99 | 4/15/99 | 10/21/99 |             |              |      |      |
| GRO (mg/L)                       | ND              | ND      | <50     | <50      | <50     | <50              | <50     | NA       |  |                 | ND      | ND      | <50     | <50              | <50     | <50     | NA       |             |              | NSE  | NSE  |
| DRO (mg/L)                       | 140             | ND      | <100    | 140      | 180     | <100             | NA      | NA       |  |                 | 150     | 170     | <100    | 160              | 110     | <100    | NA       |             |              | NSE  | NSE  |
| Lead, soluble (ug/L)             | 3.9             | NA      | NA      | NA       | 1.9     | NA               | 3.0     | NA       |  |                 | ND      | NA      | ND      | NA               | NA      | NA      | NA       |             |              | 15.0 | 1.5  |
| Detected VOC's (ug/L)            |                 |         |         |          |         |                  |         |          |  |                 |         |         |         |                  |         |         |          |             |              |      |      |
| Benzene                          | ND              | ND      | <0.26   | <0.27    | <0.26   | <0.27            | <0.26   | <0.26    |  |                 | ND      | ND      | <0.26   | <0.27            | <0.26   | <0.27   | <0.26    |             |              | 5    | 0.5  |
| n-Butylbenzene                   | ND              | ND      | NA      | <0.29    | NA      | <0.29            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.29            | NA      | <0.29   | NA       |             |              | NSE  | NSE  |
| sec-Butylbenzene                 | ND              | ND      | NA      | <0.29    | NA      | <0.29            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.29            | NA      | <0.29   | NA       |             |              | NSE  | NSE  |
| cis-1,2-Dichloroethene           | ND              | ND      | NA      | <0.28    | NA      | <0.28            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.28            | NA      | <0.28   | NA       |             |              | 70   | 7    |
| Di-Isopropyl ether               | ND              | 2.6     | NA      | 2.2      | NA      | 2.2              | NA      | NA       |  |                 | 4.4     | 1.3     | NA      | 5.2              | NA      | 1.9     | NA       |             |              | NSE  | NSE  |
| Ethylbenzene                     | ND              | ND      | <0.24   | <0.32    | <0.24   | <0.32            | <0.24   | <0.24    |  |                 | ND      | ND      | <0.24   | <0.32            | <0.24   | <0.32   | <0.24    |             |              | 700  | 140  |
| Isopropylbenzene                 | ND              | ND      | NA      | <0.26    | NA      | <0.26            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.26            | NA      | <0.26   | NA       |             |              | NSE  | NSE  |
| p-Isopropyltoluene               | ND              | ND      | NA      | <0.24    | NA      | <0.24            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.24            | NA      | <0.24   | NA       |             |              | NSE  | NSE  |
| Methyl-tert-butyl-ether          | ND              | ND      | <0.22   | <0.32    | <0.22   | <0.32            | <0.22   | <0.22    |  |                 | ND      | ND      | <0.22   | <0.32            | <0.22   | <0.32   | <0.22    |             |              | 60   | 12   |
| Naphthalene                      | ND              | ND      | NA      | <0.35    | <0.89   | <0.35            | <0.89   | NA       |  |                 | ND      | ND      | NA      | <0.35            | <0.89   | <0.35   | NA       |             |              | 40   | 8    |
| n-Propylbenzene                  | ND              | ND      | NA      | <0.76    | NA      | <0.76            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.76            | NA      | <0.76   | NA       |             |              | NSE  | NSE  |
| Tetrachloroethene                | ND              | ND      | NA      | <0.43    | NA      | <0.43            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.43            | NA      | <0.43   | NA       |             |              | 5    | 0.5  |
| Toluene                          | ND              | ND      | <0.21   | 0.28Q    | <0.21   | 0.28Q            | <0.21   | <0.21    |  |                 | ND      | ND      | <0.21   | 0.28Q            | <0.21   | 0.28Q   | <0.21    |             |              | 343  | 68.6 |
| Trichloroethene                  | ND              | ND      | NA      | <0.37    | NA      | <0.37            | NA      | NA       |  |                 | ND      | ND      | NA      | <0.37            | NA      | <0.37   | NA       |             |              | 5    | 0.5  |
| Trimethylbenzenes (1,2,4-1,3,5-) | ND              | ND      | <1.40   | <0.49    | <1.40   | <0.49            | <1.40   | <1.40    |  |                 | ND      | ND      | <1.40   | 1.09             | <1.40   | 0.92Q   | <1.40    |             |              | 480  | 96   |
| Total Xylenes (m,p,o)            | ND              | ND      | <1.34   | <0.67    | <1.34   | <0.67            | <1.34   | <1.34    |  |                 | ND      | ND      | <1.34   | 0.46             | <1.34   | 0.45Q   | <1.34    |             |              | 620  | 124  |

**Notes:**

mg/L = milligrams per liter = parts per million (ppm)  
 ug/L = micrograms per liter = parts per billion (ppb)  
 NA = Not Analyzed ; Q = parameter detected below quantitative limit (qualified results)  
 NSE = No Standard Established ; ND = No Detect  
 ES = NR140.10 Enforcement Standard  
 PAL = NR140.10 Preventative Action Limit  
**Highlighted and Bold results indicate concentrations exceeding WDNR NR140 ES**  
**Bold results indicate concentrations exceeding WDNR NR140 PAL**

**TABLE 1  
GROUNDWATER QUALITY RESULTS  
FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample I.D.                      | MW-6             |         |          |         |                   |         |          | DRINK |         |          |  | NR140<br>ES | NR140<br>PAL |      |
|----------------------------------|------------------|---------|----------|---------|-------------------|---------|----------|-------|---------|----------|--|-------------|--------------|------|
|                                  | PRE-REMEDICATION |         |          |         | POST-REMEDICATION |         |          |       |         |          |  |             |              |      |
| Site Status                      |                  |         |          |         |                   |         |          |       |         |          |  |             |              |      |
| Collection Date                  | 9/8/97           | 6/16/98 | 10/14/98 | 1/21/99 | 4/15/99           | 7/19/99 | 10/21/99 |       | 4/15/99 | 10/21/99 |  |             |              |      |
| GRO (mg/L)                       | 100              | 79      | <50      | <50     | 60                | <50     | NA       |       | <50     | NA       |  |             | NSE          | NSE  |
| DRO (mg/L)                       | 150              | 42,000  | 110      | NA      | <100              | <100    | NA       |       | NA      | NA       |  |             | NSE          | NSE  |
| Lead, soluble (ug/L)             | NA               | NA      | NA       | NA      | NA                | NA      | NA       |       | NA      | NA       |  |             | 15.0         | 1.5  |
| Detected VOC's (ug/L)            |                  |         |          |         |                   |         |          |       |         |          |  |             |              |      |
| Benzene                          | ND               | 0.27    | <0.27    | <0.26   | <0.27             | <0.26   | <0.26    |       | <0.23   | <1.0     |  |             | 5            | 0.5  |
| cis-1,2-Dichloroethene           | 1.5              | NA      | 0.7      | NA      | 0.9               | NA      | NA       |       | <0.21   | <1.0     |  |             | 70           | 7    |
| Di-Isopropyl ether               | 130              | NA      | 62       | NA      | 74                | NA      | NA       |       | NA      | NA       |  |             | NSE          | NSE  |
| Ethylbenzene                     | ND               | <0.24   | <0.32    | <0.24   | <0.32             | <0.24   | <0.24    |       | <0.23   | <1.0     |  |             | 700          | 140  |
| Isopropylbenzene                 | ND               | NA      | <0.26    | NA      | <0.26             | NA      | NA       |       | <0.24   | <1.0     |  |             | NSE          | NSE  |
| p-Isopropyltoluene               | ND               | NA      | <0.24    | NA      | <0.24             | NA      | NA       |       | <0.26   | <1.0     |  |             | NSE          | NSE  |
| Methyl-tert-butyl-ether          | ND               | 0.36    | <0.32    | 0.41Q   | <0.32             | <0.22   | 0.57Q    |       | NA      | NA       |  |             | 60           | 12   |
| Naphthalene                      | ND               | NA      | <0.35    | <0.89   | <0.35             | NA      | NA       |       | <0.38   | <1.0     |  |             | 40           | 8    |
| n-Propylbenzene                  | ND               | NA      | <0.76    | NA      | <0.76             | NA      | NA       |       | <0.26   | <1.0     |  |             | NSE          | NSE  |
| Tetrachloroethene                | ND               | NA      | <0.43    | NA      | <0.43             | NA      | NA       |       | <0.25   | <1.0     |  |             | 5            | 0.5  |
| Toluene                          | ND               | 0.40    | 0.30Q    | 0.32Q   | 0.29Q             | <0.21   | <0.21    |       | <0.23   | 1.1      |  |             | 343          | 68.6 |
| Trichloroethene                  | ND               | NA      | <0.37    | NA      | <0.37             | NA      | NA       |       | <0.23   | <1.0     |  |             | 5            | 0.5  |
| Trimethylbenzenes (1,2,4-1,3,5-) | ND               | <1.40   | <0.49    | <1.40   | <0.49             | <1.40   | <1.40    |       | <0.50   | <2.0     |  |             | 480          | 96   |
| Total Xylenes (m,p,o)            | ND               | <1.34   | <0.67    | <1.34   | <0.67             | <1.34   | <1.34    |       | <0.67   | <2.0     |  |             | 620          | 124  |

**Notes:**

mg/L = milligrams per liter = parts per million (ppm)  
ug/L = micrograms per liter = parts per billion (ppb)  
NA - Not Analyzed ; Q - parameter detected below quantitative limit (qualified results)  
NSE - No Standard Established ; ND - No Detect  
ES = NR140.10 Enforcement Standard  
PAL = NR140.10 Preventative Action Limit  
**Highlighted and Bold** results indicate concentrations exceeding WDNR NR140 ES  
**Bold** results indicate concentrations exceeding WDNR NR140 PAL

**TABLE 2  
GROUNDWATER QUALITY RESULTS  
FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample I.D.<br>Site Status<br>Sample Collection Date | MW-1 [EXT-1]     |         |         |          |                   |          |         | MW-7             |         |          |         |                   |         |       | NR140<br>ES | NR140<br>PAL |      |
|--|------------------|---------|---------|----------|-------------------|----------|---------|------------------|---------|----------|---------|-------------------|---------|-------|-------------|--------------|------|
|  | PRE-REMEDICATION |         |         |          | POST-REMEDICATION |          |         | PRE-REMEDICATION |         |          |         | POST-REMEDICATION |         |       |             |              |      |
|  | 8/23/96          | 8/29/97 | 6/16/98 | 10/16/98 | 4/15/99           | 11/19/99 | 1/18/00 | 9/8/97           | 6/16/98 | 10/16/98 | 1/21/99 | 4/15/99           | 7/19/99 |       |             |              |      |
| PAH (ug/L)   |                  |         |         |          |                   |          |         |                  |         |          |         |                   |         |       |             |              |      |
| Acenaphthene   | ND               | ND      | 77      | <47      | 990               | <94      | <2,400  |                  | ND      | 42       | <28     | <2800             | <240    | 32    |             | NSE          | NSE  |
| Acenaphthylene                                       | 530              | 4,300   | 21      | <41      | <120              | <82      | <2,100  |                  | 27      | <20      | <25     | <2500             | <210    | <8.2  |             | NSE          | NSE  |
| Anthracene   | ND               | ND      | 17      | <2.1     | <420              | <42      | 310Q    |                  | 2.3     | 13       | <3.8    | 270               | <10     | <10   |             | 3,000        | 600  |
| Benzo (a) anthracene                                 | ND               | 2,900   | 72      | 38       | 670Q              | 81Q      | 1,800Q  |                  | 10      | 32       | 19      | 2400              | 10Q     | 32    |             | NSE          | NSE  |
| Benzo (a) pyrene                                     | ND               | 21      | 2.2     | <1.5     | 9.9Q              | <3.0     | <78     |                  | ND      | 7.1      | 1.0     | <90               | <7.5    | 0.54Q |             | 0.2          | 0.02 |
| Benzo (b) fluoranthene                               | ND               | ND      | 19      | 9.8      | 140               | 13       | 540     |                  | ND      | 9.1      | 3.0     | 350               | <7.5    | <7.5  |             | 0.2          | 0.02 |
| Benzo (ghi) perylene                                 | ND               | ND      | <1.1    | <2.1     | <6.3              | <4.2     | <110    |                  | ND      | <1.1     | <1.3    | <130              | <10     | <0.42 |             | NSE          | NSE  |
| Benzo (k) fluoranthene                               | ND               | 130     | <0.45   | <0.90    | <2.7              | <1.8     | <47     |                  | 0.5     | <0.45    | 1.3     | <54               | <4.5    | <0.90 |             | NSE          | NSE  |
| Chrysene   | ND               | 790     | <64     | 60       | 1,100             | 98Q      | 3,100Q  |                  | 16      | 42       | 32      | 3300              | 17Q     | 38    |             | 0.2          | 0.02 |
| Dibenzo(a,h)anthracene                               | ND               | ND      | <10     | 3.7      | <20               | <4.0     | <100    |                  | ND      | 4.6      | 2.3     | 150               | <10     | <2.0  |             | NSE          | NSE  |
| Fluoranthene   | ND               | 310     | 150     | 5.8      | 83                | <30      | <1,600  |                  | 1.9     | 1.4      | 3.5     | 360               | 9.3Q    | <7.5  |             | 400          | 80   |
| Flourene   | 1,000            | 8,700   | <230    | 44       | 700               | 130Q     | <8,000  |                  | 30      | 74       | 28      | 2000              | 39Q     | 31    |             | 400          | 80   |
| Indeno (1,2,3-cd) pyrene                             | ND               | ND      | <1.2    | <2.5     | 9.8               | <5.0     | <130    |                  | ND      | <1.2     | <1.5    | <150              | <12     | <0.50 |             | NSE          | NSE  |
| Naphthalene (PAH)                                    | 810              | 7,800   | 220     | <42      | 420               | 120Q     | 2,600Q  |                  | 120     | 87       | <25     | <2,500            | <210    | 44    |             | 40           | 8    |
| Phenanthrene   | 2,300            | 14,000  | 1,600   | 500      | 14,000            | 1,500    | 40,000  |                  | 65      | 680      | 210     | 26000             | 220     | 370   |             | NSE          | NSE  |
| Pyrene   | ND               | 430     | 31      | 13       | 210               | 82Q      | 2,100Q  |                  | 11      | 20       | 7.8     | <2,000            | 24Q     | 22Q   |             | 250          | 50   |
| 1-Methylnaphthalene                                  | 6,900            | 46,000  | 950     | 240      | 7,300             | 680      | 20,000  |                  | 380     | 450      | 150     | 12000             | <180    | 180   |             | NSE          | NSE  |
| 2-Methylnaphthalene                                  | 7,500            | 56,000  | 1,000   | 110      | 8,800             | 740      | 24,000  |                  | 360     | 370      | <22     | 7800              | <180    | 230   |             | NSE          | NSE  |

**Notes:**

ug/L = micrograms per liter = parts per billion (ppb)  
 NA - Not Analyzed ; Q - parameter detected below quantitative limit (qualified results)  
 NSE - No Standard Established ; ND - No Detect  
 ES = NR140.10 Enforcement Standard  
 PAL = NR140.10 Preventative Action Limit  
 Highlighted and Bold results indicate concentrations exceeding WDNR NR140 ES  
 Bold results indicate concentrations exceeding WDNR NR140 PAL

**TABLE 2**  
**GROUNDWATER QUALITY RESULTS**  
**FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE**

| Sample I.D.              | MW-2    | MW-3    | MW-4    | MW-5    | MW-6    | EXT-2   |  |  | EXT-3        |  |  | NR140<br>ES | NR140<br>PAL |
|--------------------------|---------|---------|---------|---------|---------|---------|--|--|--------------|--|--|-------------|--------------|
| Sample Collection Date   | 7/19/99 | 7/19/99 | 7/19/99 | 7/19/99 | 7/19/99 | 1/18/00 |  |  | 1/18/00      |  |  |             |              |
| <b>PAH (ug/L)</b>        |         |         |         |         |         |         |  |  |              |  |  |             |              |
| Acenaphthene             | <0.47   | <0.47   | <0.47   | <0.47   | <0.47   | <9.4    |  |  | <9.4         |  |  | NSE         | NSE          |
| Acenaphthylene           | <0.47   | <0.47   | <0.47   | <0.47   | <0.47   | <8.2    |  |  | <8.2         |  |  | NSE         | NSE          |
| Anthracene               | <0.21   | <0.21   | <0.21   | <0.21   | <0.21   | <0.42   |  |  | <0.42        |  |  | 3,000       | 600          |
| Benzo (a) anthracene     | <0.014  | <0.014  | <0.014  | <0.014  | <0.014  | <0.28   |  |  | 3.1          |  |  | NSE         | NSE          |
| Benzo (a) pyrene         | <0.015  | <0.015  | <0.015  | <0.015  | <0.015  | <0.30   |  |  | <0.30        |  |  | 0.2         | 0.02         |
| Benzo (b) fluoranthene   | <0.015  | <0.015  | <0.015  | <0.015  | <0.015  | <0.30   |  |  | <b>0.80Q</b> |  |  | 0.2         | 0.02         |
| Benzo (ghi) perylene     | <0.021  | <0.021  | <0.021  | <0.021  | <0.021  | <0.42   |  |  | <0.42        |  |  | NSE         | NSE          |
| Benzo (k) fluoranthene   | <0.009  | <0.009  | <0.009  | <0.009  | <0.009  | <0.18   |  |  | <0.18        |  |  | NSE         | NSE          |
| Chrysene                 | <0.016  | <0.016  | <0.016  | <0.016  | <0.016  | <0.32   |  |  | <b>1.9</b>   |  |  | 0.2         | 0.02         |
| Dibenzo(a,h)anthracene   | <0.020  | <0.020  | <0.020  | <0.020  | <0.020  | <0.40   |  |  | <0.40        |  |  | NSE         | NSE          |
| Fluoranthene             | <0.015  | <0.015  | <0.015  | 0.021Q  | <0.015  | <0.30   |  |  | 0.65Q        |  |  | 400         | 80           |
| Flourene                 | <0.058  | <0.058  | <0.058  | <0.058  | <0.058  | <1.2    |  |  | 7.8          |  |  | 400         | 80           |
| Indeno (1,2,3-cd) pyrene | <0.025  | <0.025  | <0.025  | <0.025  | <0.025  | <0.50   |  |  | <0.50        |  |  | NSE         | NSE          |
| Naphthalene (PAH)        | <0.42   | <0.42   | <0.42   | <0.42   | <0.42   | <8.4    |  |  | <8.4         |  |  | 40          | 8            |
| Phenanthrene             | <0.046  | <0.046  | <0.046  | <0.046  | <0.046  | 6.6     |  |  | 60           |  |  | NSE         | NSE          |
| Pyrene                   | <0.017  | <0.017  | <0.017  | 0.018Q  | <0.017  | <0.34   |  |  | 3.4          |  |  | 250         | 50           |
| 1-Methylnaphthalene      | <0.36   | <0.36   | <0.36   | <0.36   | <0.36   | <7.2    |  |  | 43           |  |  | NSE         | NSE          |
| 2-Methylnaphthalene      | <0.36   | <0.36   | <0.36   | <0.36   | <0.36   | <7.2    |  |  | <7.2         |  |  | NSE         | NSE          |

**Notes:**

ug/L = micrograms per liter = parts per billion (ppb)

NA - Not Analyzed ; Q - parameter detected below quantitative limit (qualified results)

NSE - No Standard Established ; ND - No Detect

ES = NR140.10 Enforcement Standard

PAL = NR140.10 Preventative Action Limit

Highlighted and Bold results indicate concentrations exceeding WDNR NR140 ES

Bold results indicate concentrations exceeding WDNR NR140 PAL

## Mann-Kendall Analysis Spreadsheet, Wisconsin DNR Remediation and Redevelopment Program

This spreadsheet is used to test for increasing, decreasing or stable trends, based on the Mann-Kendall statistical test. Refer to guidance titled *Interim Guidance on Natural Attenuation for Petroleum Releases* dated October 1999 for more information.

Spreadsheet version 1.0 prepared by George Mickelson, June 9, 1999. Spreadsheet QA/QC check by Resty Pelayo, June and July 1999.

Site Name = Former Johnson S & G      Pewaukee      Wisconsin      BRRTS No. = 03-68-199644      Well Number = MW-1 (EXT-1)

| Event Number | Sampling Date (most recent last) | Compound | Benzo(a)pyrene Concentration (leave blank if no data) | o(b)fluoranthene Concentration (leave blank if no data) | Chrysene Concentration (leave blank if no data) | Flourene Concentration (leave blank if no data) | Naphthalene Concentration (leave blank if no data) | Pyrene Concentration (leave blank if no data) |
|--------------|----------------------------------|----------|---|---|---|---|--|---|
| 1            | 23-Aug-96                        |          | 1.45  | 12.00   | 63.00   | 1,000.00  | 610.00   | 12.00   |
| 2            | 29-Aug-97                        |          | 21.00   | 12.00   | 790.00  | 6,700.00  | 7,600.00   | 430.00  |
| 3            | 16-Jun-98                        |          | 2.20  | 19.00   | 63.00   | 229.00  | 220.00   | 31.00   |
| 4            | 16-Oct-98                        |          | 1.45  | 6.80  | 60.00   | 44.00   | 41.00  | 13.00   |
| 5            | 15-Apr-99                        |          | 9.90  | 140.00  | 1,100.00  | 700.00  | 420.00   | 410.00  |
| 6            | 19-Nov-99                        |          | 1.45  | 13.00   | 98.00   | 130.00  | 120.00   | 82.00   |
| 7            | 18-Jan-00                        |          | 1.45  | 540.00  | 3,100.00  | 5,900.00  | 2,600.00   | 2,100.00                                      |
| 8            |                                  |          |   |   |   |   |  |   |
| 9            |                                  |          |   |   |   |   |  |   |
| 10           |                                  |          |   |   |   |   |  |   |

|            |             |             |             |             |             |             |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| S =        | -5          | 10          | 8           | -3          | -3          | 9           |
| n =        | 7           | 7           | 7           | 7           | 7           | 7           |
| Average =  | 5.557142857 | 106.1142857 | 753.4285714 | 2100.428571 | 1658.714286 | 439.7142857 |
| St. Dev. = | 7.484285123 | 197.1642921 | 1117.412168 | 2897.662153 | 2765.069301 | 754.71379   |
| CV =       | 1.346786526 | 1.858037217 | 1.483102991 | 1.379557578 | 1.666995531 | 1.716373142 |

|                                     |     |     |     |     |     |     |
|-------------------------------------|-----|-----|-----|-----|-----|-----|
| Increasing Trend (80% Confidence)   | NO  | YES | YES | NO  | NO  | YES |
| Decreasing Trend (80% Confidence)   | NO  | NO  | NO  | NO  | NO  | NO  |
| Undetermined Stable Trend, CV<=1    | NO  | NO  | NO  | NO  | NO  | NO  |
| Undetermined Non-Stable Trend, CV>1 | YES | NO  | NO  | YES | YES | NO  |

Error Check, OK if Blank

|  |    |    |    |    |    |    |
|--|----|----|----|----|----|----|
| Stable or Decreasing Trend at 80% Confidence Level | NO | NO | NO | NO | NO | NO |
|--|----|----|----|----|----|----|

Data Entry By = TJD      Date = 11-May-00      Checked By =

**APPENDIX C**

**MEI SAMPLING PROTOCOL  
AND WASTE DOCUMENTS**

**MORaine ENVIRONMENTAL, INC.**  
**FIELD METHODOLOGIES**  
**Soil Sampling and Collection Procedures**

**Sample Handling**

Two (2) representative soil samples were collected from each sampling location. Samples were collected with a decontaminated hand trowel. The first sample was immediately containerized into a 6 ounce plastic medical grade specimen jar, sealed with a plastic cap, labeled and placed into a cooler with ice. The sample jar was filled to the top, such that little headspace remained. The second sample was containerized into a clean 6 ounce specimen jar and sealed with a plastic cap to minimize the loss of any volatile constituents present. The sample jar was filled approximately 1/2 to 3/4 full to allow for later screening of the headspace sample utilizing a Photoionization Detector (PID).

Samples for laboratory analysis were collected, handled and analyzed following methodologies, preservation requirements, holding times and appropriate laboratory methods as documented in the Leaking Underground Storage Tank (LUST) Analytical and quality Assurance Guidance (WDNR PUBL-SW-130 93) publication.

**Field Screening Procedures**

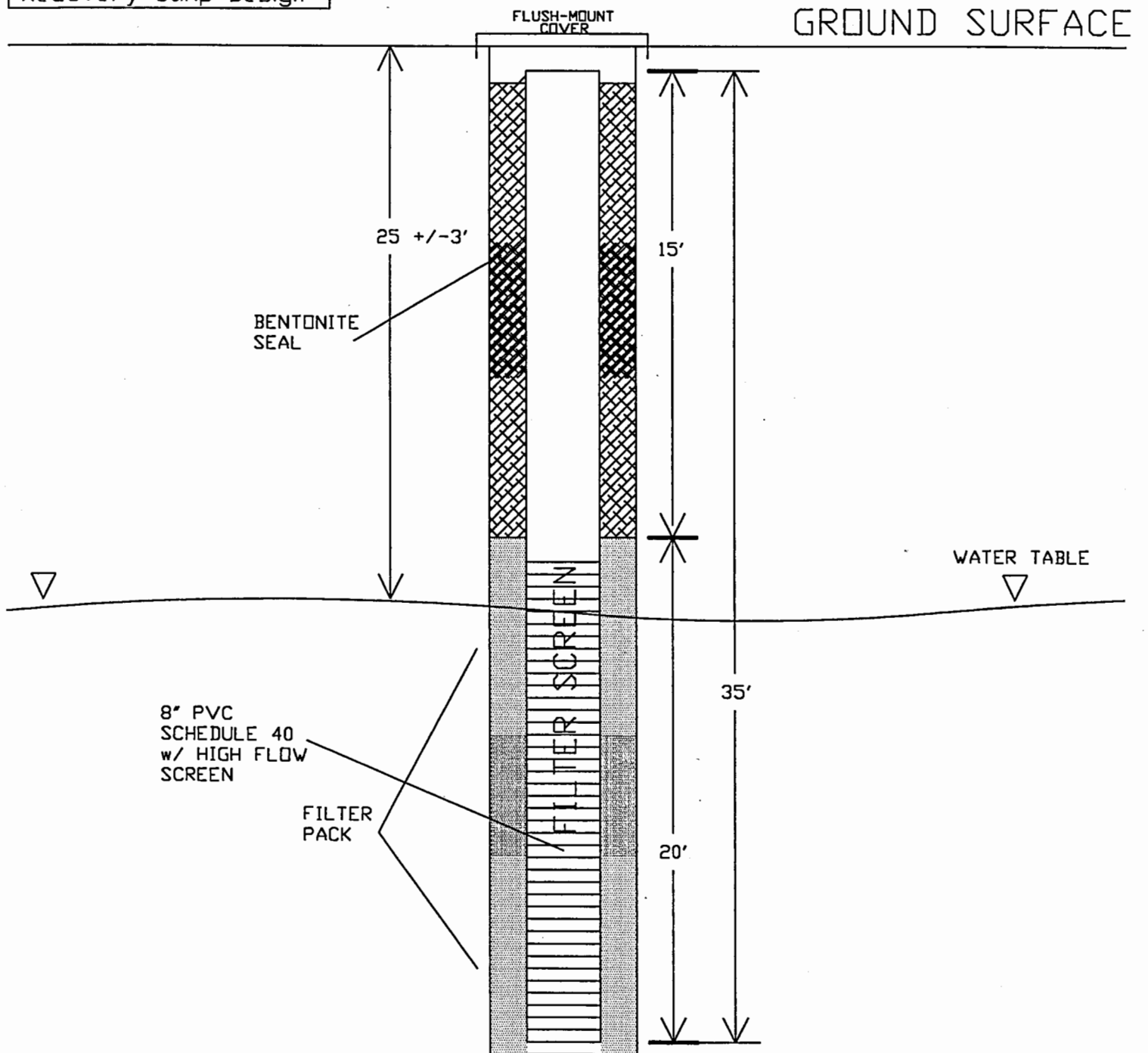
A Photoionization Detector (PID) was used to detect and measure the presence of organic vapors in the headspace of the screening sample. Headspace samples were allowed to equilibrate prior to analysis. Minimum equilibration times conformed to the specifications as follows:

| <u>Ambient Outside Air Temperature<br/>At time of Sample Collection</u> | <u>Minimum Time Sample Equilibrated<br/>at 70° F or Greater Temperature</u> |
|---|---|
| <40° F  | 40 minutes  |
| 41 - 55° F  | 20 minutes  |
| 56 - 69° F  | 10 minutes  |
| > 70° F   | 5 minutes   |

Headspace samples were equilibrated out of direct sunlight and warmed by placing in a building or heated vehicle if ambient temperatures were below 55° F. Following equilibration, "dynamic" headspace analysis was conducted. This method involved agitating the sample container for 30 seconds to facilitate volatilization of any organic compounds into the headspace. The tip of the PID probe was inserted half-way between the cap and the sample surface. The highest instrument response observed within the first 5 to 10 seconds was recorded as total organic volatiles (TOV) as "instrument units".

The PID instrument employed was a Thermo Environmental OVM 580B (Serial #580U-42948-269) equipped with a 10.6 electron volt (eV) lamp calibrated in-field for direct response to a 250 parts per million Isobutylene Standard. The instrument was calibrated prior to each use and results of daily calibrations and maintenance records for the PID are recorded in a log book which accompanies the instrument.

Johnson Sand & Gravel  
Recovery Sump Design







**ORCHARD RIDGE RECYCLING & DISPOSAL FACILITY**  
A WASTE MANAGEMENT COMPANY

W124 N9355 Boundary Road  
Menomonee Falls, WI 53051  
(414) 253-8620  
(414) 253-1322 Fax

0290

May 12, 2000

F  
Thomas Dueppen  
Moraine Environmental  
1234 12th Avenue  
Grafton, WI 53024-

RE: Profile Number: BIO470379  
Opportunity Name: Johnson, Robert  
Generating Location: N8 W22590 Johnson Road

Please find enclosed a Certificate of Bioremediated Petroleum Contaminated Soil. This certificate represents that soil accepted by Orchard Ridge RDF BioSite into its 17th bio pile has been biologically remediated. The contaminated in the soils have been treated to a level that will allow the soils to be beneficially reused. Our 17th bio pile received soil from April 1 thru November 15, 1999.

If you have any questions please do not hesitate to call us at the Special Waste Service Center at 262-253-8620 ext 102 or toll free at 1-888-964-4700 ext 102.

Sincerely,

Waste Management of Wisconsin, Inc.  
Special Waste Service Center

Therese Buechel  
Special Waste Coordinator

Enclosure(s)

# **CERTIFICATE OF BIOREMEDIATED PETROLEUM CONTAMINATED SOIL**

**At the Leading Edge of Technology**


## **ORCHARD RIDGE RECYCLING AND DISPOSAL FACILITY**

**BioSite<sup>SM</sup>**

**W124 N9355 Boundary Road  
Menomonee Falls, Wisconsin 53051  
(414) 253-8620**

This Document certifies that on May 2, 2000, 10.46 tons of petroleum contaminated soil from Profile Number BIO470379 were biologically remediated.

Waste Management of Wisconsin, Inc. hereby agrees to indemnify, defend, and hold harmless Robert Johnson from all liability (including attorneys fees) under the comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also known as Superfund) or comparable state law incurred as a result of this biological remediation and the beneficial reuse of the petroleum contaminated soil at the Orchard Ridge Recycling and Disposal Facility (RDF).

  
**James M. Dunham, District Manager**  
**Orchard Ridge Recycling and Disposal Facility**  
**A Division of Waste Management of Wisconsin, Inc.**



**WASTE MANAGEMENT**

**APPENDIX D**

**LABORATORY RESULTS - GROUNDWATER**



1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
Fax: 920-469-8827

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Client: MORaine ENVIRONMENTAL INC

WI DNR LAB ID : 405132750

| Sample No. | Field ID | Collection Date | Sample No. | Field ID | Collection Date |
|------------|----------|-----------------|------------|----------|-----------------|
| 800260-001 | EXT-1    | 1/18/00         |            |          |                 |
| 800260-002 | EXT-2    | 1/18/00         |            |          |                 |
| 800260-003 | EXT-3    | 1/18/00         |            |          |                 |

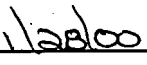
Please visit our Internet homepage at: [www.encheminc.com](http://www.encheminc.com)

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

  
Approval Signature

  
Date

# En Chem Inc.

1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
Fax: 920-469-8827

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| Lab#:               | TestGroupID: | Comment:   |
|---------------------|--------------|--|
| 800260              | All Samples  | For water PAH, low recoveries for 1-methylnaphthalene, 2-methylnaphthalene, phenanthrene, and flourene in the MS/MSD. Resultts are based on satisfactory recoveries of the BS/BSD. |
| 800260-001<br>EXT-1 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.   |
| 800260-003<br>EXT-3 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.   |

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : EXT-1

Lab Sample Number : 800260-001

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 1/28/00

Collection Date : 1/18/00

Matrix Type : WATER

Organic Results

PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510

Prep Date: 1/25/00

Analyst: ARO

| Analyte                 | Result | LOD  | LOQ   | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|-------|-----|--------|------|---------------|-----------------|
| Acenaphthene            | < 2400 | 2400 | 7600  |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Acenaphthylene          | < 2100 | 2100 | 6700  |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Anthracene              | 310    | 110  | 350   |     | ug/L   | Q    | 1/26/00       | SW846 8310      |
| Benzo(a)anthracene      | 1800   | 1500 | 4800  |     | ug/L   | Q    | 1/26/00       | SW846 8310      |
| Benzo(a)pyrene          | < 78   | 78   | 250   |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Benzo(b)fluoranthene    | 540    | 78   | 250   |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Benzo(g,h,i)perylene    | < 110  | 110  | 350   |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Benzo(k)fluoranthene    | < 47   | 47   | 150   |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Chrysene                | 3100   | 1700 | 5400  |     | ug/L   | Q    | 1/26/00       | SW846 8310      |
| Dibenzo(a,h)anthracene  | < 100  | 100  | 320   |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Fluoranthene            | < 1600 | 1600 | 5100  |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Fluorene                | < 6000 | 6000 | 19000 |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Indeno(1,2,3-cd)pyrene  | < 130  | 130  | 410   |     | ug/L   |      | 1/26/00       | SW846 8310      |
| 1-Methylnaphthalene     | 20000  | 1900 | 6100  |     | ug/L   |      | 1/26/00       | SW846 8310      |
| 2-Methylnaphthalene     | 24000  | 1900 | 6100  |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Naphthalene             | 2600   | 2200 | 7000  |     | ug/L   | Q    | 1/26/00       | SW846 8310      |
| Phenanthrene            | 40000  | 4800 | 15000 |     | ug/L   |      | 1/26/00       | SW846 8310      |
| Pyrene                  | 2100   | 1800 | 5700  |     | ug/L   | Q    | 1/26/00       | SW846 8310      |
| 9,10-Diphenylanthracene | NA     |      |       |     | %Recov |      | 1/26/00       | SW846 8310      |

Organic Results

PVOC - WATER

Prep Method: SW846 5030B

Prep Date: 1/24/00

Analyst: PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 1/26/00       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/26/00       | MOD 8021B       |
| Ethylbenzene            | 6.6    | 0.24 | 0.76 |     | ug/l   |      | 1/26/00       | MOD 8021B       |
| Methyl-tert-butyl-ether | 0.40   | 0.22 | 0.70 |     | ug/l   | Q    | 1/26/00       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 1/26/00       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | 52     | 0.54 | 1.7  |     | ug/l   |      | 1/26/00       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | 38     | 0.86 | 2.7  |     | ug/l   |      | 1/26/00       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/26/00       | MOD 8021B       |

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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : EXT-1**

**Lab Sample Number : 800260-001**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 1/28/00**

**Collection Date : 1/18/00**

**Matrix Type : WATER**

---

|            |     |      |     |      |         |           |
|------------|-----|------|-----|------|---------|-----------|
| Xylene, -o | 6.9 | 0.37 | 1.2 | ug/l | 1/26/00 | MOD 8021B |
|------------|-----|------|-----|------|---------|-----------|

**- Analytical Report -**

Project Name : JOHNSON SAND &amp; GRAVEL

Project Number : #1401

Client : MORaine ENVIRONMENTAL INC

Field ID : EXT-2

Report Date : 1/28/00

Lab Sample Number : 800260-002

Collection Date : 1/18/00

WI DNR LAB ID : 405132750

Matrix Type : WATER

**Organic Results****EPA 8260 VOLATILE LIST- WATER**

Prep Method: SW846 5030B Prep Date: 1/24/00 Analyst: JJB

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| s-Butylbenzene              | 0.41   | 0.29 | 0.92 |     | ug/L  | Q    | 1/24/00       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| cis-1,2-Dichloroethene      | 3.7    | 0.28 | 0.89 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dichloropropane         | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,1-Dichloroethane          | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,3-Dichloropropane         | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 2,2-Dichloropropane         | < 0.36 | 0.36 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |



**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : EXT-2**

**Lab Sample Number : 800260-002**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 1/28/00**

**Collection Date : 1/18/00**

**Matrix Type : WATER**

|                           |        |      |      |        |   |         |             |
|---------------------------|--------|------|------|--------|---|---------|-------------|
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L   |   | 1/24/00 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L   |   | 1/24/00 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Diisopropyl ether         | 170    | 0.55 | 1.8  | ug/L   |   | 1/24/00 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L   |   | 1/24/00 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L   |   | 1/24/00 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L   |   | 1/24/00 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L   |   | 1/24/00 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L   |   | 1/24/00 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L   |   | 1/24/00 | SW846 8260B |
| Methyl-tert-butyl-ether   | 0.35   | 0.32 | 1.0  | ug/L   | Q | 1/24/00 | SW846 8260B |
| Naphthalene               | 0.68   | 0.35 | 1.1  | ug/L   | Q | 1/24/00 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L   |   | 1/24/00 | SW846 8260B |
| Tetrachloroethene         | 17     | 0.43 | 1.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Toluene                   | 0.35   | 0.27 | 0.86 | ug/L   | Q | 1/24/00 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L   |   | 1/24/00 | SW846 8260B |
| Trichloroethene           | 2.9    | 0.37 | 1.2  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,3,5-Trimethylbenzene    | < 0.27 | 0.27 | 0.86 | ug/L   |   | 1/24/00 | SW846 8260B |
| Vinyl chloride            | < 0.20 | 0.20 | 0.64 | ug/L   |   | 1/24/00 | SW846 8260B |
| Xylenes, -m, -p           | < 0.43 | 0.43 | 1.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Xylene, -o                | < 0.24 | 0.24 | 0.76 | ug/L   |   | 1/24/00 | SW846 8260B |
| 4-Bromofluorobenzene      | 88     |      |      | %Recov |   | 1/24/00 | SW846 8260B |
| Dibromofluoromethane      | 97     |      |      | %Recov |   | 1/24/00 | SW846 8260B |
| Toluene-d8                | 95     |      |      | %Recov |   | 1/24/00 | SW846 8260B |

**Organic Results**

**PAH (HPLC) LIST - SEMIVOLATILES**

**Prep Method: SW846 3510**

**Prep Date: 1/25/00**

**Analyst: ARO**

| Analyte      | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|--------------|--------|-----|-----|-----|-------|------|---------------|-----------------|
| Acenaphthene | < 9.4  | 9.4 | 30  |     | ug/L  |      | 1/25/00       | SW846 8310      |

**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : EXT-2**

**Lab Sample Number : 800260-002**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 1/28/00**

**Collection Date : 1/18/00**

**Matrix Type : WATER**

|                         |        |      |      |        |         |            |
|-------------------------|--------|------|------|--------|---------|------------|
| Acenaphthylene          | < 8.2  | 8.2  | 26   | ug/L   | 1/25/00 | SW846 8310 |
| Anthracene              | < 0.42 | 0.42 | 1.3  | ug/L   | 1/25/00 | SW846 8310 |
| Benzo(a)anthracene      | < 0.28 | 0.28 | 0.89 | ug/L   | 1/25/00 | SW846 8310 |
| Benzo(a)pyrene          | < 0.30 | 0.30 | 0.96 | ug/L   | 1/25/00 | SW846 8310 |
| Benzo(b)fluoranthene    | < 0.30 | 0.30 | 0.96 | ug/L   | 1/25/00 | SW846 8310 |
| Benzo(g,h,i)perylene    | < 0.42 | 0.42 | 1.3  | ug/L   | 1/25/00 | SW846 8310 |
| Benzo(k)fluoranthene    | < 0.18 | 0.18 | 0.57 | ug/L   | 1/25/00 | SW846 8310 |
| Chrysene                | < 0.32 | 0.32 | 1.0  | ug/L   | 1/25/00 | SW846 8310 |
| Dibenzo(a,h)anthracene  | < 0.40 | 0.40 | 1.3  | ug/L   | 1/25/00 | SW846 8310 |
| Fluoranthene            | < 0.30 | 0.30 | 0.96 | ug/L   | 1/25/00 | SW846 8310 |
| Fluorene                | < 1.2  | 1.2  | 3.8  | ug/L   | 1/25/00 | SW846 8310 |
| Indeno(1,2,3-cd)pyrene  | < 0.50 | 0.50 | 1.6  | ug/L   | 1/25/00 | SW846 8310 |
| 1-Methylnaphthalene     | < 7.2  | 7.2  | 23   | ug/L   | 1/25/00 | SW846 8310 |
| 2-Methylnaphthalene     | < 7.2  | 7.2  | 23   | ug/L   | 1/25/00 | SW846 8310 |
| Naphthalene             | < 8.4  | 8.4  | 27   | ug/L   | 1/25/00 | SW846 8310 |
| Phenanthrene            | 6.6    | 0.92 | 2.9  | ug/L   | 1/25/00 | SW846 8310 |
| Pyrene                  | < 0.34 | 0.34 | 1.1  | ug/L   | 1/25/00 | SW846 8310 |
| 9,10-Diphenylanthracene | 48.6   |      |      | %Recov | 1/25/00 | SW846 8310 |

**- Analytical Report -**

Project Name : JOHNSON SAND &amp; GRAVEL

Project Number : #1401

Field ID : EXT-3

Lab Sample Number : 800260-003

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 1/28/00

Collection Date : 1/18/00

Matrix Type : WATER

**Organic Results****EPA 8260 VOLATILE LIST- WATER**

Prep Method: SW846 5030B Prep Date: 1/24/00 Analyst: JJB

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | 0.33   | 0.27 | 0.86 |     | ug/L  | Q    | 1/24/00       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| s-Butylbenzene              | 8.8    | 0.29 | 0.92 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| n-Butylbenzene              | 3.5    | 0.29 | 0.92 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| cis-1,2-Dichloroethene      | 15     | 0.28 | 0.89 |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,2-Dichloropropane         | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,1-Dichloroethane          | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 1,3-Dichloropropane         | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 1/24/00       | SW846 8260B     |
| 2,2-Dichloropropane         | < 0.36 | 0.36 | 1.1  |     | ug/L  |      | 1/24/00       | SW846 8260B     |

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : EXT-3

Lab Sample Number : 800260-003

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 1/28/00

Collection Date : 1/18/00

Matrix Type : WATER

|                           |        |      |      |        |   |         |             |
|---------------------------|--------|------|------|--------|---|---------|-------------|
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L   |   | 1/24/00 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L   |   | 1/24/00 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Diisopropyl ether         | 140    | 0.55 | 1.8  | ug/L   |   | 1/24/00 | SW846 8260B |
| Ethylbenzene              | 0.54   | 0.32 | 1.0  | ug/L   | Q | 1/24/00 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L   |   | 1/24/00 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L   |   | 1/24/00 | SW846 8260B |
| Isopropylbenzene          | 2.4    | 0.26 | 0.83 | ug/L   |   | 1/24/00 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L   |   | 1/24/00 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L   |   | 1/24/00 | SW846 8260B |
| Methyl-tert-butyl-ether   | 0.36   | 0.32 | 1.0  | ug/L   | Q | 1/24/00 | SW846 8260B |
| Naphthalene               | 3.2    | 0.35 | 1.1  | ug/L   |   | 1/24/00 | SW846 8260B |
| n-Propylbenzene           | 4.0    | 0.76 | 2.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L   |   | 1/24/00 | SW846 8260B |
| Tetrachloroethene         | 12     | 0.43 | 1.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Toluene                   | 0.28   | 0.27 | 0.86 | ug/L   | Q | 1/24/00 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | 3.0    | 0.22 | 0.70 | ug/L   |   | 1/24/00 | SW846 8260B |
| Trichloroethene           | 1.7    | 0.37 | 1.2  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| 1,3,5-Trimethylbenzene    | < 0.27 | 0.27 | 0.86 | ug/L   |   | 1/24/00 | SW846 8260B |
| Vinyl chloride            | < 0.20 | 0.20 | 0.64 | ug/L   |   | 1/24/00 | SW846 8260B |
| Xylenes, -m, -p           | < 0.43 | 0.43 | 1.4  | ug/L   |   | 1/24/00 | SW846 8260B |
| Xylene, -o                | < 0.24 | 0.24 | 0.76 | ug/L   |   | 1/24/00 | SW846 8260B |
| 4-Bromofluorobenzene      | 87     |      |      | %Recov |   | 1/24/00 | SW846 8260B |
| Dibromofluoromethane      | 95     |      |      | %Recov |   | 1/24/00 | SW846 8260B |
| Toluene-d8                | 93     |      |      | %Recov |   | 1/24/00 | SW846 8260B |

Organic Results

PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510

Prep Date: 1/25/00

Analyst: ARO

| Analyte      | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|--------------|--------|-----|-----|-----|-------|------|---------------|-----------------|
| Acenaphthene | < 9.4  | 9.4 | 30  |     | ug/L  |      | 1/26/00       | SW846 8310      |

**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : EXT-3**

**Lab Sample Number : 800260-003**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 1/28/00**

**Collection Date : 1/18/00**

**Matrix Type : WATER**

|                         |        |      |      |        |   |         |            |
|-------------------------|--------|------|------|--------|---|---------|------------|
| Acenaphthylene          | < 8.2  | 8.2  | 26   | ug/L   |   | 1/26/00 | SW846 8310 |
| Anthracene              | < 0.42 | 0.42 | 1.3  | ug/L   |   | 1/26/00 | SW846 8310 |
| Benzo(a)anthracene      | 3.1    | 0.28 | 0.89 | ug/L   |   | 1/26/00 | SW846 8310 |
| Benzo(a)pyrene          | < 0.30 | 0.30 | 0.96 | ug/L   |   | 1/26/00 | SW846 8310 |
| Benzo(b)fluoranthene    | 0.80   | 0.30 | 0.96 | ug/L   | Q | 1/26/00 | SW846 8310 |
| Benzo(g,h,i)perylene    | < 0.42 | 0.42 | 1.3  | ug/L   |   | 1/26/00 | SW846 8310 |
| Benzo(k)fluoranthene    | < 0.18 | 0.18 | 0.57 | ug/L   |   | 1/26/00 | SW846 8310 |
| Chrysene                | 1.9    | 0.32 | 1.0  | ug/L   |   | 1/26/00 | SW846 8310 |
| Dibenzo(a,h)anthracene  | < 0.40 | 0.40 | 1.3  | ug/L   |   | 1/26/00 | SW846 8310 |
| Fluoranthene            | 0.65   | 0.30 | 0.96 | ug/L   | Q | 1/26/00 | SW846 8310 |
| Fluorene                | 7.8    | 1.2  | 3.8  | ug/L   |   | 1/26/00 | SW846 8310 |
| Indeno(1,2,3-cd)pyrene  | < 0.50 | 0.50 | 1.6  | ug/L   |   | 1/26/00 | SW846 8310 |
| 1-Methylnaphthalene     | 43     | 7.2  | 23   | ug/L   |   | 1/26/00 | SW846 8310 |
| 2-Methylnaphthalene     | < 7.2  | 7.2  | 23   | ug/L   |   | 1/26/00 | SW846 8310 |
| Naphthalene             | < 8.4  | 8.4  | 27   | ug/L   |   | 1/26/00 | SW846 8310 |
| Phenanthrene            | 60     | 10   | 32   | ug/L   |   | 1/26/00 | SW846 8310 |
| Pyrene                  | 3.4    | 0.34 | 1.1  | ug/L   |   | 1/26/00 | SW846 8310 |
| 9,10-Diphenylanthracene | NA     |      |      | %Recov |   | 1/26/00 | SW846 8310 |

(Please Print Legibly)

Company Name: MEL

Branch or Location: GRANTON

Project Contact: TOM DREPPEN

Telephone: 414-377-9060

Project Number: # 1401

Project Name: JOHNSON SAND & GRAVEL

Project State: WA W24590 JOHNSON RD (WILKESBARRE)

Sampled By (Print): BRIAN DURKEE



1241 Bellevue St., Suite 9  
Green Bay, WI 54302  
920-469-2436 • 1-800-736-2436  
FAX 920-469-8827

525 Science Drive  
Madison, WI 53711  
608-232-3300 • 1-888-536-2436  
FAX: 608-233-0502

1423 N. 8th Street, Suite 122  
Superior, WI 54880  
715-392-5844 • 1-800-837-8238  
FAX 715-392-5843

# CHAIN OF CUSTODY

\*Preservation Codes  
 A=None B=HCL C=H2SO4 D=HN03 E=EnCore F=Methanol G=NaOH

Filtered? (YES/NO) NO NO NO  
 PRESERVATION (CODE)\* B A B

ANALYSES REQUESTED  
PVOC  
PAH  
VOC

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: Tom Druppen

Company: MEL  
 Address: 1234 12th Ave  
GRANTON WA

Invoice To: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: Same As Above

Mail Invoice To: \_\_\_\_\_

Data Package Options (please circle if requested)

| QC Summary       | Surcharge        | Site-Specific QC Required?                                 |
|------------------|------------------|--|
| EnChem Level II  | Std. Delivery    | Yes No   |
| EnChem Level III | 10% (min. \$50)  | (If yes, indicate QC sample and submit triplicate volume.) |
| EnChem Level IV  | 25% (min. \$100) |  |

| LABORATORY ID<br>(Lab Use Only) | FIELD ID | COLLECTION |      | MATRIX | COMMENTS      | TOTAL BOTTLES<br>(Lab Use Only) |
|---------------------------------|----------|------------|------|--------|---------------|---------------------------------|
|                                 |          | DATE       | TIME |        |               |                                 |
| 001                             | EXT-1    | 1-8-00     | PM   | W      | C.C.          | 1-2 AM 3-4 AM                   |
| 002                             | EXT-2    | ✓          | PM   | W      |               | ↓                               |
| 003                             | EXT-3    | ✓          | PM   | W      |               |                                 |
|                                 |          |            |      |        | NO TRIP BLANK |                                 |

|   |   |   |  |   |
|---|---|---|--|---|
| <b>Turnaround Time Requested (TAT)</b><br>(circle): <u>Std (10 Bus. Days)</u> Rush<br>(Rush TAT subject to approval/surcharge)<br>Quick Turn Number: _____<br>Date Needed: _____<br>Transmit Rush Results by (circle):<br>Phone Fax<br>Phone #: _____<br>Fax #: _____<br><b>Samples on HOLD are subject to special pricing and release of liability</b> | <b>Std. TAT Surcharge</b><br>1 day 3.0x<br>2 day 2.0x<br>3 day 1.5x<br>4 day 1.4x<br>5 day 1.3x | Relinquished By: <u>B. Durkee</u> Date/Time: <u>1-8-00 5:00 PM</u><br>Relinquished By: <u>A. Durkee</u> Date/Time: <u>1/24/00 2:50</u><br>Relinquished By: _____ Date/Time: _____<br>Relinquished By: _____ Date/Time: _____<br>Relinquished By: _____ Date/Time: _____ | Received By: <u>AW...</u> Date/Time: <u>1/21/00 1:30</u><br>Received By: <u>...</u> Date/Time: <u>1/21/00 14:50</u><br>Received By: _____ Date/Time: _____<br>Received By: _____ Date/Time: _____<br>Received By: _____ Date/Time: _____ | En Chem Project No. <u>800260</u><br>Sample Receipt Temp. <u>...</u><br>Sample Receipt pH (Wet/Metals) <u>...</u><br>Custody Seal _____ |
|---|---|---|--|---|



1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
FAX: 920-469-8827

**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Client: MORaine ENVIRONMENTAL INC

WI DNR LAB ID : 405132750

| Sample No. | Field ID  | Collection Date | Sample No. | Field ID | Collection Date |
|------------|-----------|-----------------|------------|----------|-----------------|
| 897165-001 | MW1(EXT1) | 11/19/99        |            |          |                 |

Please visit our Internet homepage at: [www.enccheminc.com](http://www.enccheminc.com)

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

J. Duranseau  
Approval Signature

12/1/99  
Date

# En Chem Inc.

1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
Fax: 920-469-8827

---

| Lab#:                   | TestGroupID: | Comment:   |
|-------------------------|--------------|--|
| 897165-001<br>MW1(EXT1) | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis. |



**- Analytical Report -**

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 1401  
**Field ID :** MW1(EXT1)  
**Lab Sample Number :** 897165-001  
**WI DNR LAB ID :** 405132750

**Client :** MORAINES ENVIRONMENTAL INC  
**Report Date :** 11/30/99  
**Collection Date :** 11/19/99  
**Matrix Type :** WATER

**Organic Results**

**PAH (HPLC) LIST - SEMIVOLATILES**

**Prep Method:** SW846 3510 **Prep Date:** 11/24/99 **Analyst:** ARO

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| Acenaphthene            | < 94   | 94  | 300 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Acenaphthylene          | < 82   | 82  | 260 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Anthracene              | < 42   | 42  | 130 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Benzo(a)anthracene      | 81     | 28  | 89  |     | ug/L   | Q    | 11/29/99      | SW846 8310      |
| Benzo(a)pyrene          | < 3.0  | 3.0 | 9.6 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Benzo(b)fluoranthene    | 13     | 3.0 | 9.6 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Benzo(g,h,i)perylene    | < 4.2  | 4.2 | 13  |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Benzo(k)fluoranthene    | < 1.8  | 1.8 | 5.7 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Chrysene                | 98     | 32  | 100 |     | ug/L   | Q    | 11/29/99      | SW846 8310      |
| Dibenzo(a,h)anthracene  | < 4.0  | 4.0 | 13  |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Fluoranthene            | < 30   | 30  | 96  |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Fluorene                | 130    | 120 | 380 |     | ug/L   | Q    | 11/29/99      | SW846 8310      |
| Indeno(1,2,3-cd)pyrene  | < 5.0  | 5.0 | 16  |     | ug/L   |      | 11/29/99      | SW846 8310      |
| 1-Methylnaphthalene     | 680    | 72  | 230 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| 2-Methylnaphthalene     | 740    | 72  | 230 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Naphthalene             | 120    | 84  | 270 |     | ug/L   | Q    | 11/29/99      | SW846 8310      |
| Phenanthrene            | 1500   | 180 | 570 |     | ug/L   |      | 11/29/99      | SW846 8310      |
| Pyrene                  | 82     | 34  | 110 |     | ug/L   | Q    | 11/29/99      | SW846 8310      |
| 9,10-Diphenylanthracene | NA     |     |     |     | %Recov |      | 11/29/99      | SW846 8310      |

(Please Print Legibly)

Company Name: Moraine Env.  
Branch or Location: Grafton  
Project Contact: T. Dueppen  
Telephone: (262) 377-9060  
Project Number: 1401  
Project Name: Johnson Sand + Gravel  
Project State: W22590 Johnson Rd. Pewaukee  
Sampled By (Print): T. Dueppen

**Data Package Options** (please circle if requested)

QC Summary      Surcharge      Site-Specific QC Required?  
EnChem Level II    Std. Delivery    Yes    No  
EnChem Level III    10% (min. \$50)    (If yes, indicate QC sample and submit triplicate volume.)  
EnChem Level IV    25% (min. \$100)

| LABORATORY ID<br>(Lab Use Only) | FIELD ID    | COLLECTION |      |
|---------------------------------|-------------|------------|------|
|                                 |             | DATE       | TIME |
| 001                             | MWI (EXT 1) | 11/19/99   | 1:00 |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |
|                                 |             |            |      |



1241 Bellevue St., Suite 9  
Green Bay, WI 54302  
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FAX 920-469-8827

525 Science Drive  
Madison, WI 53711  
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FAX: 608-233-0502

1423 N. 8th Street, Suite 122  
Superior, WI 54880  
715-392-5844 • 1-800-837-8238  
FAX 715-392-5843

# CHAIN OF CUSTODY

48398

\*Preservation Codes  
A=None    B=HCL    C=H2SO4    D=HN03    E=EnCore    F=Methanol    G=NaOH

FILTERED? (YES/NO) NO  
PRESERVATION (CODE)\* A

ANALYSES REQUESTED  
PAH

Page 1 of 1  
P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_  
Mail Report To: T. Dueppen  
Company: Moraine Env.  
Address: 1234 12th Ave.  
Grafton, WI 53024  
Invoice To: \_\_\_\_\_  
Company: SAME  
Address: \_\_\_\_\_  
Mail Invoice To: \_\_\_\_\_

| LABORATORY ID<br>(Lab Use Only) | FIELD ID    | COLLECTION |      | MATRIX | COMMENTS | TOTAL BOTTLES<br>(Lab Use Only) |
|---------------------------------|-------------|------------|------|--------|----------|---------------------------------|
|                                 |             | DATE       | TIME |        |          |                                 |
| 001                             | MWI (EXT 1) | 11/19/99   | 1:00 | H2O    |          | 1 Lab                           |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |
|                                 |             |            |      |        |          |                                 |

Turnaround Time Requested (TAT)  
(circle): Std (10 Bus. Days)    Rush  
(Rush TAT subject to approval/surcharge)  
Quick Turn Number: \_\_\_\_\_  
Date Needed: \_\_\_\_\_  
Transmit Rush Results by (circle):  
Phone    Fax  
Phone #: \_\_\_\_\_  
Fax #: \_\_\_\_\_  
Matrix Codes  
W=Water  
S=Soil  
A=Air  
C=Charcoal  
B=Biota  
Sl=Sludge

|  |                                  |                                 |                                  |
|--|----------------------------------|---------------------------------|----------------------------------|
| Relinquished By: <u>Thomas Dueppen</u> | Date/Time: <u>11/19/99 2:00</u>  | Received By: <u>[Signature]</u> | Date/Time: <u>11/22/99 9:00</u>  |
| Relinquished By: <u>[Signature]</u>    | Date/Time: <u>11/22/99 12:00</u> | Received By: <u>B. Duenpen</u>  | Date/Time: <u>11/22/99 12:02</u> |
| Relinquished By: <u>[Signature]</u>    | Date/Time: <u>11/22/99 1530</u>  | Received By: _____              | Date/Time: _____                 |
| Relinquished By: _____                 | Date/Time: _____                 | Received By: _____              | Date/Time: _____                 |
| Relinquished By: _____                 | Date/Time: _____                 | Received By: <u>[Signature]</u> | Date/Time: <u>11/22/99 1:30</u>  |

En Chem Project No. 897165  
Sample Receipt Temp. POE  
Sample Receipt pH (Wet/Metals)  
Custody Seal

Samples on HOLD are subject to special pricing and release of liability



1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
FAX: 920-469-8827

## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Client: MORaine ENVIRONMENTAL INC

WI DNR LAB ID : 405132750

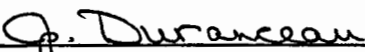
| Sample No. | Field ID     | Collection Date | Sample No. | Field ID | Collection Date |
|------------|--------------|-----------------|------------|----------|-----------------|
| 896385-001 | MW-1         | 10/21/99        |            |          |                 |
| 896385-002 | MW-2         | 10/21/99        |            |          |                 |
| 896385-003 | MW-3         | 10/21/99        |            |          |                 |
| 896385-004 | MW-4         | 10/21/99        |            |          |                 |
| 896385-005 | MW-5         | 10/21/99        |            |          |                 |
| 896385-006 | MW-6         | 10/21/99        |            |          |                 |
| 896385-007 | MW-7         | 10/21/99        |            |          |                 |
| 896385-008 | TRIP BLANK   | 10/21/99        |            |          |                 |
| 896385-009 | PRIVATE WELL | 10/21/99        |            |          |                 |

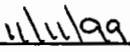
Please visit our Internet homepage at: [www.encheminc.com](http://www.encheminc.com)

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

  
Approval Signature

  
Date

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : #1401  
Field ID : MW-1  
Lab Sample Number : 896385-001  
WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
Report Date : 10/27/99  
Collection Date : 10/21/99  
Matrix Type : WATER

Organic Results

EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030B Prep Date: 10/26/99 Analyst: RJN

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| s-Butylbenzene              | 13     | 0.29 | 0.92 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| t-Butylbenzene              | 0.57   | 0.32 | 1.0  |     | ug/L  | Q    | 10/27/99      | SW846 8260B     |
| n-Butylbenzene              | 14     | 0.29 | 0.92 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| cis-1,2-Dichloroethene      | 17     | 0.28 | 0.89 |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,2-Dichloropropane         | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,1-Dichloroethane          | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 1,3-Dichloropropane         | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/27/99      | SW846 8260B     |
| 2,2-Dichloropropane         | < 0.36 | 0.36 | 1.1  |     | ug/L  |      | 10/27/99      | SW846 8260B     |

**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : MW-1**

**Lab Sample Number : 896385-001**

**WI DNR LAB ID : 405132750**

**Client : MORAIN ENVIRONMENTAL INC**

**Report Date : 10/27/99**

**Collection Date : 10/21/99**

**Matrix Type : WATER**

|                           |        |      |      |        |   |          |             |
|---------------------------|--------|------|------|--------|---|----------|-------------|
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L   |   | 10/27/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L   |   | 10/27/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L   |   | 10/27/99 | SW846 8260B |
| Diisopropyl ether         | 42     | 0.55 | 1.8  | ug/L   |   | 10/27/99 | SW846 8260B |
| Ethylbenzene              | 11     | 0.32 | 1.0  | ug/L   |   | 10/27/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L   |   | 10/27/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L   |   | 10/27/99 | SW846 8260B |
| Isopropylbenzene          | 8.9    | 0.26 | 0.83 | ug/L   |   | 10/27/99 | SW846 8260B |
| p-Isopropyltoluene        | 10     | 0.24 | 0.76 | ug/L   |   | 10/27/99 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L   |   | 10/27/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L   |   | 10/27/99 | SW846 8260B |
| Naphthalene               | 140    | 0.35 | 1.1  | ug/L   |   | 10/27/99 | SW846 8260B |
| n-Propylbenzene           | 9.8    | 0.76 | 2.4  | ug/L   |   | 10/27/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L   |   | 10/27/99 | SW846 8260B |
| Tetrachloroethene         | 2.1    | 0.43 | 1.4  | ug/L   |   | 10/27/99 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | 11     | 0.22 | 0.70 | ug/L   |   | 10/27/99 | SW846 8260B |
| Trichloroethene           | 0.91   | 0.37 | 1.2  | ug/L   | Q | 10/27/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L   |   | 10/27/99 | SW846 8260B |
| 1,3,5-Trimethylbenzene    | 23     | 0.27 | 0.86 | ug/L   |   | 10/27/99 | SW846 8260B |
| Vinyl chloride            | < 0.20 | 0.20 | 0.64 | ug/L   |   | 10/27/99 | SW846 8260B |
| Xylenes, -m, -p           | 0.53   | 0.43 | 1.4  | ug/L   | Q | 10/27/99 | SW846 8260B |
| Xylene, -o                | 3.0    | 0.24 | 0.76 | ug/L   |   | 10/27/99 | SW846 8260B |
| 4-Bromofluorobenzene      | 94     |      |      | %Recov |   | 10/27/99 | SW846 8260B |
| Dibromofluoromethane      | 92     |      |      | %Recov |   | 10/27/99 | SW846 8260B |
| Toluene-d8                | 95     |      |      | %Recov |   | 10/27/99 | SW846 8260B |

**- Analytical Report -**

|   |   |
|---|---|
| <b>Project Name :</b> JOHNSON SAND & GRAVEL | <b>Client :</b> MORaine ENVIRONMENTAL INC |
| <b>Project Number :</b> #1401               | <b>Report Date :</b> 10/29/99             |
| <b>Field ID :</b> MW-2                      | <b>Collection Date :</b> 10/21/99         |
| <b>Lab Sample Number :</b> 896385-002       | <b>Matrix Type :</b> WATER                |
| <b>WI DNR LAB ID :</b> 405132750            |   |

**Organic Results**

PVOC - WATER

Prep Method: SW846 5030B    Prep Date: 10/25/99    Analyst: MSB

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 103    |      |      |     | %Recov |      | 10/28/99      | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Toluene                 | 0.23   | 0.21 | 0.67 |     | ug/l   | Q    | 10/28/99      | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 10/28/99      | MOD 8021B       |

**- Analytical Report -**

|   |   |
|---|---|
| <b>Project Name :</b> JOHNSON SAND & GRAVEL | <b>Client :</b> MORaine ENVIRONMENTAL INC |
| <b>Project Number :</b> #1401               | <b>Report Date :</b> 10/29/99             |
| <b>Field ID :</b> MW-3                      | <b>Collection Date :</b> 10/21/99         |
| <b>Lab Sample Number :</b> 896385-003       | <b>Matrix Type :</b> WATER                |
| <b>WI DNR LAB ID :</b> 405132750            |   |

**Organic Results**

|                     |                                 |                            |                     |
|---------------------|---------------------------------|----------------------------|---------------------|
| <b>PVOC - WATER</b> | <b>Prep Method:</b> SW846 5030B | <b>Prep Date:</b> 10/25/99 | <b>Analyst:</b> MSB |
|---------------------|---------------------------------|----------------------------|---------------------|

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 105    |      |      |     | %Recov |      | 10/28/99      | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Toluene                 | 0.51   | 0.21 | 0.67 |     | ug/l   | Q    | 10/28/99      | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 10/28/99      | MOD 8021B       |

**- Analytical Report -**

|   |   |
|---|---|
| <b>Project Name :</b> JOHNSON SAND & GRAVEL | <b>Client :</b> MORaine ENVIRONMENTAL INC |
| <b>Project Number :</b> #1401               | <b>Report Date :</b> 10/29/99             |
| <b>Field ID :</b> MW-4                      | <b>Collection Date :</b> 10/21/99         |
| <b>Lab Sample Number :</b> 896385-004       | <b>Matrix Type :</b> WATER                |
| <b>WI DNR LAB ID :</b> 405132750            |   |

**Organic Results**

PVOC - WATER

Prep Method: SW846 5030B    Prep Date: 10/25/99    Analyst: MSB

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 103    |      |      |     | %Recov |      | 10/28/99      | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 10/28/99      | MOD 8021B       |



**- Analytical Report -**

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : #1401               | Report Date : 10/29/99             |
| Field ID : MW-5                      | Collection Date : 10/21/99         |
| Lab Sample Number : 896385-005       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

**Organic Results**

PVOC - WATER

Prep Method: SW846 5030B    Prep Date: 10/25/99    Analyst: MSB

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 103    |      |      |     | %Recov |      | 10/28/99      | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 10/28/99      | MOD 8021B       |

**- Analytical Report -**

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORAINÉ ENVIRONMENTAL INC |
| Project Number : #1401               | Report Date : 10/29/99             |
| Field ID : MW-6                      | Collection Date : 10/21/99         |
| Lab Sample Number : 896385-006       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

**Organic Results**

PVOC - WATER

Prep Method: SW846 5030B    Prep Date: 10/25/99    Analyst: MSB

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 103    |      |      |     | %Recov |      | 10/28/99      | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Methyl-tert-butyl-ether | 0.57   | 0.22 | 0.70 |     | ug/l   | Q    | 10/28/99      | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 10/28/99      | MOD 8021B       |

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : #1401  
Field ID : MW-7  
Lab Sample Number : 896385-007  
WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
Report Date : 10/27/99  
Collection Date : 10/21/99  
Matrix Type : WATER

Organic Results

EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030B Prep Date: 10/26/99 Analyst: RJN

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| s-Butylbenzene              | 2.5    | 0.29 | 0.92 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| t-Butylbenzene              | 0.62   | 0.32 | 1.0  |     | ug/L  | Q    | 10/26/99      | SW846 8260B     |
| n-Butylbenzene              | 5.0    | 0.29 | 0.92 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| cis-1,2-Dichloroethene      | 1.1    | 0.28 | 0.89 |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,2-Dichloropropane         | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,1-Dichloroethane          | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 1,3-Dichloropropane         | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/26/99      | SW846 8260B     |
| 2,2-Dichloropropane         | < 0.36 | 0.36 | 1.1  |     | ug/L  |      | 10/26/99      | SW846 8260B     |

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-7  
 Lab Sample Number : 896385-007  
 WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
 Report Date : 10/27/99  
 Collection Date : 10/21/99  
 Matrix Type : WATER

|                           |        |      |      |        |   |          |             |
|---------------------------|--------|------|------|--------|---|----------|-------------|
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L   |   | 10/26/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L   |   | 10/26/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L   |   | 10/26/99 | SW846 8260B |
| Diisopropyl ether         | 0.93   | 0.55 | 1.8  | ug/L   | Q | 10/26/99 | SW846 8260B |
| Ethylbenzene              | 4.5    | 0.32 | 1.0  | ug/L   |   | 10/26/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L   |   | 10/26/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L   |   | 10/26/99 | SW846 8260B |
| Isopropylbenzene          | 1.6    | 0.26 | 0.83 | ug/L   |   | 10/26/99 | SW846 8260B |
| p-Isopropyltoluene        | 6.1    | 0.24 | 0.76 | ug/L   |   | 10/26/99 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L   |   | 10/26/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L   |   | 10/26/99 | SW846 8260B |
| Naphthalene               | 56     | 0.35 | 1.1  | ug/L   |   | 10/26/99 | SW846 8260B |
| n-Propylbenzene           | 1.3    | 0.76 | 2.4  | ug/L   | Q | 10/26/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L   |   | 10/26/99 | SW846 8260B |
| Tetrachloroethene         | 0.84   | 0.43 | 1.4  | ug/L   | Q | 10/26/99 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | 19     | 0.22 | 0.70 | ug/L   |   | 10/26/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L   |   | 10/26/99 | SW846 8260B |
| 1,3,5-Trimethylbenzene    | 14     | 0.27 | 0.86 | ug/L   |   | 10/26/99 | SW846 8260B |
| Vinyl chloride            | < 0.20 | 0.20 | 0.64 | ug/L   |   | 10/26/99 | SW846 8260B |
| Xylenes, -m, -p           | 4.2    | 0.43 | 1.4  | ug/L   |   | 10/26/99 | SW846 8260B |
| Xylene, -o                | 0.84   | 0.24 | 0.76 | ug/L   |   | 10/26/99 | SW846 8260B |
| 4-Bromofluorobenzene      | 94     |      |      | %Recov |   | 10/26/99 | SW846 8260B |
| Dibromofluoromethane      | 93     |      |      | %Recov |   | 10/26/99 | SW846 8260B |
| Toluene-d8                | 93     |      |      | %Recov |   | 10/26/99 | SW846 8260B |

**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : TRIP BLANK

Lab Sample Number : 896385-008

Wisconsin Cert # : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 11/10/99

Collection Date : 10/21/99

Matrix Type : WATER

**Organic Results**

PVOC - WATER

Prep Method: SW846 5030B Prep Date: 10/25/99 Analyst: MSB

| Analyte                 | Result | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 103    | --  | %Recov |      | 10/28/99      | MOD 8021B       |
| Benzene                 | < 1.0  | 1.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| Ethylbenzene            | < 1.0  | 1.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| Methyl-tert-butyl-ether | < 1.0  | 1.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| Toluene                 | < 1.0  | 1.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 2.0  | 2.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 1.0  | 1.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylenes, -m, -p         | < 2.0  | 2.0 | ug/l   |      | 10/28/99      | MOD 8021B       |
| Xylene, -o              | < 1.0  | 1.0 | ug/l   |      | 10/28/99      | MOD 8021B       |

**Organic Results**

SDWA - LOW LEVEL VOLATILE LIST

Prep Method: EPA 524.2 Prep Date: Analyst: \*MD

| Analyte                     | Result | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|-----|-------|------|---------------|-----------------|
| 1,2-Dibromo-3-chloropropane | < 2.0  | 2.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| 1,2-Dibromoethane           | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Methyl-tert-butyl-ether     | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Benzene                     | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Bromobenzene                | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Bromochloromethane          | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Bromodichloromethane        | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Bromoform                   | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Bromomethane                | < 2.0  | 2.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| n-Butylbenzene              | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| s-Butylbenzene              | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| t-Butylbenzene              | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |
| Carbon tetrachloride        | < 1.0  | 1.0 | ug/L  |      | 10/28/99      | EPA 524.2       |

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : TRIP BLANK

Lab Sample Number : 896385-008

Wisconsin Cert # : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 11/10/99

Collection Date : 10/21/99

Matrix Type : WATER

|                           |       |     |      |          |           |
|---------------------------|-------|-----|------|----------|-----------|
| Chlorobenzene             | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Chlorodibromomethane      | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Chloroethane              | < 2.0 | 2.0 | ug/L | 10/28/99 | EPA 524.2 |
| Chloroform                | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Chloromethane             | < 2.0 | 2.0 | ug/L | 10/28/99 | EPA 524.2 |
| 2-Chlorotoluene           | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 4-Chlorotoluene           | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Dibromomethane            | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,2-Dichlorobenzene       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,3-Dichlorobenzene       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,4-Dichlorobenzene       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Dichlorodifluoromethane   | < 2.0 | 2.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,1-Dichloroethane        | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,2-Dichloroethane        | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,1-Dichloroethene        | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| cis-1,2-Dichloroethene    | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| trans-1,2-Dichloroethene  | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,2-Dichloropropane       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,3-Dichloropropane       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 2,2-Dichloropropane       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,1-Dichloropropene       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| cis-1,3-Dichloropropene   | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| trans-1,3-Dichloropropene | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Ethylbenzene              | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Fluorotrichloromethane    | < 2.0 | 2.0 | ug/L | 10/28/99 | EPA 524.2 |
| Hexachlorobutadiene       | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Isopropylbenzene          | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| p-Isopropyltoluene        | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Methylene chloride        | 3.5   | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Naphthalene               | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| n-Propylbenzene           | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| Styrene                   | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,1,2,2-Tetrachloroethane | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |
| 1,1,1,2-Tetrachloroethane | < 1.0 | 1.0 | ug/L | 10/28/99 | EPA 524.2 |

**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : TRIP BLANK**

**Lab Sample Number : 896385-008**

**Wisconsin Cert # : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 11/10/99**

**Collection Date : 10/21/99**

**Matrix Type : WATER**

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|                        |       |     |        |          |           |
|------------------------|-------|-----|--------|----------|-----------|
| Tetrachloroethene      | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| Toluene                | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,2,4-Trichlorobenzene | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,2,3-Trichlorobenzene | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,1,1-Trichloroethane  | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,1,2-Trichloroethane  | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| Trichloroethene        | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,2,3-Trichloropropane | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,2,4-Trimethylbenzene | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,3,5-Trimethylbenzene | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| Vinyl chloride         | < 2.0 | 2.0 | ug/L   | 10/28/99 | EPA 524.2 |
| Xylenes, -m, -p        | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| Xylene, -o             | < 1.0 | 1.0 | ug/L   | 10/28/99 | EPA 524.2 |
| 1,2-Dichlorobenzene-d4 | 106   | --  | %Recov | 10/28/99 | EPA 524.2 |
| 4-Bromofluorobenzene   | 103   | --  | %Recov | 10/28/99 | EPA 524.2 |

- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : PRIVATE WELL

Lab Sample Number : 896385-009

Wisconsin Cert # : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 11/10/99

Collection Date : 10/21/99

Matrix Type : WATER

Organic Results

SDWA - LOW LEVEL VOLATILE LIST

Prep Method: EPA 524.2

Prep Date:

Analyst: \*MD

| Analyte                     | Result | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|-----|-------|------|---------------|-----------------|
| 1,2-Dibromoethane           | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Methyl-tert-butyl-ether     | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,2-Dibromo-3-chloropropane | < 2.0  | 2.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Benzene                     | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Bromobenzene                | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Bromochloromethane          | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Bromodichloromethane        | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Bromoform                   | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Bromomethane                | < 2.0  | 2.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| n-Butylbenzene              | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| s-Butylbenzene              | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| t-Butylbenzene              | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Carbon tetrachloride        | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Chlorobenzene               | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Chlorodibromomethane        | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Chloroethane                | < 2.0  | 2.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Chloroform                  | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Chloromethane               | < 2.0  | 2.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 2-Chlorotoluene             | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 4-Chlorotoluene             | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Dibromomethane              | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,2-Dichlorobenzene         | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,3-Dichlorobenzene         | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,4-Dichlorobenzene         | 2.8    | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| Dichlorodifluoromethane     | < 2.0  | 2.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,1-Dichloroethane          | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,2-Dichloroethane          | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |
| 1,1-Dichloroethene          | < 1.0  | 1.0 | ug/L  |      | 11/2/99       | EPA 524.2       |



- Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : PRIVATE WELL

Lab Sample Number : 896385-009

Wisconsin Cert # : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 11/10/99

Collection Date : 10/21/99

Matrix Type : WATER

|                           |       |     |        |         |           |
|---------------------------|-------|-----|--------|---------|-----------|
| cis-1,2-Dichloroethene    | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| trans-1,2-Dichloroethene  | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,2-Dichloropropane       | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,3-Dichloropropane       | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 2,2-Dichloropropane       | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,1-Dichloropropene       | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| cis-1,3-Dichloropropene   | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| trans-1,3-Dichloropropene | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Ethylbenzene              | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Fluorotrichloromethane    | < 2.0 | 2.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Hexachlorobutadiene       | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Isopropylbenzene          | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| p-Isopropyltoluene        | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Methylene chloride        | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Naphthalene               | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| n-Propylbenzene           | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Styrene                   | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,1,2,2-Tetrachloroethane | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,1,1,2-Tetrachloroethane | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Tetrachloroethene         | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Toluene                   | 1.1   | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,2,4-Trichlorobenzene    | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,2,3-Trichlorobenzene    | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,1,1-Trichloroethane     | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,1,2-Trichloroethane     | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Trichloroethene           | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,2,3-Trichloropropane    | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,2,4-Trimethylbenzene    | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,3,5-Trimethylbenzene    | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Vinyl chloride            | < 2.0 | 2.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Xylenes, -m, -p           | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| Xylene, -o                | < 1.0 | 1.0 | ug/L   | 11/2/99 | EPA 524.2 |
| 1,2-Dichlorobenzene-d4    | 99    | —   | %Recov | 11/2/99 | EPA 524.2 |
| 4-Bromofluorobenzene      | 96    | —   | %Recov | 11/2/99 | EPA 524.2 |

Company Name: MET  
 Branch or Location: GRANTON  
 Project Contact: TOM DUEPPEN  
 Telephone: 377-9060  
 Project Number: # 1401  
 Project Name: JOHNSON SAND & GRAVEL  
 Project State: NB WISCONSIN JOHNSON RD WISCONSIN  
 Sampled By (Print): BRADY DURKEE  
 Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NR  
 Other



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 FAX 715-392-5843

# CHAIN OF CUSTODY

85451

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: TOM DUEPPEN

Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Invoice To: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Mail Invoice To: \_\_\_\_\_

FILTERED? (YES/NO) N X  
 PRESERVATION (CODE)\* B B

ANALYSES REQUESTED  
VOC  
PIG

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |      | FIELD SCREEN | MATRIX | SHADED AREA FOR LABORATORY USE ONLY |               |          |                   |
|----------|--------------------|------------|------|--------------|--------|-------------------------------------|---------------|----------|-------------------|
|          |                    | DATE       | TIME |              |        | GOOD COND.                          | TOTAL BOTTLES | COMMENTS | LABORATORY NUMBER |
| 1        | MW-1               | 10/21/99   | PM   | X            |        | X                                   | 3             |          | 001               |
| 2        | MW-2               |            | PM   | X            |        |                                     |               |          | 002               |
| 3        | MW-3               |            | PM   | X            |        |                                     |               |          | 003               |
| 4        | MW-4               |            | AM   | X            |        |                                     |               |          | 004               |
| 5        | MW-5               |            | AM   | X            |        |                                     |               |          | 005               |
| 6        | MW-6               |            | AM   | X            |        |                                     |               |          | 006               |
| 7        | MW-7               |            | PM   | X            |        |                                     |               |          | 007               |
| TB       | TRIP BLANK         |            | AM   | X            |        |                                     | 2             |          | 008               |
| PW       | private well       |            | PM   | X            |        |                                     | 3             |          | 009               |

**\*Preservation Code**  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)

\*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

|                                     |                               |                                 |                                 |   |
|-------------------------------------|-------------------------------|---------------------------------|---------------------------------|---|
| Relinquished By: <u>B. DURKEE</u>   | Date/Time: <u>10/21/99</u>    | Received By: <u>[Signature]</u> | Date/Time: <u>10/23/99 9:00</u> | En Chem Project No. <u>896385</u>       |
| Relinquished By: <u>[Signature]</u> | Date/Time: <u>10/23/99</u>    | Received By: <u>[Signature]</u> | Date/Time: <u>10/23/99</u>      | Sample Receipt Temp. <u>[Signature]</u> |
| Relinquished By: <u>[Signature]</u> | Date/Time: <u>10/23/99</u>    | Received By: <u>[Signature]</u> | Date/Time: <u>[Signature]</u>   | Sample Receipt pH (Wet/Metals)          |
| Relinquished By: <u>[Signature]</u> | Date/Time: <u>[Signature]</u> | Received By: <u>[Signature]</u> | Date/Time: <u>10/22/99</u>      | Custody Seal                            |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Client: MORaine ENVIRONMENTAL INC

WI DNR LAB ID : 405132750

| Sample No. | Field ID | Collection Date | Sample No. | Field ID | Collection Date |
|------------|----------|-----------------|------------|----------|-----------------|
| 894041-001 | MW-2     | 7/19/99         |            |          |                 |
| 894041-002 | MW-3     | 7/19/99         |            |          |                 |
| 894041-003 | MW-4     | 7/19/99         |            |          |                 |
| 894041-004 | MW-5     | 7/19/99         |            |          |                 |
| 894041-005 | MW-6     | 7/19/99         |            |          |                 |
| 894041-006 | MW-7     | 7/19/99         |            |          |                 |
| 894041-007 | TB       | 7/19/99         |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duranceau  
Approval Signature

7/29/99  
Date



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---

| Lab#:              | TestGroupID: | Comment:   |
|--------------------|--------------|--|
| 894041-006<br>MW-7 | PAHLC-W      | Surrogate recoveries not available due to high dilution of sample. |
|                    | GRO-W        | Late peaks were present outside of window.                         |

# Documentation of Subcontracted Analysis

Listed below are the labs used for subcontracted analysis and associated FID number.

| Code | Laboratory  | Wisconsin FID Number |
|------|---|----------------------|
| *MD  | En Chem Madison                                   | 113172950            |
| *GB  | En Chem Green Bay                                 | 405132750            |
| *SP  | En Chem Superior                                  | 816079330            |
| *RL  | Robert E. Lee                                     | 405043870            |
| *NL  | Northern Lakes Service                            | 721026460            |
| *SF  | Sommer - Frey                                     | 241249360            |
| *CT  | Commonwealth Tech.                                | 157066030            |
| *QO  | Quanterra - North Canton, OH                      | 999518190            |
| *QP  | Quanterra - Pittsburgh, PA                        | 998027800            |
| *KM  | Kemron - Marietta, OH                             | 998202040            |
| *SUB | Indicates analysis that requires no certification |                      |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-2  
 Lab Sample Number : 894041-001  
 WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
 Report Date : 7/22/99  
 Collection Date : 7/19/99  
 Matrix Type : WATER

**Organic Results**

| PAH (HPLC) LIST - SEMIVOLATILES |          |        | Prep Method: SW846 3510 |     |        |      | Prep Date: 7/21/99 | Analyst: ARO    |
|---------------------------------|----------|--------|-------------------------|-----|--------|------|--------------------|-----------------|
| Analyte                         | Result   | LOD    | LOQ                     | EQL | Units  | Code | Analysis Date      | Analysis Method |
| Acenaphthene                    | < 0.47   | 0.47   | 1.5                     |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Acenaphthylene                  | < 0.41   | 0.41   | 1.3                     |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Anthracene                      | < 0.021  | 0.021  | 0.067                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Benzo(a)anthracene              | < 0.014  | 0.014  | 0.045                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Benzo(a)pyrene                  | < 0.015  | 0.015  | 0.048                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Benzo(b)fluoranthene            | < 0.015  | 0.015  | 0.048                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Benzo(g,h,i)perylene            | < 0.021  | 0.021  | 0.067                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Benzo(k)fluoranthene            | < 0.0090 | 0.0090 | 0.029                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Chrysene                        | < 0.016  | 0.016  | 0.051                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Dibenzo(a,h)anthracene          | < 0.020  | 0.020  | 0.064                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Fluoranthene                    | < 0.015  | 0.015  | 0.048                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Fluorene                        | < 0.058  | 0.058  | 0.18                    |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Indeno(1,2,3-cd)pyrene          | < 0.025  | 0.025  | 0.080                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| 1-Methylnaphthalene             | < 0.36   | 0.36   | 1.1                     |     | ug/L   |      | 7/22/99            | SW846 8310      |
| 2-Methylnaphthalene             | < 0.36   | 0.36   | 1.1                     |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Naphthalene                     | < 0.42   | 0.42   | 1.3                     |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Phenanthrene                    | < 0.046  | 0.046  | 0.15                    |     | ug/L   |      | 7/22/99            | SW846 8310      |
| Pyrene                          | < 0.017  | 0.017  | 0.054                   |     | ug/L   |      | 7/22/99            | SW846 8310      |
| 9,10-Diphenylanthracene         | 109      |        |                         |     | %Recov |      | 7/22/99            | SW846 8310      |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-3  
 Lab Sample Number : 894041-002  
 WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
 Report Date : 7/22/99  
 Collection Date : 7/19/99  
 Matrix Type : WATER

**Organic Results**

PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510    Prep Date: 7/21/99    Analyst: ARO

| Analyte                 | Result   | LOD    | LOQ   | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|----------|--------|-------|-----|--------|------|---------------|-----------------|
| Acenaphthene            | < 0.47   | 0.47   | 1.5   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Acenaphthylene          | < 0.41   | 0.41   | 1.3   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Anthracene              | < 0.021  | 0.021  | 0.067 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Benzo(a)anthracene      | < 0.014  | 0.014  | 0.045 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Benzo(a)pyrene          | < 0.015  | 0.015  | 0.048 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Benzo(b)fluoranthene    | < 0.015  | 0.015  | 0.048 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Benzo(g,h,i)perylene    | < 0.021  | 0.021  | 0.067 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Benzo(k)fluoranthene    | < 0.0090 | 0.0090 | 0.029 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Chrysene                | < 0.016  | 0.016  | 0.051 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Dibenzo(a,h)anthracene  | < 0.020  | 0.020  | 0.064 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Fluoranthene            | < 0.015  | 0.015  | 0.048 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Fluorene                | < 0.058  | 0.058  | 0.18  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Indeno(1,2,3-cd)pyrene  | < 0.025  | 0.025  | 0.080 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 1-Methylnaphthalene     | < 0.36   | 0.36   | 1.1   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 2-Methylnaphthalene     | < 0.36   | 0.36   | 1.1   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Naphthalene             | < 0.42   | 0.42   | 1.3   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Phenanthrene            | < 0.046  | 0.046  | 0.15  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Pyrene                  | < 0.017  | 0.017  | 0.054 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 9,10-Diphenylanthracene | 104      |        |       |     | %Recov |      | 7/22/99       | SW846 8310      |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** #1401  
**Field ID :** MW-4  
**Lab Sample Number :** 894041-003  
**WI DNR L&B ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 7/29/99  
**Collection Date :** 7/19/99  
**Matrix Type :** WATER

### Inorganic Results

| Test             | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Prep Method | Analysis Method | Analys |
|------------------|--------|-----|-----|-----|-------|------|---------------|-------------|-----------------|--------|
| Lead - Dissolved | 3.0    | 2.8 | 8.9 |     | ug/L  | Q    | 7/26/99       | SW846 6010B | SW846 6010B     | *MD    |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO    Prep Date: 7/20/99    Analyst: MWM

| Analyte                   | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50   | ug/l   |      | 7/22/99       | Wi MOD GRO      |
| Blank Spike               | 101    |     |     | 1.00 | %Recov |      | 7/22/99       | Wi MOD GRO      |
| Blank Spike Duplicate     | 96     |     |     | 1.0  | %Recov |      | 7/22/99       | Wi MOD GRO      |
| Blank                     | < 50   |     |     | 50   | ug/l   |      | 7/22/99       | Wi MOD GRO      |

### Organic Results

#### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510    Prep Date: 7/21/99    Analyst: ARO

| Analyte                | Result   | LOD    | LOQ   | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|----------|--------|-------|-----|-------|------|---------------|-----------------|
| Acenaphthene           | < 0.47   | 0.47   | 1.5   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Acenaphthylene         | < 0.41   | 0.41   | 1.3   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Anthracene             | < 0.021  | 0.021  | 0.067 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(a)anthracene     | < 0.014  | 0.014  | 0.045 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(a)pyrene         | < 0.015  | 0.015  | 0.048 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(b)fluoranthene   | < 0.015  | 0.015  | 0.048 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(g,h,i)perylene   | < 0.021  | 0.021  | 0.067 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(k)fluoranthene   | < 0.0090 | 0.0090 | 0.029 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Chrysene               | < 0.016  | 0.016  | 0.051 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Dibenzo(a,h)anthracene | < 0.020  | 0.020  | 0.064 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Fluoranthene           | < 0.015  | 0.015  | 0.048 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Fluorene               | < 0.058  | 0.058  | 0.18  |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Indeno(1,2,3-cd)pyrene | < 0.025  | 0.025  | 0.080 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| 1-Methylnaphthalene    | < 0.36   | 0.36   | 1.1   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| 2-Methylnaphthalene    | < 0.36   | 0.36   | 1.1   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Naphthalene            | < 0.42   | 0.42   | 1.3   |     | ug/L  |      | 7/22/99       | SW846 8310      |





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : #1401  
Field ID : MW-4  
Lab Sample Number : 894041-003  
WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
Report Date : 7/29/99  
Collection Date : 7/19/99  
Matrix Type : WATER

|                         |         |       |       |        |         |            |
|-------------------------|---------|-------|-------|--------|---------|------------|
| Phenanthrene            | < 0.046 | 0.046 | 0.15  | ug/L   | 7/22/99 | SW846 8310 |
| Pyrene                  | < 0.017 | 0.017 | 0.054 | ug/L   | 7/22/99 | SW846 8310 |
| 9,10-Diphenylanthracene | 109     |       |       | %Recov | 7/22/99 | SW846 8310 |

### Organic Results

#### PVOC - WATER

Prep Method: SW846 5030B Prep Date: 7/20/99 Analyst: MWM

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 100    |      |      |     | %Recov |      | 7/22/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 7/22/99       | MOD 8021B       |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : #1401               | Report Date : 7/22/99              |
| Field ID : MW-5                      | Collection Date : 7/19/99          |
| Lab Sample Number : 894041-004       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

### Organic Results

| PAH (HPLC) LIST - SEMIVOLATILES |          |        | Prep Method: SW846 3510 |     |        | Prep Date: 7/21/99 |               | Analyst: ARO    |  |
|---------------------------------|----------|--------|-------------------------|-----|--------|--------------------|---------------|-----------------|--|
| Analyte                         | Result   | LOD    | LOQ                     | EQL | Units  | Code               | Analysis Date | Analysis Method |  |
| Acenaphthene                    | < 0.47   | 0.47   | 1.5                     |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Acenaphthylene                  | < 0.41   | 0.41   | 1.3                     |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Anthracene                      | < 0.021  | 0.021  | 0.067                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Benzo(a)anthracene              | < 0.014  | 0.014  | 0.045                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Benzo(a)pyrene                  | < 0.015  | 0.015  | 0.048                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Benzo(b)fluoranthene            | < 0.015  | 0.015  | 0.048                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Benzo(g,h,i)perylene            | < 0.021  | 0.021  | 0.067                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Benzo(k)fluoranthene            | < 0.0090 | 0.0090 | 0.029                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Chrysene                        | < 0.016  | 0.016  | 0.051                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Dibenzo(a,h)anthracene          | < 0.020  | 0.020  | 0.064                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Fluoranthene                    | 0.021    | 0.015  | 0.048                   |     | ug/L   | Q                  | 7/22/99       | SW846 8310      |  |
| Fluorene                        | < 0.058  | 0.058  | 0.18                    |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Indeno(1,2,3-cd)pyrene          | < 0.025  | 0.025  | 0.080                   |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| 1-Methylnaphthalene             | < 0.36   | 0.36   | 1.1                     |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| 2-Methylnaphthalene             | < 0.36   | 0.36   | 1.1                     |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Naphthalene                     | < 0.42   | 0.42   | 1.3                     |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Phenanthrene                    | < 0.046  | 0.046  | 0.15                    |     | ug/L   |                    | 7/22/99       | SW846 8310      |  |
| Pyrene                          | 0.018    | 0.017  | 0.054                   |     | ug/L   | Q                  | 7/22/99       | SW846 8310      |  |
| 9,10-Diphenylanthracene         | 87.5     |        |                         |     | %Recov |                    | 7/22/99       | SW846 8310      |  |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-6  
 Lab Sample Number : 894041-005  
 WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC  
 Report Date : 7/22/99  
 Collection Date : 7/19/99  
 Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO    Prep Date: 7/21/99    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100  | ug/l   |      | 7/21/99       | Wi MOD DRO      |
| Blank spike           | 89     |     |     | 25   | %Recov |      | 7/21/99       | Wi MOD DRO      |
| Blank spike duplicate | 101    |     |     | 25.0 | %Recov |      | 7/21/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50   | ug/l   |      | 7/21/99       | Wi MOD DRO      |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO    Prep Date: 7/20/99    Analyst: MWM

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 7/22/99       | Wi MOD GRO      |
| Blank Spike             | 101    |     |     | 1.00 | %Recov |      | 7/22/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 96     |     |     | 1.0  | %Recov |      | 7/22/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 7/22/99       | Wi MOD GRO      |

### Organic Results

#### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510    Prep Date: 7/21/99    Analyst: ARO

| Analyte                | Result   | LOD    | LOQ   | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|----------|--------|-------|-----|-------|------|---------------|-----------------|
| Acenaphthene           | < 0.47   | 0.47   | 1.5   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Acenaphthylene         | < 0.41   | 0.41   | 1.3   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Anthracene             | < 0.021  | 0.021  | 0.067 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(a)anthracene     | < 0.014  | 0.014  | 0.045 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(a)pyrene         | < 0.015  | 0.015  | 0.048 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(b)fluoranthene   | < 0.015  | 0.015  | 0.048 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(g,h,i)perylene   | < 0.021  | 0.021  | 0.067 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(k)fluoranthene   | < 0.0090 | 0.0090 | 0.029 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Chrysene               | < 0.016  | 0.016  | 0.051 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Dibenzo(a,h)anthracene | < 0.020  | 0.020  | 0.064 |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Fluoranthene           | < 0.015  | 0.015  | 0.048 |     | ug/L  |      | 7/22/99       | SW846 8310      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Client : MORAIN ENVIRONMENTAL INC

Field ID : MW-6

Report Date : 7/22/99

Lab Sample Number : 894041-005

Collection Date : 7/19/99

WI DNR LAB ID : 405132750

Matrix Type : WATER

| Analyte                 | Result  | L0D   | L0Q   | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|---------|-------|-------|-----|--------|------|---------------|-----------------|
| Fluorene                | < 0.058 | 0.058 | 0.18  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Indeno(1,2,3-cd)pyrene  | < 0.025 | 0.025 | 0.080 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 1-Methylnaphthalene     | < 0.36  | 0.36  | 1.1   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 2-Methylnaphthalene     | < 0.36  | 0.36  | 1.1   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Naphthalene             | < 0.42  | 0.42  | 1.3   |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Phenanthrene            | < 0.046 | 0.046 | 0.15  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Pyrene                  | < 0.017 | 0.017 | 0.054 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 9,10-Diphenylanthracene | 109     |       |       |     | %Recov |      | 7/22/99       | SW846 8310      |

### Organic Results

PVOC - WATER

Prep Method: SW846 5030B

Prep Date: 7/20/99

Analyst: MWM

| Analyte                 | Result | L0D  | L0Q  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 101    |      |      |     | %Recov |      | 7/22/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 7/22/99       | MOD 8021B       |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-7  
 Lab Sample Number : 894041-006  
 WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC  
 Report Date : 7/29/99  
 Collection Date : 7/19/99  
 Matrix Type : WATER

### Inorganic Results

| Test             | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Prep Method | Analysis Method | Analys |
|------------------|--------|-----|-----|-----|-------|------|---------------|-------------|-----------------|--------|
| Lead - Dissolved | < 2.8  | 2.8 | 8.9 |     | ug/L  |      | 7/26/99       | SW846 6010B | SW846 6010B     | *MD    |

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO    Prep Date: 7/21/99    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL   | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 310000 |     |     | 10000 | ug/l   |      | 7/21/99       | Wi MOD DRO      |
| Blank spike           | 89     |     |     | 25    | %Recov |      | 7/21/99       | Wi MOD DRO      |
| Blank spike duplicate | 101    |     |     | 25.0  | %Recov |      | 7/21/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50    | ug/l   |      | 7/21/99       | Wi MOD DRO      |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO    Prep Date: 7/20/99    Analyst: MWM

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 790    |     |     | 50   | ug/l   |      | 7/22/99       | Wi MOD GRO      |
| Blank Spike             | 101    |     |     | 1.00 | %Recov |      | 7/22/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 96     |     |     | 1.0  | %Recov |      | 7/22/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 7/22/99       | Wi MOD GRO      |

### Organic Results

#### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510    Prep Date: 7/21/99    Analyst: ARO

| Analyte              | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|----------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Acenaphthene         | 32     | 9.4  | 30   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Acenaphthylene       | < 8.2  | 8.2  | 26   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Anthracene           | < 10   | 10   | 32   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(a)anthracene   | 32     | 7.0  | 22   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(a)pyrene       | 0.54   | 0.30 | 0.96 |     | ug/L  | Q    | 7/22/99       | SW846 8310      |
| Benzo(b)fluoranthene | < 7.5  | 7.5  | 24   |     | ug/L  |      | 7/22/99       | SW846 8310      |
| Benzo(g,h,i)perylene | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 7/22/99       | SW846 8310      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : MW-7

Lab Sample Number : 894041-006

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 7/29/99

Collection Date : 7/19/99

Matrix Type : WATER

| Compound                | Result | LOD  | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|-----|-----|--------|------|---------------|-----------------|
| Benzo(k)fluoranthene    | < 0.90 | 0.90 | 2.9 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Chrysene                | 38     | 8.0  | 25  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Dibenzo(a,h)anthracene  | < 2.0  | 2.0  | 6.4 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Fluoranthene            | < 7.5  | 7.5  | 24  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Fluorene                | 31     | 5.8  | 18  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Indeno(1,2,3-cd)pyrene  | < 0.50 | 0.50 | 1.6 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 1-Methylnaphthalene     | 180    | 36   | 110 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| 2-Methylnaphthalene     | 230    | 36   | 110 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Naphthalene             | 44     | 8.4  | 27  |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Phenanthrene            | 370    | 46   | 150 |     | ug/L   |      | 7/22/99       | SW846 8310      |
| Pyrene                  | 22     | 8.5  | 27  |     | ug/L   | Q    | 7/22/99       | SW846 8310      |
| 9,10-Diphenylanthracene | NA     |      |     |     | %Recov |      | 7/22/99       | SW846 8310      |

### Organic Results

#### PVOC - WATER

Prep Method: SW846 5030B

Prep Date: 7/20/99

Analyst: MWM

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 103    |      |      |     | %Recov |      | 7/22/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Ethylbenzene            | 9.2    | 0.24 | 0.76 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | 0.48   | 0.22 | 0.70 |     | ug/l   | Q    | 7/22/99       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | 12     | 0.54 | 1.7  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | 30     | 0.86 | 2.7  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Xylenes, -m, -p         | 6.9    | 0.97 | 3.1  |     | ug/l   |      | 7/22/99       | MOD 8021B       |
| Xylene, -o              | 0.68   | 0.37 | 1.2  |     | ug/l   | Q    | 7/22/99       | MOD 8021B       |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : TB

Lab Sample Number : 894041-007

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 7/22/99

Collection Date : 7/19/99

Matrix Type : WATER

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO    Prep Date: 7/20/99    Analyst: MWM

| Analyte                   | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50   | ug/l   |      | 7/21/99       | Wi MOD GRO      |
| Blank Spike               | 101    |     |     | 1.00 | %Recov |      | 7/21/99       | Wi MOD GRO      |
| Blank Spike Duplicate     | 96     |     |     | 1.0  | %Recov |      | 7/21/99       | Wi MOD GRO      |
| Blank                     | < 50   |     |     | 50   | ug/l   |      | 7/21/99       | Wi MOD GRO      |

**Organic Results**

**PVOC - WATER**

Prep Method: SW846 5030B    Prep Date: 7/20/99    Analyst: MWM

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 100    |      |      |     | %Recov |      | 7/21/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 7/21/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 7/21/99       | MOD 8021B       |

Company Name: MES  
 Branch or Location: Johnson  
 Project Contact: Tom Dypjen  
 Telephone: 577-9060  
 Project Number: # 1401  
 Project Name: JOHNSON Sand & gravel  
 Project State: WI Johnson rd Timaru (5th)  
 Sampled By (Print): \_\_\_\_\_  
 Regulatory Program (circle):  UST  RCRA  CLP  SDWA  
 NPDES/WPDES  CAA  NR  
 Other: \_\_\_\_\_



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525 Science Drive  
 Madison, WI 53711  
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 FAX: 608-233-0502

1423 N. 8th Street, Suite 122  
 Superior, WI 54880  
 715-392-5844 • 1-800-837-8238  
 FAX 715-392-5843

# CHAIN OF CUSTODY

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: Tom Dypjen

Company: MES

Address: 1234 1st Ave

Johnson rd

Invoice To: \_\_\_\_\_

Company: \_\_\_\_\_

Address: 1234 1st Ave

Mail Invoice To: \_\_\_\_\_

FILTERED? (YES/NO) N Y U W N  
 PRESERVATION (CODE)\* A D E F B

ANALYSES REQUESTED  
WASH  
1300A  
1400L  
DRB  
CDC

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |      | FIELD SCREEN | MATRIX | GOOD COND. | TOTAL BOTTLES | COMMENTS | LABORATORY NUMBER |
|----------|--------------------|------------|------|--------------|--------|------------|---------------|----------|-------------------|
|          |                    | DATE       | TIME |              |        |            |               |          |                   |
| 1        | 10/1/97            | 7-17-97    | AM   | X            | W      | ✓          | 1             |          | 001               |
| 2        | 10/1/97            |            | AM   | X            | W      | ✓          | 1             |          | 002               |
| 3        | 10/1/97            |            | AM   | X            | W      | ✓          | 1             | 1.250ml  | 003               |
| 4        | 10/1/97            |            | AM   | X            | W      | ✓          | 1             | 4.40ml   | 004               |
| 5        | 10/1/97            |            | AM   | X            | W      | ✓          | 1             | 4.40ml   | 005               |
| 6        | 10/1/97            |            | AM   | X            | W      | ✓          | 1             | 1.250ml  | 006               |
| 7        | 10/1/97            |            | AM   | X            | W      | ✓          | 1             | 2.40ml   | 007               |

**\*Preservation Code**  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)

**\*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.**

|                                    |                                 |                                |                                 |   |
|------------------------------------|---------------------------------|--------------------------------|---------------------------------|---|
| Relinquished By: <u>Tom Dypjen</u> | Date/Time: <u>7/19/97 8:00</u>  | Received By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | En Chem Project No. <u>894041</u>         |
| Relinquished By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | Received By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | Sample Receipt Temp. <u>ROE</u>           |
| Relinquished By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | Received By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | Sample Receipt pH (Wet/Metals) <u>7.0</u> |
| Relinquished By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | Received By: <u>Tom Dypjen</u> | Date/Time: <u>7/20/97 12:00</u> | Custody Seal                              |





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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

WI DNR LAB ID : 405132750

Client: MORaine ENVIRONMENTAL INC

Report Date : 5/7/99

| Sample No. | Field ID     | Collection Date | Sample No. | Field ID | Collection Date |
|------------|--------------|-----------------|------------|----------|-----------------|
| 891836-001 | MW-1         | 4/15/99         |            |          |                 |
| 891836-002 | MW-2         | 4/15/99         |            |          |                 |
| 891836-003 | MW-3         | 4/15/99         |            |          |                 |
| 891836-004 | MW-4         | 4/15/99         |            |          |                 |
| 891836-005 | MW-5         | 4/15/99         |            |          |                 |
| 891836-006 | MW-6         | 4/15/99         |            |          |                 |
| 891836-007 | MW-7         | 4/15/99         |            |          |                 |
| 891836-008 | PRIVATE WELL | 4/15/99         |            |          |                 |
| 891836-009 | TRIP BLANK   | 4/15/99         |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Durandean  
Approval Signature

5/7/99  
Date



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| Lab#:              | TestGroupID: | Comment:   |
|--------------------|--------------|--|
| 891836-            | 8260+-W      | Methylene chloride is present in the laboratory environment. Detects should be considered suspect. |
| 891836-001<br>MW-1 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.             |
|                    | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.        |
| 891836-006<br>MW-6 | GRO-W        | Reported concentration due to early unidentified peaks in window.                                  |
| 891836-007<br>MW-7 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.             |
|                    | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.        |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : 1401  
 Field ID : MW-1  
 Lab Sample Number : 891836-001  
 WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
 Report Date : 5/7/99  
 Collection Date : 4/15/99  
 Matrix Type : WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

Prep Method: WI MOD DRO    Prep Date: 4/19/99    Analyst: DJB

| Analyte               | Result  | LOD | LOQ | EQL   | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|---------|-----|-----|-------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 1500000 |     |     | 80000 | ug/l   |      | 4/19/99       | WI MOD DRO      |
| Blank spike           | 88      |     |     | 25    | %Recov |      | 4/19/99       | WI MOD DRO      |
| Blank spike duplicate | 95      |     |     | 25    | %Recov |      | 4/19/99       | WI MOD DRO      |
| Blank                 | < 50    |     |     | 50    | ug/l   |      | 4/19/99       | WI MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

Prep Method: SW846 5030B    Prep Date: 4/20/99    Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| s-Butylbenzene              | 9.1    | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| t-Butylbenzene              | 0.57   | 0.32 | 1.0  |     | ug/L  | Q    | 4/20/99       | SW846 8260B     |
| n-Butylbenzene              | 8.8    | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Client :** MORaine ENVIRONMENTAL INC

**Field ID :** MW-1

**Report Date :** 5/7/99

**Lab Sample Number :** 891836-001

**Collection Date :** 4/15/99

**WI DNR LAB ID :** 405132750

**Matrix Type :** WATER

|                           |        |      |      |      |   |         |             |
|---------------------------|--------|------|------|------|---|---------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| cis-1,2-Dichloroethene    | 32     | 0.28 | 0.89 | ug/L |   | 4/20/99 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |   | 4/20/99 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |   | 4/20/99 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |   | 4/20/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Diisopropyl ether         | 52     | 0.55 | 1.8  | ug/L |   | 4/20/99 | SW846 8260B |
| Ethylbenzene              | 3.8    | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |   | 4/20/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Isopropylbenzene          | 4.8    | 0.26 | 0.83 | ug/L |   | 4/20/99 | SW846 8260B |
| p-Isopropyltoluene        | 6.1    | 0.24 | 0.76 | ug/L |   | 4/20/99 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | 0.43   | 0.32 | 1.0  | ug/L | Q | 4/20/99 | SW846 8260B |
| Naphthalene               | 32     | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| n-Propylbenzene           | 4.9    | 0.76 | 2.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |   | 4/20/99 | SW846 8260B |
| Tetrachloroethene         | 1.1    | 0.43 | 1.4  | ug/L | Q | 4/20/99 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | 6.3    | 0.22 | 0.70 | ug/L |   | 4/20/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L |   | 4/20/99 | SW846 8260B |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-1

Lab Sample Number : 891836-001

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 5/7/99

Collection Date : 4/15/99

Matrix Type : WATER

| Analyte                | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| 1,3,5-Trimethylbenzene | 12     | 0.27 | 0.86 |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| Vinyl chloride         | 0.36   | 0.20 | 0.64 |     | ug/L   | Q    | 4/20/99       | SW846 8260B     |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| Xylene, -o             | 0.77   | 0.24 | 0.76 |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| 4-Bromofluorobenzene   | 100    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |
| Dibromofluoromethane   | 108    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |
| Toluene-d8             | 110    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO    Prep Date: 4/19/99    Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 700    |     |     | 50  | ug/l   |      | 4/20/99       | Wi MOD GRO      |
| Blank Spike             | 96     |     |     | 1.0 | %Recov |      | 4/20/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 98     |     |     | 1.0 | %Recov |      | 4/20/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50  | ug/l   |      | 4/20/99       | Wi MOD GRO      |

### Organic Results

#### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510    Prep Date: 4/19/99    Analyst: ARO

| Analyte                | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Acenaphthene           | 990    | 140  | 450  |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Acenaphthylene         | < 120  | 120  | 380  |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Anthracene             | < 420  | 420  | 1300 |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Benzo(a)anthracene     | 670    | 280  | 890  |     | ug/L  | Q    | 5/7/99        | SW846 8310      |
| Benzo(a)pyrene         | 9.9    | 4.5  | 14   |     | ug/L  | Q    | 5/7/99        | SW846 8310      |
| Benzo(b)fluoranthene   | 140    | 15   | 48   |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Benzo(g,h,i)perylene   | < 6.3  | 6.3  | 20   |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Benzo(k)fluoranthene   | < 2.7  | 2.7  | 8.6  |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Chrysene               | 1100   | 320  | 1000 |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Dibenzo(a,h)anthracene | < 20   | 20   | 64   |     | ug/L  |      | 5/7/99        | SW846 8310      |
| Fluoranthene           | 83     | 75   | 240  |     | ug/L  | Q    | 5/7/99        | SW846 8310      |
| Fluorene               | 700    | 290  | 920  |     | ug/L  | Q    | 5/7/99        | SW846 8310      |
| Indeno(1,2,3-cd)pyrene | 9.8    | 7.5  | 24   |     | ug/L  | Q    | 5/7/99        | SW846 8310      |
| 1-Methylnaphthalene    | 7300   | 1800 | 5700 |     | ug/L  |      | 5/7/99        | SW846 8310      |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Field ID : MW-1**

**Lab Sample Number : 891836-001**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 5/7/99**

**Collection Date : 4/15/99**

**Matrix Type : WATER**

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|                         |       |      |      |        |        |            |
|-------------------------|-------|------|------|--------|--------|------------|
| 2-Methylnaphthalene     | 8800  | 1800 | 5700 | ug/L   | 5/7/99 | SW846 8310 |
| Naphthalene             | 420   | 130  | 410  | ug/L   | 5/7/99 | SW846 8310 |
| Phenanthrene            | 14000 | 1800 | 5700 | ug/L   | 5/7/99 | SW846 8310 |
| Pyrene                  | 410   | 85   | 270  | ug/L   | 5/7/99 | SW846 8310 |
| 9,10-Diphenylanthracene | NA    |      |      | %Recov | 5/7/99 | SW846 8310 |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 1401  
**Field ID :** MW-2  
**Lab Sample Number :** 891836-002  
**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 4/21/99  
**Collection Date :** 4/15/99  
**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD DRO **Prep Date:** 4/19/99 **Analyst:** DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 4/19/99       | Wi MOD DRO      |
| Blank spike           | 88     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank spike duplicate | 95     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 4/19/99       | Wi MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

**Prep Method:** SW846 5030B **Prep Date:** 4/20/99 **Analyst:** HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Field ID : MW-2**

**Lab Sample Number : 891836-002**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 4/21/99**

**Collection Date : 4/15/99**

**Matrix Type : WATER**

|                           |        |      |      |      |   |         |             |
|---------------------------|--------|------|------|------|---|---------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L |   | 4/20/99 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |   | 4/20/99 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |   | 4/20/99 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |   | 4/20/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Diisopropyl ether         | < 0.55 | 0.55 | 1.8  | ug/L |   | 4/20/99 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |   | 4/20/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L |   | 4/20/99 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L |   | 4/20/99 | SW846 8260B |
| Methylene chloride        | 0.39   | 0.36 | 1.1  | ug/L | Q | 4/20/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |   | 4/20/99 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Toluene                   | 0.46   | 0.27 | 0.86 | ug/L | Q | 4/20/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L |   | 4/20/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L |   | 4/20/99 | SW846 8260B |





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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-2

Lab Sample Number : 891836-002

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 4/21/99

Collection Date : 4/15/99

Matrix Type : WATER

|                        |        |      |      |        |         |             |
|------------------------|--------|------|------|--------|---------|-------------|
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 4/20/99 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 4/20/99 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 4/20/99 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 4/20/99 | SW846 8260B |
| 4-Bromofluorobenzene   | 101    |      |      | %Recov | 4/20/99 | SW846 8260B |
| Dibromofluoromethane   | 109    |      |      | %Recov | 4/20/99 | SW846 8260B |
| Toluene-d8             | 109    |      |      | %Recov | 4/20/99 | SW846 8260B |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO    Prep Date: 4/19/99    Analyst: MSB

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike             | 109    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 111    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Field ID :** MW-3

**Lab Sample Number :** 891836-003

**WI DNR LAB ID :** 405132750

**Client :** MORAINÉ ENVIRONMENTAL INC

**Report Date :** 4/21/99

**Collection Date :** 4/15/99

**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD DRO    **Prep Date:** 4/19/99    **Analyst:** DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 4/19/99       | Wi MOD DRO      |
| Blank spike           | 88     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank spike duplicate | 95     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 4/19/99       | Wi MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

**Prep Method:** SW846 5030B    **Prep Date:** 4/20/99    **Analyst:** HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Field ID : MW-3**

**Lab Sample Number : 891836-003**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 4/21/99**

**Collection Date : 4/15/99**

**Matrix Type : WATER**

|                           |        |      |      |      |           |             |
|---------------------------|--------|------|------|------|-----------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 4/20/99   | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L | 4/20/99   | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L | 4/20/99   | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L | 4/20/99   | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| Diisopropyl ether         | < 0.55 | 0.55 | 1.8  | ug/L | 4/20/99   | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L | 4/20/99   | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L | 4/20/99   | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L | 4/20/99   | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L | 4/20/99   | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L | 4/20/99   | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L | 4/20/99   | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| Toluene                   | 0.36   | 0.27 | 0.86 | ug/L | Q 4/20/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L | 4/20/99   | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L | 4/20/99   | SW846 8260B |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Client : MORaine ENVIRONMENTAL INC**

**Field ID : MW-3**

**Report Date : 4/21/99**

**Lab Sample Number : 891836-003**

**Collection Date : 4/15/99**

**WI DNR LAB ID : 405132750**

**Matrix Type : WATER**

|                        |        |      |      |        |         |             |
|------------------------|--------|------|------|--------|---------|-------------|
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 4/20/99 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 4/20/99 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 4/20/99 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 4/20/99 | SW846 8260B |
| 4-Bromofluorobenzene   | 102    |      |      | %Recov | 4/20/99 | SW846 8260B |
| Dibromofluoromethane   | 108    |      |      | %Recov | 4/20/99 | SW846 8260B |
| Toluene-d8             | 110    |      |      | %Recov | 4/20/99 | SW846 8260B |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

**Prep Method: Wi MOD GRO**

**Prep Date: 4/19/99**

**Analyst: MSB**

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike             | 109    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 111    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-4

Lab Sample Number : 891836-004

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 4/20/99

Collection Date : 4/15/99

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO Prep Date: 4/19/99 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 4/19/99       | WI MOD DRO      |
| Blank spike           | 88     |     |     | 25  | %Recov |      | 4/19/99       | WI MOD DRO      |
| Blank spike duplicate | 95     |     |     | 25  | %Recov |      | 4/19/99       | WI MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 4/19/99       | WI MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030B Prep Date: 4/16/99 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Client : MORaine ENVIRONMENTAL INC

Field ID : MW-4

Report Date : 4/20/99

Lab Sample Number : 891836-004

Collection Date : 4/15/99

WI DNR LAB ID : 405132750

Matrix Type : WATER

|                           |        |      |      |      |         |             |
|---------------------------|--------|------|------|------|---------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L | 4/19/99 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L | 4/19/99 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L | 4/19/99 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L | 4/19/99 | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 4/19/99 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L | 4/19/99 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L | 4/19/99 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L | 4/19/99 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L | 4/19/99 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L | 4/19/99 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L | 4/19/99 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L | 4/19/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L | 4/19/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L | 4/19/99 | SW846 8260B |
| Diisopropyl ether         | 2.2    | 0.55 | 1.8  | ug/L | 4/19/99 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L | 4/19/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L | 4/19/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L | 4/19/99 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L | 4/19/99 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L | 4/19/99 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L | 4/19/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L | 4/19/99 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L | 4/19/99 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L | 4/19/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L | 4/19/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L | 4/19/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L | 4/19/99 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L | 4/19/99 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L | 4/19/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L | 4/19/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L | 4/19/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 4/19/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L | 4/19/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L | 4/19/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L | 4/19/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L | 4/19/99 | SW846 8260B |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Field ID :** MW-4

**Lab Sample Number :** 891836-004

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 4/20/99

**Collection Date :** 4/15/99

**Matrix Type :** WATER

|                        |        |      |      |        |         |             |
|------------------------|--------|------|------|--------|---------|-------------|
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 4/19/99 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 4/19/99 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 4/19/99 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 4/19/99 | SW846 8260B |
| 4-Bromofluorobenzene   | 82     |      |      | %Recov | 4/19/99 | SW846 8260B |
| Dibromofluoromethane   | 90     |      |      | %Recov | 4/19/99 | SW846 8260B |
| Toluene-d8             | 83     |      |      | %Recov | 4/19/99 | SW846 8260B |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD GRO

**Prep Date:** 4/19/99

**Analyst:** MSB

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike             | 109    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 111    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : 1401  
Field ID : MW-5  
Lab Sample Number : 891836-005  
WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
Report Date : 4/21/99  
Collection Date : 4/15/99  
Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO Prep Date: 4/19/99 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 4/19/99       | Wi MOD DRO      |
| Blank spike           | 88     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank spike duplicate | 95     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 4/19/99       | Wi MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030B Prep Date: 4/20/99 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-5

Lab Sample Number : 891836-005

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 4/21/99

Collection Date : 4/15/99

Matrix Type : WATER

|                           |        |      |      |      |           |             |
|---------------------------|--------|------|------|------|-----------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 4/20/99   | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L | 4/20/99   | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L | 4/20/99   | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L | 4/20/99   | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| Diisopropyl ether         | 1.9    | 0.55 | 1.8  | ug/L | 4/20/99   | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L | 4/20/99   | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L | 4/20/99   | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L | 4/20/99   | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L | 4/20/99   | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L | 4/20/99   | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L | 4/20/99   | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L | 4/20/99   | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,4-Trimethylbenzene    | 0.30   | 0.22 | 0.70 | ug/L | Q 4/20/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L | 4/20/99   | SW846 8260B |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-5

Lab Sample Number : 891836-005

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 4/21/99

Collection Date : 4/15/99

Matrix Type : WATER

| Analyte                | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| 1,3,5-Trimethylbenzene | 0.62   | 0.27 | 0.86 |     | ug/L   | Q    | 4/20/99       | SW846 8260B     |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| Xylene, -o             | 0.45   | 0.24 | 0.76 |     | ug/L   | Q    | 4/20/99       | SW846 8260B     |
| 4-Bromofluorobenzene   | 101    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |
| Dibromofluoromethane   | 108    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |
| Toluene-d8             | 110    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO Prep Date: 4/19/99 Analyst: MSB

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike             | 109    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 111    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 1401  
**Field ID :** MW-6  
**Lab Sample Number :** 891836-006  
**WI DNR LAB ID :** 405132750

**Client :** MORAIN ENVIRONMENTAL INC  
**Report Date :** 4/21/99  
**Collection Date :** 4/15/99  
**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD DRO    **Prep Date:** 4/19/99    **Analyst:** DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 4/19/99       | Wi MOD DRO      |
| Blank spike           | 88     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank spike duplicate | 95     |     |     | 25  | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 4/19/99       | Wi MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

**Prep Method:** SW846 5030B    **Prep Date:** 4/20/99    **Analyst:** HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Field ID : MW-6**

**Lab Sample Number : 891836-006**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 4/21/99**

**Collection Date : 4/15/99**

**Matrix Type : WATER**

|                           |        |      |      |      |           |             |
|---------------------------|--------|------|------|------|-----------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| cis-1,2-Dichloroethene    | 0.90   | 0.28 | 0.89 | ug/L | 4/20/99   | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L | 4/20/99   | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L | 4/20/99   | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L | 4/20/99   | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L | 4/20/99   | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| Diisopropyl ether         | 74     | 0.55 | 1.8  | ug/L | 4/20/99   | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L | 4/20/99   | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L | 4/20/99   | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L | 4/20/99   | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L | 4/20/99   | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L | 4/20/99   | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L | 4/20/99   | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L | 4/20/99   | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L | 4/20/99   | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L | 4/20/99   | SW846 8260B |
| Toluene                   | 0.29   | 0.27 | 0.86 | ug/L | Q 4/20/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 4/20/99   | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L | 4/20/99   | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L | 4/20/99   | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L | 4/20/99   | SW846 8260B |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Field ID :** MW-6

**Lab Sample Number :** 891836-006

**WI DNR LAB ID :** 405132750

**Client :** MORAINÉ ENVIRONMENTAL INC

**Report Date :** 4/21/99

**Collection Date :** 4/15/99

**Matrix Type :** WATER

|                        |        |      |      |        |         |             |
|------------------------|--------|------|------|--------|---------|-------------|
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 4/20/99 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 4/20/99 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 4/20/99 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 4/20/99 | SW846 8260B |
| 4-Bromofluorobenzene   | 101    |      |      | %Recov | 4/20/99 | SW846 8260B |
| Dibromofluoromethane   | 109    |      |      | %Recov | 4/20/99 | SW846 8260B |
| Toluene-d8             | 110    |      |      | %Recov | 4/20/99 | SW846 8260B |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD GRO    **Prep Date:** 4/19/99    **Analyst:** MSB

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 60     |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike             | 109    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 111    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 1401  
**Field ID :** MW-7  
**Lab Sample Number :** 891836-007  
**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 5/5/99  
**Collection Date :** 4/15/99  
**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD DRO    **Prep Date:** 4/19/99    **Analyst:** DJB

| Analyte               | Result | LOD | LOQ | EQL   | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 290000 |     |     | 10000 | ug/l   |      | 4/19/99       | Wi MOD DRO      |
| Blank spike           | 88     |     |     | 25    | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank spike duplicate | 95     |     |     | 25    | %Recov |      | 4/19/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50    | ug/l   |      | 4/19/99       | Wi MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

**Prep Method:** SW846 5030B    **Prep Date:** 4/20/99    **Analyst:** HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| s-Butylbenzene              | 3.5    | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| t-Butylbenzene              | 0.50   | 0.32 | 1.0  |     | ug/L  | Q    | 4/20/99       | SW846 8260B     |
| n-Butylbenzene              | 2.9    | 0.29 | 0.92 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/20/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/20/99       | SW846 8260B     |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Field ID :** MW-7

**Lab Sample Number :** 891836-007

**WI DNR LAB ID :** 405132750

**Client :** MORAIN ENVIRONMENTAL INC

**Report Date :** 5/5/99

**Collection Date :** 4/15/99

**Matrix Type :** WATER

|                           |        |      |      |      |   |         |             |
|---------------------------|--------|------|------|------|---|---------|-------------|
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| cis-1,2-Dichloroethene    | 1.8    | 0.28 | 0.89 | ug/L |   | 4/20/99 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |   | 4/20/99 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |   | 4/20/99 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |   | 4/20/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Diisopropyl ether         | 0.63   | 0.55 | 1.8  | ug/L | Q | 4/20/99 | SW846 8260B |
| Ethylbenzene              | 0.71   | 0.32 | 1.0  | ug/L | Q | 4/20/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |   | 4/20/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Isopropylbenzene          | 0.85   | 0.26 | 0.83 | ug/L |   | 4/20/99 | SW846 8260B |
| p-Isopropyltoluene        | 6.7    | 0.24 | 0.76 | ug/L |   | 4/20/99 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |   | 4/20/99 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L |   | 4/20/99 | SW846 8260B |
| n-Propylbenzene           | 1.1    | 0.76 | 2.4  | ug/L | Q | 4/20/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |   | 4/20/99 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L |   | 4/20/99 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 4/20/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | 3.7    | 0.22 | 0.70 | ug/L |   | 4/20/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L |   | 4/20/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L |   | 4/20/99 | SW846 8260B |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Client : MORAIN ENVIRONMENTAL INC

Field ID : MW-7

Report Date : 5/5/99

Lab Sample Number : 891836-007

Collection Date : 4/15/99

WI DNR LAB ID : 405132750

Matrix Type : WATER

| Analyte                | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| 1,3,5-Trimethylbenzene | 0.50   | 0.27 | 0.86 |     | ug/L   | Q    | 4/20/99       | SW846 8260B     |
| Vinyl chloride         | 0.23   | 0.20 | 0.64 |     | ug/L   | Q    | 4/20/99       | SW846 8260B     |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 |     | ug/L   |      | 4/20/99       | SW846 8260B     |
| 4-Bromofluorobenzene   | 102    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |
| Dibromofluoromethane   | 108    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |
| Toluene-d8             | 111    |      |      |     | %Recov |      | 4/20/99       | SW846 8260B     |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO

Prep Date: 4/19/99

Analyst: MSB

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 1400   |     |     | 50   | ug/l   |      | 4/20/99       | Wi MOD GRO      |
| Blank Spike             | 109    |     |     | 1.00 | %Recov |      | 4/20/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 111    |     |     | 1.00 | %Recov |      | 4/20/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 4/20/99       | Wi MOD GRO      |

### Organic Results

#### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510

Prep Date: 4/19/99

Analyst: ARO

| Analyte                | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|--------|-----|-----|-----|-------|------|---------------|-----------------|
| Acenaphthene           | < 240  | 240 | 760 |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Acenaphthylene         | < 210  | 210 | 670 |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Anthracene             | < 10   | 10  | 32  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Benzo(a)anthracene     | 10.0   | 7.0 | 22  |     | ug/L  | Q    | 5/4/99        | SW846 8310      |
| Benzo(a)pyrene         | < 7.5  | 7.5 | 24  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Benzo(b)fluoranthene   | < 7.5  | 7.5 | 24  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Benzo(g,h,i)perylene   | < 10   | 10  | 32  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Benzo(k)fluoranthene   | < 4.5  | 4.5 | 14  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Chrysene               | 17     | 8.0 | 25  |     | ug/L  | Q    | 5/4/99        | SW846 8310      |
| Dibenzo(a,h)anthracene | < 10   | 10  | 32  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| Fluoranthene           | 9.3    | 7.5 | 24  |     | ug/L  | Q    | 5/4/99        | SW846 8310      |
| Fluorene               | 39     | 29  | 92  |     | ug/L  | Q    | 5/4/99        | SW846 8310      |
| Indeno(1,2,3-cd)pyrene | < 12   | 12  | 38  |     | ug/L  |      | 5/4/99        | SW846 8310      |
| 1-Methylnaphthalene    | < 180  | 180 | 570 |     | ug/L  |      | 5/4/99        | SW846 8310      |





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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Field ID : MW-7**

**Lab Sample Number : 891836-007**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 5/5/99**

**Collection Date : 4/15/99**

**Matrix Type : WATER**

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|                         |       |     |     |        |   |        |            |
|-------------------------|-------|-----|-----|--------|---|--------|------------|
| 2-Methylnaphthalene     | < 180 | 180 | 570 | ug/L   |   | 5/4/99 | SW846 8310 |
| Naphthalene             | < 210 | 210 | 670 | ug/L   |   | 5/4/99 | SW846 8310 |
| Phenanthrene            | 220   | 23  | 73  | ug/L   |   | 5/4/99 | SW846 8310 |
| Pyrene                  | 24    | 8.5 | 27  | ug/L   | Q | 5/4/99 | SW846 8310 |
| 9,10-Diphenylanthracene | NA    |     |     | %Recov |   | 5/4/99 | SW846 8310 |



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## - Analytical Report -

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORAINES ENVIRONMENTAL INC |
| Project Number : 1401                | Report Date : 4/26/99               |
| Field ID : PRIVATE WELL              | Collection Date : 4/15/99           |
| Lab Sample Number : 891836-008       | Matrix Type : DRINKING WATER        |
| WI DNR LAB ID : 405132750            |                                     |

### Organic Results

| SDWA - LOW LEVEL VOLATILE LIST |        |      | Prep Method: EPA 524.2 |     |       | Prep Date: | Analyst: *MD  |                 |
|--------------------------------|--------|------|------------------------|-----|-------|------------|---------------|-----------------|
| Analyte                        | Result | LOD  | LOQ                    | EQL | Units | Code       | Analysis Date | Analysis Method |
| 1,2-Dibromoethane              | < 0.20 | 0.20 | 0.64                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Methyl-tert-butyl-ether        | < 0.21 | 0.21 | 0.67                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,2-Dibromo-3-chloropropane    | < 0.52 | 0.52 | 1.7                    |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Benzene                        | < 0.23 | 0.23 | 0.73                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Bromobenzene                   | < 0.22 | 0.22 | 0.70                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Bromochloromethane             | < 0.30 | 0.30 | 0.96                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Bromodichloromethane           | < 0.23 | 0.23 | 0.73                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Bromoform                      | < 0.28 | 0.28 | 0.89                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Bromomethane                   | < 0.21 | 0.21 | 0.67                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| n-Butylbenzene                 | < 0.26 | 0.26 | 0.83                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| s-Butylbenzene                 | < 0.26 | 0.26 | 0.83                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| t-Butylbenzene                 | < 0.27 | 0.27 | 0.86                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Carbon tetrachloride           | < 0.24 | 0.24 | 0.76                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Chlorobenzene                  | < 0.22 | 0.22 | 0.70                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Chlorodibromomethane           | < 0.24 | 0.24 | 0.76                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Chloroethane                   | < 0.24 | 0.24 | 0.76                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Chloroform                     | < 0.18 | 0.18 | 0.57                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Chloromethane                  | < 0.27 | 0.27 | 0.86                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 2-Chlorotoluene                | < 0.23 | 0.23 | 0.73                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 4-Chlorotoluene                | < 0.26 | 0.26 | 0.83                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| Dibromomethane                 | < 0.23 | 0.23 | 0.73                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,2-Dichlorobenzene            | < 0.32 | 0.32 | 1.0                    |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,3-Dichlorobenzene            | < 0.31 | 0.31 | 0.99                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,4-Dichlorobenzene            | 0.59   | 0.29 | 0.92                   |     | ug/L  | Q          | 4/22/99       | EPA 524.2       |
| Dichlorodifluoromethane        | < 0.25 | 0.25 | 0.80                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,1-Dichloroethane             | < 0.22 | 0.22 | 0.70                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,2-Dichloroethane             | < 0.18 | 0.18 | 0.57                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| 1,1-Dichloroethene             | < 0.25 | 0.25 | 0.80                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| cis-1,2-Dichloroethene         | < 0.21 | 0.21 | 0.67                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |
| trans-1,2-Dichloroethene       | < 0.26 | 0.26 | 0.83                   |     | ug/L  |            | 4/22/99       | EPA 524.2       |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Client :** MORAIN ENVIRONMENTAL INC

**Field ID :** PRIVATE WELL

**Report Date :** 4/26/99

**Lab Sample Number :** 891836-008

**Collection Date :** 4/15/99

**WI DNR LAB ID :** 405132750

**Matrix Type :** DRINKING WATER

|                           |        |      |      |        |         |           |
|---------------------------|--------|------|------|--------|---------|-----------|
| 1,2-Dichloropropane       | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,3-Dichloropropane       | < 0.19 | 0.19 | 0.61 | ug/L   | 4/22/99 | EPA 524.2 |
| 2,2-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,1-Dichloropropene       | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| cis-1,3-Dichloropropene   | < 0.21 | 0.21 | 0.67 | ug/L   | 4/22/99 | EPA 524.2 |
| trans-1,3-Dichloropropene | < 0.22 | 0.22 | 0.70 | ug/L   | 4/22/99 | EPA 524.2 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| Fluorotrichloromethane    | < 0.24 | 0.24 | 0.76 | ug/L   | 4/22/99 | EPA 524.2 |
| Hexachlorobutadiene       | < 0.29 | 0.29 | 0.92 | ug/L   | 4/22/99 | EPA 524.2 |
| Isopropylbenzene          | < 0.24 | 0.24 | 0.76 | ug/L   | 4/22/99 | EPA 524.2 |
| p-Isopropyltoluene        | < 0.26 | 0.26 | 0.83 | ug/L   | 4/22/99 | EPA 524.2 |
| Methylene chloride        | < 0.15 | 0.15 | 0.48 | ug/L   | 4/22/99 | EPA 524.2 |
| Naphthalene               | < 0.38 | 0.38 | 1.2  | ug/L   | 4/22/99 | EPA 524.2 |
| n-Propylbenzene           | < 0.26 | 0.26 | 0.83 | ug/L   | 4/22/99 | EPA 524.2 |
| Styrene                   | < 0.21 | 0.21 | 0.67 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,1,2,2-Tetrachloroethane | < 0.37 | 0.37 | 1.2  | ug/L   | 4/22/99 | EPA 524.2 |
| 1,1,1,2-Tetrachloroethane | < 0.20 | 0.20 | 0.64 | ug/L   | 4/22/99 | EPA 524.2 |
| Tetrachloroethene         | < 0.25 | 0.25 | 0.80 | ug/L   | 4/22/99 | EPA 524.2 |
| Toluene                   | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,2,4-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L   | 4/22/99 | EPA 524.2 |
| 1,2,3-Trichlorobenzene    | < 0.34 | 0.34 | 1.1  | ug/L   | 4/22/99 | EPA 524.2 |
| 1,1,1-Trichloroethane     | < 0.24 | 0.24 | 0.76 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,1,2-Trichloroethane     | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| Trichloroethene           | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,2,3-Trichloropropane    | < 0.36 | 0.36 | 1.1  | ug/L   | 4/22/99 | EPA 524.2 |
| 1,2,4-Trimethylbenzene    | < 0.26 | 0.26 | 0.83 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,3,5-Trimethylbenzene    | < 0.24 | 0.24 | 0.76 | ug/L   | 4/22/99 | EPA 524.2 |
| Vinyl chloride            | < 0.26 | 0.26 | 0.83 | ug/L   | 4/22/99 | EPA 524.2 |
| Xylenes, -m, -p           | < 0.44 | 0.44 | 1.4  | ug/L   | 4/22/99 | EPA 524.2 |
| Xylene, -o                | < 0.23 | 0.23 | 0.73 | ug/L   | 4/22/99 | EPA 524.2 |
| 1,2-Dichlorobenzene-d4    | 99     |      |      | %Recov | 4/22/99 | EPA 524.2 |
| 4-Bromofluorobenzene      | 100    |      |      | %Recov | 4/22/99 | EPA 524.2 |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : TRIP BLANK

Lab Sample Number : 891836-009

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 4/20/99

Collection Date : 4/15/99

Matrix Type : WATER

### Organic Results

EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030B

Prep Date: 4/16/99

Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| cis-1,2-Dichloroethene      | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,2-Dichloropropane         | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |
| 1,1-Dichloroethane          | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 4/19/99       | SW846 8260B     |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 1401**

**Client : MORAIN ENVIRONMENTAL INC**

**Field ID : TRIP BLANK**

**Report Date : 4/20/99**

**Lab Sample Number : 891836-009**

**Collection Date : 4/15/99**

**WI DNR LAB ID : 405132750**

**Matrix Type : WATER**

|                           |        |      |      |        |         |             |
|---------------------------|--------|------|------|--------|---------|-------------|
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L   | 4/19/99 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L   | 4/19/99 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L   | 4/19/99 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L   | 4/19/99 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L   | 4/19/99 | SW846 8260B |
| Diisopropyl ether         | < 0.55 | 0.55 | 1.8  | ug/L   | 4/19/99 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L   | 4/19/99 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L   | 4/19/99 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L   | 4/19/99 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L   | 4/19/99 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L   | 4/19/99 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L   | 4/19/99 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L   | 4/19/99 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L   | 4/19/99 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L   | 4/19/99 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L   | 4/19/99 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L   | 4/19/99 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L   | 4/19/99 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L   | 4/19/99 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L   | 4/19/99 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L   | 4/19/99 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L   | 4/19/99 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   | 4/19/99 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L   | 4/19/99 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L   | 4/19/99 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L   | 4/19/99 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L   | 4/19/99 | SW846 8260B |
| 1,3,5-Trimethylbenzene    | < 0.27 | 0.27 | 0.86 | ug/L   | 4/19/99 | SW846 8260B |
| Vinyl chloride            | < 0.20 | 0.20 | 0.64 | ug/L   | 4/19/99 | SW846 8260B |
| Xylenes, -m, -p           | < 0.43 | 0.43 | 1.4  | ug/L   | 4/19/99 | SW846 8260B |
| Xylene, -o                | < 0.24 | 0.24 | 0.76 | ug/L   | 4/19/99 | SW846 8260B |
| 4-Bromofluorobenzene      | 82     |      |      | %Recov | 4/19/99 | SW846 8260B |
| Dibromofluoromethane      | 86     |      |      | %Recov | 4/19/99 | SW846 8260B |
| Toluene-d8                | 82     |      |      | %Recov | 4/19/99 | SW846 8260B |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : TRIP BLANK

Lab Sample Number : 891836-009

WI DNR LAB ID : 405132750

Client : MORAINÉ ENVIRONMENTAL INC

Report Date : 4/20/99

Collection Date : 4/15/99

Matrix Type : WATER

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO

Prep Date: 4/19/99

Analyst: MSB

| Analyte                   | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike               | 109    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank Spike Duplicate     | 111    |     |     | 1.00 | %Recov |      | 4/19/99       | Wi MOD GRO      |
| Blank                     | < 50   |     |     | 50   | ug/l   |      | 4/19/99       | Wi MOD GRO      |

Company Name: MEI  
 Branch or Location: CORNING  
 Project Contact: Tom Duppen  
 Telephone: 377-9060  
 Project Number: # 1401  
 Project Name: JOHNSON SAND & GRAVEL  
 Project State: WI W22590 Johnson Rd (W22590)  
 Sampled By (Print): B. Durkee  
 Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NR  
 Other \_\_\_\_\_



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525 Science Drive  
 Madison, WI 53711  
 608-232-3300 • 1-888-536-2436  
 FAX: 608-233-0502

1423 N. 8th Street, Suite 122  
 Superior, WI 54880  
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 FAX 715-392-5843

# CHAIN OF CUSTODY

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Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: Tom Duppen

Company: MEI

Address: 1234 12th Ave  
 Corning WI

Invoice To: \_\_\_\_\_

Company: \_\_\_\_\_  
 Address: Same As Above

Mail Invoice To: \_\_\_\_\_

|                      |     |     |     |     |      |         |       |
|----------------------|-----|-----|-----|-----|------|---------|-------|
| ANALYSES REQUESTED   | GRD | DRD | VOL | PAN | LEAD | SPURIAL | OTHER |
| FILTERED? (YES/NO)   | N   | N   | N   | N   | N    | N       | N     |
| PRESERVATION (CODE)* | B   | B   | B   | A   | D    |         |       |

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |      | FIELD SCREEN | MATRIX | GOOD COND. | TOTAL BOTTLES | COMMENTS | LABORATORY NUMBER |
|----------|--------------------|------------|------|--------------|--------|------------|---------------|----------|-------------------|
|          |                    | DATE       | TIME |              |        |            |               |          |                   |
| 1        | MW 1               | 4-5-99     | PM   | -            | W      | ✓          | 2-40ml        | number 1 | 001               |
| 2        | MW 2               |            | PM   | -            | W      | ✓          | 1-40ml        | number 1 | 002               |
| 3        | MW 3               |            | PM   | -            | W      | ✓          |               |          | 003               |
| 4        | MW 4               |            | PM   | -            | W      | ✓          |               |          | 004               |
| 5        | MW 5               |            | AM   | -            | W      | ✓          |               |          | 005               |
| 6        | MW 6               |            | AM   | -            | W      | ✓          |               |          | 006               |
| 7        | MW 7               |            | PM   | -            | W      | ✓          | 2-40ml        | number 1 | 007               |
| TAP      | Private well       |            | PM   | -            | W      | ✓          | 3-40ml        |          | 008               |
| TB       | TRIP BLANK         |            | AM   | -            | W      | ✓          | 2-40ml        |          | 009               |

**\*Preservation Code**  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)  
 \*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By: B. Durkee Date/Time: 4/16/99 7:00 AM  
 Relinquished By: [Signature] Date/Time: 4/16/99 12:30  
 Relinquished By: [Signature] Date/Time: 4/16/99 1:00  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: [Signature] Date/Time: 4/16/99 8:10  
 Received By: [Signature] Date/Time: 3:00  
 Received By: [Signature] Date/Time: \_\_\_\_\_  
 Received By: [Signature] Date/Time: \_\_\_\_\_

En Chem Project No. 891836  
 Sample Receipt Temp. ROT  
 Sample Receipt pH (Wet/Moist) PH 6.30  
 Custody Seal \_\_\_\_\_



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

WI DNR LAB ID : 405132750

Client: MORaine ENVIRONMENTAL INC

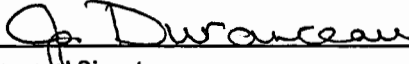
Report Date : 2/3/99

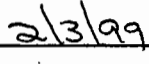
| Sample No. | Field ID   | Collection Date | Sample No. | Field ID | Collection Date |
|------------|------------|-----------------|------------|----------|-----------------|
| 890268-001 | MW-1       | 1/21/99         |            |          |                 |
| 890268-002 | MW-2       | 1/21/99         |            |          |                 |
| 890268-003 | MW-3       | 1/21/99         |            |          |                 |
| 890268-004 | MW-4       | 1/21/99         |            |          |                 |
| 890268-005 | MW-5       | 1/21/99         |            |          |                 |
| 890268-006 | MW-6       | 1/21/99         |            |          |                 |
| 890268-007 | MW-7       | 1/21/99         |            |          |                 |
| 890268-008 | TRIP BLANK | 1/21/99         |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

  
\_\_\_\_\_  
Approved Signature

  
\_\_\_\_\_  
Date





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---

| Lab#:              | TestGroupID: | Comment:   |
|--------------------|--------------|--|
| 890268-001<br>MW-1 | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.  |
| 890268-004<br>MW-4 | DRO-W        | Early peaks present outside of window of analysis.   |
| 890268-005<br>MW-5 | DRO-W        | Hump was present late in chromatogram.   |
| 890268-006<br>MW-6 | GRO-W        | Results from sample vial used for prior analysis. Insufficient sample submitted for analysis on unpunctured vial. Reported GRO value is due to a single early unidentified peak. |
| 890268-007<br>MW-7 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.   |
|                    | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.  |



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## - Analytical Report -

Project Name : JOHN SON SAND & GRAVEL  
 Project Number : 1401  
 Field ID : MW-1  
 Lab Sample Number : 890268-001  
 WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC  
 Report Date : 2/3/99  
 Collection Date : 1/21/99  
 Matrix Type : WATER

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL   | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 160000 |     |     | 10000 | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0   | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50    | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

**PVOC + NAPHT - WATER**

Prep Method: SW846 5030B    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 107    |     |     |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 52   | 52  | 170 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | 140    | 48  | 150 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 44   | 44  | 140 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 180  | 180 | 570 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | < 42   | 42  | 130 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | 1600   | 110 | 350 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | 990    | 170 | 540 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 190  | 190 | 610 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | 77     | 74  | 240 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 1401  
**Field ID :** MW-2  
**Lab Sample Number :** 890268-002  
**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 2/3/99  
**Collection Date :** 1/21/99  
**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD DRO    **Prep Date:** 1/26/99    **Analyst:** DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 1/26/99       | Wi MOD DRO      |
| Blank spike           | 82     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank spike duplicate | 88     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 1/26/99       | Wi MOD DRO      |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD GRO    **Prep Date:** 1/26/99    **Analyst:** PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

**PVOC + NAPHT - WATER**

**Prep Method:** SW846 5030B    **Prep Date:** 1/26/99    **Analyst:** PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 0.89 | 0.89 | 2.8  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | 0.46   | 0.21 | 0.67 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 1/27/99       | MOD 8021B       |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-3

Lab Sample Number : 890268-003

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 2/3/99

Collection Date : 1/21/99

Matrix Type : WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

Prep Method: Wi MOD DRO    Prep Date: 1/26/99    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 1/26/99       | Wi MOD DRO      |
| Blank spike           | 82     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank spike duplicate | 88     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 1/26/99       | Wi MOD DRO      |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

**PVOC + NAPHT - WATER**

Prep Method: SW846 5030B    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 105    |      |      |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 0.89 | 0.89 | 2.8  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | 0.37   | 0.21 | 0.67 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 1/27/99       | MOD 8021B       |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-4

Lab Sample Number : 890268-004

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 2/3/99

Collection Date : 1/21/99

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO Prep Date: 1/26/99 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 180    |     |     | 100 | ug/l   |      | 1/26/99       | Wi MOD DRO      |
| Blank spike           | 82     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank spike duplicate | 88     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 1/26/99       | Wi MOD DRO      |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO Prep Date: 1/26/99 Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

#### PVOC + NAPHT - WATER

Prep Method: SW846 5030B Prep Date: 1/26/99 Analyst: PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 0.89 | 0.89 | 2.8  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 1/27/99       | MOD 8021B       |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Field ID :** MW-5

**Lab Sample Number :** 890268-005

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 2/3/99

**Collection Date :** 1/21/99

**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD DRO    **Prep Date:** 1/26/99    **Analyst:** DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 110    |     |     | 100 | ug/l   |      | 1/26/99       | Wi MOD DRO      |
| Blank spike           | 82     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank spike duplicate | 88     |     |     | 25  | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 1/26/99       | Wi MOD DRO      |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

**Prep Method:** Wi MOD GRO    **Prep Date:** 1/26/99    **Analyst:** PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

**PVOC + NAPHT - WATER**

**Prep Method:** SW846 5030B    **Prep Date:** 1/26/99    **Analyst:** PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 0.89 | 0.89 | 2.8  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 1/27/99       | MOD 8021B       |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-6

Lab Sample Number : 890268-006

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 2/3/99

Collection Date : 1/21/99

Matrix Type : WATER

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: Wi MOD GRO Prep Date: 1/26/99 Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 120    |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

#### PVOC + NAPHT - WATER

Prep Method: SW846 5030B Prep Date: 1/26/99 Analyst: PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 102    |      |      |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | 0.41   | 0.22 | 0.70 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 0.89 | 0.89 | 2.8  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | 0.32   | 0.21 | 0.67 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 1/27/99       | MOD 8021B       |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-7

Lab Sample Number : 890268-007

WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC

Report Date : 2/3/99

Collection Date : 1/21/99

Matrix Type : WATER

**Organic Results**

**DIESEL RANGE ORGANICS - WATER**

Prep Method: Wi MOD DRO    Prep Date: 1/26/99    Analyst: DJB

| Analyte               | Result  | LOD | LOQ | EQL    | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|---------|-----|-----|--------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 5900000 |     |     | 300000 | ug/l   |      | 1/26/99       | Wi MOD DRO      |
| Blank spike           | 82      |     |     | 25     | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank spike duplicate | 88      |     |     | 25     | %Recov |      | 1/26/99       | Wi MOD DRO      |
| Blank                 | < 50    |     |     | 50     | ug/l   |      | 1/26/99       | Wi MOD DRO      |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 27000  |     |     | 2500 | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

**Organic Results**

**PAH (HPLC) LIST - SEMIVOLATILES**

Prep Method: SW846 3510    Prep Date: 1/27/99    Analyst: ARO

| Analyte                | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Acenaphthene           | < 2800 | 2800 | 8900 |     | ug/L  |      | 1/28/99       | SW846 8310      |
| Acenaphthylene         | < 2500 | 2500 | 8000 |     | ug/L  |      | 1/28/99       | SW846 8310      |
| Anthracene             | 270    | 130  | 410  |     | ug/L  | Q    | 1/28/99       | SW846 8310      |
| Benzo(a)anthracene     | 2400   | 1700 | 5400 |     | ug/L  | Q    | 1/28/99       | SW846 8310      |
| Benzo(a)pyrene         | < 90   | 90   | 290  |     | ug/L  |      | 1/28/99       | SW846 8310      |
| Benzo(b)fluoranthene   | 350    | 90   | 290  |     | ug/L  |      | 1/28/99       | SW846 8310      |
| Benzo(g,h,i)perylene   | < 130  | 130  | 410  |     | ug/L  |      | 1/28/99       | SW846 8310      |
| Benzo(k)fluoranthene   | < 54   | 54   | 170  |     | ug/L  |      | 1/28/99       | SW846 8310      |
| Chrysene               | 3300   | 1900 | 6100 |     | ug/L  | Q    | 1/28/99       | SW846 8310      |
| Dibenzo(a,h)anthracene | 150    | 120  | 380  |     | ug/L  | Q    | 1/28/99       | SW846 8310      |
| Fluoranthene           | 260    | 90   | 290  |     | ug/L  | Q    | 1/28/99       | SW846 8310      |





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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 1401

**Field ID :** MW-7

**Lab Sample Number :** 890268-007

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 2/3/99

**Collection Date :** 1/21/99

**Matrix Type :** WATER

|                         |        |      |       |        |         |            |
|-------------------------|--------|------|-------|--------|---------|------------|
| Fluorene                | 2000   | 350  | 1100  | ug/L   | 1/28/99 | SW846 8310 |
| Indeno(1,2,3-cd)pyrene  | < 150  | 150  | 480   | ug/L   | 1/28/99 | SW846 8310 |
| 1-Methylnaphthalene     | 12000  | 2200 | 7000  | ug/L   | 1/28/99 | SW846 8310 |
| 2-Methylnaphthalene     | 7800   | 2200 | 7000  | ug/L   | 1/28/99 | SW846 8310 |
| Naphthalene             | < 2500 | 2500 | 8000  | ug/L   | 1/28/99 | SW846 8310 |
| Phenanthrene            | 26000  | 5500 | 18000 | ug/L   | 1/28/99 | SW846 8310 |
| Pyrene                  | < 2000 | 2000 | 6400  | ug/L   | 1/28/99 | SW846 8310 |
| 9,10-Diphenylanthracene | NA     |      |       | %Recov | 1/28/99 | SW846 8310 |

### Organic Results

**PVOC + NAPHT - WATER**

**Prep Method:** SW846 5030B

**Prep Date:** 1/26/99

**Analyst:** PMS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 105    |     |     |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 13   | 13  | 41  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | 19     | 12  | 38  |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 11   | 11  | 35  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 44   | 44  | 140 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | < 10   | 10  | 32  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | 57     | 27  | 86  |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | 370    | 43  | 140 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 48   | 48  | 150 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 18   | 18  | 57  |     | ug/l   |      | 1/27/99       | MOD 8021B       |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 1401  
**Field ID :** TRIP BLANK  
**Lab Sample Number :** 890268-008  
**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 2/3/99  
**Collection Date :** 1/21/99  
**Matrix Type :** WATER

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: Wi MOD GRO    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike             | 99     |     |     | 1.0  | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 1/27/99       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 1/27/99       | Wi MOD GRO      |

### Organic Results

**PVOC + NAPHT - WATER**

Prep Method: SW846 5030B    Prep Date: 1/26/99    Analyst: PMS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 1/27/99       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Naphthalene             | < 0.89 | 0.89 | 2.8  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Toluene                 | 0.33   | 0.21 | 0.67 |     | ug/l   | Q    | 1/27/99       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 1/27/99       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 1/27/99       | MOD 8021B       |

Company Name: MET

Branch or Location: CONIFON

Project Contact: Tommy Duppen

Telephone: 414-377-9060

Project Number: 1401

Project Name: JOHNSON SAND & GRAVEL

Project Location: 115 WISCONSIN BLVD - 115 WISCONSIN BLVD

Sampled By (Print): J. Duppen

Regulatory Program (circle):  UST  RCRA  CLP  SDWA  
 NPDES/WPDES  CAA  NR  
 Other \_\_\_\_\_



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802 Deming Way  
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 608-827-5501 • 1-888-536-2436  
 Fax: 608-827-5503

1423 N. 8th Street., Suite 122  
 Superior, WI 54880  
 715-392-5844 • 1-800-837-8238  
 FAX 715-392-5843

# CHAIN OF CUSTODY

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: Tommy Duppen

Company: MET

Address: 115 WISCONSIN BLVD CONIFON

Invoice To: \_\_\_\_\_

Company: \_\_\_\_\_

Address: 115 WISCONSIN BLVD CONIFON

Mail Invoice To: \_\_\_\_\_

FILTERED? (YES/NO) N N Y N N  
 PRESERVATION (CODE) F F F A B

ANALYSES REQUESTED  
Ases  
PL  
Lead  
Asbestos  
PAH

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |      | ANALYSES REQUESTED |    |      |          |     |       |       |       |       |       | FIELD SCREEN | MATRIX | GOOD COND. | TOTAL BOTTLES | COMMENTS      | LABORATORY NUMBER |
|----------|--------------------|------------|------|--------------------|----|------|----------|-----|-------|-------|-------|-------|-------|--------------|--------|------------|---------------|---------------|-------------------|
|          |                    | DATE       | TIME | Ases               | PL | Lead | Asbestos | PAH | Other | Other | Other | Other | Other |              |        |            |               |               |                   |
| 1101     | 11/1/99            | 11/1/99    | PM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          | 3 40ml        | Smelly sample | 001               |
| 1102     | 11/1/99            | 11/1/99    | PM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          | 3 40ml        |               | 002               |
| 1103     | 11/1/99            | 11/1/99    | PM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          |               |               | 003               |
| 1104     | 11/1/99            | 11/1/99    | PM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          |               |               | 004               |
| 1105     | 11/1/99            | 11/1/99    | AM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          |               |               | 005               |
| 1106     | 11/1/99            | 11/1/99    | AM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          | 1 40ml        |               | 006               |
| 1107     | 11/1/99            | 11/1/99    | PM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          | 2 40ml        | Smelly sample | 007               |
| 1108     | 11/1/99            | 11/1/99    | AM   | X                  | X  | X    | X        | X   | X     | X     | X     | X     | X     | X            | W      | Y          | 2 40ml        |               | 008               |

**\*Preservation Code**  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)

**\*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.**

|                                     |                                    |   |                                    |                                    |
|-------------------------------------|------------------------------------|---|------------------------------------|------------------------------------|
| Relinquished By: <u>J. Duppen</u>   | Date/Time: <u>11/2/99 4:50</u>     | Received By: <u>[Signature]</u>           | Date/Time: <u>11/2/99 4:50</u>     | En Chem Project No. <u>870268</u>  |
| Relinquished By: <u>[Signature]</u> | Date/Time: <u>11/2/99 12:00</u>    | Received By: <u>[Signature]</u>           | Date/Time: <u>11/2/99 12:00</u>    | Sample Receipt Temp. <u>R.O.F.</u> |
| Relinquished By: <u>[Signature]</u> | Date/Time: <u>11/2/99 2:4</u>      | Received By: <u>[Signature]</u>           | Date/Time: <u>11/2/99 2:4</u>      | Sample Receipt pH (Wet/Metals)     |
| Relinquished By: <u>[Signature]</u> | Date/Time: <u>11/2/99 11:15/99</u> | Received By (En Chem): <u>[Signature]</u> | Date/Time: <u>11/2/99 11:15/99</u> |                                    |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Client: MORaine ENVIRONMENTAL INC

WI DNR LAB ID : 405132750

Report Date : 1/31/99

| Sample No. | Field ID | Collection Date | Sample No. | Field ID | Collection Date |
|------------|----------|-----------------|------------|----------|-----------------|
| 890304-001 | MW-4     | 1/21/99         |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

G. Duranceau  
Approval Signature

1/31/99  
Date



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 1401

Field ID : MW-4

Lab Sample Number : 890304-001

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 1/29/99

Collection Date : 1/21/99

Matrix Type : WATER

---

### Inorganic Results

| Test             | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Prep Method | Analysis Method | Analys |
|------------------|--------|-----|-----|-----|-------|------|---------------|-------------|-----------------|--------|
| Lead - Dissolved | 1.9    | 1.6 | 5.1 |     | ug/L  | Q    | 1/29/99       | SW846 7421  | SW846 7421      | MWM    |





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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

WI DNR LAB ID : 405132750

Client: MORAINÉ ENVIRONMENTAL INC

Report Date : 11/2/98

| Sample No. | Field ID | Collection Date | Sample No. | Field ID | Collection Date |
|------------|----------|-----------------|------------|----------|-----------------|
| 886252-001 | MW-1     | 10/16/98        |            |          |                 |
| 886252-002 | MW-7     | 10/16/98        |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duranceau  
Approval Signature

11/2/98  
Date



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| Lab#               | TestGroupID | Comment   |
|--------------------|-------------|---|
| 886252-            | PAHLC-W     | BS RPD for Acenaphthylene (49.72%), 1-methylnaphthylene (54.35%) and 2-methylnaphthylene (49.94%) was above the control limits for Acenaphthylene (42.47%), 1-methylnaphthylene (44.53%) and 2-methylnaphthylene (44.62%) |
|                    | 8260+-W     |   |
| 886252-001<br>MW-1 | PAHLC-W     | Surrogate recovery data unavailable due to high dilution required for sample analysis.  |
| 886252-002<br>MW-7 | PAHLC-W     | Surrogate recovery data unavailable due to high dilution required for sample analysis.  |





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : MW-1

Lab Sample Number : 886252-001

WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC

Report Date : 11/2/98

Collection Date : 10/16/98

Matrix Type : WATER

### Inorganic Results

| Test             | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Prep Method | Analysis Method | Analyst |
|------------------|--------|-----|-----|-----|-------|------|---------------|-------------|-----------------|---------|
| Lead - Dissolved | < 1.8  | 1.8 | 5.7 |     | ug/L  |      | 10/29/98      | SW846 3015  | SW846 7421      | MSB     |

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO    Prep Date: 10/21/98    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 48000  |     |     | 2000 | ug/l   |      | 10/21/98      | Wi MOD DRO      |
| Blank spike           | 96     |     |     | 25   | %Recov |      | 10/21/98      | Wi MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25   | %Recov |      | 10/21/98      | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50   | ug/l   |      | 10/21/98      | Wi MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030    Prep Date: 10/23/98    Analyst: JJB

| Analyte              | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|----------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene              | 0.35   | 0.27 | 0.86 |     | ug/L  | Q    | 10/23/98      | SW846 8260B     |
| Bromobenzene         | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromochloromethane   | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromodichloromethane | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromoform            | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromomethane         | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| s-Butylbenzene       | 7.3    | 0.29 | 0.92 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| t-Butylbenzene       | 0.52   | 0.32 | 1.0  |     | ug/L  | Q    | 10/23/98      | SW846 8260B     |
| n-Butylbenzene       | 8.5    | 0.29 | 0.92 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Carbon tetrachloride | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chloroform           | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chlorobenzene        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chlorodibromomethane | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/23/98      | SW846 8260B     |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** #1401  
**Field ID :** MW-1  
**Lab Sample Number :** 886252-001  
**WI DNR LAB ID :** 405132750

**Client :** MORAIN ENVIRONMENTAL INC  
**Report Date :** 11/2/98  
**Collection Date :** 10/16/98  
**Matrix Type :** WATER

|                             |        |      |      |      |            |             |
|-----------------------------|--------|------|------|------|------------|-------------|
| Chloroethane                | < 0.54 | 0.54 | 1.7  | ug/L | 10/23/98   | SW846 8260B |
| Chloromethane               | < 0.61 | 0.61 | 1.9  | ug/L | 10/23/98   | SW846 8260B |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 | ug/L | 10/23/98   | SW846 8260B |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  | ug/L | 10/23/98   | SW846 8260B |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  | ug/L | 10/23/98   | SW846 8260B |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  | ug/L | 10/23/98   | SW846 8260B |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  | ug/L | 10/23/98   | SW846 8260B |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  | ug/L | 10/23/98   | SW846 8260B |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 | ug/L | 10/23/98   | SW846 8260B |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  | ug/L | 10/23/98   | SW846 8260B |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 | ug/L | 10/23/98   | SW846 8260B |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  | ug/L | 10/23/98   | SW846 8260B |
| cis-1,2-Dichloroethene      | 21     | 0.28 | 0.89 | ug/L | 10/23/98   | SW846 8260B |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  | ug/L | 10/23/98   | SW846 8260B |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  | ug/L | 10/23/98   | SW846 8260B |
| 1,2-Dichloropropane         | < 0.35 | 0.35 | 1.1  | ug/L | 10/23/98   | SW846 8260B |
| 1,1-Dichloroethane          | < 0.35 | 0.35 | 1.1  | ug/L | 10/23/98   | SW846 8260B |
| 1,3-Dichloropropane         | < 0.42 | 0.42 | 1.3  | ug/L | 10/23/98   | SW846 8260B |
| 2,2-Dichloropropane         | < 0.36 | 0.36 | 1.1  | ug/L | 10/23/98   | SW846 8260B |
| 1,1-Dichloropropene         | < 0.81 | 0.81 | 2.6  | ug/L | 10/23/98   | SW846 8260B |
| cis-1,3-Dichloropropene     | < 0.32 | 0.32 | 1.0  | ug/L | 10/23/98   | SW846 8260B |
| trans-1,3-Dichloropropene   | < 0.43 | 0.43 | 1.4  | ug/L | 10/23/98   | SW846 8260B |
| Diisopropyl ether           | 46     | 0.55 | 1.8  | ug/L | 10/23/98   | SW846 8260B |
| Ethylbenzene                | 2.9    | 0.32 | 1.0  | ug/L | 10/23/98   | SW846 8260B |
| Fluorotrichloromethane      | < 0.28 | 0.28 | 0.89 | ug/L | 10/23/98   | SW846 8260B |
| Hexachlorobutadiene         | < 0.62 | 0.62 | 2.0  | ug/L | 10/23/98   | SW846 8260B |
| Isopropylbenzene            | 3.8    | 0.26 | 0.83 | ug/L | 10/23/98   | SW846 8260B |
| p-Isopropyltoluene          | 6.7    | 0.24 | 0.76 | ug/L | 10/23/98   | SW846 8260B |
| Methylene chloride          | < 0.36 | 0.36 | 1.1  | ug/L | 10/23/98   | SW846 8260B |
| Methyl-tert-butyl-ether     | 0.33   | 0.32 | 1.0  | ug/L | Q 10/23/98 | SW846 8260B |
| Naphthalene                 | 24     | 0.35 | 1.1  | ug/L | 10/23/98   | SW846 8260B |
| n-Propylbenzene             | 2.7    | 0.76 | 2.4  | ug/L | 10/23/98   | SW846 8260B |
| Styrene                     | < 0.17 | 0.17 | 0.54 | ug/L | 10/23/98   | SW846 8260B |
| 1,1,2,2-Tetrachloroethane   | < 0.69 | 0.69 | 2.2  | ug/L | 10/23/98   | SW846 8260B |
| 1,1,1,2-Tetrachloroethane   | < 0.70 | 0.70 | 2.2  | ug/L | 10/23/98   | SW846 8260B |



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 FAX: 920-469-8827

**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-1  
 Lab Sample Number : 886252-001  
 WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
 Report Date : 11/2/98  
 Collection Date : 10/16/98  
 Matrix Type : WATER

|                        |        |      |      |        |   |          |             |
|------------------------|--------|------|------|--------|---|----------|-------------|
| Tetrachloroethene      | 1.6    | 0.43 | 1.4  | ug/L   |   | 10/23/98 | SW846 8260B |
| Toluene                | 0.40   | 0.27 | 0.86 | ug/L   | Q | 10/23/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene | < 0.47 | 0.47 | 1.5  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene | < 0.27 | 0.27 | 0.86 | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,1,1-Trichloroethane  | < 0.30 | 0.30 | 0.96 | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | 5.3    | 0.22 | 0.70 | ug/L   |   | 10/23/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | 11     | 0.27 | 0.86 | ug/L   |   | 10/23/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   |   | 10/23/98 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   |   | 10/23/98 | SW846 8260B |
| Xylene, -o             | 0.72   | 0.24 | 0.76 | ug/L   | Q | 10/23/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 93     |      |      | %Recov |   | 10/23/98 | SW846 8260B |
| Dibromofluoromethane   | 90     |      |      | %Recov |   | 10/23/98 | SW846 8260B |
| Toluene-d8             | 94     |      |      | %Recov |   | 10/23/98 | SW846 8260B |

**Organic Results**

**PAH (HPLC) LIST - SEMIVOLATILES**

Prep Method: SW846 3510

Prep Date: 10/22/98 Analyst: ARO

| Analyte                | Result | LOD  | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|-----|-----|-------|------|---------------|-----------------|
| Acenaphthene           | < 47   | 47   | 150 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Acenaphthylene         | < 41   | 41   | 130 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Anthracene             | < 2.1  | 2.1  | 6.7 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(a)anthracene     | 38     | 4.2  | 13  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(a)pyrene         | < 1.5  | 1.5  | 4.8 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(b)fluoranthene   | 6.8    | 1.5  | 4.8 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(g,h,i)perylene   | < 2.1  | 2.1  | 6.7 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(k)fluoranthene   | < 0.90 | 0.90 | 2.9 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Chrysene               | 60     | 4.8  | 15  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Dibenzo(a,h)anthracene | 3.7    | 2.0  | 6.4 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Fluoranthene           | 5.8    | 4.5  | 14  |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Fluorene               | 44     | 17   | 54  |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Indeno(1,2,3-cd)pyrene | < 2.5  | 2.5  | 8.0 |     | ug/L  |      | 10/30/98      | SW846 8310      |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : MW-1**

**Lab Sample Number : 886252-001**

**WI DNR LAB ID : 405132750**

**Client : MORAIN ENVIRONMENTAL INC**

**Report Date : 11/2/98**

**Collection Date : 10/16/98**

**Matrix Type : WATER**

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|                         |      |     |     |        |   |          |            |
|-------------------------|------|-----|-----|--------|---|----------|------------|
| 1-Methylnaphthalene     | 240  | 36  | 110 | ug/L   |   | 10/30/98 | SW846 8310 |
| 2-Methylnaphthalene     | 110  | 36  | 110 | ug/L   |   | 10/30/98 | SW846 8310 |
| Naphthalene             | < 42 | 42  | 130 | ug/L   |   | 10/30/98 | SW846 8310 |
| Phenanthrene            | 500  | 69  | 220 | ug/L   |   | 10/30/98 | SW846 8310 |
| Pyrene                  | 13   | 5.1 | 16  | ug/L   | Q | 10/30/98 | SW846 8310 |
| 9,10-Diphenylanthracene | NA   |     |     | %Recov |   | 10/30/98 | SW846 8310 |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-7  
 Lab Sample Number : 886252-002  
 WI DNR LAB ID : 405132750

Client : MORAINES ENVIRONMENTAL INC  
 Report Date : 11/2/98  
 Collection Date : 10/16/98  
 Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO    Prep Date: 10/21/98    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 76000  |     |     | 3000 | ug/l   |      | 10/21/98      | Wi MOD DRO      |
| Blank spike           | 96     |     |     | 25   | %Recov |      | 10/21/98      | Wi MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25   | %Recov |      | 10/21/98      | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50   | ug/l   |      | 10/21/98      | Wi MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030    Prep Date: 10/23/98    Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| s-Butylbenzene              | 19     | 0.29 | 0.92 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| t-Butylbenzene              | 0.86   | 0.32 | 1.0  |     | ug/L  | Q    | 10/23/98      | SW846 8260B     |
| n-Butylbenzene              | 12     | 0.29 | 0.92 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/23/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/23/98      | SW846 8260B     |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** #1401  
**Field ID :** MW-7  
**Lab Sample Number :** 886252-002  
**WI DNR LAB ID :** 405132750

**Client :** MORAIN ENVIRONMENTAL INC  
**Report Date :** 11/2/98  
**Collection Date :** 10/16/98  
**Matrix Type :** WATER

|                           |        |      |      |      |          |          |             |
|---------------------------|--------|------|------|------|----------|----------|-------------|
| 1,2-Dibromoethane         | < 0.39 | 0.39 | 1.2  | ug/L |          | 10/23/98 | SW846 8260B |
| Dibromomethane            | < 0.53 | 0.53 | 1.7  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,3-Dichlorobenzene       | < 0.34 | 0.34 | 1.1  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |          | 10/23/98 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |          | 10/23/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.43 | 0.43 | 1.4  | ug/L |          | 10/23/98 | SW846 8260B |
| cis-1,2-Dichloroethene    | 5.0    | 0.28 | 0.89 | ug/L |          | 10/23/98 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |          | 10/23/98 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |          | 10/23/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |          | 10/23/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |          | 10/23/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |          | 10/23/98 | SW846 8260B |
| Diisopropyl ether         | 0.89   | 0.55 | 1.8  | ug/L | Q        | 10/23/98 | SW846 8260B |
| Ethylbenzene              | 3.5    | 0.32 | 1.0  | ug/L |          | 10/23/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |          | 10/23/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |          | 10/23/98 | SW846 8260B |
| Isopropylbenzene          | 12     | 0.26 | 0.83 | ug/L |          | 10/23/98 | SW846 8260B |
| p-Isopropyltoluene        | 16     | 0.24 | 0.76 | ug/L |          | 10/23/98 | SW846 8260B |
| Methylene chloride        | 0.42   | 0.36 | 1.1  | ug/L | QB(0.49) | 10/23/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |          | 10/23/98 | SW846 8260B |
| Naphthalene               | 1.7    | 0.35 | 1.1  | ug/L |          | 10/23/98 | SW846 8260B |
| n-Propylbenzene           | 17     | 0.76 | 2.4  | ug/L |          | 10/23/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |          | 10/23/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |          | 10/23/98 | SW846 8260B |
| Tetrachloroethene         | 0.56   | 0.43 | 1.4  | ug/L | Q        | 10/23/98 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L |          | 10/23/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |          | 10/23/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |          | 10/23/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |          | 10/23/98 | SW846 8260B |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** #1401

**Field ID :** MW-7

**Lab Sample Number :** 886252-002

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 11/2/98

**Collection Date :** 10/16/98

**Matrix Type :** WATER

|                        |        |      |      |        |   |          |             |
|------------------------|--------|------|------|--------|---|----------|-------------|
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | 42     | 0.22 | 0.70 | ug/L   |   | 10/23/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   |   | 10/23/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | 1.9    | 0.27 | 0.86 | ug/L   |   | 10/23/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   |   | 10/23/98 | SW846 8260B |
| Xylenes, -m, -p        | 0.50   | 0.43 | 1.4  | ug/L   | Q | 10/23/98 | SW846 8260B |
| Xylene, -o             | 0.35   | 0.24 | 0.76 | ug/L   | Q | 10/23/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 118    |      |      | %Recov |   | 10/23/98 | SW846 8260B |
| Dibromofluoromethane   | 113    |      |      | %Recov |   | 10/23/98 | SW846 8260B |
| Toluene-d8             | 115    |      |      | %Recov |   | 10/23/98 | SW846 8260B |

## Organic Results

### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510

Prep Date: 10/22/98

Analyst: ARO

| Analyte                | Result | LOD  | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|------------------------|--------|------|-----|-----|-------|------|---------------|-----------------|
| Acenaphthene           | < 28   | 28   | 89  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Acenaphthylene         | < 25   | 25   | 80  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Anthracene             | < 3.8  | 3.8  | 12  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(a)anthracene     | 19     | 2.5  | 8.0 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(a)pyrene         | 0.98   | 0.90 | 2.9 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Benzo(b)fluoranthene   | 3.0    | 2.7  | 8.6 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Benzo(g,h,i)perylene   | < 1.3  | 1.3  | 4.1 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Benzo(k)fluoranthene   | 1.3    | 0.54 | 1.7 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Chrysene               | 32     | 2.9  | 9.2 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Dibenzo(a,h)anthracene | 2.3    | 1.2  | 3.8 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Fluoranthene           | 3.5    | 2.7  | 8.6 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Fluorene               | 28     | 10   | 32  |     | ug/L  | Q    | 10/30/98      | SW846 8310      |
| Indeno(1,2,3-cd)pyrene | < 1.5  | 1.5  | 4.8 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| 1-Methylnaphthalene    | 150    | 22   | 70  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| 2-Methylnaphthalene    | < 22   | 22   | 70  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Naphthalene            | < 25   | 25   | 80  |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Phenanthrene           | 210    | 33   | 110 |     | ug/L  |      | 10/30/98      | SW846 8310      |
| Pyrene                 | 7.8    | 3.1  | 9.9 |     | ug/L  | Q    | 10/30/98      | SW846 8310      |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : MW-7**

**Lab Sample Number : 886252-002**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 11/2/98**

**Collection Date : 10/16/98**

**Matrix Type : WATER**

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|                         |    |        |          |            |
|-------------------------|----|--------|----------|------------|
| 9,10-Diphenylanthracene | NA | %Recov | 10/28/98 | SW846 8310 |
|-------------------------|----|--------|----------|------------|







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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

WI DNR LAB ID : 405132750

Client: MORaine ENVIRONMENTAL INC

Report Date : 10/21/98

| Sample No. | Field ID   | Collection Date | Sample No. | Field ID | Collection Date |
|------------|------------|-----------------|------------|----------|-----------------|
| 886175-001 | MW-2       | 10/14/98        |            |          |                 |
| 886175-002 | MW-3       | 10/14/98        |            |          |                 |
| 886175-003 | MW-4       | 10/14/98        |            |          |                 |
| 886175-004 | MW-5       | 10/14/98        |            |          |                 |
| 886175-005 | MW-6       | 10/14/98        |            |          |                 |
| 886175-006 | TRIP BLANK | 10/14/98        |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duranceau  
Approval Signature

10/23/98  
Date



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| Lab#:              | TestGroupID: | Comment:   |
|--------------------|--------------|--|
| 886175-            | 8260+-W      | Methylene chloride is present in the laboratory environment. Detects should be considered suspect. |
| 886175-003<br>MW-4 | DRO-W        | Hump was present late in chromatogram.   |
| 886175-004<br>MW-5 | DRO-W        | Hump was present late in chromatogram.   |
| 886175-005<br>MW-6 | GRO-W        | One large early unidentified peak present.   |
|                    | DRO-W        | Hump was present late in chromatogram.   |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : #1401  
Field ID : MW-2  
Lab Sample Number : 886175-001  
WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC  
Report Date : 10/21/98  
Collection Date : 10/14/98  
Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO Prep Date: 10/19/98 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 10/19/98      | Wi MOD DRO      |
| Blank spike           | 94     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 10/19/98      | Wi MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030 Prep Date: 10/20/98 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/20/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/20/98      | SW846 8260B     |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** #1401  
**Field ID :** MW-2  
**Lab Sample Number :** 886175-001  
**WI DNR LAB ID :** 405132750

**Client :** MORAIN ENVIRONMENTAL INC  
**Report Date :** 10/21/98  
**Collection Date :** 10/14/98  
**Matrix Type :** WATER

|                           |        |      |      |      |          |          |             |
|---------------------------|--------|------|------|------|----------|----------|-------------|
| 1,2-Dibromoethane         | < 0.39 | 0.39 | 1.2  | ug/L |          | 10/20/98 | SW846 8260B |
| Dibromomethane            | < 0.53 | 0.53 | 1.7  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,3-Dichlorobenzene       | < 0.34 | 0.34 | 1.1  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |          | 10/20/98 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |          | 10/20/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.43 | 0.43 | 1.4  | ug/L |          | 10/20/98 | SW846 8260B |
| cis-1,2-Dichloroethane    | < 0.28 | 0.28 | 0.89 | ug/L |          | 10/20/98 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |          | 10/20/98 | SW846 8260B |
| trans-1,2-Dichloroethane  | < 0.79 | 0.79 | 2.5  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |          | 10/20/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |          | 10/20/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |          | 10/20/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |          | 10/20/98 | SW846 8260B |
| Diisopropyl ether         | < 0.55 | 0.55 | 1.8  | ug/L |          | 10/20/98 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L |          | 10/20/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |          | 10/20/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |          | 10/20/98 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L |          | 10/20/98 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L |          | 10/20/98 | SW846 8260B |
| Methylene chloride        | 0.56   | 0.36 | 1.1  | ug/L | QB(0.48) | 10/20/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |          | 10/20/98 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L |          | 10/20/98 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L |          | 10/20/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |          | 10/20/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |          | 10/20/98 | SW846 8260B |
| Tetrachloroethane         | < 0.43 | 0.43 | 1.4  | ug/L |          | 10/20/98 | SW846 8260B |
| Toluene                   | 0.28   | 0.27 | 0.86 | ug/L | Q        | 10/20/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |          | 10/20/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |          | 10/20/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |          | 10/20/98 | SW846 8260B |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** #1401

**Field ID :** MW-2

**Lab Sample Number :** 886175-001

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 10/21/98

**Collection Date :** 10/14/98

**Matrix Type :** WATER

|                        |        |      |      |        |          |             |
|------------------------|--------|------|------|--------|----------|-------------|
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   | 10/20/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | < 0.22 | 0.22 | 0.70 | ug/L   | 10/20/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   | 10/20/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   | 10/20/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 10/20/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 10/20/98 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 10/20/98 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 10/20/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 113    |      |      | %Recov | 10/20/98 | SW846 8260B |
| Dibromofluoromethane   | 116    |      |      | %Recov | 10/20/98 | SW846 8260B |
| Toluene-d8             | 113    |      |      | %Recov | 10/20/98 | SW846 8260B |

## Organic Results

**GASOLINE RANGE ORGANICS - WATER**

**Prep Method:** WI MOD.GRO

**Prep Date:** 10/19/98

**Analyst:** EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike             | 96     |     |     | 1.0  | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike Duplicate   | 100    |     |     | 1.00 | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : #1401  
 Field ID : MW-3  
 Lab Sample Number : 886175-002  
 WI DNR LAB ID : 405132750

Client : MORAIN ENVIRONMENTAL INC  
 Report Date : 10/21/98  
 Collection Date : 10/14/98  
 Matrix Type : WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

Prep Method: Wi MOD DRO    Prep Date: 10/19/98    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 10/19/98      | Wi MOD DRO      |
| Blank spike           | 94     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 10/19/98      | Wi MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

Prep Method: SW846 5030    Prep Date: 10/19/98    Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : MW-3**

**Lab Sample Number : 886175-002**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 10/21/98**

**Collection Date : 10/14/98**

**Matrix Type : WATER**

|                           |        |      |      |      |   |          |             |
|---------------------------|--------|------|------|------|---|----------|-------------|
| 1,2-Dibromoethane         | < 0.39 | 0.39 | 1.2  | ug/L |   | 10/19/98 | SW846 8260B |
| Dibromomethane            | < 0.53 | 0.53 | 1.7  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,3-Dichlorobenzene       | < 0.34 | 0.34 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L |   | 10/19/98 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |   | 10/19/98 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |   | 10/19/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |   | 10/19/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Diisopropyl ether         | < 0.55 | 0.55 | 1.8  | ug/L |   | 10/19/98 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |   | 10/19/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L |   | 10/19/98 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L |   | 10/19/98 | SW846 8260B |
| Methylene chloride        | 0.59   | 0.36 | 1.1  | ug/L | Q | 10/19/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |   | 10/19/98 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Toluene                   | 0.32   | 0.27 | 0.86 | ug/L | Q | 10/19/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 10/19/98 | SW846 8260B |





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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** #1401

**Field ID :** MW-3

**Lab Sample Number :** 886175-002

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 10/21/98

**Collection Date :** 10/14/98

**Matrix Type :** WATER

|                        |        |      |      |        |          |             |
|------------------------|--------|------|------|--------|----------|-------------|
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | < 0.22 | 0.22 | 0.70 | ug/L   | 10/19/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   | 10/19/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 10/19/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 10/19/98 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 10/19/98 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 10/19/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 115    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Dibromofluoromethane   | 116    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Toluene-d8             | 118    |      |      | %Recov | 10/19/98 | SW846 8260B |

## Organic Results

### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO

Prep Date: 10/19/98

Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike             | 96     |     |     | 1.0  | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike Duplicate   | 100    |     |     | 1.00 | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORAINÉ ENVIRONMENTAL INC |
| Project Number : #1401               | Report Date : 10/21/98             |
| Field ID : MW-4                      | Collection Date : 10/14/98         |
| Lab Sample Number : 886175-003       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO    Prep Date: 10/19/98    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 140    |     |     | 100 | ug/l   |      | 10/19/98      | WI MOD DRO      |
| Blank spike           | 94     |     |     | 25  | %Recov |      | 10/19/98      | WI MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25  | %Recov |      | 10/19/98      | WI MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 10/19/98      | WI MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030    Prep Date: 10/19/98    Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : #1401               | Report Date : 10/21/98             |
| Field ID : MW-4                      | Collection Date : 10/14/98         |
| Lab Sample Number : 886175-003       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

|                           |        |      |      |      |   |          |             |
|---------------------------|--------|------|------|------|---|----------|-------------|
| 1,2-Dibromoethane         | < 0.39 | 0.39 | 1.2  | ug/L |   | 10/19/98 | SW846 8260B |
| Dibromomethane            | < 0.53 | 0.53 | 1.7  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,3-Dichlorobenzene       | < 0.34 | 0.34 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L |   | 10/19/98 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |   | 10/19/98 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |   | 10/19/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |   | 10/19/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Diisopropyl ether         | 2.2    | 0.55 | 1.8  | ug/L |   | 10/19/98 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |   | 10/19/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L |   | 10/19/98 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L |   | 10/19/98 | SW846 8260B |
| Methylene chloride        | 0.54   | 0.36 | 1.1  | ug/L | Q | 10/19/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |   | 10/19/98 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 10/19/98 | SW846 8260B |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** #1401

**Field ID :** MW-4

**Lab Sample Number :** 886175-003

**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC

**Report Date :** 10/21/98

**Collection Date :** 10/14/98

**Matrix Type :** WATER

|                        |        |      |      |        |          |             |
|------------------------|--------|------|------|--------|----------|-------------|
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | < 0.22 | 0.22 | 0.70 | ug/L   | 10/19/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   | 10/19/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 10/19/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 10/19/98 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 10/19/98 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 10/19/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 115    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Dibromofluoromethane   | 115    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Toluene-d8             | 116    |      |      | %Recov | 10/19/98 | SW846 8260B |

## Organic Results

### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO    Prep Date: 10/19/98    Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike             | 96     |     |     | 1.0  | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike Duplicate   | 100    |     |     | 1.00 | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : MW-5

Lab Sample Number : 886175-004

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 10/21/98

Collection Date : 10/14/98

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO Prep Date: 10/19/98 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 150    |     |     | 100 | ug/l   |      | 10/19/98      | Wi MOD DRO      |
| Blank spike           | 94     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 10/19/98      | Wi MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030 Prep Date: 10/19/98 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : MW-5**

**Lab Sample Number : 886175-004**

**WI DNR LAB ID : 405132750**

**Client : MORAINÉ ENVIRONMENTAL INC**

**Report Date : 10/21/98**

**Collection Date : 10/14/98**

**Matrix Type : WATER**

|                           |        |      |      |      |          |             |
|---------------------------|--------|------|------|------|----------|-------------|
| 1,2-Dibromoethane         | < 0.39 | 0.39 | 1.2  | ug/L | 10/19/98 | SW846 8260B |
| Dibromomethane            | < 0.53 | 0.53 | 1.7  | ug/L | 10/19/98 | SW846 8260B |
| 1,3-Dichlorobenzene       | < 0.34 | 0.34 | 1.1  | ug/L | 10/19/98 | SW846 8260B |
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L | 10/19/98 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L | 10/19/98 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L | 10/19/98 | SW846 8260B |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 10/19/98 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L | 10/19/98 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L | 10/19/98 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L | 10/19/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L | 10/19/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L | 10/19/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L | 10/19/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L | 10/19/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L | 10/19/98 | SW846 8260B |
| Diisopropyl ether         | 5.2    | 0.55 | 1.8  | ug/L | 10/19/98 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L | 10/19/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L | 10/19/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L | 10/19/98 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L | 10/19/98 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L | 10/19/98 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L | 10/19/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L | 10/19/98 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L | 10/19/98 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L | 10/19/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L | 10/19/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L | 10/19/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L | 10/19/98 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L | 10/19/98 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L | 10/19/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L | 10/19/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L | 10/19/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 10/19/98 | SW846 8260B |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Field ID : MW-5**

**Lab Sample Number : 886175-004**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 10/21/98**

**Collection Date : 10/14/98**

**Matrix Type : WATER**

|                        |        |      |      |        |   |          |             |
|------------------------|--------|------|------|--------|---|----------|-------------|
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   |   | 10/19/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | 0.80   | 0.22 | 0.70 | ug/L   |   | 10/19/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   |   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   |   | 10/19/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | 0.29   | 0.27 | 0.86 | ug/L   | Q | 10/19/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   |   | 10/19/98 | SW846 8260B |
| Xylenes, -m, -p        | 0.46   | 0.43 | 1.4  | ug/L   | Q | 10/19/98 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   |   | 10/19/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 112    |      |      | %Recov |   | 10/19/98 | SW846 8260B |
| Dibromofluoromethane   | 114    |      |      | %Recov |   | 10/19/98 | SW846 8260B |
| Toluene-d8             | 116    |      |      | %Recov |   | 10/19/98 | SW846 8260B |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO

Prep Date: 10/19/98

Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike             | 96     |     |     | 1.0  | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike Duplicate   | 100    |     |     | 1.00 | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** #1401  
**Field ID :** MW-6  
**Lab Sample Number :** 886175-005  
**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 10/21/98  
**Collection Date :** 10/14/98  
**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

Prep Method: Wi MOD DRO    Prep Date: 10/19/98    Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 110    |     |     | 100 | ug/l   |      | 10/19/98      | Wi MOD DRO      |
| Blank spike           | 94     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank spike duplicate | 97     |     |     | 25  | %Recov |      | 10/19/98      | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50  | ug/l   |      | 10/19/98      | Wi MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

Prep Method: SW846 5030    Prep Date: 10/19/98    Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : MW-6

Lab Sample Number : 886175-005

WI DNR LAB ID : 405132750

Client : MORAINÉ ENVIRONMENTAL INC

Report Date : 10/21/98

Collection Date : 10/14/98

Matrix Type : WATER

|                           |        |      |      |      |   |          |             |
|---------------------------|--------|------|------|------|---|----------|-------------|
| 1,2-Dibromoethane         | < 0.39 | 0.39 | 1.2  | ug/L |   | 10/19/98 | SW846 8260B |
| Dibromomethane            | < 0.53 | 0.53 | 1.7  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,3-Dichlorobenzene       | < 0.34 | 0.34 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,4-Dichlorobenzene       | < 0.30 | 0.30 | 0.96 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichloroethane        | < 0.37 | 0.37 | 1.2  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichlorobenzene       | < 0.25 | 0.25 | 0.80 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethene        | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| cis-1,2-Dichloroethene    | 0.72   | 0.28 | 0.89 | ug/L | Q | 10/19/98 | SW846 8260B |
| Dichlorodifluoromethane   | < 0.47 | 0.47 | 1.5  | ug/L |   | 10/19/98 | SW846 8260B |
| trans-1,2-Dichloroethene  | < 0.79 | 0.79 | 2.5  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L |   | 10/19/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L |   | 10/19/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Diisopropyl ether         | 62     | 0.55 | 1.8  | ug/L |   | 10/19/98 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L |   | 10/19/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L |   | 10/19/98 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L |   | 10/19/98 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L |   | 10/19/98 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L |   | 10/19/98 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L |   | 10/19/98 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L |   | 10/19/98 | SW846 8260B |
| Toluene                   | 0.30   | 0.27 | 0.86 | ug/L | Q | 10/19/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L |   | 10/19/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L |   | 10/19/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 10/19/98 | SW846 8260B |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** #1401

**Field ID :** MW-6

**Lab Sample Number :** 886175-005

**WI DNR LAB ID :** 405132750

**Client :** MORAIN ENVIRONMENTAL INC

**Report Date :** 10/21/98

**Collection Date :** 10/14/98

**Matrix Type :** WATER

|                        |        |      |      |        |          |             |
|------------------------|--------|------|------|--------|----------|-------------|
| 1,1,2-Trichloroethane  | < 0.61 | 0.61 | 1.9  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene | < 0.22 | 0.22 | 0.70 | ug/L   | 10/19/98 | SW846 8260B |
| Trichloroethene        | < 0.37 | 0.37 | 1.2  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichloropropane | < 0.75 | 0.75 | 2.4  | ug/L   | 10/19/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene | < 0.27 | 0.27 | 0.86 | ug/L   | 10/19/98 | SW846 8260B |
| Vinyl chloride         | < 0.20 | 0.20 | 0.64 | ug/L   | 10/19/98 | SW846 8260B |
| Xylenes, -m, -p        | < 0.43 | 0.43 | 1.4  | ug/L   | 10/19/98 | SW846 8260B |
| Xylene, -o             | < 0.24 | 0.24 | 0.76 | ug/L   | 10/19/98 | SW846 8260B |
| 4-Bromofluorobenzene   | 115    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Dibromofluoromethane   | 116    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Toluene-d8             | 115    |      |      | %Recov | 10/19/98 | SW846 8260B |

## Organic Results

### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO

Prep Date: 10/19/98

Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike             | 96     |     |     | 1.0  | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike Duplicate   | 100    |     |     | 1.00 | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : TRIP BLANK

Lab Sample Number : 886175-006

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 10/21/98

Collection Date : 10/14/98

Matrix Type : WATER

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030

Prep Date: 10/19/98 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromobenzene                | < 0.83 | 0.83 | 2.6  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromochloromethane          | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromodichloromethane        | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromoform                   | < 0.44 | 0.44 | 1.4  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Bromomethane                | < 0.70 | 0.70 | 2.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| s-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| t-Butylbenzene              | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| n-Butylbenzene              | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Carbon tetrachloride        | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroform                  | < 0.35 | 0.35 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorobenzene               | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chlorodibromomethane        | < 0.42 | 0.42 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloroethane                | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Chloromethane               | < 0.61 | 0.61 | 1.9  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 2-Chlorotoluene             | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 4-Chlorotoluene             | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dibromo-3-chloropropane | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dibromoethane           | < 0.39 | 0.39 | 1.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Dibromomethane              | < 0.53 | 0.53 | 1.7  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,3-Dichlorobenzene         | < 0.34 | 0.34 | 1.1  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,4-Dichlorobenzene         | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dichloroethane          | < 0.37 | 0.37 | 1.2  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,2-Dichlorobenzene         | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| 1,1-Dichloroethene          | < 0.43 | 0.43 | 1.4  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| cis-1,2-Dichloroethene      | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| Dichlorodifluoromethane     | < 0.47 | 0.47 | 1.5  |     | ug/L  |      | 10/19/98      | SW846 8260B     |
| trans-1,2-Dichloroethene    | < 0.79 | 0.79 | 2.5  |     | ug/L  |      | 10/19/98      | SW846 8260B     |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : #1401**

**Client : MORAINÉ ENVIRONMENTAL INC**

**Field ID : TRIP BLANK**

**Report Date : 10/21/98**

**Lab Sample Number : 886175-006**

**Collection Date : 10/14/98**

**WI DNR LAB ID : 405132750**

**Matrix Type : WATER**

|                           |        |      |      |        |          |             |
|---------------------------|--------|------|------|--------|----------|-------------|
| 1,2-Dichloropropane       | < 0.35 | 0.35 | 1.1  | ug/L   | 10/19/98 | SW846 8260B |
| 1,1-Dichloroethane        | < 0.35 | 0.35 | 1.1  | ug/L   | 10/19/98 | SW846 8260B |
| 1,3-Dichloropropane       | < 0.42 | 0.42 | 1.3  | ug/L   | 10/19/98 | SW846 8260B |
| 2,2-Dichloropropane       | < 0.36 | 0.36 | 1.1  | ug/L   | 10/19/98 | SW846 8260B |
| 1,1-Dichloropropene       | < 0.81 | 0.81 | 2.6  | ug/L   | 10/19/98 | SW846 8260B |
| cis-1,3-Dichloropropene   | < 0.32 | 0.32 | 1.0  | ug/L   | 10/19/98 | SW846 8260B |
| trans-1,3-Dichloropropene | < 0.43 | 0.43 | 1.4  | ug/L   | 10/19/98 | SW846 8260B |
| Diisopropyl ether         | < 0.55 | 0.55 | 1.8  | ug/L   | 10/19/98 | SW846 8260B |
| Ethylbenzene              | < 0.32 | 0.32 | 1.0  | ug/L   | 10/19/98 | SW846 8260B |
| Fluorotrichloromethane    | < 0.28 | 0.28 | 0.89 | ug/L   | 10/19/98 | SW846 8260B |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0  | ug/L   | 10/19/98 | SW846 8260B |
| Isopropylbenzene          | < 0.26 | 0.26 | 0.83 | ug/L   | 10/19/98 | SW846 8260B |
| p-Isopropyltoluene        | < 0.24 | 0.24 | 0.76 | ug/L   | 10/19/98 | SW846 8260B |
| Methylene chloride        | < 0.36 | 0.36 | 1.1  | ug/L   | 10/19/98 | SW846 8260B |
| Methyl-tert-butyl-ether   | < 0.32 | 0.32 | 1.0  | ug/L   | 10/19/98 | SW846 8260B |
| Naphthalene               | < 0.35 | 0.35 | 1.1  | ug/L   | 10/19/98 | SW846 8260B |
| n-Propylbenzene           | < 0.76 | 0.76 | 2.4  | ug/L   | 10/19/98 | SW846 8260B |
| Styrene                   | < 0.17 | 0.17 | 0.54 | ug/L   | 10/19/98 | SW846 8260B |
| 1,1,2,2-Tetrachloroethane | < 0.69 | 0.69 | 2.2  | ug/L   | 10/19/98 | SW846 8260B |
| 1,1,1,2-Tetrachloroethane | < 0.70 | 0.70 | 2.2  | ug/L   | 10/19/98 | SW846 8260B |
| Tetrachloroethene         | < 0.43 | 0.43 | 1.4  | ug/L   | 10/19/98 | SW846 8260B |
| Toluene                   | < 0.27 | 0.27 | 0.86 | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichlorobenzene    | < 0.47 | 0.47 | 1.5  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,4-Trichlorobenzene    | < 0.27 | 0.27 | 0.86 | ug/L   | 10/19/98 | SW846 8260B |
| 1,1,1-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   | 10/19/98 | SW846 8260B |
| 1,1,2-Trichloroethane     | < 0.61 | 0.61 | 1.9  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,4-Trimethylbenzene    | < 0.22 | 0.22 | 0.70 | ug/L   | 10/19/98 | SW846 8260B |
| Trichloroethene           | < 0.37 | 0.37 | 1.2  | ug/L   | 10/19/98 | SW846 8260B |
| 1,2,3-Trichloropropane    | < 0.75 | 0.75 | 2.4  | ug/L   | 10/19/98 | SW846 8260B |
| 1,3,5-Trimethylbenzene    | < 0.27 | 0.27 | 0.86 | ug/L   | 10/19/98 | SW846 8260B |
| Vinyl chloride            | < 0.20 | 0.20 | 0.64 | ug/L   | 10/19/98 | SW846 8260B |
| Xylenes, -m, -p           | < 0.43 | 0.43 | 1.4  | ug/L   | 10/19/98 | SW846 8260B |
| Xylene, -o                | < 0.24 | 0.24 | 0.76 | ug/L   | 10/19/98 | SW846 8260B |
| 4-Bromofluorobenzene      | 114    |      |      | %Recov | 10/19/98 | SW846 8260B |
| Dibromofluoromethane      | 111    |      |      | %Recov | 10/19/98 | SW846 8260B |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : #1401

Field ID : TRIP BLANK

Lab Sample Number : 886175-006

WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC

Report Date : 10/21/98

Collection Date : 10/14/98

Matrix Type : WATER

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|            |     |        |          |             |
|------------|-----|--------|----------|-------------|
| Toluene-d8 | 114 | %Recov | 10/19/98 | SW846 8260B |
|------------|-----|--------|----------|-------------|

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO Prep Date: 10/19/98 Analyst: EGS

| Analyte                   | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike               | 96     |     |     | 1.0  | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank Spike Duplicate     | 100    |     |     | 1.00 | %Recov |      | 10/20/98      | Wi MOD GRO      |
| Blank                     | < 50   |     |     | 50   | ug/l   |      | 10/20/98      | Wi MOD GRO      |

Company Name: MEI  
 Branch or Location: Griffon  
 Project Contact: TOM DUPPEN  
 Telephone: 377-9060  
 Project Number: # 1401  
 Project Name: Johnson Sand & Gravel  
 Project State: W22590 Johnson rd Waukesha  
 Sampled By (Print): B Dinkel  
 Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NR  
 Other



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525 Science Drive  
 Madison, WI 53711  
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 FAX: 608-233-0502

1423 N. 8th Street, Suite 122  
 Superior, WI 54880  
 715-392-5844 • 1-800-837-8238  
 FAX 715-392-5843

# CHAIN OF CUSTODY

31573

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: TOM DUPPEN

Company: MEI

Address: 1234 12th Ave

Griffon WI

Invoice To: \_\_\_\_\_

Company: \_\_\_\_\_

Address: SAME AS ABOVE

Mail Invoice To: \_\_\_\_\_

NR720 Confirmation Analysis Required? (circle): Y N  
 (En Chem will not confirm unless otherwise instructed.)

FILTERED? (YES/NO) N N N  
 PRESERVATION (CODE)\* E R B  
 ANALYSES REQUESTED  
GRO  
AP0  
VOL

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |      | FIELD SCREEN | MATRIX | SHADED AREA FOR LABORATORY USE ONLY |                  | COMMENTS | LABORATORY NUMBER |
|----------|--------------------|------------|------|--------------|--------|-------------------------------------|------------------|----------|-------------------|
|          |                    | DATE       | TIME |              |        | GOOD COND.                          | TOTAL BOTTLES    |          |                   |
| 1        | MW 2               | 10-14-98   | PM   | -            | W      | X                                   | 1-4 AM<br>3-4 PM |          | 001               |
| 2        | MW 3               |            | PM   | -            | W      |                                     |                  |          | 002               |
| 4        | MW 4               |            | PM   | -            | W      |                                     |                  |          | 003               |
| 5        | MW 5               |            | PM   | -            | W      |                                     |                  |          | 004               |
| 6        | MW 6               |            | PM   | -            | W      |                                     |                  |          | 005               |
| T.B      | TRIP BLANK         |            | AM   | -            | W      |                                     | 2-4 PM           |          | 006               |

**\*Preservation Code**  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)  
 \*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By: B Dinkel Date/Time: 10-15-98 5:00 PM  
 Relinquished By: B Dinkel Date/Time: 10/16/98 1600  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: B Dinkel Date/Time: 10/16/98  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received By: B Dinkel Date/Time: 10-16-98 1600

En Chem Project No. 886175  
 Sample Receipt Temp. Ro I  
 Sample Receipt pH (Wat/Metals) \_\_\_\_\_  
 Custody Seal \_\_\_\_\_



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

WI DNR LAB ID : 405132750

Client: MORaine ENVIRONMENTAL INC

Report Date : 6/24/98

| Sample No. | Field ID   | Collection Date | Sample No. | Field ID | Collection Date |
|------------|------------|-----------------|------------|----------|-----------------|
| 883569-001 | MW1        | 6/16/98         |            |          |                 |
| 883569-002 | MW2        | 6/16/98         |            |          |                 |
| 883569-003 | MW3        | 6/16/98         |            |          |                 |
| 883569-004 | MW4        | 6/16/98         |            |          |                 |
| 883569-005 | MW5        | 6/16/98         |            |          |                 |
| 883569-006 | MW6        | 6/16/98         |            |          |                 |
| 883569-007 | MW7        | 6/16/98         |            |          |                 |
| 883569-008 | TRIP BLANK | 6/16/98         |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duranseau  
Approval Signature

6/24/98  
Date



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| Lab#:             | TestGroupID: | Comment:  |
|-------------------|--------------|---|
| 883569-001<br>MW1 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.      |
|                   | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline. |
| 883569-006<br>MW6 | GRO-W        | Reported concentration due to single peak in window.  |
| 883569-007<br>MW7 | PAHLC-W      | Surrogate recovery data unavailable due to high dilution required for sample analysis.      |
|                   | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline. |





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**- Analytical Report -**

**Project Name :** JOHNSON SAND & GRAVEL  
**Project Number :** 0305  
**Field ID :** MW1  
**Lab Sample Number :** 883569-001  
**WI DNR LAB ID :** 405132750

**Client :** MORaine ENVIRONMENTAL INC  
**Report Date :** 6/23/98  
**Collection Date :** 6/16/98  
**Matrix Type :** WATER

**Organic Results**

**DIESEL RANGE ORGANICS - WATER**

Prep Method: WI MOD DRO    Prep Date: 6/19/98    Analyst: DJB

| Analyte               | Result | LOD | LCQ | EQL   | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 330000 |     |     | 13000 | ug/l   |      | 6/19/98       | WI MOD DRO      |
| Blank spike           | 91     |     |     | 25    | %Recov |      | 6/19/98       | WI MOD DRO      |
| Blank spike duplicate | 94     |     |     | 25    | %Recov |      | 6/19/98       | WI MOD DRO      |
| Blank                 | < 50   |     |     | 50    | ug/l   |      | 6/19/98       | WI MOD DRO      |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO    Prep Date: 6/18/98    Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 1600   |     |     | 100  | ug/l   |      | 6/19/98       | WI MOD GRO      |
| Blank Spike             | 101    |     |     | 1.00 | %Recov |      | 6/19/98       | WI MOD GRO      |
| Blank Spike Duplicate   | 98     |     |     | 1.0  | %Recov |      | 6/19/98       | WI MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | WI MOD GRO      |

**Organic Results**

**PAH (HPLC) LIST - SEMIVOLATILES**

Prep Method: SW846 3510    Prep Date: 6/18/98    Analyst: ARO

| Analyte              | Result | LOD  | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|----------------------|--------|------|-----|-----|-------|------|---------------|-----------------|
| Acenaphthene         | 77     | 24   | 76  |     | ug/L  |      | 6/22/98       | SW846 8310      |
| Acenaphthylene       | 21     | 20   | 64  |     | ug/L  | Q    | 6/22/98       | SW846 8310      |
| Anthracene           | 17     | 10   | 32  |     | ug/L  | Q    | 6/22/98       | SW846 8310      |
| Benzo(a)anthracene   | 72     | 56   | 180 |     | ug/L  | Q    | 6/22/98       | SW846 8310      |
| Benzo(a)pyrene       | 2.2    | 0.75 | 2.4 |     | ug/L  | Q    | 6/22/98       | SW846 8310      |
| Benzo(b)fluoranthene | 19     | 7.5  | 24  |     | ug/L  | Q    | 6/22/98       | SW846 8310      |
| Benzo(g,h,i)perylene | < 1.1  | 1.1  | 3.5 |     | ug/L  |      | 6/22/98       | SW846 8310      |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : 0305                | Report Date : 6/23/98              |
| Field ID : MW1                       | Collection Date : 6/16/98          |
| Lab Sample Number : 883569-001       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

| Compound                | Result | LOD  | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|-----|-----|--------|------|---------------|-----------------|
| Benzo(k)fluoranthene    | < 0.45 | 0.45 | 1.4 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Chrysene                | < 64   | 64   | 200 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Dibenzo(a,h)anthracene  | < 10   | 10   | 32  |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Fluoranthene            | 150    | 7.5  | 24  |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Fluorene                | < 230  | 230  | 730 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Indeno(1,2,3-cd)pyrene  | < 1.2  | 1.2  | 3.8 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| 1-Methylnaphthalene     | 950    | 180  | 570 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| 2-Methylnaphthalene     | 1000   | 180  | 570 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Naphthalene             | 220    | 21   | 67  |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Phenanthrene            | 1600   | 180  | 570 |     | ug/L   |      | 6/22/98       | SW846 8310      |
| Pyrene                  | 31     | 8.5  | 27  |     | ug/L   |      | 6/22/98       | SW846 8310      |
| 9,10-Diphenylanthracene | NA     |      |     |     | %Recov |      | 6/22/98       | SW846 8310      |

### Organic Results

| PVOC - WATER            |        | Prep Method: SW846 5030 |     |     |        | Prep Date: 6/18/98 |               | Analyst: EGS    |  |
|-------------------------|--------|-------------------------|-----|-----|--------|--------------------|---------------|-----------------|--|
| Analyte                 | Result | LOD                     | LOQ | EQL | Units  | Code               | Analysis Date | Analysis Method |  |
| a,a,a-Trifluorotoluene  | 108    |                         |     |     | %Recov |                    | 6/19/93       | MOD 8021B       |  |
| Benzene                 | < 0.52 | 0.52                    | 1.7 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| Ethylbenzene            | 8.7    | 0.48                    | 1.5 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| Methyl-tert-butyl-ether | 1.6    | 0.44                    | 1.4 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| Toluene                 | < 0.42 | 0.42                    | 1.3 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| 1,3,5-Trimethylbenzene  | 21     | 1.1                     | 3.5 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| 1,2,4-Trimethylbenzene  | 16     | 1.7                     | 5.4 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| Xylenes, -m, -p         | < 1.9  | 1.9                     | 6.1 |     | ug/l   |                    | 6/19/98       | MOD 8021B       |  |
| Xylene, -o              | 1.00   | 0.74                    | 2.4 |     | ug/l   | Q                  | 6/19/98       | MOD 8021B       |  |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : 0305  
Field ID : MW2  
Lab Sample Number : 883569-002  
WI DNR LAB ID : 405132750

Client : MORAINÉ ENVIRONMENTAL INC  
Report Date : 6/22/98  
Collection Date : 6/16/98  
Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: Wi MOD DRO Prep Date: 6/18/98 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100  | ug/l   |      | 6/18/98       | Wi MOD DRO      |
| Blank spike           | 80     |     |     | 25   | %Recov |      | 6/18/98       | Wi MOD DRO      |
| Blank spike duplicate | 85.0   |     |     | 25.0 | %Recov |      | 6/18/98       | Wi MOD DRO      |
| Blank                 | < 50   |     |     | 50   | ug/l   |      | 6/18/98       | Wi MOD DRO      |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO Prep Date: 6/18/98 Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | Wi MOD GRO      |
| Blank Spike             | 101    |     |     | 1.00 | %Recov |      | 6/19/98       | Wi MOD GRO      |
| Blank Spike Duplicate   | 98     |     |     | 1.0  | %Recov |      | 6/19/98       | Wi MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | Wi MOD GRO      |

### Organic Results

#### PVOC - WATER

Prep Method: SW846 5030 Prep Date: 6/18/98 Analyst: EGS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 6/19/98       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW2**

**Lab Sample Number : 883569-002**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 6/22/98**

**Collection Date : 6/16/98**

**Matrix Type : WATER**

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|                 |        |      |     |      |         |           |
|-----------------|--------|------|-----|------|---------|-----------|
| Xylenes, -m, -p | < 0.97 | 0.97 | 3.1 | ug/l | 6/19/98 | MOD 8021B |
| Xylene, -o      | < 0.37 | 0.37 | 1.2 | ug/l | 6/19/98 | MOD 8021B |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORAINÉ ENVIRONMENTAL INC |
| Project Number : 0305                | Report Date : 6/22/98              |
| Field ID : MW3                       | Collection Date : 6/16/98          |
| Lab Sample Number : 883569-003       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

### Organic Results

| DIESEL RANGE ORGANICS - WATER |        | Prep Method: WI MOD DRO |     | Prep Date: 6/18/98 |        | Analyst: DJB |               |                 |
|-------------------------------|--------|-------------------------|-----|--------------------|--------|--------------|---------------|-----------------|
| Analyte                       | Result | LOD                     | LOQ | EQL                | Units  | Code         | Analysis Date | Analysis Method |
| DIESEL RANGE ORGANICS         | < 100  |                         |     | 100                | ug/l   |              | 6/18/98       | WI MOD DRO      |
| Blank spike                   | 80     |                         |     | 25                 | %Recov |              | 6/18/98       | WI MOD DRO      |
| Blank spike duplicate         | 85.0   |                         |     | 25.0               | %Recov |              | 6/18/98       | WI MOD DRO      |
| Blank                         | < 50   |                         |     | 50                 | ug/l   |              | 6/18/98       | WI MOD DRO      |

### Organic Results

| GASOLINE RANGE ORGANICS - WATER |        | Prep Method: WI MOD.GRO |     | Prep Date: 6/18/98 |        | Analyst: EGS |               |                 |
|---------------------------------|--------|-------------------------|-----|--------------------|--------|--------------|---------------|-----------------|
| Analyte                         | Result | LOD                     | LOQ | EQL                | Units  | Code         | Analysis Date | Analysis Method |
| GASOLINE RANGE ORGANICS         | < 50   |                         |     | 50                 | ug/l   |              | 6/19/98       | WI MOD GRO      |
| Blank Spike                     | 101    |                         |     | 1.00               | %Recov |              | 6/19/98       | WI MOD GRO      |
| Blank Spike Duplicate           | 98     |                         |     | 1.0                | %Recov |              | 6/19/98       | WI MOD GRO      |
| Blank                           | < 50   |                         |     | 50                 | ug/l   |              | 6/19/98       | WI MOD GRO      |

### Organic Results

| PVOC - WATER            |        | Prep Method: SW846 5030 |      | Prep Date: 6/18/98 |        | Analyst: EGS |               |                 |
|-------------------------|--------|-------------------------|------|--------------------|--------|--------------|---------------|-----------------|
| Analyte                 | Result | LOD                     | LOQ  | EQL                | Units  | Code         | Analysis Date | Analysis Method |
| a,a,a-Trifluorotoluene  | 104    |                         |      |                    | %Recov |              | 6/19/98       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26                    | 0.83 |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24                    | 0.76 |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22                    | 0.70 |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21                    | 0.67 |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54                    | 1.7  |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86                    | 2.7  |                    | ug/l   |              | 6/19/98       | MOD 8021B       |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW3**

**Lab Sample Number : 883569-003**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 6/22/98**

**Collection Date : 6/16/98**

**Matrix Type : WATER**

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|                 |        |      |     |      |         |           |
|-----------------|--------|------|-----|------|---------|-----------|
| Xylenes, -m, -p | < 0.97 | 0.97 | 3.1 | ug/l | 6/19/98 | MOD 8021B |
| Xylene, -o      | < 0.37 | 0.37 | 1.2 | ug/l | 6/19/98 | MOD 8021B |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : 0305                | Report Date : 6/22/98              |
| Field ID : MW4                       | Collection Date : 6/16/98          |
| Lab Sample Number : 883569-004       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

### Organic Results

| DIESEL RANGE ORGANICS - WATER |        |     | Prep Method: Wi MOD DRO |      |        |      | Prep Date: 6/18/98 | Analyst: DJB    |
|-------------------------------|--------|-----|-------------------------|------|--------|------|--------------------|-----------------|
| Analyte                       | Result | LOD | LOQ                     | EQL  | Units  | Code | Analysis Date      | Analysis Method |
| DIESEL RANGE ORGANICS         | < 100  |     |                         | 100  | ug/l   |      | 6/18/98            | Wi MOD DRO      |
| Blank spike                   | 80     |     |                         | 25   | %Recov |      | 6/18/98            | Wi MOD DRO      |
| Blank spike duplicate         | 85.0   |     |                         | 25.0 | %Recov |      | 6/18/98            | Wi MOD DRO      |
| Blank                         | < 50   |     |                         | 50   | ug/l   |      | 6/18/98            | Wi MOD DRO      |

### Organic Results

| GASOLINE RANGE ORGANICS - WATER |        |     | Prep Method: WI MCD.GRO |      |        |      | Prep Date: 6/18/98 | Analyst: EGS    |
|---------------------------------|--------|-----|-------------------------|------|--------|------|--------------------|-----------------|
| Analyte                         | Result | LOD | LOQ                     | EQL  | Units  | Code | Analysis Date      | Analysis Method |
| GASOLINE RANGE ORGANICS         | < 50   |     |                         | 50   | ug/l   |      | 6/19/98            | Wi MOD GRO      |
| Blank Spike                     | 101    |     |                         | 1.00 | %Recov |      | 6/19/98            | Wi MOD GRO      |
| Blank Spike Duplicate           | 98     |     |                         | 1.0  | %Recov |      | 6/19/98            | Wi MOD GRO      |
| Blank                           | < 50   |     |                         | 50   | ug/l   |      | 6/19/98            | Wi MOD GRO      |

### Organic Results

| PVOC - WATER            |        |      | Prep Method: SW846 5030 |     |        |      | Prep Date: 6/18/98 | Analyst: EGS    |
|-------------------------|--------|------|-------------------------|-----|--------|------|--------------------|-----------------|
| Analyte                 | Result | LOD  | LOQ                     | EQL | Units  | Code | Analysis Date      | Analysis Method |
| a,a,a-Trifluorotoluene  | 105    |      |                         |     | %Recov |      | 6/19/98            | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.93                    |     | ug/l   |      | 6/19/98            | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76                    |     | ug/l   |      | 6/19/98            | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70                    |     | ug/l   |      | 6/19/98            | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67                    |     | ug/l   |      | 6/19/98            | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7                     |     | ug/l   |      | 6/19/98            | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7                     |     | ug/l   |      | 6/19/98            | MOD 8021B       |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW4**

**Lab Sample Number : 883569-004**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 6/22/98**

**Collection Date : 6/16/98**

**Matrix Type : WATER**

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|                 |        |      |     |      |         |           |
|-----------------|--------|------|-----|------|---------|-----------|
| Xylenes, -m, -p | < 0.97 | 0.97 | 3.1 | ug/l | 6/19/98 | MOD 8021B |
| Xylene, -o      | < 0.37 | 0.37 | 1.2 | ug/l | 6/19/98 | MOD 8021B |





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW5

Lab Sample Number : 883569-005

WI DNR LAB ID : 405132750

Client : MORAINES ENVIRONMENTAL INC

Report Date : 6/22/98

Collection Date : 6/16/98

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO Prep Date: 6/18/98 Analyst: DJB

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100  | ug/l   |      | 6/18/98       | WI MOD DRO      |
| Blank spike           | 80     |     |     | 25   | %Recov |      | 6/18/98       | WI MOD DRO      |
| Blank spike duplicate | 85.0   |     |     | 25.0 | %Recov |      | 6/18/98       | WI MOD DRO      |
| Blank                 | < 50   |     |     | 50   | ug/l   |      | 6/18/98       | WI MOD DRO      |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO Prep Date: 6/18/98 Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | WI MOD GRO      |
| Blank Spike             | 107    |     |     | 1.00 | %Recov |      | 6/19/98       | WI MOD GRO      |
| Blank Spike Duplicate   | 101    |     |     | 1.00 | %Recov |      | 6/19/98       | WI MOD GRO      |
| Blank                   | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | WI MOD GRO      |

### Organic Results

#### PVOC - WATER

Prep Method: SW846 5030 Prep Date: 6/18/98 Analyst: EGS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 100.0  |      |      |     | %Recov |      | 6/19/98       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW5**

**Lab Sample Number : 883569-005**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 6/22/98**

**Collection Date : 6/16/98**

**Matrix Type : WATER**

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|                 |        |      |     |      |         |           |
|-----------------|--------|------|-----|------|---------|-----------|
| Xylenes, -m, -p | < 0.97 | 0.97 | 3.1 | ug/l | 6/19/98 | MOD 8021B |
| Xylene, -o      | < 0.37 | 0.37 | 1.2 | ug/l | 6/19/98 | MOD 8021B |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : 0305                | Report Date : 6/22/98              |
| Field ID : MW6                       | Collection Date : 6/16/98          |
| Lab Sample Number : 883569-006       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

### Organic Results

| DIESEL RANGE ORGANICS - WATER |        | Prep Method: Wi MOD DRO |     | Prep Date: 6/18/98 |        | Analyst: DJB |               |                 |
|-------------------------------|--------|-------------------------|-----|--------------------|--------|--------------|---------------|-----------------|
| Analyte                       | Result | LOD                     | LOQ | EQL                | Units  | Code         | Analysis Date | Analysis Method |
| DIESEL RANGE ORGANICS         | 42000  |                         |     | 1500               | ug/l   |              | 6/19/98       | Wi MOD DRO      |
| Blank spike                   | 80     |                         |     | 25                 | %Recov |              | 6/19/98       | Wi MOD DRO      |
| Blank spike duplicate         | 85     |                         |     | 25                 | %Recov |              | 6/19/98       | Wi MOD DRO      |
| Blank                         | < 50   |                         |     | 50                 | ug/l   |              | 6/19/98       | Wi MOD DRO      |

### Organic Results

| GASOLINE RANGE ORGANICS - WATER |        | Prep Method: WI MOD.GRO |     | Prep Date: 6/18/98 |        | Analyst: EGS |               |                 |
|---------------------------------|--------|-------------------------|-----|--------------------|--------|--------------|---------------|-----------------|
| Analyte                         | Result | LOD                     | LOQ | EQL                | Units  | Code         | Analysis Date | Analysis Method |
| GASOLINE RANGE ORGANICS         | 79     |                         |     | 50                 | ug/l   |              | 6/19/98       | Wi MOD GRO      |
| Blank Spike                     | 107    |                         |     | 1.00               | %Recov |              | 6/19/98       | Wi MOD GRO      |
| Blank Spike Duplicate           | 101    |                         |     | 1.00               | %Recov |              | 6/19/98       | Wi MOD GRO      |
| Blank                           | < 50   |                         |     | 50                 | ug/l   |              | 6/19/98       | Wi MOD GRO      |

### Organic Results

| PVOC - WATER            |        | Prep Method: SW846 5030 |      | Prep Date: 6/18/98 |        | Analyst: EGS |               |                 |
|-------------------------|--------|-------------------------|------|--------------------|--------|--------------|---------------|-----------------|
| Analyte                 | Result | LOD                     | LOQ  | EQL                | Units  | Code         | Analysis Date | Analysis Method |
| a,a,a-Trifluorotoluene  | 101    |                         |      |                    | %Recov |              | 6/19/98       | MOD 8021B       |
| Benzene                 | 0.27   | 0.26                    | 0.83 |                    | ug/l   | Q            | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24                    | 0.76 |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | 0.36   | 0.22                    | 0.70 |                    | ug/l   | Q            | 6/19/98       | MOD 8021B       |
| Toluene                 | 0.40   | 0.21                    | 0.67 |                    | ug/l   | Q            | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54                    | 1.7  |                    | ug/l   |              | 6/19/98       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86                    | 2.7  |                    | ug/l   |              | 6/19/98       | MOD 8021B       |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW6**

**Lab Sample Number : 883569-006**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 6/22/98**

**Collection Date : 6/16/98**

**Matrix Type : WATER**

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|                 |        |      |     |      |         |           |
|-----------------|--------|------|-----|------|---------|-----------|
| Xylenes, -m, -p | < 0.97 | 0.97 | 3.1 | ug/l | 6/19/98 | MOD 8021B |
| Xylene, -o      | < 0.37 | 0.37 | 1.2 | ug/l | 6/19/98 | MOD 8021B |



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## - Analytical Report -

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Project Name : JOHNSON SAND & GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : 0305                | Report Date : 6/23/98              |
| Field ID : MW7                       | Collection Date : 6/16/98          |
| Lab Sample Number : 883569-007       | Matrix Type : WATER                |
| WI DNR LAB ID : 405132750            |                                    |

### Organic Results

| DIESEL RANGE ORGANICS - WATER |        |     | Prep Method: Wi MOD DRO |      |        |      | Prep Date: 6/18/96 | Analyst: DJB    |
|-------------------------------|--------|-----|-------------------------|------|--------|------|--------------------|-----------------|
| Analyte                       | Result | LOD | LOQ                     | EQL  | Units  | Code | Analysis Date      | Analysis Method |
| DIESEL RANGE ORGANICS         | 220000 |     |                         | 8000 | ug/l   |      | 6/19/98            | Wi MOD DRO      |
| Blank spike                   | 80     |     |                         | 25   | %Recov |      | 6/19/98            | Wi MOD DRO      |
| Blank spike duplicate         | 85     |     |                         | 25   | %Recov |      | 6/19/98            | Wi MOD DRO      |
| Blank                         | < 50   |     |                         | 50   | ug/l   |      | 6/19/98            | Wi MOD DRO      |

### Organic Results

| GASOLINE RANGE ORGANICS - WATER |        |     | Prep Method: WI MOD.GRO |      |        |      | Prep Date: 6/18/98 | Analyst: EGS    |
|---------------------------------|--------|-----|-------------------------|------|--------|------|--------------------|-----------------|
| Analyte                         | Result | LOD | LOQ                     | EQL  | Units  | Code | Analysis Date      | Analysis Method |
| GASOLINE RANGE ORGANICS         | 1900   |     |                         | 50   | ug/l   |      | 6/19/98            | Wi MOD GRO      |
| Blank Spike                     | 107    |     |                         | 1.00 | %Recov |      | 6/19/98            | Wi MOD GRO      |
| Blank Spike Duplicate           | 101    |     |                         | 1.00 | %Recov |      | 6/19/98            | Wi MOD GRO      |
| Blank                           | < 50   |     |                         | 50   | ug/l   |      | 6/19/98            | Wi MOD GRO      |

### Organic Results

| PAH (HPLC) LIST - SEMIVOLATILES |        |      | Prep Method: SW846 3510 |     |       |      | Prep Date: 6/18/98 | Analyst: ARO    |
|---------------------------------|--------|------|-------------------------|-----|-------|------|--------------------|-----------------|
| Analyte                         | Result | LOD  | LOQ                     | EQL | Units | Code | Analysis Date      | Analysis Method |
| Acenaphthene                    | 42     | 24   | 76                      |     | ug/L  | Q    | 6/22/98            | SW846 8310      |
| Acenaphthylene                  | < 20   | 20   | 64                      |     | ug/L  |      | 6/22/98            | SW846 9310      |
| Anthracene                      | 13     | 5.2  | 17                      |     | ug/L  | Q    | 6/22/98            | SW846 8310      |
| Benzo(a)anthracene              | 32     | 32   | 100                     |     | ug/L  | Q    | 6/22/98            | SW846 8310      |
| Benzo(a)pyrene                  | 1.1    | 0.75 | 2.4                     |     | ug/L  | Q    | 6/22/98            | SW846 8310      |
| Benzo(b)fluoranthene            | 9.1    | 0.75 | 2.4                     |     | ug/L  |      | 6/22/98            | SW846 8310      |
| Benzo(g,h,i)perylene            | < 1.1  | 1.1  | 3.5                     |     | ug/L  |      | 6/22/98            | SW846 8310      |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW7**

**Lab Sample Number : 883569-007**

**WI DNR LAB ID : 405132750**

**Client : MORAINÉ ENVIRONMENTAL INC**

**Report Date : 6/23/98**

**Collection Date : 6/16/98**

**Matrix Type : WATER**

|                         |        |      |     |        |   |         |            |
|-------------------------|--------|------|-----|--------|---|---------|------------|
| Benzo(k)fluoranthene    | < 0.45 | 0.45 | 1.4 | ug/L   |   | 6/22/98 | SW846 8310 |
| Chrysene                | 42     | 36   | 110 | ug/L   | Q | 6/22/98 | SW846 8310 |
| Dibenzo(a,h)anthracene  | 4.6    | 1.0  | 3.2 | ug/L   |   | 6/22/98 | SW846 8310 |
| Fluoranthene            | 1.4    | 0.75 | 2.4 | ug/L   | Q | 6/22/98 | SW846 8310 |
| Fluorene                | 74     | 14   | 45  | ug/L   |   | 6/22/98 | SW846 8310 |
| Indeno(1,2,3-cd)pyrene  | < 1.2  | 1.2  | 3.8 | ug/L   |   | 6/22/98 | SW846 8310 |
| 1-Methylnaphthalene     | 450    | 90   | 290 | ug/L   |   | 6/22/98 | SW846 8310 |
| 2-Methylnaphthalene     | 370    | 90   | 290 | ug/L   |   | 6/22/98 | SW846 8310 |
| Naphthalene             | 87     | 21   | 67  | ug/L   |   | 6/22/98 | SW846 8310 |
| Phenanthrene            | 680    | 100  | 320 | ug/L   |   | 6/22/98 | SW846 8310 |
| Pyrene                  | 20     | 4.2  | 13  | ug/L   |   | 6/22/98 | SW846 8310 |
| 9,10-Diphenylanthracene | NA     |      |     | %Recov |   | 6/22/98 | SW846 8310 |

**Organic Results**

**PVOC - WATER**

**Prep Method: SW846 5030**

**Prep Date: 6/18/98**

**Analyst: EGS**

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 104    |      |      |     | %Recov |      | 6/19/98       | MOD 8021B       |
| Benzene                 | 0.63   | 0.26 | 0.83 |     | ug/l   | Q    | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | 28     | 0.24 | 0.76 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | 0.40   | 0.22 | 0.70 |     | ug/l   | Q    | 6/19/98       | MOD 8021B       |
| Toluene                 | 0.40   | 0.21 | 0.67 |     | ug/l   | Q    | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | 15     | 0.54 | 1.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | 77     | 0.86 | 2.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Xylenes, -m, -p         | 8.1    | 0.97 | 3.1  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Xylene, -o              | 2.3    | 0.37 | 1.2  |     | ug/l   |      | 6/19/98       | MOD 8021B       |



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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : 0305  
 Field ID : TRIP BLANK  
 Lab Sample Number : 883569-008  
 WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC  
 Report Date : 6/22/98  
 Collection Date : 6/16/98  
 Matrix Type : WATER

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO    Prep Date: 6/18/98    Analyst: EGS

| Analyte                   | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50   | ug/l   |      | 6/19/98       | WI MOD GRO      |
| Blank Spike               | 107    |     |     | 1.00 | %Recov |      | 6/19/98       | WI MOD GRO      |
| Blank Spike Duplicate     | 101    |     |     | 1.00 | %Recov |      | 6/19/98       | WI MOD GRO      |
| Blank                     | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | WI MOD GRO      |

**Organic Results**

**PVOC - WATER**

Prep Method: SW846 5030    Prep Date: 6/18/98    Analyst: EGS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| a,a,a-Trifluorotoluene  | 101    |      |      |     | %Recov |      | 6/19/98       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,2,4-Trimethylbenzene  | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 6/19/98       | MOD 8021B       |



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### - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Client : MORaine ENVIRONMENTAL INC

Field ID : TRIP BLANK

Report Date : 6/22/98

Lab Sample Number : 883569-008

Collection Date : 6/16/98

WI DNR LAB ID : 405132750

Matrix Type : WATER

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO Prep Date: 6/18/98 Analyst: EGS

| Analyte                   | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50   | ug/l   |      | 6/19/98       | Wi MOD GRO      |
| Blank Spike               | 107    |     |     | 1.00 | %Recov |      | 6/19/98       | Wi MOD GRO      |
| Blank Spike Duplicate     | 101    |     |     | 1.00 | %Recov |      | 6/19/98       | Wi MOD GRO      |
| Blank                     | < 50   |     |     | 50   | ug/l   |      | 6/19/98       | Wi MOD GRO      |

### Organic Results

#### PC - WATER

Prep Method: SW846 5030 Prep Date: 6/18/98 Analyst: EGS

| Analyte                 | Result | LOD  | LOQ  | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|------|------|-----|--------|------|---------------|-----------------|
| 1,1,1-Trifluorotoluene  | 101    |      |      |     | %Recov |      | 6/19/98       | MOD 8021B       |
| Benzene                 | < 0.26 | 0.26 | 0.83 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Ethylbenzene            | < 0.24 | 0.24 | 0.76 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Methyl-tert-butyl-ether | < 0.22 | 0.22 | 0.70 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Toluene                 | < 0.21 | 0.21 | 0.67 |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,3,5-Trimethylbenzene  | < 0.54 | 0.54 | 1.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| 1,4-Trimethylbenzene    | < 0.86 | 0.86 | 2.7  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Xylenes, -m, -p         | < 0.97 | 0.97 | 3.1  |     | ug/l   |      | 6/19/98       | MOD 8021B       |
| Xylene, -o              | < 0.37 | 0.37 | 1.2  |     | ug/l   |      | 6/19/98       | MOD 8021B       |

Date/Time:

Received By (En Chem):

Date/Time:

Relinquished By:

Work Sample ID: 883569-008





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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

WI DNR LAB ID : 405132750

Client: MORaine ENVIRONMENTAL INC

Report Date : 1/15/98

| Sample No. | Field ID | Collection Date | Sample No. | Field ID | Collection Date |
|------------|----------|-----------------|------------|----------|-----------------|
| 880138-001 | PW       | 1/9/98          |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duranceau  
Approval Signature

1/15/98  
Date



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
Project Number : 0305  
Field ID : PW  
Lab Sample Number : 880138-001  
WI DNR LAB ID : 405132750

Client : MORaine ENVIRONMENTAL INC  
Report Date : 1/14/98  
Collection Date : 1/9/98  
Matrix Type : WATER

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030 Prep Date: 1/13/98 Analyst: JJB

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Dibromomethane              | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,3-Dichlorobenzene         | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,4-Dichlorobenzene         | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,2-Dichloroethane          | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,2-Dichlorobenzene         | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 1/13/98       | SW846 8260      |
| 1,1-Dichloroethene          | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| cis-1,2-Dichloroethene      | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| Dichlorodifluoromethane     | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 1/13/98       | SW846 8260      |
| trans-1,2-Dichloroethene    | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 1/13/98       | SW846 8260      |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Client : MORaine ENVIRONMENTAL INC**

**Field ID : PW**

**Report Date : 1/14/98**

**Lab Sample Number : 880138-001**

**Collection Date : 1/9/98**

**WI DNR LAB ID : 405132750**

**Matrix Type : WATER**

|                           |        |      |      |        |         |            |
|---------------------------|--------|------|------|--------|---------|------------|
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L   | 1/13/98 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L   | 1/13/98 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L   | 1/13/98 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L   | 1/13/98 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L   | 1/13/98 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L   | 1/13/98 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L   | 1/13/98 | SW846 8260 |
| Diisopropyl ether         | < 0.43 | 0.43 | 1.4  | ug/L   | 1/13/98 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L   | 1/13/98 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L   | 1/13/98 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L   | 1/13/98 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L   | 1/13/98 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L   | 1/13/98 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L   | 1/13/98 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L   | 1/13/98 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L   | 1/13/98 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L   | 1/13/98 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L   | 1/13/98 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L   | 1/13/98 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L   | 1/13/98 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L   | 1/13/98 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L   | 1/13/98 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L   | 1/13/98 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L   | 1/13/98 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L   | 1/13/98 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   | 1/13/98 | SW846 8260 |
| 1,2,4-Trimethylbenzene    | < 0.30 | 0.30 | 0.96 | ug/L   | 1/13/98 | SW846 8260 |
| Trichloroethene           | < 0.20 | 0.20 | 0.64 | ug/L   | 1/13/98 | SW846 8260 |
| 1,2,3-Trichloropropane    | < 0.48 | 0.48 | 1.5  | ug/L   | 1/13/98 | SW846 8260 |
| 1,3,5-Trimethylbenzene    | < 0.25 | 0.25 | 0.80 | ug/L   | 1/13/98 | SW846 8260 |
| Vinyl chloride            | < 0.23 | 0.23 | 0.73 | ug/L   | 1/13/98 | SW846 8260 |
| Xylenes, -m, -p           | < 0.51 | 0.51 | 1.6  | ug/L   | 1/13/98 | SW846 8260 |
| Xylene, -o                | < 0.28 | 0.28 | 0.89 | ug/L   | 1/13/98 | SW846 8260 |
| 4-Bromofluorobenzene      | 109    |      |      | %Recov | 1/13/98 | SW846 8260 |
| Dibromofluoromethane      | 109    |      |      | %Recov | 1/13/98 | SW846 8260 |



1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
FAX: 920-469-8827

**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : PW**

**Lab Sample Number : 880138-001**

**WI DNR LAB ID : 405132750**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 1/14/98**

**Collection Date : 1/9/98**

**Matrix Type : WATER**

---

|            |     |        |         |            |
|------------|-----|--------|---------|------------|
| Toluene-d8 | 108 | %Recov | 1/13/98 | SW846 8260 |
|------------|-----|--------|---------|------------|

Company Name: MACHINE ENVIRO  
 Branch or Location: Grafton  
 Project Contact: PAI HARRISON  
 Telephone: 914-377-9060  
 Project Number: # 0305  
 Project Name: Johnson Sand & Gravel  
 Project Location: Waukesha  
 Sampled By (Print): B. Durkee  
 Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NR  
 Other  
 NR720 Confirmation Analysis Required? (circle): Y N  
 (En Chem will not confirm unless otherwise instructed.)



1241 Bellevue St., Suite 9  
 Green Bay, WI 54302  
 920-469-2436 • 1-800-736-2436  
 FAX 920-469-8827

802 Deming Way  
 Madison, WI 53717  
 608-827-5501 • 1-888-536-2436  
 Fax: 608-827-5503

1423 N. 8th Street., Suite 122  
 Superior, WI 54880  
 715-392-5844 • 1-800-837-8238  
 FAX 715-392-5843

# CHAIN OF CUSTODY

17121

Page 1 of 1  
 P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

FILTERED? (YES/NO) N  
 PRESERVATION (CODE)\* B

ANALYSES REQUESTED

Mail Report To: PAI HARRISON  
 Company: MACHINE

Address: 1254 13th Ave  
Grafton WI 53024

Invoice To: \_\_\_\_\_  
 Company: \_\_\_\_\_

Address: Share As Name

Mail Invoice To: \_\_\_\_\_

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |       | FIELD SCREEN | MATRIX | GOOD COND. | TOTAL BOTTLES | SHADED AREA FOR LABORATORY USE ONLY |                   |
|----------|--------------------|------------|-------|--------------|--------|------------|---------------|-------------------------------------|-------------------|
|          |                    | DATE       | TIME  |              |        |            |               | COMMENTS                            | LABORATORY NUMBER |
| 1-10     | Groundwater well   | 1/12/98    | 11:45 | Y            | W      | ✓          | 3-40          |                                     | 001               |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |
|          |                    |            |       |              |        |            |               |                                     |                   |

|   |  |   |                                      |
|---|--|---|--------------------------------------|
| <b>*Preservation Code</b><br>A=None B=HCL C=H2SO4<br>D=HN03 E=EnCore F=Methanol**<br>G=NaOH O=Other (Indicate)<br><br><b>**If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.</b> | Relinquished By: <u>B. Durkee</u> Date/Time: <u>1-12-98 11:00</u>    | Received By: <u>PAI HARRISON</u> Date/Time: <u>1/12/98 11:30</u>          | En Chem Project No. <u>880138</u>    |
|   | Relinquished By: <u>Melinda Burt</u> Date/Time: <u>1/12/98 12:30</u> | Received By: <u>PAI HARRISON</u> Date/Time: <u>1-12-98 11:30</u>          | Sample Receipt Temp. <u>80°F</u>     |
|   | Relinquished By: <u>B. Durkee</u> Date/Time: <u>1-12-98 14:00</u>    | Received By: <u>PAI HARRISON</u> Date/Time: _____                         | Sample Receipt pH (Web/Metals) _____ |
|   | Relinquished By: _____ Date/Time: _____                              | Received By (En Chem): <u>Melinda Burt</u> Date/Time: <u>1/2/98 11:00</u> |                                      |



# Moraine Environmental, Inc.

Environmental Management Services

REMEDIAL ACTION SUMMARY

SITE CLOSURE REQUEST

AI

FORMER JOHNSON SAND AND GRAVEL SITE

NB W22590 JOHNSON ROAD

Town of Pewaukee, Wisconsin 53186

PREPARED FOR:

Mr. Robert Johnson

Johnson Sand and Gravel

20685 W. National Avenue

New Berlin, Wisconsin 53146

PREPARED BY:

MORAINÉ ENVIRONMENTAL, INC.

1234 12TH AVENUE

GRAFTON, WISCONSIN 53024

(262) 377-9060

PELFA Claim #53186-1661-90

WDNR FID #268438610

MEI PROJECT REF #1401

June 29, 2000

## EXECUTIVE SUMMARY

The subject property consists of a 2 acre lot with a one story building that is utilized as office and storage space by the current property owners, Schmidt Custom Floors, Inc. (Figure 1). The eastern building exterior previously contained two 10,000 gallon Underground Storage Tanks (USTs) utilized for bulk storage / distribution of petroleum products. The USTs were removed on March 30, 1994 and the Wisconsin Department of Natural Resources (WDNR) was notified of obvious petroleum impacts associated with releases from these USTs. Moraine Environmental, Inc. (MEI) conducted a site investigation of soil/groundwater impacts between February 1996 and August 1997. Results of the site investigation and recommendations for a remedial action plan (RAP) are included in MEI's *Site Investigation Report and Remedial Work Plan*, dated November 17, 1997.

The Wisconsin Department of Commerce (Commerce), administrators of the Petroleum Environmental Cleanup Fund Act (PECFA) program, reviewed and approved the following RAP for the subject site on November 25, 1997: installation of free product recovery sumps; periodic pumping and off-site disposal of impacted groundwater; and a groundwater monitoring program to assess natural attenuation. From mid-1998 to mid-1999, MEI was partially successful in removing free product from the groundwater surface utilizing oil skimmers in the monitoring wells. However, the thickness of free product in monitoring well MW-1 consistently exceeded the product thickness in groundwater [ $>0.1$  feet] defined as an Environmental Factor [per Comm 47]. MEI continued with the original RAP and installed three recovery sumps along the east side of the building in August 1999 (Figure 2). Approximately 6,800 gallons of impacted groundwater has currently been pumped-out and treated off-site.

At the request of the responsible party, Mr. Robert Johnson, MEI has discontinued remedial actions and is requesting a WDNR review for site closure. Lab analysis and field measurement from 3.5 years of groundwater monitoring indicate that the contaminant plume remains isolated near the former UST area, however, the PAH constituent levels in the contaminant plume are either non-stable or increasing over time. Even though a "flexible closure" [per NR 726.05(2)(b)] by demonstrating natural attenuation of residual impacts is not possible, the contaminant plume at the subject site does not appear to pose a significant threat to human health or the environment at this time. On behalf of Mr. Johnson, MEI is requesting a "restricted closure" from the WDNR in conjunction with an institutional control to address the contaminant conditions remaining at the subject site. These controls include soil and groundwater use restrictions added to the property deed.

## 9.0 PROJECT SUMMARY

The following summary is based on observations, field data and laboratory data collected during subsurface investigations and remediation activities at the former Johnson Sand & Gravel Site, located at N8 W22590 Johnson Road, in the Town of Pewaukee, Wisconsin:

Investigative activities conducted by MEI in 1996 and 1997 identified gasoline/diesel impacted soil and groundwater beneath the site. The greatest impacts to the subsurface were identified near the former UST area. MEI recommended a RAP consisting of installation of free product recovery sumps; periodic pumping and off-site disposal of impacted groundwater; and a groundwater monitoring program to assess natural attenuation.

The RAP was approved by Commerce in late 1997. From mid-1998 to mid-1999, MEI was partially successful in removing free product from the groundwater surface utilizing oil skimmers in the monitoring wells. However, the thickness of free product in monitoring well MW-1 consistently exceeded the product thickness in groundwater [ $>0.1$  feet] defined as an Environmental Factor [per Comm 47]. MEI continued with the original RAP and installed three recovery sumps along the east side of the building in August 1999 (Figure 2). Approximately 6,800 gallons of impacted groundwater has currently been pumped-out and treated off-site.

Comm 46 / NR 746 regulations would define the subject property as a "high risk" site under the jurisdiction of the WDNR. The fill material and native soil at the subject property would also be defined as a "permeable soil" and the remaining unsaturated soil impacts [2,200 tons estimated] do not appear to pose any direct contact concerns. One EF is currently present, consisting of petroleum product with a thickness of  $>0.01$  feet on two or more groundwater sampling events [MW-1(EXT-1)]. The subject site also has two Comm 46 / NR 746 risk factors associated with groundwater contaminants exceeding NR140 ES within permeable material and within 100 feet of a private well.

Lab analysis confirms that the private well water has not been impacted. Lab analysis and field measurement from 3.5 years of groundwater monitoring indicate that the contaminant plume remains isolated near the former UST area, and the contaminant plume should not impact groundwater quality near the potable wellhead. However, the PAH constituent levels in the contaminant plume are either non-stable or increasing over time and natural attenuation can not be confirmed.



At the request of the responsible party, Mr. Robert Johnson, MEI has discontinued remedial actions and is requesting a WDNR review for site closure. Even though a “flexible closure” [per NR 726.05(2)(b)] by demonstrating natural attenuation of residual impacts is not possible at this time, the contaminant plume at the subject site does not appear to pose a significant threat to human health or the environment at this time.

## **10.0 RECOMMENDATIONS**

Based on information collected during remedial activities and the current regulations on risk assessment, MEI recommends the following for the former Johnson Sand & Gravel Site:

- Submit a request for a “restricted closure” from the WDNR in conjunction with institutional controls, including soil and groundwater use restrictions added to the property deed.

\\SERVER\C\WORD\MSWTEH14\1401RASUMM SITECLOSURE.DOC

**WASTE DISPOSAL DOCUMENTATION**

# WSK SERVICE COMPANY, INC.

Septic System & Well Evaluations • Soil Testing

Steve Jentges  
President

OCT - 8 1999

Invoice # 10699

CSTM  
POWTS Inspector  
#227036  
PI 6122

October 06, 1999

## INVOICE

P.O. Box 437  
Port Washington  
WI 53074

262-284-5822  
FAX 262-284-5890

### BILLED TO:

Moraine Environmental, Inc. 1234 12th Avenue Grafton, WI 53024-1924  
Contact: Thomas Dueppen

### JOB SITE:

Former Johnson Sand & Gravel Site, N8 W22590 Johnson Road Pewaukee WI,  
53186. (project number: PECFA claim # 53186-1661-90)

### SERVICES PERFORMED:

Provide storage tanker, transport and dispose of contaminated ground water  
from the recovery wells at the above stated site.

### Itemized services performed:

09/30/99 Transport 6,000 gallons at \$.20 per gallon

### DISPOSAL FACILITY:

Port Washington Wastewater Treatment Facility 450 Lake Drive Port  
Washington.

Disposed on 09/30/99 at 04:10 PM

**TOTAL AMOUNT OWED:            \$1200.00**

All waste hauled by Special Waste Hauling License Permit # 13263, SY612

TERMS: 30 days/ net Balances over 30 days 1.5% per month 18% per year

P M  
LENDER  
QB

Tom D. —

01  
14800  
10/8/99  
TJD

TAYLOR INDUSTRIAL VAC  
 P.O. Box 16579  
 MILWAUKEE, WI 53216

# invoice

32663

(414) 447-4700

OCT - 6 1999

Moraine Environmental  
 Accounts Payable Department  
 1234 12th Avenue  
 Grafton WI 53024  
 USA

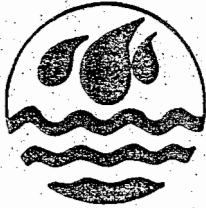
|                    |                             |
|--------------------|-----------------------------|
| SALESPERSON<br>BTH | DATE OF INVOICE<br>09/30/99 |
| SHIP TO            |                             |

| ACCOUNT NO. | DATE SHIPPED  | SHIPPED VIA | COL REP | FOB POINT | TERMS       | YOUR ORDER NUMBER |        |
|-------------|---|-------------|---------|-----------|-------------|-------------------|--------|
| C1147       |   |             |         |           | Net 30 Days | VEPRAI BETH       |        |
| QUANTITY    | DESCRIPTION   |             |         |           |             | UNIT PRICE        | AMOUNT |
| 1,200       | 9/30/99 Trans & Disp Johnson Sand Man36209                                  |             |         |           |             | 0.35              | 420.00 |
|             | P M<br>LENDER<br>08<br><br>1.5% INTEREST CHARGED ON ALL<br>OVERDUE BALANCES |             |         |           |             |                   | 420.00 |
|             |   |             |         |           |             |                   | 0.00   |
|             |   |             |         |           |             | <b>TOTAL</b>      | 420.00 |

*Dueppu*

81  
~~1488~~  
 10/7/99  
 TJD

*Thank You*



GREAT LAKES RECOVERY SYSTEMS  
 P.O. BOX 16579  
 MILWAUKEE, WI 53216  
 (414) 447-4700 FAX (414) 447-4990

No 36209

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: HERALD ENVIRONMENTAL JOHNSON SAND & GRAVEL  
88 W2250 JOHNSON ROAD  
MILWAUKEE  
 Phone: (414) - 377-9770  
 ADDRESS: 1234 12th AVENUE  
MILWAUKEE, WI.

US EPA ID #: N/A

TRANSPORTER: TAYLOR INDUSTRIAL VAC  
 Phone: (414) - 447-4700  
 ADDRESS: P.O. BOX 16579  
MILWAUKEE, WI. 53216

US EPA ID #: WID048031694

LOAD IDENTIFICATION

Volume: 1200 in gallons/or-barrels  
 Date loaded: 4-30-90  
 Profile number: P-0

NON-HAZARDOUS WASTE CERTIFICATION

I hereby certify, as the authorized representative of the  
 aforementioned generator that I am familiar with the applicable  
 solid and hazardous waste management statues and regulations. I  
 certify that the wastewater accompanying this manifest is a non-  
 hazardous liquid waste, is representative of the profile  
 submitted to GREAT LAKES RECOVERY SYSTEMS and contains no PCBs or  
 other hazardous material.

GENERATOR'S SIGNATURE: \_\_\_\_\_

Printed/Typed Name: \_\_\_\_\_ DATE: 4-30-90

TRANSPORTER'S SIGNATURE: \_\_\_\_\_

Printed/Typed name: Carl DATE: 4-30-90

Date: \_\_\_\_\_

GREAT LAKES RECOVERY SYSTEMS DISPOSAL VERIFICATION

Date Received: \_\_\_\_\_ Received By: \_\_\_\_\_

QUANTITY: \_\_\_\_\_ Date Treated: 4/30/90

WHITE-GEN GREEN-GLRS CANARY-GLRS PINK-GLRS GOLDENROD-TRANSPORTER



**TAYLOR INDUSTRIAL VAC**

P.O. Box 16579  
MILWAUKEE, WI 53216

# invoice

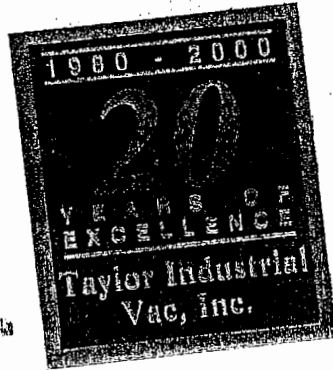
32069

(414) 447-4700

Moraine Environmental  
Accounts Payable Department  
1234 12th Avenue  
Grafton WI 53024  
USA

|                    |                             |
|--------------------|-----------------------------|
| SALESPERSON<br>BTH | DATE OF INVOICE<br>09/09/99 |
| SHIP TO            |                             |

| ACCOUNT NO. | DATE SHIPPED                              | SHIPPED VIA | COL. PP. | F.O.B. POINT | TERMS       | YOUR ORDER NUMBER |               |
|-------------|---|-------------|----------|--------------|-------------|-------------------|---------------|
| C1147       |   |             |          |              | Net 30 Days | VERBAL            |               |
| QUANTITY    | DESCRIPTION                               |             |          |              |             | UNIT PRICE        | AMOUNT        |
| 800         | 9/7/99 Trans & Disp Waste Liquid Man36155 |             |          |              |             | 0.35              | 280.00        |
|             |   |             |          |              |             |                   | 280.00        |
|             |   |             |          |              |             |                   | 0.00          |
|             |   |             |          |              |             | <b>TOTAL</b>      | <b>280.00</b> |



1401  
9/20/99  
TJD  
SEP 17 1999

Need Soap in bulk? \$2/gal for  
Steam Cleaning, Laundry & misc  
use soap. Get a free sample.

*Thank You*



GREAT LAKES RECOVERY SYSTEMS  
 P.O. BOX-16579  
 MILWAUKEE, WI 53216  
 (414) 447-4700 FAX (414) 447-4990

No 36155

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: MOL AINS Environmental Inc

Phone: (414)-377-9770

ADDRESS: 1234 12th Ave.

Grafton, WI 53024-1904

US EPA ID #: W110

TRANSPORTER: TAYLOR INDUSTRIAL VAC

Phone: (414)-447-4700

ADDRESS: P.O. BOX 16579

MILWAUKEE, WI. 53216

US EPA ID #: WID048031694

LOAD IDENTIFICATION

Volume: 800 in gallons/or barrels

Date loaded: 1-7-99

Profile number: P-0

NON-HAZARDOUS WASTE CERTIFICATION

I hereby certify, as the authorized representative of the  
 aforementioned generator that I am familiar with the applicable  
 solid and hazardous waste management statues and regulations. I  
 certify that the wastewater accompanying this manifest is a non-  
 hazardous liquid waste, is representative of the profile  
 submitted to GREAT LAKES RECOVERY SYSTEMS and contains no PCBs or  
 other hazardous material.

GENERATOR'S SIGNATURE: [Signature]

Printed/Typed Name: Thomas Deppa DATE: 1-7-99

TRANSPORTER'S SIGNATURE: [Signature]

Printed/Typed name: [Signature] DATE: 1-7-99

Date: 1-7-99

GREAT LAKES RECOVERY SYSTEMS DISPOSAL VERIFICATION

Date Received: 9/2/05 Received By: [Signature]

QUANTITY: 500 Date Treated: 9/7/05

WHITE-GEN GREEN-GLRS CANARY-GLRS PINK-GLRS GOLDENROD-TRANSPORTER

### Checklist for "Non-Responders" Audit

Phase I: No entry into BRRTS since RP letter for all cases prior to 1/1/01

Case Name: ① Schmidt Custom Floors - Chlorinated  
② Former Johnson Sand & Gravel FID#: 268438610  
BRRTS#: ① 02-68-259665  
② 03-68-004228 Auditor: Volkert PM/Reviewer: Volkert/Delwiche

#### If there is file information not listed in BRRTS

Have you updated BRRTS with all file information available?  Y or N  
Is there a closure request pending? Y or  N  
Is this a high-risk site that DNR should continue to retain?  Y or Unknown  
Are there documents in the file that are more recent than 1/1/01? Y or  N

#### Phone Contact Information

Contact Name: Steve Benton RP or  Consultant Marine Env.  
Phone #: 262-377-9060 Date of call: 7-25-02  
Status of Case: \_\_\_\_\_

He said they are continuing to monitor wells  
at the site. He thought a report would be  
prepared fairly soon.

Based on this status update, does RP need a letter?  Y or  N

If yes, which type of letter is appropriate?

- 1) Original RP is still owner and nothing has been done.
- 2) Current property owner is different from original RP.
- 3) Work has been done at the site, but DNR does not have copies of documents.
- 4) Case-specific (does not fit any of the above scenarios). \* Modification of Ltr. 3

Has a BRRTS code been entered and the letter forwarded to Reviewer?  Y or N

Has case been entered into Reviewer's tracking spreadsheet? Y or N

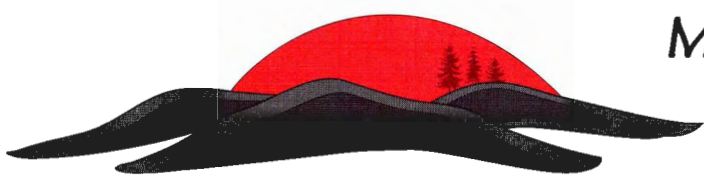
If a letter was not sent, is there other action needed, and if so, what? \_\_\_\_\_

Date this action was completed: 8/12/02 By whom: Dave Volkert

\* Letter must be reviewed and approved by supervisor.

but added  
1994 release  
as well





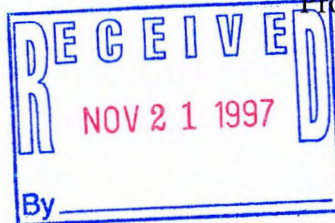
# Moraine Environmental, Inc.

Environmental Management Services

November 17, 1997

Project Reference #0305

Mr. Mike Farley  
Wisconsin Department of Natural Resources  
Southeast District - Annex Building  
P.O. Box 12436  
Milwaukee, Wisconsin 53212



Dear Mr. Farley:

Enclosed please find a report entitled "Site Investigation Report and Remedial Work Plan for Former Johnson Sand and Gravel Site". After the assigned WDNR staff personnel have reviewed this report, please have the responsible individual sign the enclosed DNR Form 4-B. A?

Mr. Robert Johnson and Moraine Environmental, Inc. (MEI) are anxiously awaiting the Department review of this report. Approval of investigative/remedial activities to date will allow our client to file for reimbursement through the PECFA program, of investigative/remedial costs incurred.

Should you have any questions or comments regarding this report or the project in general, please contact us at (414) 377-9060. Your efforts are greatly appreciated.

Sincerely,

MORaine ENVIRONMENTAL, INC.

Thomas C. Sweet  
President

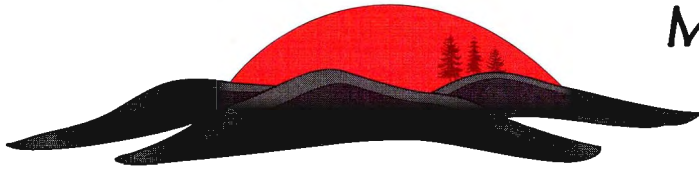
TCS/mcj

cc: Robert Johnson  
Dick Van Grinsven

Enclosure

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**Moraine Environmental, Inc.**

Environmental Management Services

**SITE INVESTIGATION REPORT AND  
REMEDIAL WORK PLAN FOR**

***FORMER JOHNSON SAND AND GRAVEL SITE  
N8 W22590 JOHNSON ROAD  
TOWN OF PEWAUKEE, WISCONSIN***

**WDNR FILE REF: 268438610 ERR-LUST**

**PECFA # 53186-1661-90**

**PREPARED FOR:**

**MR. ROBERT JOHNSON  
JOHNSON SAND AND GRAVEL  
20685 WEST NATIONAL AVENUE  
NEW BERLIN, WISCONSIN 53186**

**PREPARED BY:**

**MORAINE ENVIRONMENTAL, INC  
1234 12TH AVENUE  
GRAFTON, WISCONSIN 53024  
(414) 377-9060**

**PROJECT REFERENCE #0305**

**November 17, 1997**

## DOCUMENT CERTIFICATION

"I, Patrick J. Patterson, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Patrick J. Patterson, Project Engineer  
Signature and title

11-17-97  
Date

"I, Thomas C. Sweet, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3) Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Thomas C. Sweet, President  
Signature and title

11/17/97  
Date

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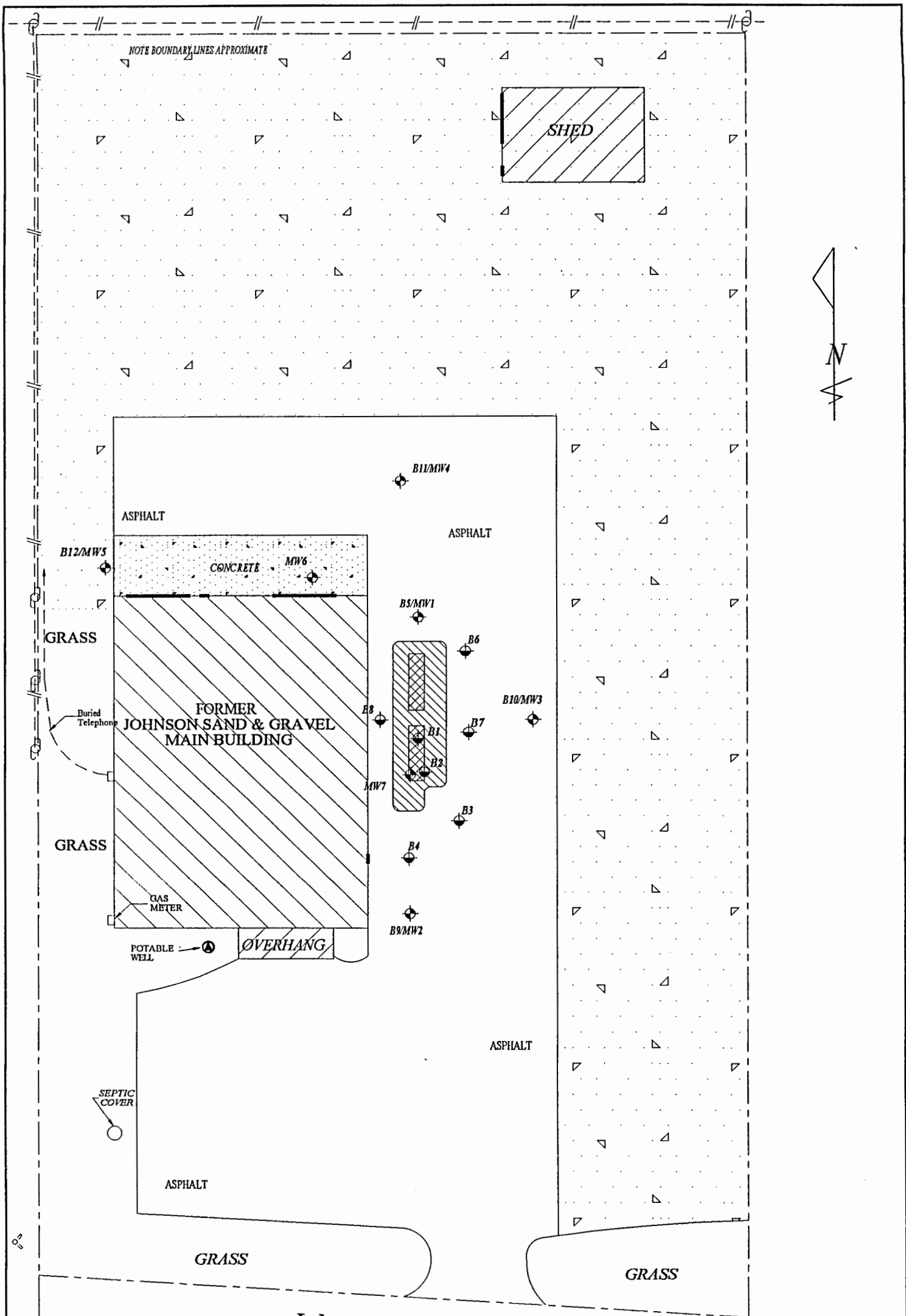
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## APPENDICES

- A. Analytical Results of UST Site Assessment
- B. Site Photographs
- C. Soil Boring Logs
- D. Borehole Abandonment Forms
- E. Well Construction and Development Forms
- F. Chain of Custody Forms
- G. Soil Analytical and Biological Laboratory Data
- H. Groundwater Analytical Laboratory Data



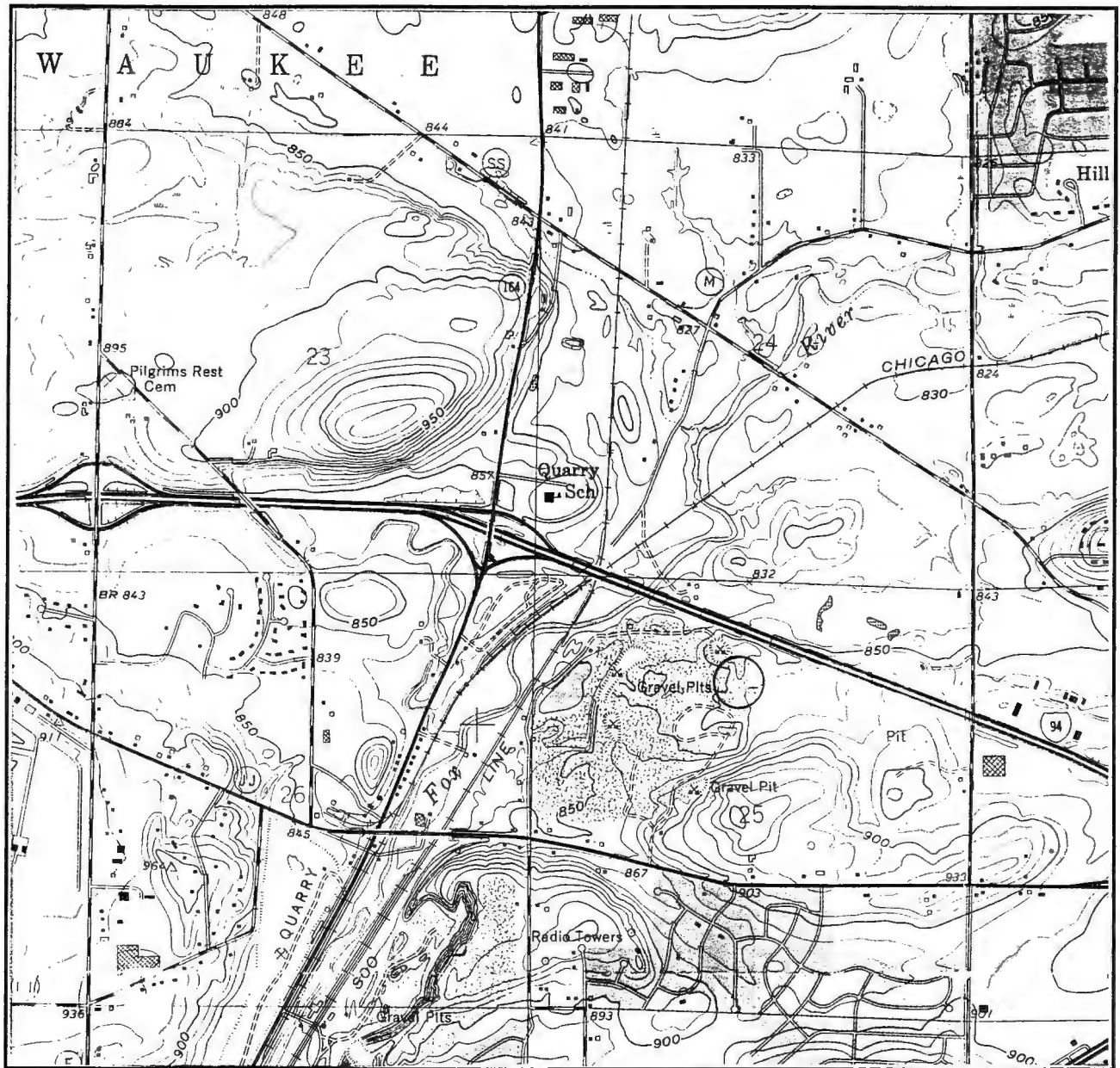
**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- — — Property Line
- - - Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |             |
|--|-------------|
| FIGURE NAME  |             |
| Site Layout and Boring/Well Location Map                                 |             |
| SITE NAME AND LOCATION   |             |
| Former Johnson Sand & Gravel Site<br>N8 W22590 Johnson Road Waukesha, WI |             |
| PROJECT REFERENCE  | FIGURE NAME |
| MEI #0305  | Figure 2    |



Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

○ — SITE LOCATION

|                 |   |          |
|-----------------|---|----------|
| Drawing Title   | <b>Site Location Map</b>  |          |
| Project Name    | Former Johnson Sand and Gravel<br>N8 W22590 Johnson Road<br>Waukesha, Wisconsin |          |
| Drawing Company | Moraine Environmental, Inc.   |          |
| Project Number  | MEI #0305   | Figure 1 |

**SITE REMEDIAL WORK PLAN**  
**Former Johnson Sand and Gravel Site**  
**Town of Pewaukee, Waukesha County, Wisconsin**  
**File Ref: 268438610 ERR LUST**  
**MEI Project Reference: MEI 0305**

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**1.0 Project Overview**

The Former Johnson Sand and Gravel site located at N8 W22590 Johnson Road in the Town of Pewaukee, Wisconsin was formerly operated as the headquarters for Johnson Sand and Gravel Company. Two 10,000 gallon underground storage tanks (UST) containing gasoline and diesel fuel were formerly located on the subject property. The two USTs were removed from the site on March 30, 1994 and have been registered with the Wisconsin Department of Commerce (DCOM). Maps illustrating the location of the site and pertinent site features are presented as Figures 1 and 2.

A petroleum release was observed during the removal of the USTs and the Wisconsin Department of Natural Resources (WDNR) was immediately notified of the release. The UST assessment information and analytical test results of the select soil sample are included in Appendix A.

Subsurface investigation has been performed at the site and the extent of petroleum contamination within the soils and groundwater underlying the site has been adequately defined for the selection of a cost effective remedial option as required by the WDNR and DCOM. This site is eligible for remedial cost reimbursement through the Petroleum Environmental Cleanup Fund Act (PECFA).

The soil contamination above the saturated zone is limited to small areas beneath and around the former USTs location. The groundwater contamination is slightly more extensive with the contamination plume extending towards the north/northwest. Free product has been encountered in two of the seven existing monitoring wells.



The excavation of gasoline/diesel contaminated soil beneath the former USTs can not be performed due to the existing building located directly west of the UST excavation and depth of soil contamination. However, based on site specific criteria and changing WDNR regulation, the removal of the free product by pumping from proposed sump wells and long term groundwater monitoring has been selected at this time as the most cost effective means of site remediation. Three piezometers are proposed to be installed and sampled with this remedial alternative. DCOM approval of the proposed remedial cost for this portion of the site remediation is currently being sought by MEI.

Once WDNR and DCOM approvals have been received, MEI will install three proposed recovery sumps in early 1998 and begin pumping free product and contaminated groundwater. Following sufficient removal activities, MEI will terminate groundwater pumping and begin long term monitoring of contaminant plume and perimeter wells. MEI has chosen this alternative based on many different site and regulatory considerations. However, if this "low tech" remedial approach is not effective enough to remove Non-Aqueous Phase Liquid (NAPL) and begin Remediation by Natural Attenuation (RNA), then MEI will review and begin more aggressive (active) remedial approaches.

## **2.0 Personnel / Contractors Involved in Remediation Activities**

The following persons and companies are involved with remedial activities at the site.

### ENVIRONMENTAL CONSULTANT

Moraine Environmental, Inc.  
1234 12th Avenue  
Grafton, Wisconsin 53024-1924  
Phone: (414) 377-9060  
Primary Contact: Pat Patterson /Tom Sweet

### SITE REPRESENTATIVE

Robert Johnson  
Johnson Sand and Gravel, Inc.  
20685 West National Avenue  
New Berlin, Wisconsin 53146  
Phone:(414) 679-4400

PRIMARY WDNR CONTACT

Wisconsin Department of Natural Resources  
Southeast District Annex  
4041 North Richards Street, Box 12436  
Milwaukee, WI 53212-0436  
Phone:(414) 229-0800  
Project Manager: Michael G. Farley

LABORATORY SERVICES

EnChem Inc.  
1795 Industrial Drive  
Green Bay, WI 54302  
Phone:(800) 736-2436  
WDNR Cert. #405132750

**3.0 Site Background Information**

The following list is a summarization of site background information:

Site Name: Former Johnson Sand and Gravel Site  
WDNR File Reference: 268438610

Location: N8 W22590 Johnson Road, Waukesha, Wisconsin 53186

TRS Data: Northwest 1/4 of the Northeast 1/4 of Section 25, Township 7 North,  
Range 19 East, in the Town of Pewaukee, Waukesha County,  
Wisconsin

Site Features: The site is comprised of about 2.0 acres and has been subdivided into commercial properties from the former sand and gravel quarry. The exiting building is believed to have been constructed in the mid 1970's and utilized as the corporate headquarters and maintenance building of the Johnson Sand and Gravel Company. The 10,000 gallon gasoline and 10,000 gallon diesel fuel USTs were used by Johnson Sand and Gravel for refueling gravel trucks and equipment. The USTs were located on the east side of the existing building. Site photographs are included in Appendix B.

The area of the former UST system is completely covered by new asphalt. Municipal water and sewer, overhead electrical and underground telephone and natural gas utilities also exist on the site. The site is relatively flat with a slight slope to the north/northwest.

Land Use: The surrounding area is generally commercial. The site is a portion of a former quarry that was operated from the late 1950s to the 1980s.

#### **4.0 Potential Receptors and Contaminant Migration Pathways**

The following lists detail potential contaminant receptors and migration pathways.

Subsurface Utilities: Underground telephone, and natural gas utilities are located west, east and south of the area of the petroleum release. Based upon the existing subsurface conditions encountered (groundwater located at about 23 feet bgs), and the results of soil analytical testing showing contamination isolated to the area around the former UST system, the potential for a contaminant migration pathway is very slight, if it exists at all.

Surface Drainage: Based on field observations and site and surrounding area topography, precipitation runoff is controlled by the existing asphalt and drainage ditches located along the southern, western and northern property lines. These ditches channel surface runoff/precipitation to the northwest/west toward the Fox River. The Fox River is approximately 0.5 miles west/northwest of the site.

Local Water Supply: The site is served with private water supply (potable well) while other surrounding areas are served with public water supply.

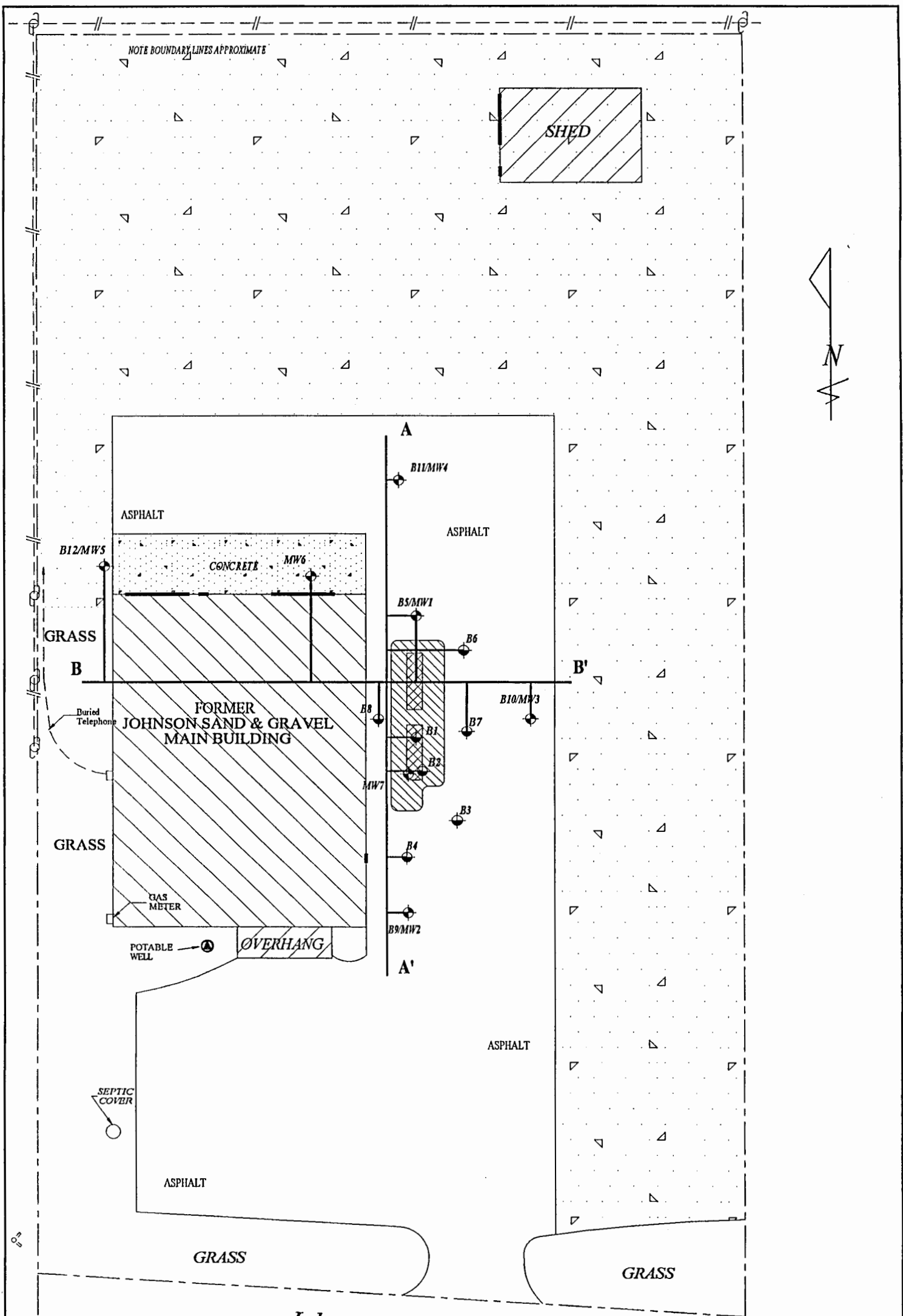
## **5.0 Local Soils and Hydrogeologic Conditions**

### **Local Geologic Characteristics**

On February 19 and 20, 1996, eight soil borings were drilled on the site, of which one boring (B5) was converted to a monitoring well. On August 7, 1996, four additional monitoring wells were installed on the site to further define the extent of groundwater contamination. On August 29, 1997, two monitoring wells were installed to further define the extent of contamination and evaluate the groundwater contamination beneath the former UST system. The boring/well locations are shown on the previous Figure 2.

Soil types encountered during the investigation consisted of variable fill material of clayey silt and sand to sand and gravel to sandy clay which extends to depths ranging from 16 to 25 feet below ground surface (bgs). The fill material is then underlain by brown silt to fine sandy silt to sand and gravel with variable amounts of clay, coarse gravel and cobbles. This soil material extends to depths ranging from 18 to 38 feet (maximum depth explored). These encountered native soils are typical glacial till material for this portion of Waukesha County.

Moderate to strong gasoline odors and staining were encountered in collected soils from B1, B2 and MW7 at the depth of the base of the UST excavation (12 feet bgs) and at 16 feet bgs in B5. The petroleum contamination is associated with only a limited amount of the vadose zone soils around the UST system, and a limited amount of the shallow groundwater. Geologic columnar sections of the subsurface have been completed for the site, the locations of which are all shown on Figure 3. The geologic columnar sections (Figures 4 and 5) further illustrate subsurface conditions. The Soil Boring Logs (Appendix C) detail the soil conditions encountered at each boring. Borings not converted into monitoring wells were



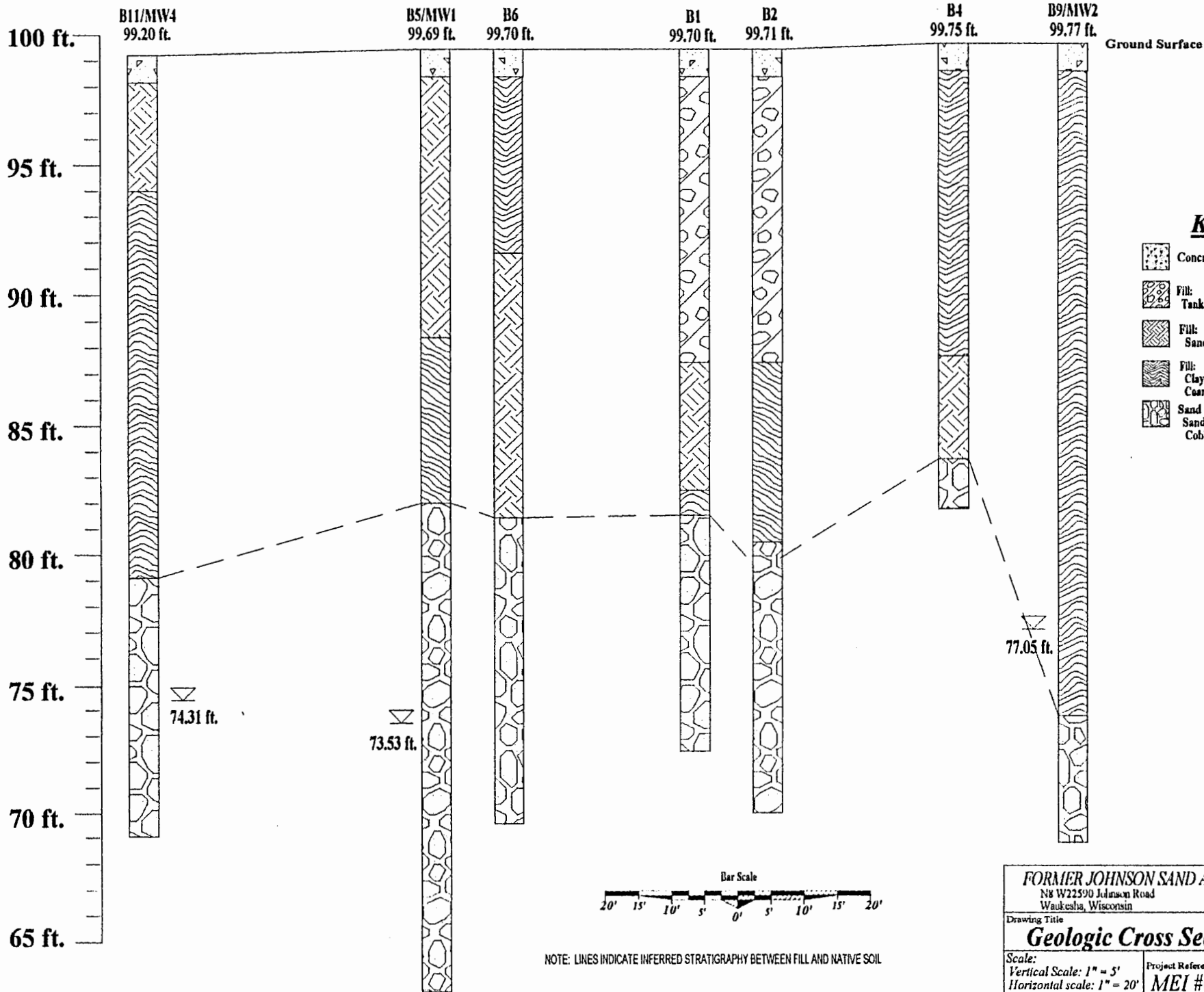
**MEI - Legend**

- ⊕ - Potable Well Location
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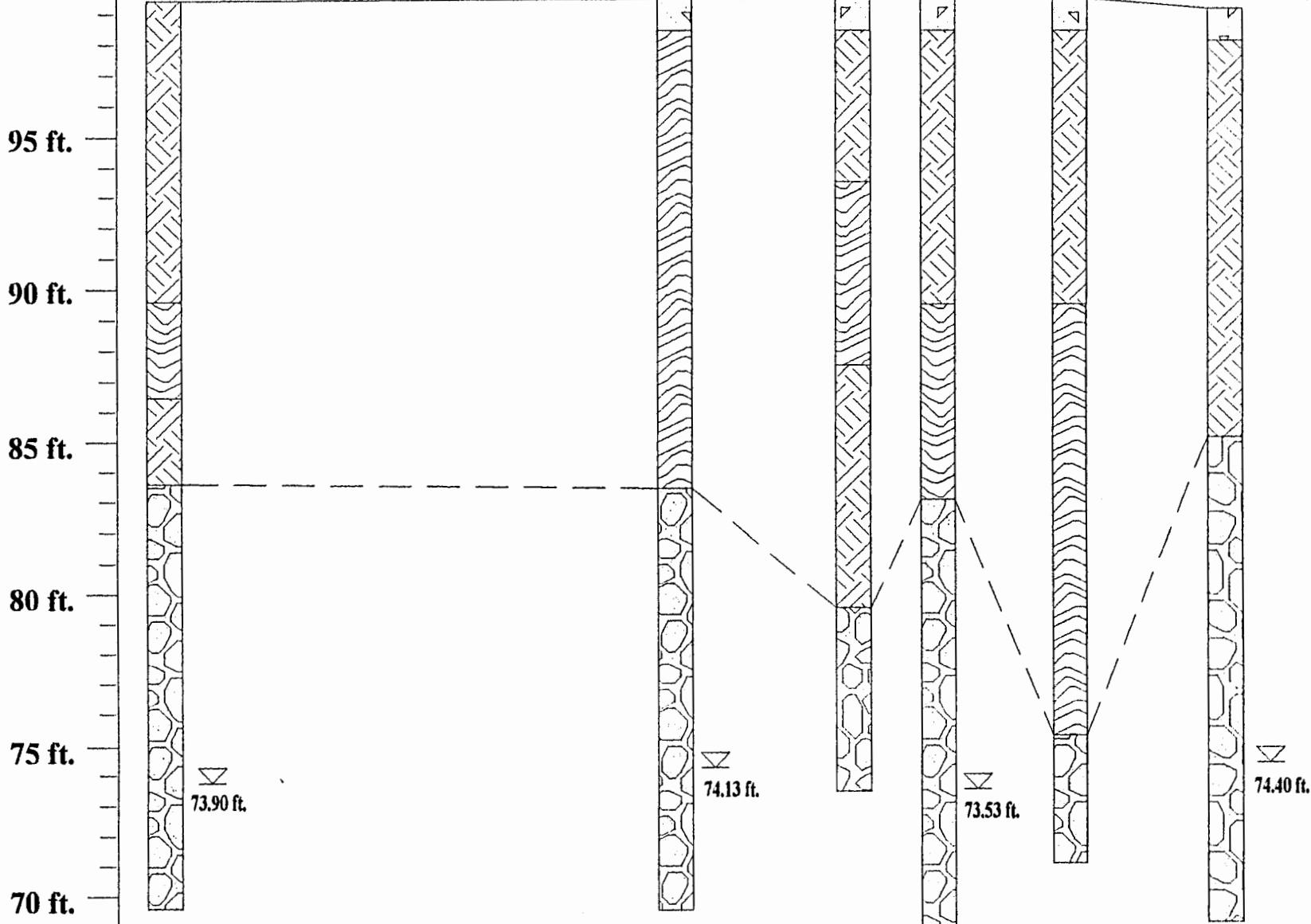
\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                 |
|--|-----------------|
| FIGURE NAME  |                 |
| <b>Geologic Cross-Section Location Map</b>   |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 3</b> |



|  |                                       |                           |
|--|---------------------------------------|---------------------------|
| <b>FORMER JOHNSON SAND AND GRAVEL</b><br>N8 W22590 Johnson Road<br>Waukesha, Wisconsin |                                       |                           |
| Drawing Title<br><b>Geologic Cross Section A - A'</b>                                  |                                       |                           |
| Scale:<br>Vertical Scale: 1" = 5'<br>Horizontal Scale: 1" = 20'                        | Project Reference<br><b>MEI #0305</b> | Figure<br><b>Figure 4</b> |

100 ft. B12/MW5 99.62 ft. MW6 99.68 ft. B8 99.70 ft. B5/MW1 99.69 ft. B7 99.70 ft. B10/MW3 99.27 ft. Ground Surface



- KEY**
- Concrete and Base
  - Fill: Tank Excavation/#1 Stone
  - Fill: Sandy Silt, Silt, Sand-Gravel
  - Fill: Clayey Silt, Silty Clay w/ Coarse Sand and Gravel
  - Sand and Gravel: Sand-Gravel, Silt-Sand and Cobbles



NOTE: LINES INDICATE INFERRED STRATIGRAPHY BETWEEN FILL AND NATIVE SOIL

|   |  |                                    |
|---|--|------------------------------------|
| <p><b>FORMER JOHNSON SAND AND GRAVEL</b><br/>         N8 W22590 Johnson Road<br/>         Waukesha, Wisconsin</p> |  |                                    |
| <p>Drawing Title<br/> <b>Geologic Cross Section B - B'</b></p>  |  |                                    |
| <p>Scale:<br/>         Vertical Scale: 1" = 5'<br/>         Horizontal scale: 1" = 20'</p>                        | <p>Project Reference<br/> <b>MEI #0305</b></p> | <p>Figure<br/> <b>Figure 5</b></p> |

properly abandoned and patched. The borehole abandonment forms for these borings are included in Appendix D.

### **Local Groundwater Conditions**

As previously stated, seven monitoring wells were installed from March 20, 1996 to August 29, 1997. The well casings extend to 28 to 38 feet bgs, with screen lengths of 10 to 15 feet. The wells were constructed, developed and sampled in accordance with NR 141 requirements. The well construction/development forms are included in Appendix E. Based on the water level measurements collected, the static water level is 22.29 to 25.59 feet below top of casing. The elevations of the groundwater range from 73.53 to 77.05 feet. Free product Non-Aqueous Phase Liquid (NAPL) was encountered in MW1 and approximately 0.82 feet of NAPL was measured. A significant petroleum sheen layer was also encountered in MW7. The static water table levels/elevations are shown on Table 1. A groundwater contour map is presented as Figure 6.

In review of the collected groundwater elevations, flow direction is toward the north/northwest. The NAPL and dissolved phase contamination appears to be isolated to the immediate area around the UST system (MW1 and MW7). Strong diesel fuel odors, significant petroleum sheens and free product NAPL were observed in water samples collected from MW1 and MW7.





**TABLE 1  
 STATIC WATER LEVEL MEASUREMENTS  
 Former Johnson Sand and Gravel Site**

| Monitoring Well | Top of Casing Elevation | Ground Surface Elevation | Depth to Water (feet) | Water Table Elevation | Date Measured |
|-----------------|-------------------------|--------------------------|-----------------------|-----------------------|---------------|
| MW1             | 99.12                   | 99.69                    | 25.61 (fp)            | 73.51 (fp)            | 8-13-96       |
|                 |                         |                          | 25.94                 | 73.18                 | 9-13-96       |
|                 |                         |                          | 27.20 (fp)            | 71.92 (fp)            |               |
|                 |                         |                          | 27.32                 | 71.80                 |               |
|                 |                         |                          | 24.77 (fp)            | 74.35 (fp)            | 9-8-97        |
| MW2             | 99.34                   | 99.77                    | 22.79                 | 76.55                 | 8-13-96       |
|                 |                         |                          | 23.78                 | 75.56                 | 9-13-96       |
|                 |                         |                          | 22.29                 | 77.05                 | 9-8-97        |
| MW3             | 98.81                   | 99.27                    | 25.88                 | 72.93                 | 8-13-96       |
|                 |                         |                          | 26.50                 | 72.31                 | 9-13-96       |
|                 |                         |                          | 24.41                 | 74.40                 | 9-8-97        |
| MW4             | 98.78                   | 99.20                    | 26.20                 | 72.58                 | 8-13-96       |
|                 |                         |                          | 26.84                 | 71.94                 | 9-13-96       |
|                 |                         |                          | 24.47                 | 74.31                 | 9-8-97        |
| MW5             | 99.32                   | 99.62                    | 26.92                 | 72.40                 | 8-13-96       |
|                 |                         |                          | 27.82                 | 71.50                 | 9-13-96       |
|                 |                         |                          | 25.42                 | 73.90                 | 9-8-97        |
| MW6             | 99.53                   | --                       | 25.40                 | 74.13                 | 9-8-97        |
| MW7             | 99.55                   | --                       | 25.36                 | 74.19                 | 9-8-97        |

(fp) = free product non-aqueous phase liquid (diesel fuel)  
 \*All elevations referenced to local benchmark (northeast building corner -E1.100')

## **6.0 Soil and Groundwater Contaminant Conditions**

### **Volatile Organic Vapor Emissions Scan**

Soil samples collected from the initial eight soil borings were screened in the field to detect volatile organic vapor emissions. The field screening indicated that the soil/groundwater contamination is encountered at a minimum depth of ten feet bgs and extends into the saturated zone in the area of the former UST system. A photoionization detector (PID) was used on the collected samples. Table 2 indicates the recorded field screening results for B1 to B8.

Soil samples having noticeable petroleum odors, highest PID results and/or collected at the vadose/saturated zone interface were properly preserved, containerized and placed in a controlled environment. The select soil samples were analyzed for the presence of Gasoline Range Organics (GRO), Diesel Range Organics (DRO), Volatile Organic Compounds (VOC) and Total Lead. Three soil samples were analyzed for the presence and quantity of petroleum-degrading microorganisms.

The collected groundwater samples were properly preserved, containerized and placed in a controlled environment. The water samples were analyzed for the presence of GRO, VOC, DRO and Soluble Lead. The water samples collected from MW1 and MW7 were analyzed for PAHs. The chain-of-custody document for select soil and water samples are included in Appendix F.

**TABLE 2**  
**OVM FIELD SCREENING RESULTS(a)**  
**Former Johnson Sand and Gravel Site**

| Depth (feet) | B1  | B2  | B3  | B4  | B5  | B6  | B7  | B8  |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 2 to 4       | --  | --  | --  | BDL | BDL | --  | --  | --  |
| 4 to 6       | --  | --  | --  | BDL | BDL | BDL | 20  | --  |
| 6 to 8       | --  | --  | --  | BDL | BDL | 5.3 | --  | BDL |
| 8 to 10      | --  | --  | --  | 8.4 | BDL | --  | --  | BDL |
| 10 to 12     | 285 | --  | --  | 3.3 | BDL | BDL | 19  | 6.9 |
| 12 to 14     | 433 | 614 | 8.4 | 5.0 | BDL | BDL | --  | BDL |
| 14 to 16     | 106 | 115 | 6.7 | 6.7 | BDL | BDL | 212 | 5.4 |
| 16 to 18     | 412 | 360 | 5.0 | --  | 49  | 14  | --  | --  |
| 18 to 20     | 342 | 315 | BDL | --  | 240 | 64  | --  | 300 |
| 20 to 22     | 150 | 318 | BDL | --  | 383 | 100 | 70  | 297 |
| 22 to 24     | 120 | 498 | BDL | --  | 183 | --  | 40  | 333 |
| 24 to 26     | 27  | 492 | --  | --  | 19  | --  | --  | 94  |
| 26 to 28     | --  | 345 | BDL | --  | --  | --  | --  | --  |
| 28 to 30     | --  | 349 | 1.6 | --  | 16  | --  | --  | --  |
| 30 to 32     | --  | --  | --  | --  | --  | --  | --  | --  |
| 32 to 34     | --  | --  | --  | --  | 11  | --  | --  | --  |

Notes:

- (a) - Indicated results reported in OVM-units.
- - No sample collected at sampling interval or below depth of boring termination..
- BDL : Below Detection Level of OVM-PID meter.

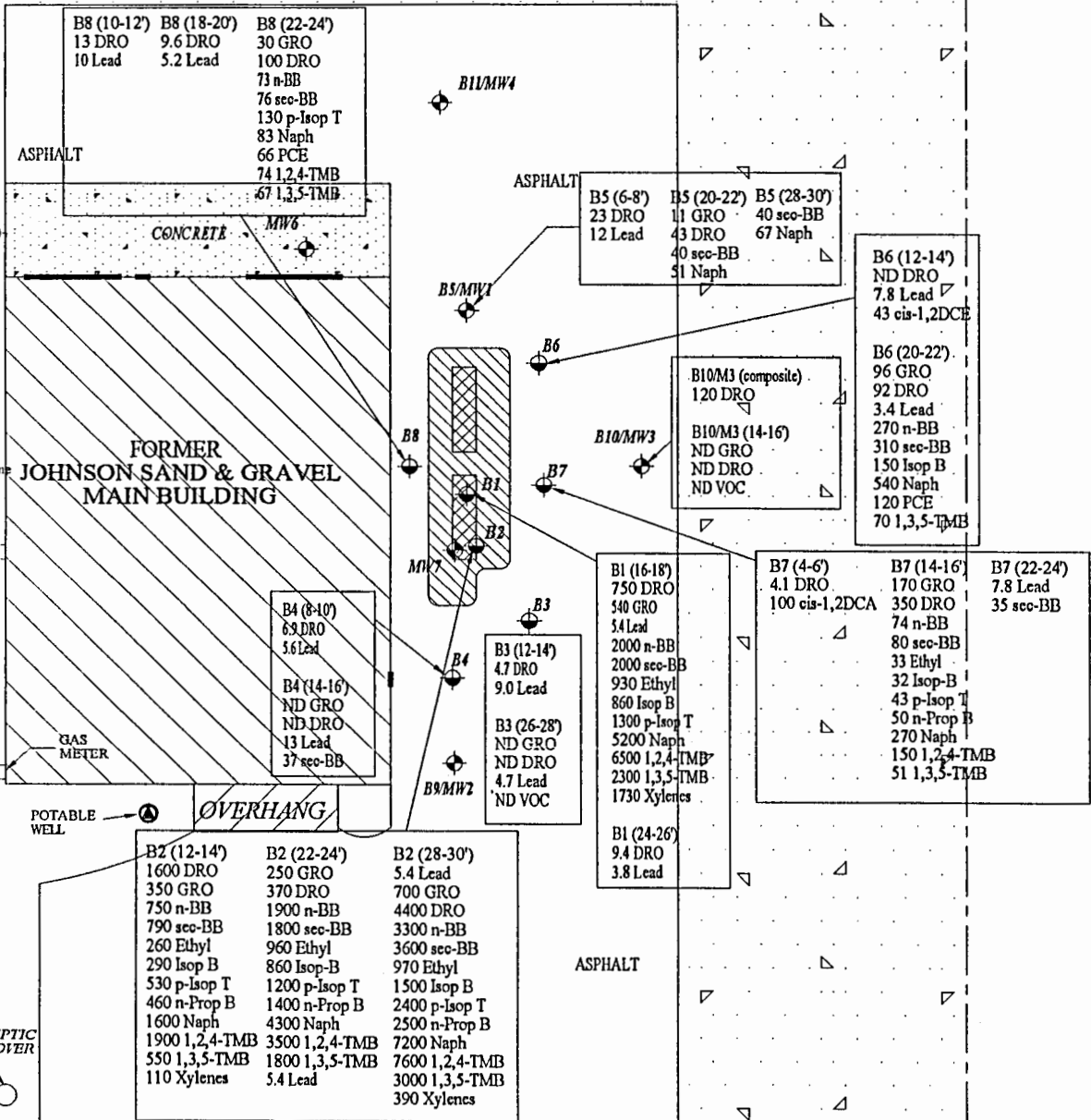
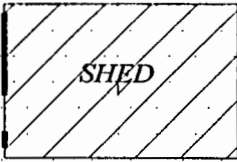
### **Soil Contaminant Conditions**

Soil samples collected during the investigation were submitted to an independent laboratory (En Chem) for analysis. The soil analytical results are summarized in Table 3.

The select soils collected from B1 (16-18'), B2 (12-14'), B2 (22-24'), B7 (14-16') and B8 (22-24') have detectable GRO, DRO and/or VOC concentrations above current generic residual contaminant levels (RCL) expressed in NR720. The Total Lead test results show Total Lead levels within typical levels for the local geology and are well below current residual levels for a non-industrial site (50 mg/kg). The results of biological analysis indicated insufficient petroleum degrading microorganisms in the subsurface soils to support active or passive biodegradation of the petroleum contamination. The extent of petroleum impacted soil in the vadose zone has been adequately defined. The soil contamination extends from approximately 10 feet bgs to 22 feet bgs. It is estimated that 1,100 tons of soil has been impacted by this petroleum release. The analytical test results are indicated at each boring location on Figure 7 and the laboratory data is included in Appendix G.

Based on the concentrations of petroleum hydrocarbons within the soil situated in the vadose zone and the extent of the soil impacts, conservatively 13,000 pounds of combined GRO, DRO and VOC are present within the vadose zone around the UST system at the site.

NOTE BOUNDARY LINES APPROXIMATE



GRO/DRO ppm  
VOC ppb  
Johnson Road

**MEI - Legend**

- ⊕ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
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|  |                 |
|--|-----------------|
| FIGURE NAME  |                 |
| <b>Soil Analytical Test Results</b>  |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 7</b> |

**TABLE 3**  
**SOIL QUALITY RESULTS**  
**Former Johnson Sand and Gravel Site**

|                        | B1<br>(16-18') | B1<br>(24-26') | B2<br>(12-14') | B2<br>(22-24') | B2<br>(28-30') | B3<br>(12-14') | B3<br>(26-28') | B4<br>(8-10') | B4<br>(14-16') | B5<br>(6-8') | B5<br>(20-22') | B5<br>(28-30') | B6<br>(12-14') | B6<br>(20-22') | B7<br>(4-6') | B7<br>(14-16') | B7<br>(22-24') | B8<br>(10-12') | B8<br>(18-20') | B8<br>(22-24') | M3<br>composite | M3<br>(14-16') | Generic<br>RCL's |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|--------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|------------------|
| GRO (mg/kg)            | 540            | ND             | 350            | 250            | 700            | ND             | ND             | ND            | ND             | ND           | 11             | ND             | ND             | 96             | ND           | 170            | ND             | ND             | ND             | 30             | NA              | ND             | 100              |
| DRO (mg/kg)            | 750            | 9.4            | 1600           | 370            | 4400           | 4.7            | ND             | 6.9           | ND             | 23           | 43             | ND             | ND             | 92             | 4.1          | 350            | ND             | 13             | 9.6            | 100            | 120             | ND             | 100              |
| Lead (mg/kg)           | 5.4            | 3.8            | ND             | 5.4            | 5.4            | 9.0            | 4.7            | 5.6           | 13             | 12           | ND             | ND             | 7.8            | 3.4            | ND           | ND             | 7.8            | 10             | 5.2            | ND             | NA              | NA             | 50               |
| Detected VOCs (ug/kg)  |                |                |                |                |                |                |                |               |                |              |                |                |                |                |              |                |                |                |                |                |                 |                |                  |
| Benzene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 5.5              |
| n-Butylbenzene         | 2000           | ND             | 750            | 1900           | 3300           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 270            | ND           | 74             | ND             | ND             | ND             | 73             | NA              | ND             | NSE              |
| sec-Butylbenzene       | 2000           | ND             | 790            | 1800           | 3600           | ND             | ND             | ND            | 37             | ND           | 40             | 40             | ND             | 310            | ND           | 80             | 35             | ND             | ND             | 76             | NA              | ND             | NSE              |
| cis-1,2 Dichloroethene | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | 43             | ND             | 100          | ND             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| Ethylbenzene           | 930            | ND             | 260            | 960            | 970            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 33           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 2900             |
| Isopropylbenzene       | 860            | ND             | 290            | 860            | 1500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 150            | ND           | 32             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| p-Isopropyltoluene     | 1300           | ND             | 530            | 1200           | 2400           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 43           | ND             | ND             | ND             | ND             | 130            | NA              | ND             | NSE              |
| n-Propylbenzene        | ND             | ND             | 460            | 1400           | 2500           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 50           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | NSE              |
| Naphthalene            | 5200           | ND             | 1600           | 4300           | 7200           | ND             | ND             | ND            | ND             | ND           | 51             | 67             | ND             | 540            | ND           | 270            | ND             | ND             | ND             | 83             | NA              | ND             | NSE              |
| Tetrachloroethene      | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 120            | ND           | ND             | ND             | ND             | ND             | 66             | NA              | ND             | NSE              |
| Toluene                | ND             | ND             | ND             | ND             | ND             | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 1500             |
| 1,2,4-Trimethylbenzene | 6500           | ND             | 1900           | 3500           | 7600           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | 150          | ND             | ND             | ND             | ND             | 74             | NA              | ND             | NSE              |
| 1,3,5-Trimethylbenzene | 2300           | ND             | 550            | 1800           | 3000           | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | 70             | ND           | 51             | ND             | ND             | ND             | 67             | NA              | ND             | NSE              |
| Total Xylenes          | 1730           | ND             | 110            | ND             | 390            | ND             | ND             | ND            | ND             | ND           | ND             | ND             | ND             | ND             | ND           | ND             | ND             | ND             | ND             | ND             | NA              | ND             | 4100             |

Notes:

mg/kg - milligrams per kilogram

ug/kg - micrograms per kilogram

NA - Not Analyzed

ND - Not Detected

NSE - No Standard Established

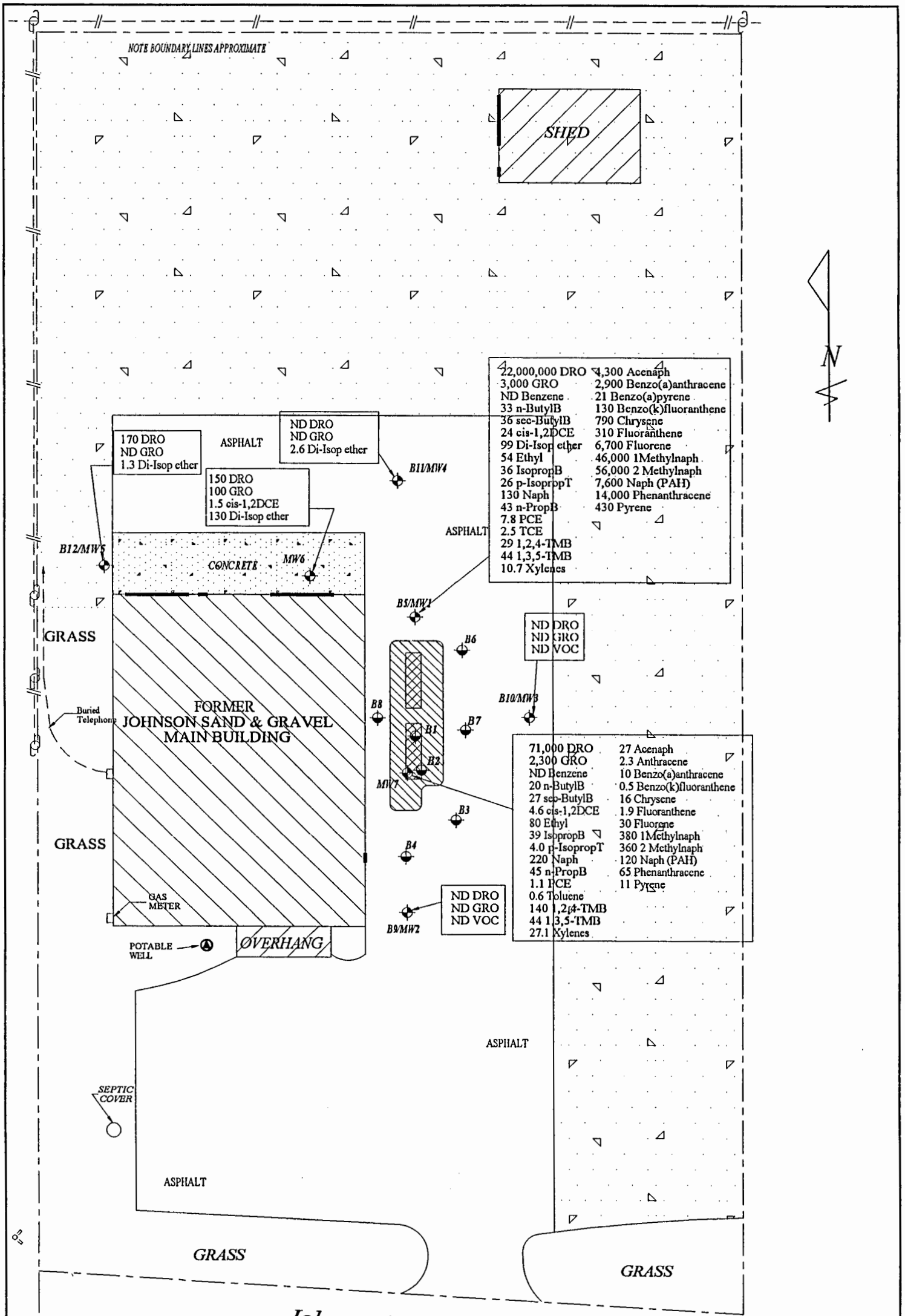
00.00 - Shaded numbers indicate concentrations exceeding WDNR soil cleanup guidelines in NR720

### **Groundwater Contaminant Conditions**

The results of the analytical testing performed on the water indicated that Naphthalene levels detected in MW1 (130 ug/l) and MW7 (220 ug/l) are above the current groundwater Enforcement Standard (40 ug/l) for Naphthalene. Tetrachloroethene (7.8 ug/l), Benzo (a) pyrene (21 ug/l) and Fluorene (6700 ug/l) levels detected in MW1 are above current Enforcement Standards (ES). Naphthalene concentrations detected from the PAH scan in MW1 (7,600 ug/l), and MW7 (120 ug/l) are well above the NR 140 Enforcement Standard. Detected levels of Tetrachloroethene level (1.1 ug/l) in MW7 is above the current Preventive Action Limit (PAL) of 0.5 ug/l. Detected levels of Trichloroethene (2.5 ug/l) and cis-1,2 Dichloroethene (24 ug/l) in MW1 are above current PALs of 0.5 ug/l and 7.0 ug/l, respectively. In addition, the Soluble Lead levels in MW1 and MW4 are above the current Preventive Action Limit (1.5 ug/l) for Lead.

Significantly high concentrations of GRO and DRO are also present in the water collected from MW1 and MW7. Groundwater quality standards for GRO and DRO did not exist at the time of the completion of this remedial workplan. The analytical results are summarized on Table 4 and shown at each well location on Figure 8. The analytical laboratory data is included as Appendix H. The extent of the petroleum contamination is shown on Figure 9. It has been estimated that approximately 55,000 gallons of groundwater have been contaminated by the gasoline/diesel fuel release.





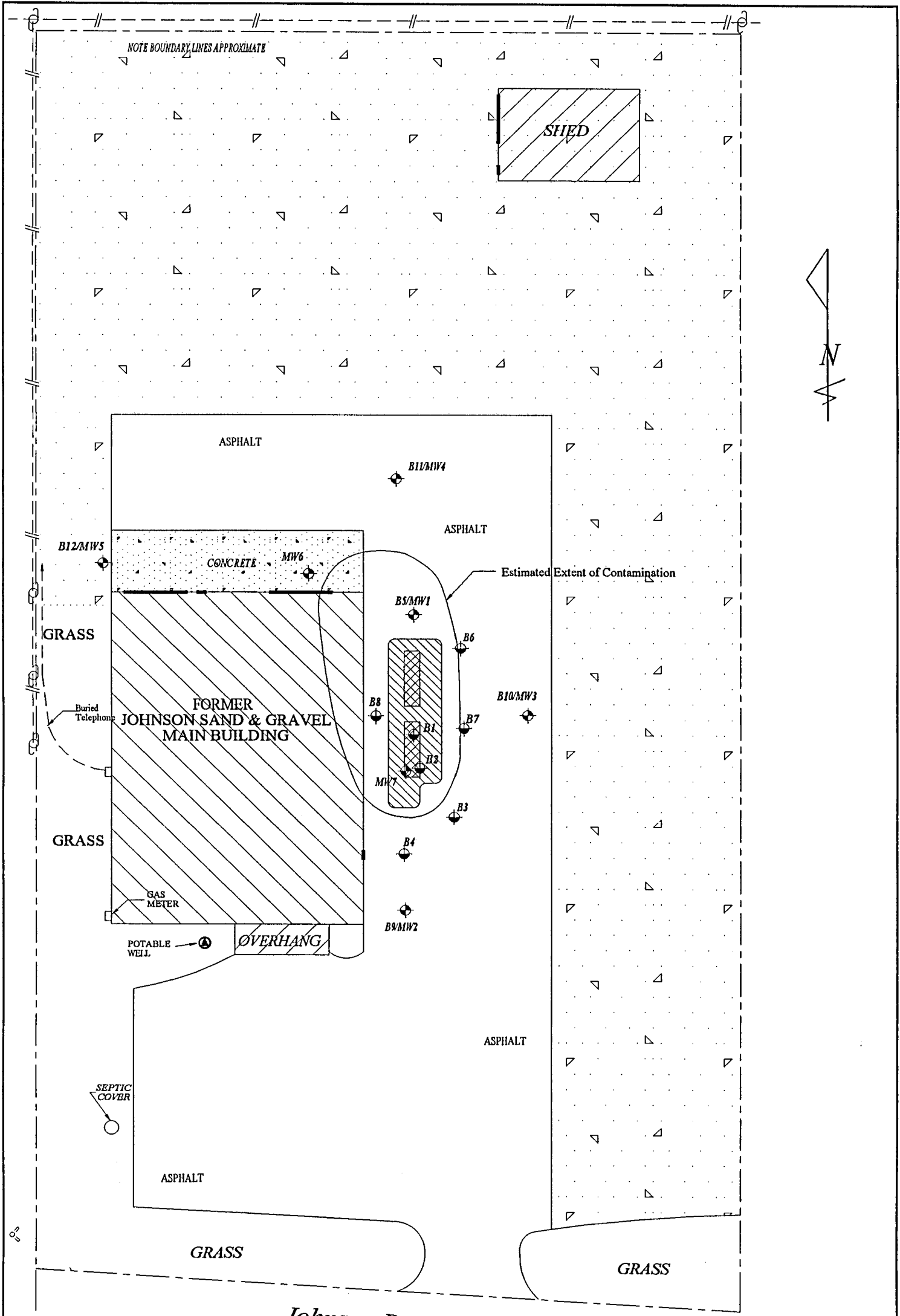
**MEI - Legend**

- ⊙ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- - - Property Line
- - - Buried Line



\* Dimensions And Locations On Map Are Approximate and For Reference Only. Site Has Not Been Surveyed.

|  |                                |
|--|--------------------------------|
| FIGURE NAME<br><b>Groundwater Analytical Test Results</b>  |                                |
| SITE NAME AND LOCATION<br><b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                                |
| PROJECT REFERENCE<br><b>MEI #0305</b>  | FIGURE NAME<br><b>Figure 8</b> |



**MEI - Legend**

- ⊕ - Potable Well Location
- ⊕ - Soil Boring Location
- ⊕ - Hydrant
- // — Overhead Electric Line
- ⊕ - Monitoring Well
- ⊕ - Utility Pole
- — — Property Line
- — — Buried Line



\* Dimensions And Locations On Map Are Approximate And For Reference Only. Site Has Not Been Surveyed.

|  |                 |
|--|-----------------|
| FIGURE NAME  |                 |
| <b>Contamination Extent Map</b>  |                 |
| SITE NAME AND LOCATION   |                 |
| <b>Former Johnson Sand &amp; Gravel Site<br/>N8 W22590 Johnson Road Waukesha, WI</b> |                 |
| PROJECT REFERENCE  | FIGURE NAME     |
| <b>MEI #0305</b>   | <b>Figure 9</b> |

**TABLE 4  
GROUNDWATER QUALITY RESULTS  
Former Johnson Sand and Gravel Site**

| Chemical                      | M1         |            | M2      |         | M3      |         | M4         |         | M5      |         | M6     | M7         | Enforcement Standard (ES) | Preventive Action Limit (PAL) |
|-------------------------------|------------|------------|---------|---------|---------|---------|------------|---------|---------|---------|--------|------------|---------------------------|-------------------------------|
|                               | 8-23-96    | 8-29-97    | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96    | 8-29-97 | 8-23-96 | 8-29-97 | 9-8-97 | 9-8-97     |                           |                               |
| Gasoline Range Organics (GRO) | 2,300      | 3,000      | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | 100    | 2,300      | NSE                       | NSE                           |
| Diesel Range Organics (DRO)   | 1,300,000  | 22,000,000 | 130     | ND      | ND      | ND      | 140        | ND      | 150     | 170     | 150    | 71,000     | NSE                       | NSE                           |
| Soluble Lead                  | <b>2.6</b> | NA         | ND      | NA      | ND      | NA      | <b>3.9</b> | NA      | ND      | NA      | NA     | NA         | 15.0                      | 1.5                           |
| Detected VOCs/PAHs            |            |            |         |         |         |         |            |         |         |         |        |            |                           |                               |
| Benzene                       | ND         | ND         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | ND         | 5.0                       | 0.5                           |
| n-Butylbenzene                | 28         | 33         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 20         | NSE                       | NSE                           |
| sec-Butylbenzene              | 37         | 36         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 27         | NSE                       | NSE                           |
| cis-1,2 Dichloroethene        | <b>11</b>  | <b>24</b>  | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | 1.5    | 4.6        | 70                        | 7                             |
| Di-Isopropyl ether            | 50         | 99         | ND      | ND      | ND      | ND      | ND         | 2.6     | 4.4     | 1.3     | 130    | ND         | NSE                       | NSE                           |
| Ethylbenzene                  | 36         | 54         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 80         | 700                       | 140                           |
| Isopropylbenzene              | 29         | 36         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 39         | NSE                       | NSE                           |
| p-Isopropyltoluene            | 85         | 26         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 4.0        | NSE                       | NSE                           |
| Naphthalene                   | <b>97</b>  | <b>130</b> | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | <b>220</b> | 40                        | 8.0                           |
| n-Propylbenzene               | 18         | 43         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 45         | NSE                       | NSE                           |
| Tetrachloroethene             | <b>8.5</b> | <b>7.8</b> | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | <b>1.1</b> | 5.0                       | 0.5                           |
| Toluene                       | ND         | ND         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 0.60       | 343                       | 68.6                          |
| Trichloroethene               | ND         | <b>2.5</b> | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | ND         | 5.0                       | 0.5                           |
| 1,2,4-Trimethylbenzene        | 27         | 29         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 140        | NSE                       | NSE                           |
| 1,3,5-Trimethylbenzene        | 43         | 44         | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 44         | NSE                       | NSE                           |
| Xylenes, Total                | 8.7        | 10.7       | ND      | ND      | ND      | ND      | ND         | ND      | ND      | ND      | ND     | 27.1       | 620                       | 124                           |

**Key:**

ND - Indicates no detectable analyte at or above the listed detection limit  
 ( a ) - M1 sampled for PAH on 9-6-96  
 All results reported in ug/l  
 NA - Not Analyzed

NSE - No Standard Established  
 Highlighted and Bold results exceed NRI40 Enforcement Standards.  
 Bold results exceed Preventive Action Limits.

**TABLE 4 (cont.)  
GROUNDWATER QUALITY RESULTS  
Former Johnson Sand and Gravel Site**

| Chemical               | M1           |              | M2      |         | M3      |         | M4      |         | M5      |         | M6     | M7         | Enforcement Standard (ES) | Preventive Action Limit (PAL) |
|------------------------|--------------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|--------|------------|---------------------------|-------------------------------|
|                        | 8-23-96      | 8-29-97      | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 8-23-96 | 8-29-97 | 9-8-97 | 9-8-97     |                           |                               |
| Acenaphthalene         | 530          | 4,300        | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 27         | NSE                       | NSE                           |
| Anthracene             | ND           | ND           | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 2.3        | NSE                       | NSE                           |
| Benzo (a) anthracene   | ND           | 2,900        | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 10         | NSE                       | NSE                           |
| Benzo (a) pyrene       | ND           | <b>21</b>    | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | ND         | 0.2                       | 0.02                          |
| Benzo (k) Fluoranthene | ND           | 130          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 0.5        | NSE                       | NSE                           |
| Chrysene               | ND           | 790          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 16         | NSE                       | NSE                           |
| Fluoranthene           | ND           | 310          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 1.9        | NSE                       | NSE                           |
| Fluorene               | <b>1,000</b> | <b>6,700</b> | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 30         | 400                       | 80                            |
| 1 Methyl-naphthalene   | 6,900        | 46,000       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 380        | NSE                       | NSE                           |
| 2 Methyl-naphthalene   | 7,500        | 56,000       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 360        | NSE                       | NSE                           |
| Naphthalene as PAH     | <b>610</b>   | <b>7,600</b> | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | <b>120</b> | 40                        | 8                             |
| Phenanthracene         | 2,300        | 14,000       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 65         | NSE                       | NSE                           |
| Pyrene                 | ND           | 430          | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA     | 11         | NSE                       | NSE                           |

**Key:**  
 ND - Indicates no detectable analyte at or above the listed detection limit  
 (a) - M1 sampled for PAH on 9-6-96  
 All results reported in ug/l  
 NA - Not Analyzed  
 NSE - No Standard Established  
 Highlighted and Bold results exceed NR140 Enforcement Standards.  
 Bold results exceed Preventive Action Limits.

**7.0 Selected Remedial Alternative - Removal of Free Product Non-Aqueous Phase Liquid (NAPL) and Long-Term Groundwater Monitoring**

Due to the close proximity of the former USTs to the existing building, extensive vertical soil contamination from 10 to 24 feet bgs, somewhat granular soil consistency, and depth to groundwater of 22 to 24 feet bgs, MEI believes that three free product recovery sumps should be installed in the area of MW1, MW7 and the former UST system location to remove NAPL (free product diesel) and contaminated groundwater. Following the removal of the free product NAPL, MEI recommends that 10,000 gallons of contaminated groundwater be pumped via pumper truck once a month for a ten month period. Once the removal of a total of 100,000 gallons of contaminated groundwater is complete, implement a groundwater monitoring program that will incorporate quarterly sampling of GRO, DRO, PAHs and VOCs and annual sampling for Natural Attenuation (NA) parameters.

Prior to or at the same time that the sump wells are being installed, MEI recommends the installation of three piezometers to evaluate piezometric conditions and to abide by current requirements for NA monitoring. The three piezometers will be extended to approximately 60 feet bgs and will be sampled for the presence of GRO, DRO, VOCs, PAHs and dissolved Lead. This program will be implemented for a two year period, after which time, if the petroleum plume has stabilized or begun to reduce in contaminant mass, MEI will recommend continuing a long-term groundwater monitoring program until WDNR groundwater quality standards are achieved.

However, if following free product NAPL removal and the recommended two year groundwater monitoring (RNA monitoring) period, the petroleum plume continues to expand or contaminant mass increases, and/or the free product NAPL cannot be removed at acceptable volumes or decreased to acceptable concentrations, MEI reserves the right to implement a more aggressive groundwater remediation plan to eliminate any free product NAPL, residual NAPL and/or dissolved NAPL associated with the encountered petroleum plume.

## **8.0 Post Remediation Groundwater Sample Analysis**

A sampling event will be performed to obtain a baseline on the Natural Attenuation parameters prior to the installation of sump wells.

Following piezometric installation, the three proposed piezometers will be sampled for the presence of GRO, DRO, VOCs PAHs, and NA parameters.

Following the installation of the three free product NAPL/contaminated groundwater recovery sumps and the removal of approximately 100,000 gallons of contaminated groundwater via pumper truck at 10,000 gallons/month, a two year groundwater monitoring program will be implemented. The collected water samples will be quarterly monitored for GRO, DRO, VOC and PAHs and annually monitored for Dissolved Oxygen (DO), Oxygen Reduction Potential (Redox), Nitrate/Nitrite, Ferrous Iron, Sulfate, Manganese and Methane.

## **9.0 Project Goals and Schedule**

MEI anticipates beginning this project in early Spring of 1998, following receipt of WDNR and DCOM approvals.

Following the sump installation and NAPL removal process, a two year groundwater sampling program will be implemented for monitoring of contaminants reduction and site remediation by Natural Attenuation (RNA). An active groundwater remediation plan will be implemented if required by WDNR or if petroleum plume continues to expand or contaminant mass increases.

**APPENDIX A**

**ANALYTICAL RESULTS OF UST  
SITE ASSESSMENT**



George E. Meyer  
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District  
Post Office Box 12436  
4041 N. Richards Street  
Milwaukee, Wisconsin 53212  
TELEPHONE: 414-961-2727  
TELEFAX #: 414-961-2770

May 20, 1994

File Ref: 268438610  
ER-LUST

Mr. Robert Johnson  
Johnson Sand & Gravel  
N8 W22590 Johnson Drive  
Waukesha, WI 53186

RE: Johnson Sand & Gravel, N8 W22590 Johnson Drive, Waukesha, WI 53186

Dear Mr. Johnson:

Wisconsin Department of Natural Resources (WDNR) has been notified that petroleum contamination was discovered March 31, 1994 at the above referenced location. Based on the site specific information provided, this case has been assigned to the Low Priority Rank group. The purpose of this letter is to inform you of your legal responsibilities to address this situation.

Releases from underground storage tanks regulated under Subtitle I of the Resource Conservation and Recovery Act require compliance with the provisions of 40 CFR Parts 280 and 281. The Environmental Protection Agency (EPA) has the authority to take enforcement action at any time, but will generally not take action against parties cooperating with the state. The WDNR proceeds in LUST cases under the authority of s. 144.76, Wisconsin Statutes, commonly referred to as Wisconsin's Hazardous Substance Spill Law. The definition of "hazardous substance" as found in s. 144.01(4m), Wisconsin Statutes, includes petroleum products.

Wisconsin Statute 144.76(2a) states: "A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall notify the Department immediately of any discharge not exempted under sub.(9)."

Wisconsin Statute 144.76(3) states: "A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of this state."

Because you possess or control a hazardous substance which has been released to the environment, the Department identifies you as the party responsible for taking the actions necessary to restore the environment. You are required to:

1. Immediately notify the WDNR Spills Hotline at (414) 263-8491 should emergency conditions involving explosive vapors and/or well contamination develop.



2. Conduct an investigation to determine the extent of soil and groundwater contamination.
3. Remediate all of the environmental impacts caused by this situation.
4. Sample private water supply wells which may have been impacted by the release.

The Department suggests that you have a qualified environmental engineer or hydrogeologist direct the remedial investigation, assess the environmental impact, and coordinate the implementation of a cleanup program. Within 30 days of receiving this letter, you should provide the WDNR with the following information:

1. The name of the individual/firm directing the investigation.
2. The date the remedial investigation will begin.

The Department requires that the location of the tank and/or release be submitted with the work plan. Requirements for location are Latitude, Longitude, 1/4, 1/4, Township, and Range (east or west).

Final documentation of the investigation and cleanup should be prepared according to the guidance enclosed and sent to this office on completion of compliance with all applicable federal, state and local laws and regulations. Remedial actions must adequately cleanup contaminated soil and/or groundwater to current WDNR guidelines and/or standards. All product, soil, wastewater, and sludge must be disposed of in compliance with all applicable federal, state and local laws and regulations. Because the Department is experiencing a backlog of leaking underground storage tank cases of emergency status and your case is not currently ranked as an emergency, your submittals will be reviewed as time permits. Investigation and cleanup should not, however, be delayed pending WDNR review of your case.

The WDNR requests that concise LUST project updates be submitted every six months for all low priority sites; biannual updates will enable WDNR project managers to monitor the status of remedial investigations and/or corrective actions on projects which are not under direct WDNR oversight.

You are encouraged to contact the Department of Industry, Labor, and Human Relations (DILHR), the state agency that administers the Petroleum Environmental Cleanup Fund (PECFA). This fund may reimburse you for eligible costs associated with the remedial investigation and cleanup. DILHR should be contacted at (608) 266-2424 to obtain current information regarding the PECFA program.

Please be aware that your ability to utilize PECFA funds will be dependent on your cooperation in adequately addressing this problem.

Sincerely,



Giselle Red

Program Assistant, Environmental Repair Section

c: Ms. Amy Bucher, Moraine Environmental, P. O. Box 488, Mequon, WI 53092  
SED Case File

# CHECKLIST FOR UNDERGROUND TANK CLOSURE

**RETURN COMPLETED CHECKLIST TO:**  
Safety & Buildings Division  
Fire Prevention & Underground  
Storage Tank Section  
P. O. Box 7969, Madison, WI 53707

**Complete one form for  
each site closure.**

**A. IDENTIFICATION: (Please Print)** Indicate whether closure is for:  Tank System     Tank Only     Piping Only

|   |  |  |  |
|---|--|--|--|
| 1. Site Name<br><i>Johnson Sand &amp; Gravel</i>                                      |  | 2. Owner Name<br><i>Johnson Sand &amp; Gravel</i>  |  |
| Site Street Address (not P.O. Box)<br><i>N8 W22590 Johnson Drive</i>                  |  | Owner Street Address<br><i>N8 W22590 Johnson Dr.</i>   |  |
| <input type="checkbox"/> City   | <input type="checkbox"/> Village                     | <input checked="" type="checkbox"/> Town of:   |  |
| <i>Pewaukee</i>   |  | <i>Pewaukee</i>  |  |
| State<br><i>Wis.</i>  | Zip Code<br><i>53186</i>                             | County<br><i>Waukesha</i>  | Telephone No. (include area code)<br><i>(414) 542-9424</i> |
| 3. Closure Company Name (Print)<br><i>Northern Petro Serv.</i>                        |  | Closure Company Street Address<br><i>W222 N610 Cheney Rd.</i>                                    |  |
| Closure Company Telephone No. (include area code)<br><i>(414) 549-9610</i>            |  | Closure Company City, State, Zip Code<br><i>Waukesha Wis. 53186</i>                              |  |
| 4. Name of Company Performing Closure Assessment<br><i>MORRIS ENVIRONMENTAL, INC.</i> |  | Assessment Company Street Address, City, State, Zip Code<br><i>P.O. Box 488, MEDUN, WI 53092</i> |  |
| Telephone # (include area code)<br><i>(414) 242-8998</i>                              | Certified Assessor Name (Print)<br><i>ATV BUCHER</i> | Assessor Signature<br><i>A. BUCHER</i>   | Assessor Certification No.<br><i>00562</i>                 |

| Tank ID # | Closure                             | Temp. Closure            | Closure In Place         | Tank Capacity | Contents * | Closure Assessment   |
|-----------|-------------------------------------|--------------------------|--------------------------|---------------|------------|--|
| 1.        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10,000        | 01         | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| 2.        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10,000        | 03         | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| 3.        | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |               |            | <input type="checkbox"/> Y <input type="checkbox"/> N            |
| 4.        | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |               |            | <input type="checkbox"/> Y <input type="checkbox"/> N            |
| 5.        | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |               |            | <input type="checkbox"/> Y <input type="checkbox"/> N            |
| 6.        | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |               |            | <input type="checkbox"/> Y <input type="checkbox"/> N            |

\* Indicate which product by numeric code: 01-Diesel; 02-Leaded; 03-Unleaded; 04-Fuel Oil; 05-Gasohol; 06-Other; 09-Unknown; 10-Premix; 11-Waste oil; 13-Chemical (indicate the chemical name(s) or numbers(s)); 14-Kerosene; 15-Aviation.

Written notification was provided to the local agent 15 days in advance of closure date.  Y     N     NA  
 All local permits were obtained before beginning closure.  Y     N     NA

**Check applicable box at right in response to all statements in Sections B - E.**

**B. TEMPORARILY OUT OF SERVICE**

**Remover**    **Inspector**    **NA**  
**Verified**    **Verified**

- Written inspector approval of temporary closure obtained, which is effective until (provide date) \_\_\_\_\_  Y  N
1. Product Removed
    - a. Product lines drained into tank (or other container) and resulting liquid removed, AND  Y  N
    - b. All product removed to bottom of suction line, OR  Y  N
    - c. All product removed to within 1" of bottom.  Y  N
  2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.  Y  N
  3. All product lines at the islands or pumps located elsewhere are removed and capped, OR  Y  N
  4. Dispensers/pumps left in place but locked and power disconnected.  Y  N
  5. Vent lines left open.  Y  N
  6. Inventory form filed indicating temporary closure.  Y  N

**C. CLOSURE BY REMOVAL**

1. Product from piping drained into tank (or other container).  Y  N
  2. Piping disconnected from tank and removed.  Y  N
  3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.  Y  N
  4. All pump motors and suction hoses bonded to tank or otherwise grounded.  Y  N
  5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.  Y  N
- NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR.**
6. Vent lines left connected until tanks purged.  Y  N
  7. Tank openings temporarily plugged so vapors exit through vent.  Y  N
  8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.  Y  N
  9. Tank removed from excavation after **PURGING/INERTING**, placed on level ground and blocked to prevent movement.  Y  N
  10. Tank cleaned before being removed from site.  Y  N

**C. CLOSURE BY REMOVAL (continued)**

|  | Remover<br>Verified  | Inspector<br>Verified    | NA                       |
|--|--|--------------------------|--------------------------|
| 11. Tank labeled in 2" high letters after removal but before being moved from site. ....   | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.</b> |  |                          |                          |
| 12. Tank vent hole (1/8 th " in uppermost part of tank) installed prior to moving the tank from site. ....                             | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Inventory form filed by owner with Safety and Buildings Division indicating closure by removal. ....                               | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Site security is provided while the excavation is open. ....   | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |

**D. CLOSURE IN PLACE**

**NOTE: CLOSURES IN PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS OR LOCAL AGENT.**

|  |   |                          |                                     |
|--|---|--------------------------|-------------------------------------|
| 1. Product from piping drained into tank (or other container). ....  | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Piping disconnected from tank and removed. ....   | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. All liquid and residue removed from tank using explosion proof pumps or hand pumps. ....  | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. All pump motors and suction hoses bonded to tank or otherwise grounded. ....  | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. ....                                 | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <b>NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR - EDUCTOR OUTPUT 12 FT ABOVE GRADE.</b> |   |                          |                                     |
| 6. Vent lines left connected until tanks purged. ....  | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Tank openings temporarily plugged so vapors exit through vent. ....   | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F. ....   | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Tank properly cleaned to remove all sludge and residue. ....  | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled. ....                              | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Vent line disconnected or removed. ....  | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Inventory form filed by owner with Safety and Buildings Division indicating closure in place. ....                                     | <input type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**E. CLOSURE ASSESSMENTS**

**NOTE: DETERMINE IF A CLOSURE ASSESSMENT IS REQUIRED BY REFERRING TO ILHR 10.**

|   |  |                          |                          |
|---|--|--------------------------|--------------------------|
| 1. Individual conducting the assessment has a closure assessment plan (written) which is used as the basis for their work on the site. .... | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Do points of obvious contamination exist? ....   | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Are there strong odors in the soils? ....  | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Was a field screening instrument used to pre-screen soil sample locations? ....  | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Was a closure assessment omitted because of obvious contamination? ....  | <input type="checkbox"/> Y <input checked="" type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Was the DNR notified of suspected or obvious contamination? ....   | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | <input type="checkbox"/> | <input type="checkbox"/> |

Agency, office and person contacted: JULIE FROST

7. Contamination suspected because of:  Odor  Soil Staining  Free Product  Sheen On Groundwater  Field Instrument Test

**F. METHOD OF ACHIEVING 10% LEVEL DESCRIPTION**

Educator Or Diffused Air Blower

Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of 12 feet above ground.

Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.

Dry Ice

Dry ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed over the greatest possible tank area. Dry ice evaporated before proceeding.

Inert Gas (CO/2 or N/2) **NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHERE. THE TANK MAY NOT BE ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT**

Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank opposite the vent.

Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing device grounded.

Tank atmosphere monitored for flammable or combustible vapor levels.

Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space monitored at bottom, middle and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained before removing tank from ground.

**G. NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW**

**H. REMOVER/CLEANER INFORMATION**

Steve Kollmann  
Remover Name (print)

Steve Kollmann  
Remover Signature

398 3-31-94  
Remover Certification No. Date Signed

**I. INSPECTOR INFORMATION**

\_\_\_\_\_  
Inspector Name (print)

\_\_\_\_\_  
Inspector Signature

\_\_\_\_\_  
Inspector Certification No.

\_\_\_\_\_  
FDID # For Location Where Inspection Performed

\_\_\_\_\_  
Inspector Telephone Number

\_\_\_\_\_  
Date Signed



# Moraine Environmental, Inc.

Environmental Management Services

March 31, 1994

Project Reference #0290

Ms. Gina Keenan  
Wisconsin Department of Natural Resources  
Southeast District - Annex Building  
P. O. Box 12436  
Milwaukee, Wisconsin 53212

Re: Underground Storage Tank (UST) Release  
Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
N8 W22590 Johnson Drive  
Waukesha, Wisconsin 53186

Dear Ms. Keenan:

In accordance with the Wisconsin Department of Natural Resources reporting requirements, please be advised that Moraine Environmental, Inc. (MEI) discovered a petroleum release at the above referenced property on March 30, 1994. This letter will confirm MEI's phone conversation with the WDNR on March 31, 1994.

Specifically, MEI was on site to collect soil samples following the removal of two (2) 10,000 gallon UST's, one which contained unleaded gasoline and the other diesel. Soils within the tank excavation did not appear to be impacted, however, stained soils and strong odors were noted to exist beneath the dispenser area.

Accordingly, MEI, on behalf of the owner, would like to formally report a petroleum product release at the above referenced property. The responsible party letter should be addressed to the owner of the property at the site address listed above.

If you have any questions, please contact me at (414) 242-8998.

Sincerely,

MORAINE ENVIRONMENTAL, INC.

Amy Bucher  
Environmental Scientist

cc: Mr. Robert Johnson

mei-tech\0290dnr.ltr



Note: Use of this form is voluntary but is requested by the Department pursuant to ch. NR 149, NR 500-540, NR 158 and NR 419, Wis. Adm. Code. Personally identifiable information will be used for no other purpose.

|   |   |   |
|---|---|---|
| Sample Collector(s)<br><i>AMY BUCKER</i>                | Title/Work Station/Company<br><i>MORaine ENVIRONMENTAL, INC.</i>  | Telephone Number (include area code)<br><i>(414) 242-8998</i> |
| Property Owner<br><i>JOHNSON SAND AND GRAVEL # 0290</i> | Property Address<br><i>N 8 W 2290 JOHNSON DRIVE, WAUKESHA, WI</i> | Telephone Number (include area code)                          |

I hereby certify that I received, properly handled and disposed of these samples as noted below:

|  |                                      |   |
|--|--------------------------------------|---|
| Relinquished By (Signature)<br><i>A. Bucker</i>      | Date/Time<br><i>3/31/94 10:35 AM</i> | Received By (Signature)<br><i>W. John Bucker</i>              |
| Relinquished By (Signature)<br><i>W. John Bucker</i> | Date/Time<br><i>3/31/94 11:34P</i>   | Received By (Signature)                                       |
| Relinquished By (Signature)                          | Date/Time<br><i>3/31/94 1230</i>     | Received for EN CHEM by (Signature)<br><i>Michael J. Dunn</i> |

**LABORATORY USE ONLY**  
Temperature of temperature blank *ROT*  
If samples were received on ice and there was ice remaining, you may report the temperature as 'received on ice'. If all of the ice was melted, the temperature of the melt may be substituted for a temperature blank.

| Field ID Number | Date Collected | Time Collected | Sample |        | Preserv. Type | Field Screening | Location/Description (see footnote 2) | Analysis Type | Lab ID Number | Sample Condition      |                 |                |            |                |  |
|-----------------|----------------|----------------|--------|--------|---------------|-----------------|---------------------------------------|---------------|---------------|-----------------------|-----------------|----------------|------------|----------------|--|
|                 |                |                | Type 1 | Device |               |                 |                                       |               |               | no/type of Containers | Cracked /broken | Improp. Sealed | Good Cond. | Other Comments |  |
| 1               | 3-30-94        | 2:00 PM        | SOIL   | GRAB   | -             | 11.0            | DIESEL TANK-50.                       | 5             | 112591        | 1- phatit<br>1-202    |                 |                |            | X              |  |
| 2               | 3-30-94        | 2:15 PM        | SOIL   | GRAB   | MED4          | 6.0             | TANKS CENTER BASE                     | 1             | 112592        | ↓                     |                 |                |            |                |  |
| 3               | 3-30-94        | 2:30 PM        | SOIL   | GRAB   | MED4          | ND              | GAS TANK-NO.                          | 1             | 112593        | ↓                     |                 |                |            |                |  |
| 4               | 3-30-94        | 3:00 PM        | SOIL   | GRAB   | MED4          | 26.0            | DISPENSER-8'                          | 1             | 112594        | ↓                     |                 |                |            |                |  |

**FOOTNOTES**  
1. specify groundwater, surface water, soil, leachate, sludge, etc.  
2. sample description must clearly correlate the sample ID to the sampling location.

- ANALYSIS CODES**
- |         |                   |                  |                     |
|---------|-------------------|------------------|---------------------|
| 1. GRO  | 5. DRO            | 9. Free Liquids  | 13. BETX            |
| 2. PVOC | 6. PAH            | 10. pH           | 14. Protocol D1-GRO |
| 3. Lead | 7. Flashpoint     | 11. TCLP-Benzene | 15. Protocol D1-DRO |
| 4. 8021 | 8. Percent Solids | 12. TCLP-Lead    | 16. 8260            |

**BILLING ADDRESS:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DEPARTMENT USE ONLY**

Split samples: Offered?  yes  no (Check one)  
Accepted?  yes  no (Check one)

Accepted By: \_\_\_\_\_

*proy 9403211*



...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL, WAUKESHA  
En Chem Proj# : 9403211  
Date Reported : 04/05/1994

Report to: MORaine ENVIRONMENTAL

Thank you for using En Chem! Samples were analyzed according to strict EPA or Wisconsin DNR methodology. Any comments or problems associated with the receipt of or analysis are reported below:

Sample no. 112594: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.





...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL, WAUKESHA  
Your Sample ID: 4  
Sample Desc. : DISPENSER-8'  
Sample Matrix : SOIL Date Collected: 03/30/1994  
En Chem Proj# : 9403211 Date Received : 03/31/1994  
En Chem Lab # : 112594 Date Reported : 04/05/1994

Report to: MORaine ENVIRONMENTAL  
P.O. BOX 488  
108 NORTH MAIN STREET  
THIENSVILLE, WI 53092

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| GRO-S    | Gasoline Range Organics(GRO)-Soil | 300    | mg/kg   | 14              |             | 04/04/1994 | WDNR MOD GRO    | 04/04/1994    | CAR                  |
|          | Blank spike                       | 102    | % recov |                 |             |            |                 |               |                      |
|          | Blank spike duplicate             | 99     | % recov |                 |             |            |                 |               |                      |
|          | Soil spike                        | 102    | % recov |                 |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*David Tronoff*



...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL, WAUKESHA  
Your Sample ID: 1  
Sample Desc. : DIESEL TANK-SO.  
Sample Matrix : SOIL Date Collected: 03/30/1994  
En Chem Proj# : 9403211 Date Received : 03/31/1994  
En Chem Lab # : 112591 Date Reported : 04/11/1994

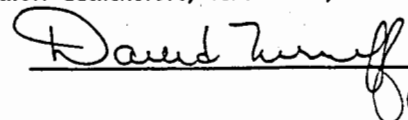
Report to: MORaine ENVIRONMENTAL  
P.O. BOX 488  
108 NORTH MAIN STREET  
THIENSVILLE, WI 53092

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                       | Result | Units | Detection Limit | Prep Method | Prep Date | Analysis Method | Analysis Date | Analyzed By |
|----------|---------------------------------|--------|-------|-----------------|-------------|-----------|-----------------|---------------|-------------|
| DRO-S    | Diesel Range Organics(DRO)-Soil | 4000   | mg/kg | 200             |             |           |                 | 04/11/1994    | NJS         |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

  
David W. Huff





...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL, WAUKESHA  
Your Sample ID: 2  
Sample Desc. : TANKS CENTER BASE  
Sample Matrix : SOIL Date Collected: 03/30/1994  
En Chem Proj# : 9403211 Date Received : 03/31/1994  
En Chem Lab # : 112592 Date Reported : 04/05/1994

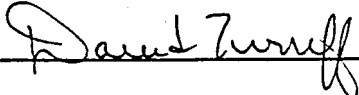
Report to: MORaine ENVIRONMENTAL  
P.O. BOX 488  
108 NORTH MAIN STREET  
THIENSVILLE, WI 53092

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                         | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Date | Analyzed By |
|----------|-----------------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|---------------|-------------|
| GRO-S    | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg | 2.7             |             | 04/04/1994 | WDNR MOD GRO    | 04/04/1994    |               | CAR         |
|          | Blank spike                       | 102 %  | recov |                 |             |            |                 |               |               |             |
|          | Blank spike duplicate             | 99 %   | recov |                 |             |            |                 |               |               |             |
|          | Soil spike                        | 102 %  | recov |                 |             |            |                 |               |               |             |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

  
\_\_\_\_\_



...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL, WAUKESHA  
Your Sample ID: 3  
Sample Desc. : GAS TANK-NO.  
Sample Matrix : SOIL Date Collected: 03/30/1994  
En Chem Proj# : 9403211 Date Received : 03/31/1994  
En Chem Lab # : 112593 Date Reported : 04/05/1994

Report to: MORaine ENVIRONMENTAL  
P.O. BOX 488  
108 NORTH MAIN STREET  
THIENSVILLE, WI 53092

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                         | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Date | Analyzed By |
|----------|-----------------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|---------------|-------------|
| GRO-S    | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg | 2.9             |             | 04/04/1994 | WDNR MOD GRO    | 04/04/1994    |               | CAR         |
|          | Blank spike                       | 102 %  | recov |                 |             |            |                 |               |               |             |
|          | Blank spike duplicate             | 99 %   | recov |                 |             |            |                 |               |               |             |
|          | Soil spike                        | 102 %  | recov |                 |             |            |                 |               |               |             |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

PROJECT: ~~GRD~~ NORTHERN PETRO

Continued From Page \_\_\_\_\_

MARCH 30, 1994 ON SITE 1:15 PM STEVE AND NOAH ON SITE W/ NORTHERN  
DENNIS TETZLAFF ON SITE 45' CLOUDY

ROBERT JOHNSON (TILLING OFFICE)

JOHNSON SAND AND GRAVEL  
N8 W22590 JOHNSON DRIVE  
WAUKESHA WI 53188

CHARLES BABE FIRE INSPECTOR  
ON SITE

TANK ID 67270 0127 INSTALLED 1/01/82 UNLEADED, 10,000 GAL  
TIGHTNESS TESTING, COATED STEEL TANK, PIPING & COATED STEEL

TANK ID 67270 0126 INSTALLED 1/01/82 DIESEL, 10,000 GAL  
TIGHTNESS TESTING, COATED STEEL TANK, PIPING, COATED STEEL

UNDERGROUND ELECTRIC - WEST SIDE BLDG  
UNDERGROUND GAS - FROM JOHNSON INC (SUN COINTEL BLDG)  
MUNICIPAL SEWER, WELL - DENVATE SO. SIDE OF BLDG  
LOCATED IN INDUSTRIAL PARK

DIESEL TANK (TANK A) SOUTH 172" X 9'10" SO END UPPER 1/3 OF TANK HAD  
GAS TANK (TANK B) NORTH HOLE IN IT DUE TO EXCAVATOR  
SHOEN ON PERMANENT WATER AT BASE TANK B HITTING IT

| SAMPLE LOCATION    | DEPTH | CUM  |       |
|--------------------|-------|------|-------|
| DISPENSER BASE - 1 | 4'    | 24.0 | GRD   |
| PIPING - 1         | 4'    | 14.0 | GRD   |
| DIESEL SO. BASE    | 14.5  | 11.0 | DRO * |
| CENTER TANKS BASE  | 14.5  | 6.0  | GRD * |
| GAS NO. BASE       | 14.5  | ND   | GRD * |
| DISPENSER - 2      | 8'    | 26.0 | GRD * |

NEIGHBORING PROCD N ~~ADDRESS~~ I-94  
TEL COUNTY DISTRIBUTORS  
S PRICE ENGINEERING

E TRU GREEN CHEM LAWN  
W LETTERHEAD PRESS

Continued on Page \_\_\_\_\_

Read and Understood By

D. Pucina

Signed

3/30/94

Date

Signed

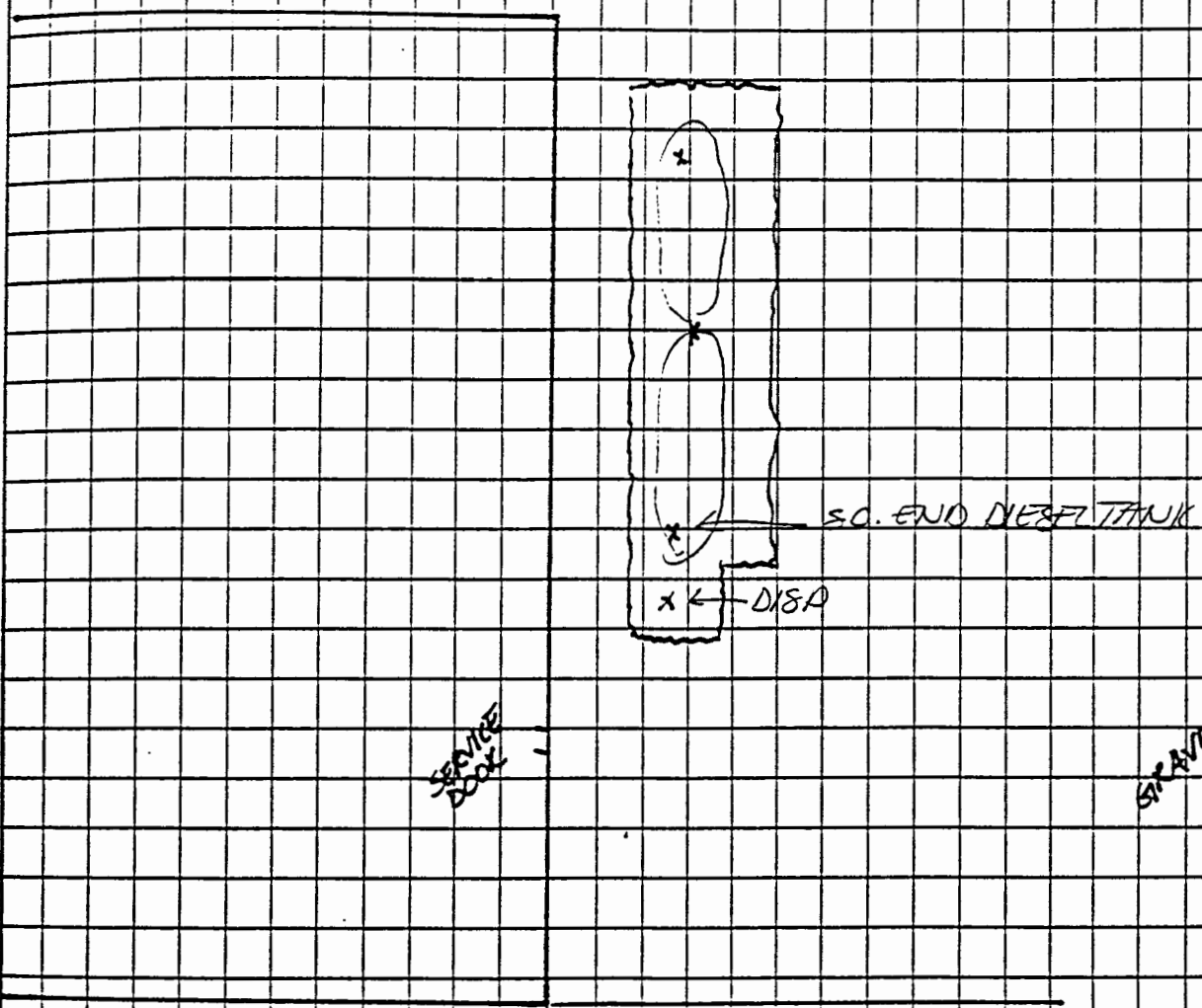
Date

PROJECT #0290

Continued From Page \_\_\_\_\_

1" = 20' N

GRAVE



GEOLOGY CONSISTED OF ALL FILL MATERIAL.  
 MR. JOHNSON REPORTED THAT BUILDING ON 17'  
 OF FILL 20 YRS AGO. SAND BACKFILL SURROUNDED SAN TANKS. FILL CONSISTED OF SAND  
 AND GRAVEL WITH BROWN CLAY & GRAVEL AT SO. BASE DIES

TANKS CLEANED BY UNKNOWN

Continued on Page

Read and Understood By

D. BUKHET

3/30/94

Signed

Date

Signed

Date

**APPENDIX B**

**SITE PHOTOGRAPHS**

*Former Johnson Sand and Gravel Site  
MEI #0305  
N8 W22590 Johnson Road  
Waukesha, Wisconsin*



*UST removal activities in 1994.*



*Cleaning of one 10,000 gallon tank  
by Northern Petro Services, Inc.*

***Former Johnson Sand and Gravel Site  
MEI #0305  
N8 W22590 Johnson Road  
Waukesha, Wisconsin***



***Photo shows venting of northern tank  
prior to removal.***

***Former Johnson Sand and Gravel Site  
MEI #0305  
N8 W22590 Johnson Road  
Waukesha, Wisconsin***



***Photo shows perched water at bottom of  
northern tank.***



***Former Johnson Sand and Gravel Site  
MEI #0305  
N8 W22590 Johnson Road  
Waukesha, Wisconsin***



***Photo taken facing northwest toward  
southeast building corner.***



***Installation of soil boring. Please observe that  
asphaltic concrete covers former UST area.***

## **APPENDIX C**

### **SOIL BORING LOGS**



| Sample             |                            | Blow Counts  | Depth In Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit       | USCS | Grate Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | RQD /<br>Comments |
|--------------------|----------------------------|--------------|---------------|---|------|-----------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|-------------------|
| Number<br>and Type | Length Alt. &<br>Recovered |              |               |   |      |           |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                   |
| #1                 | 18"                        | 5, 8, 10, 15 | 8.15          | LT. BROWN SAND w/TRACE SILTS AND SMALL WHT STONE. (NOTICABLE PETRO. COAR) |      |           |              | 412       |                 | WET            |              |                  |       | ODOR              |
|                    | 18"                        | 5, 19        | 12.18         | BR. CLAY w/LG. WHT. STONE (18.0)  |      |           |              | 342       |                 | DRY            |              |                  |       |                   |
|                    | 20"                        | 14, 21       | 20.00         | LT. BROWN SAND w/TRACE SILTS (NOTICABLE COAR) AND LG. WHT. STONE (20.0)   |      |           |              | 150       |                 | DRY            |              |                  |       |                   |
|                    | 20"                        | 14, 21       | 22.00         | COARSE DPK. BR. SANDS w/SMALL WHT. STONE (22.0)                           |      |           |              | 120       |                 | DRY            |              |                  |       |                   |
|                    | 14"                        | 12, 28       | 24.00         | (NOTICABLE COAR) WHT. SHALE (24.0)  |      |           |              |           |                 | WET            |              |                  |       |                   |
| #2                 | 14"                        | 22, 25       | 26.00         | COARSE BR. COARSE SANDS w/LG. STONE WHT. SHALE (26.0)                     |      |           |              | 27        |                 | DRY            |              |                  |       | ODOR              |
|                    |                            |              | 28.00         |   |      |           |              |           |                 |                |              |                  |       |                   |
|                    |                            |              |               | BORING TERMINATED 27' BPS   |      |           |              |           |                 |                |              |                  |       |                   |



| Sample             |                            | Blow Counts      | Depth In Feet                                 | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit    | USCS | Gratic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | ROD/<br>Comments |
|--------------------|----------------------------|------------------|---|--|------|------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|------------------|
| Number<br>and Type | Length Att. &<br>Recovered |                  |   |  |      |            |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                  |
| #3                 | 18"                        | 21, 17<br>4, 7   |   | COARSE LOOSE LT. BR SANDS (MED.)<br>w/TRACE LG. STONE / GRAN.<br>SHALE |      |            |              | 360       |                 | MOIST<br>WET   |              |                  |       |                  |
|                    |                            |                  |   | NOTE DIESEL ODR (16.0)   |      |            |              |           |                 |                |              |                  |       |                  |
|                    | 20"                        | 28, 18<br>17, 19 |   |  |      |            |              | 315       |                 | DRY<br>MOIST   |              |                  |       | NOTE<br>ODOR     |
|                    |                            |                  |   | (18.0)   |      |            |              |           |                 |                |              |                  |       |                  |
|                    | 16"                        | 18, 22<br>26, 20 |   | PUSHED STONE GRANITE (20.0)  |      |            |              |           |                 | DRY            |              |                  |       | NOTE<br>ODOR     |
|                    |                            |                  |   | COARSE MED. - COARSE LT. BR SAND.<br>w/TRACE STONE AND LG. STONE (WHT) |      |            |              |           | 318             | MOIST<br>DRY   |              |                  |       | NOTE<br>ODOR     |
|                    |                            |                  |   | DIESEL ODR (22.0)  |      |            |              |           |                 |                |              |                  |       |                  |
|                    | 22"                        | 14, 8<br>6, 17   |   | WET/MOIST SILTY BR. SANDS (MED.) (24.0)                                |      |            |              |           | 498             |                |              |                  |       | STRONG<br>ODOR   |
|                    |                            |                  |   | COARSE MED/COARSE SANDS w/TRACE<br>LG. STONE<br>WHT.                   |      |            |              |           | 492             | WET<br>WET     |              |                  |       |                  |
|                    | 22"                        | 10, 20<br>36, 37 |   | MED. LOOSE SAND BR/GRN (26.0)<br>w/TRACE SM. STONE                     |      |            |              |           | 375             |                |              |                  |       |                  |
| 22"                |                            |                  | BR. MED MOIST SAND (STRONG<br>ODOR) (28.0)    |  |      |            |              |           |                 |                |              |                  |       |                  |
| 4"                 | 50<br>BT                   |                  | COARSE LG. GRANITE STONES                     |  |      |            |              | 349       |                 |                |              |                  |       |                  |
| NA                 |                            |                  | Auger Refusal<br>BORING TERMINATED AT (29.5') |  |      |            |              |           |                 |                |              |                  |       |                  |

1:00A  
MCS  
RST  
GRACE

32

34

#3

|  |                    |  |  |   |                               |
|--|--------------------|--|--|---|-------------------------------|
| Facility/Project Name<br><b>Johnson Sand &amp; Gravel Property</b>                                       |                    | License/Permit/Monitoring Number         |  | Boring Number<br><b>B 3</b>   |                               |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Midwest Engineering (414-521-2125) ROLAND</b> |                    | Date Drilling Started<br><b>03-19-96</b> |  | Date Drilling Completed<br><b>03-19-96</b>  |                               |
| DNR Facility Well No.  | WI Unique Well No. | Common Well Name                         |  | Final Static Water Level<br>Feet MSL  | Surface Elevation<br>Feet MSL |
| Boring Location<br>State Plane _____ N, _____ E S/C/N _____ Lat _____ ° _____ ' _____ "                  |                    |  |  | Local Grid Location (if applicable)<br>_____ Feet <input type="checkbox"/> N _____ Feet <input type="checkbox"/> E<br>_____ Feet <input type="checkbox"/> S _____ Feet <input type="checkbox"/> W |                               |
| Part of the S.W. 1/4 of the N.E. 1/4 Section 25, T 7 N, R 19 E   |                    | Long _____ ° _____ ' _____ "             |  |   |                               |
| County<br><b>WAUKESHA</b>  |                    | DNR County Code                          |  | Civil Town / City / or Village<br><b>WAUKESHA</b>   |                               |

| Sample Number and Type | Length Alt. & Recovered | Blow Counts     | Depth In Feet | Soil/Rock Description And Geologic Origin For Each Major Unit                     | USCS | Gratic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | RQD / Comments |  |  |  |  |
|------------------------|-------------------------|-----------------|---------------|---|------|------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|----------------|--|--|--|--|
|                        |                         |                 |               |   |      |            |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                |  |  |  |  |
|                        |                         |                 |               | ASPHALT PARKING LOT 6"  |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         | NA              |               | #2 STONE<br>TB  |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (2.0)   |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (4.0)   |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (6.0)   |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (8.0)   |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (10.0)  |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (12.0)  |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
| (#21)                  | 16"                     | 25, 15<br>9, 16 |               | CONCRETE LG. STONE W/ TRACE<br>MED. BROWN CLAY (MED. SAND)<br>W/ SLIGHT DARK SILT |      |            |              | 8.4       |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | (14.0)  |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |
|                        |                         |                 |               | SEE PL. 2   |      |            |              |           |                 |                |              |                  |       |                |  |  |  |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                                 |  |
|---------------------------------|--|
| Signature<br><i>[Signature]</i> | Firm<br><b>Moraine Environmental, Inc.</b> |
|---------------------------------|--|

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

| Sample             |                            | Blow Counts    | Depth in Feet           | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit   | USCS | Graphic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | RQD /<br>Comments |
|--------------------|----------------------------|----------------|-------------------------|---|------|-------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|-------------------|
| Number<br>and Type | Length Att. &<br>Recovered |                |                         |   |      |             |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                   |
| #2                 | 18"                        | 11,15<br>8,10  | 11.15<br>8.10           | RED. BR. SOFT CLAYEY SILT<br>w/ LOOSE MED. BR. SAND AND<br>LG. STONE  |      |             |              | 6.7       |                 | DRY            |              |                  |       |                   |
|                    |                            |                |                         | No CORN (16.0)  |      |             |              |           |                 |                |              |                  |       |                   |
|                    | 20"                        | 24,8<br>14,14  | 24.8<br>14.14           | BLK SHALE STONE (18.0)  |      |             |              | 5.0       |                 | DRY            |              |                  |       |                   |
|                    |                            | 22,25<br>39,27 | 22.25<br>39.27          | RED. BR. SOFT CLAYEY SILT<br>w/ LOOSE SM. STONE (GRAY - BLK)<br>SEAMS |      |             |              | NO        |                 | DRY            |              |                  |       |                   |
|                    | 22"                        |                |                         | BR. DM LOOSE SILT w/ LG. STONE (20.0)                                 |      |             |              | NO        |                 | DRY            |              |                  |       |                   |
|                    |                            | 41,19<br>18,15 | 41.19<br>18.15          | RED. BR. SOFT CLAYEY SILT<br>w/ LOOSE SM. STONE<br>NO CORN (22.0)     |      |             |              | NO        |                 | DRY            |              |                  |       |                   |
|                    | 18"                        | 41,10<br>27,5  | 41.10<br>27.5           | LOOSE RUSTY STONE (24.0)  |      |             |              | NO        |                 | DRY            |              |                  |       |                   |
|                    |                            |                |                         | POOR SAMPLE RECOVERED (26.0)  |      |             |              | NO        |                 |                |              |                  |       |                   |
|                    |                            | 8"             | 50<br>6"                | LOOSE COARSE LT. BR.<br>SAND & GRAVELS (28.0)                         |      |             |              | 1.6       |                 | WET            |              |                  |       |                   |
|                    |                            |                |                         | LG. ROCK 28.5   |      |             |              |           |                 | WET            |              |                  |       |                   |
|                    |                            |                | 29.5 AUGER REFUSAL (BT) |   |      |             |              |           |                 |                |              |                  |       |                   |

Rock (BIG)

BT











|   |  |                    |  |   |  |   |
|---|--|--------------------|--|---|--|---|
| Facility/Project Name<br><b>Johnson Sand &amp; Gravel Property</b>                                |  |                    | License/Permit/Monitoring Number         |   | Boring Number<br><b>B 6</b>                |   |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Midwest Engineering (414-521-2125)</b> |  |                    | Date Drilling Started<br><b>03 20 96</b> |   | Date Drilling Completed<br><b>03 20 96</b> |   |
| DNR Facility Well No.   |  | WI Unique Well No. | Common Well Name                         |   | Final Static Water Level<br>Feet MSL       | Surface Elevation<br>Feet MSL   |
| Boring Location<br>State Plane _____ N, _____ E S/C/N Lat _____ ° _____ ' _____ "                 |  |                    | Local Grid Location (if applicable)      |   |  | Borehole Diameter 3.25"   |
| Part of the S.W. 1/4 of the N.E. 1/4 Section 25, T 7 N, R 19 E                                    |  |                    | Long _____ ° _____ ' _____ "             |   |  | Feet <input type="checkbox"/> N <input type="checkbox"/> E<br><input type="checkbox"/> S <input type="checkbox"/> W |
| County<br><b>WAUKESHA</b>   |  | DNR County Code    |  | Civil Town / City / or Village<br><b>WAUKESHA</b> |  |   |

| Sample Number and Type | Length Att. & Recovered | Blow Counts | Depth In Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | RQD / Comments |  |  |
|------------------------|-------------------------|-------------|---------------|---|------|-------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|----------------|--|--|
|                        |                         |             |               |   |      |             |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                |  |  |
|                        |                         |             |               | 4" ASPHALT CAP (11:30A)                                       |      |             |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         | NA          |               | SETP FOU  |      |             |              | NC        |                 |                |              |                  |       |                |  |  |
|                        |                         |             | (2.0)         |   |      |             |              | NC        |                 |                |              |                  |       |                |  |  |
|                        |                         |             | (4.0)         | DRK. BR. SAND / SCLT W/ OLIGNECS                              |      |             |              | ND        |                 | DRY            |              |                  |       |                |  |  |
|                        |                         |             | (6.0)         |   |      |             |              |           |                 |                |              |                  |       |                |  |  |
|                        | 20"                     | 26          |               | MED. LT BR SAND w/ SMALL LOOSE STONE                          |      |             |              | 5.3       |                 | DRY            |              |                  |       |                |  |  |
|                        |                         |             | (8.0)         |   |      |             |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             | (10.0)        |   |      |             |              | NO        |                 | DRY            |              |                  |       |                |  |  |
|                        |                         |             | (12.0)        |   |      |             |              |           |                 |                |              |                  |       |                |  |  |
|                        | #1 19"                  | 22 1/2      |               | LG. STONE / BR. MED AND FINE SAND LOOSE                       |      |             |              | NO        |                 | DRY            |              |                  |       |                |  |  |
|                        |                         |             | (14.0)        |   |      |             |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               | (PLEASE SEE PG. 2)  |      |             |              |           |                 |                |              |                  |       |                |  |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                                 |  |
|---------------------------------|--|
| Signature<br><i>[Signature]</i> | Firm<br><b>Moraine Environmental, Inc.</b> |
|---------------------------------|--|

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| Sample             |                            | Blow Counts | Depth In Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit  | USCS | Graphic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | ROD /<br>Comments |  |  |  |                       |
|--------------------|----------------------------|-------------|---------------|--|------|-------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|-------------------|--|--|--|-----------------------|
| Number<br>and Type | Length Alt. &<br>Recovered |             |               |  |      |             |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                   |  |  |  |                       |
|                    | 2"                         | 50<br>6"    |               | No Sample<br>RECOVERED PUSHED LG. STONE<br>(16.0)  |      |             |              | No        |                 |                |              |                  |       |                   |  |  |  |                       |
|                    | 8"                         | 50<br>8"    |               | POOR SAMPLE RECOVERED<br>DRY COARSE SAND (SPL) W/ SML STONES<br>(18.0)   |      |             |              | 14        |                 |                |              |                  |       |                   |  |  |  |                       |
|                    | 8"                         | 50<br>8"    |               | LG. STONE<br>COBBLES<br>(20.0)   |      |             |              | 64        |                 |                |              |                  |       |                   |  |  |  | SILT<br>DEBEL<br>ODOR |
| #2                 | 4"                         | 50<br>4"    |               | (22.0)   |      |             |              | 100       |                 |                |              |                  |       |                   |  |  |  | DIESEL<br>ODOR        |
|                    |                            | 50<br>0"    |               | NSC<br>AUGER REFUSAL (LG. BOULDER)<br>(24.0)   |      |             |              |           |                 |                |              |                  |       |                   |  |  |  |                       |
|                    |                            |             |               | (26.0)   |      |             |              |           |                 |                |              |                  |       |                   |  |  |  |                       |
|                    |                            | 50<br>0"    |               | NSC<br>LG. ROCK (BOULDER)<br>(28.0)  |      |             |              |           |                 |                |              |                  |       |                   |  |  |  |                       |
|                    |                            |             |               | <p style="text-align: center;">BT 28.5</p> <p style="text-align: center;">(AUGER REFUSAL<br/>BORING TERMINATED<br/>NO WATER ENCOUNTERED)</p> |      |             |              |           |                 |                |              |                  |       |                   |  |  |  |                       |

|   |                    |                  |  |  |   |
|---|--------------------|------------------|--|--|---|
| Facility/Project Name<br><b>Johnson Sand &amp; Gravel Property</b>                                |                    |                  | License/Permit/Monitoring Number   |  | Boring Number<br><b>B 7</b>               |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Midwest Engineering (414-521-2125)</b> |                    |                  | Date Drilling Started<br><b>03-20-96</b>   | Date Drilling Completed<br><b>03-20-96</b> | Drilling Method<br><b>Hollow Stew Aug</b> |
| DNR Facility Well No.   | WI Unique Well No. | Common Well Name | Final Static Water Level<br>Feet MSL   | Surface Elevation<br>Feet MSL              | Borehole Diameter <b>3.25"</b>            |
| Boring Location<br>State Plane _____ N, _____ E S/C/N Lat _____ ° _____ ' _____ "                 |                    |                  | Local Grid Location (if applicable)  |  |   |
| Part of the S.W. 1/4 of the N.E. 1/4 Section 25, T 7 N, R 19 E                                    |                    |                  | Long _____ ° _____ ' _____ " Feet <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S _____ Feet <input type="checkbox"/> W |  |   |
| County<br><b>WAUKESHA</b>   |                    | DNR County Code  | Civil Town / City / or Village<br><b>WAUKESHA</b>  |  |   |

| Sample Number and Type | Length Alt. & Recovered | Blow Counts | Depth In Feet | Soil/Rock Description And Geologic Origin For Each Major Unit    | USCS | Grate Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | RQD / Comments |  |  |
|------------------------|-------------------------|-------------|---------------|--|------|-----------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|----------------|--|--|
|                        |                         |             |               |  |      |           |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                |  |  |
|                        |                         |             |               | <b>5" ASPHALT (1:300/ST)</b>                                     |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               | <b>TB #2 STONE</b>   |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
| <b>#1</b>              | <b>20"</b>              | <b>76</b>   |               | <b>SOFT (4.0)</b>  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         | <b>78</b>   |               | <b>DRK. BRN. ORGANIC PART / SELF / MOI w/ SWI. STONE No oven</b> |      |           |              | <b>20</b> |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               | <b>NSC</b>   |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        | <b>20"</b>              | <b>221</b>  |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         | <b>16</b>   |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         | <b>13</b>   |               | <b>DRK. BR. SAND SOFT SANDY MOI SELF</b>                         |      |           |              | <b>19</b> |                 |                |              |                  |       |                |  |  |
|                        |                         | <b>10</b>   |               | <b>w/ SWI: STONE</b>   |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               | <b>NSC (PLEASE SEE P. 2)</b>                                     |      |           |              |           |                 |                |              |                  |       |                |  |  |
|                        |                         |             |               |  |      |           |              |           |                 |                |              |                  |       |                |  |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *[Signature]* Firm **Moraine Environmental, Inc.**

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|   |  |                    |  |   |  |   |
|---|--|--------------------|--|---|--|---|
| Facility/Project Name<br><b>Johnson Sand &amp; Gravel Property</b>                                |  |                    | License/Permit/Monitoring Number         |   | Boring Number<br><b>B 8</b>                |   |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Midwest Engineering (414-521-2125)</b> |  |                    | Date Drilling Started<br><b>03-20-96</b> |   | Date Drilling Completed<br><b>03-20-96</b> |   |
| DNR Facility Well No.   |  | WI Unique Well No. | Common Well Name                         |   | Final Static Water Level<br>Feet MSL       | Surface Elevation<br>Feet MSL   |
| Boring Location<br>State Plane _____ N, _____ E S/C/N Lat _____ ° _____ ' _____ "                 |  |                    | Local Grid Location (if applicable)      |   |  | Borehole Diameter 3.25"   |
| Part of the S.W. 1/4 of the N.E. 1/4 Section 25, T 7 N, R 19 E                                    |  |                    | Long _____ ° _____ ' _____ "             |   |  | Feet <input type="checkbox"/> N <input type="checkbox"/> E<br><input type="checkbox"/> S <input type="checkbox"/> W |
| County<br><b>WAUKESHA</b>   |  | DNR County Code    |  | Civil Town / City / or Village<br><b>WAUKESHA</b> |  |   |

| Sample Number and Type | Length Ali. & Recovered | Blow Counts | Depth in Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       | RQD / Comments |  |
|------------------------|-------------------------|-------------|---------------|---|------|-------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|----------------|--|
|                        |                         |             |               |   |      |             |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 |                |  |
|                        |                         |             |               | ASPHALT 5"  |      |             |              |           |                 |                |              |                  |       |                |  |
|                        |                         | NA          |               | #2 STONE TB<br>SITE FILL                                      |      |             |              |           |                 |                |              |                  |       |                |  |
|                        |                         |             | (2.0)         |   |      |             |              |           |                 |                |              |                  |       |                |  |
|                        |                         |             | (4.0)         |   |      |             |              |           |                 |                |              |                  |       |                |  |
|                        | 4"                      | 44          | (6.0)         | SOFT DAK BR/BLK FINE MOT SILT<br>W/TRACG ORGANKES             |      |             |              | NO        |                 | DRY            |              |                  |       |                |  |
|                        |                         | 46          | (8.0)         |   |      |             |              |           |                 |                |              |                  |       |                |  |
|                        |                         |             | (10.0)        |   |      |             |              | NO        |                 |                |              |                  |       |                |  |
| #1                     | 22"                     | 49          | (12.0)        | LT. BROWN<br>BROWN LOOSE MED. SAND<br>W/SMA BEANS             |      |             |              | C.9       |                 | DRY            |              |                  |       |                |  |
|                        |                         | 109         | (14.0)        |   |      |             |              | NO        |                 | DRY            |              |                  |       |                |  |
|                        |                         |             |               | (PLEASE SEE P. 2)   |      |             |              |           |                 |                |              |                  |       |                |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                                      |  |
|--------------------------------------|--|
| Signature<br><i>Christiaan - MED</i> | Firm<br><b>Moraine Environmental, Inc.</b> |
|--------------------------------------|--|

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

| Sample             |                            | Blow Counts | Depth In Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | USCS | Gratic Log | Well Diagram | PID / FID | Soil Properties |                |              |                  |       |                   |
|--------------------|----------------------------|-------------|---------------|---|------|------------|--------------|-----------|-----------------|----------------|--------------|------------------|-------|-------------------|
| Number<br>and Type | Length Alt. &<br>Recovered |             |               |   |      |            |              |           | Comp. Strength  | Moisture Cont. | Liquid Limit | Plasticity Limit | P 200 | RQD /<br>Comments |
| #2                 | 14"                        | 18          | 50            | SOFT DK. BR. MAT SECT<br>W/ TRICE CLAY<br>AND MED. BR. SAND.        |      |            |              | 5.4       | DRY             |                |              |                  |       |                   |
|                    |                            |             |               | NO GOSP. (16.0)   |      |            |              |           |                 |                |              |                  |       |                   |
| #2                 | 8"                         | 15          | 138           | NSC   |      |            |              | NA        |                 |                |              |                  |       |                   |
|                    |                            |             |               | (18.0)  |      |            |              |           |                 |                |              |                  |       |                   |
| #3                 | 8"                         | 15          | 138           | DESSEL<br>NOTE OOSP.  |      |            |              | 300       |                 |                |              |                  |       |                   |
|                    |                            |             |               | (20.0)  |      |            |              |           |                 |                |              |                  |       |                   |
| #3                 | 20"                        | 11          | 34            | MED. LT. BR. SAND<br>W/FWGS   |      |            |              | 297       | MOIST           |                |              |                  |       |                   |
|                    |                            |             |               | (22.0)  |      |            |              |           |                 |                |              |                  |       |                   |
| #3                 | 8"                         | 11          | 34            | LT. BR.<br>COARSE SANDS<br>W/SM. STONE                              |      |            |              | 333       | WET             |                |              |                  |       |                   |
|                    |                            |             |               | (24.0)  |      |            |              |           |                 |                |              |                  |       |                   |
| #3                 | 8"                         | 11          | 34            | LOOSE<br>CG. SAND<br>LT. BR.  |      |            |              | 94        | WET             |                |              |                  |       |                   |
|                    |                            |             |               | (26.0)  |      |            |              |           |                 |                |              |                  |       |                   |
|                    |                            |             |               | BT (WATER)  |      |            |              |           |                 |                |              |                  |       |                   |
|                    |                            |             |               | (28.0)  |      |            |              |           |                 |                |              |                  |       |                   |

32

30

3

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>                             |  |  | License/Permit/Monitoring Number       |  | Boring Number<br><b>MW-2</b>   |  |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Boart Longyear-Paul Dickinson</b> |  |  | Date Drilling Started<br><b>8/7/96</b> |  | Date Drilling Completed<br><b>8/7/96</b>   |  |
| DNR Facility Well No.  |  |  | WI Unique Well No.                     |  | Common Well Name<br><b>MW-2</b>  |  |
| Final Static Water Level<br>Feet MSL   |  |  | Surface Elevation<br>Feet MSL          |  | Borehole Diameter<br><b>10.0</b> Inches  |  |
| Boring Location<br>State Plane<br>1/4 of      1/4 of Section                                 |  |  | N, E<br>T      N,R                     |  | Local Grid Location (If applicable)<br>Lat      0' ''<br>Long      0' ''<br>Feet <input type="checkbox"/> N <input type="checkbox"/> E<br>Feet <input type="checkbox"/> S      Feet <input type="checkbox"/> W |  |
| County<br><b>Waukesha</b>  |  |  | DNR County Code<br><b>68</b>           |  | Civil Town/City/ or Village<br><b>Waukesha</b>   |  |

| Sample Number | Length (in) Recovered | Blow Counts | Depth In Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties      |                  |              |               |       | RQD/ Comments |  |
|---------------|-----------------------|-------------|---------------|---|------|-------------|--------------|---------|----------------------|------------------|--------------|---------------|-------|---------------|--|
|               |                       |             |               |   |      |             |              |         | Standard Penetration | Moisture Content | Liquid Limit | Plastic Limit | P 200 |               |  |
|               |                       |             | 1             | BLACKTOP  |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 2             | EARTH DRILL   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 3             | CLAY and COBBLE   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 4             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 5             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 6             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 7             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 8             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 9             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 10            |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 11            |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 12            |   |      |             |              |         |                      |                  |              |               |       |               |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|               |   |
|---------------|---|
| Signature<br> | Firm<br><b>BOART LONGYEAR</b><br>101 Alderson Schofield, WI 54476-0109<br>Tel: (715) 359-7090 Fax: (715) 355-5715 |
|---------------|---|

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number **MW-2** Use only as an attachment to Form 4400-122. Page **2** of **3**


| Sample |                          | Blow Counts | Depth In Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | U S C S                                | Graphic<br>Log | Well<br>Diagram | PID/FID | Soil Properties         |                     |                 |                  |       | RQD/<br>Comments |  |
|--------|--------------------------|-------------|---------------|---|--|----------------|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|--|
| Number | Length (in)<br>Recovered |             |               |   |  |                |                 |         | Standard<br>Penetration | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 |                  |  |
|        |                          |             | 13            | Gry Silty CLAY  |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 14            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 15            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 16            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 17            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 18            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 19            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 20            |   | Br Silty CLAY, C. GRAVEL and<br>COBBLE |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 21            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 22            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 23            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 24            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 25            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 26            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 27            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 28            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 29            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 30            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 31            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 32            |   |  |                |                 |         |                         |                     |                 |                  |       |                  |  |



|  |  |  |  |  |   |  |
|--|--|--|--|--|---|--|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>                             |  |  | License/Permit/Monitoring Number       |  | Boring Number<br><b>MW-3</b>  |  |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Boart Longyear-Paul Dickinson</b> |  |  | Date Drilling Started<br><b>8/7/96</b> |  | Date Drilling Completed<br><b>8/7/96</b>  |  |
| DNR Facility Well No.  |  |  | WI Unique Well No.                     |  | Common Well Name<br><b>MW-3</b>   |  |
| Final Static Water Level<br>Feet MSL   |  |  | Surface Elevation<br>Feet MSL          |  | Borehole Diameter<br><b>8.0</b> Inches  |  |
| Boring Location<br>State Plane<br>1/4 of      1/4 of Section                                 |  |  | N, E<br>T      N,R                     |  | Local Grid Location (If applicable)<br>Lat      0' ''<br>Long      0' ''<br>Feet <input type="checkbox"/> N <input type="checkbox"/> E<br><input type="checkbox"/> S <input type="checkbox"/> W |  |
| County<br><b>Waukesha</b>  |  |  | DNR County Code<br><b>68</b>           |  | Civil Town/City/ or Village<br><b>Waukesha</b>  |  |

| Sample Number | Length (in) Recovered | Blow Counts | Depth In Feet | Soil/Rock Description And Geologic Origin For Each Major Unit | USCS | Graphic Log | Well Diagram | PID/FID | Soil Properties      |                  |              |               |       | RQD/ Comments |  |
|---------------|-----------------------|-------------|---------------|---|------|-------------|--------------|---------|----------------------|------------------|--------------|---------------|-------|---------------|--|
|               |                       |             |               |   |      |             |              |         | Standard Penetration | Moisture Content | Liquid Limit | Plastic Limit | P 200 |               |  |
|               |                       |             | 0             | BLACKTOP  |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 1             | FILL  |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 2             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 3             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 4             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 5             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 6             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 7             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 8             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 9             |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 10            |   |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 11            | Gry Sandy CLAY and C. GRAVEL (Till)                           |      |             |              |         |                      |                  |              |               |       |               |  |
|               |                       |             | 12            |   |      |             |              |         |                      |                  |              |               |       |               |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

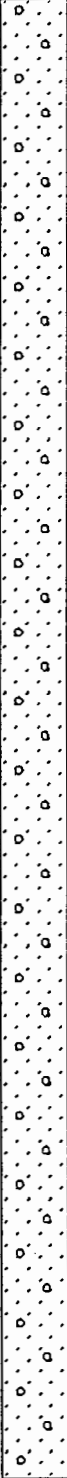
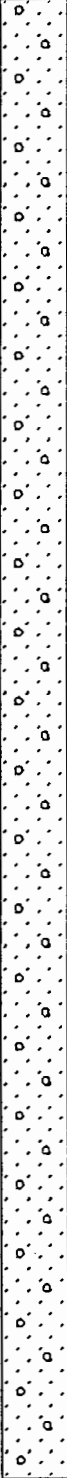
|  |   |
|--|---|
| Signature<br> | Firm<br><b>BOART LONGYEAR</b><br>101 Alderson Schofield, WI 54476-0109<br>Tel: (715) 359-7090 Fax: (715) 355-5715 |
|--|---|

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Boring Number **MW-3**

Use only as an attachment to Form 4400-122.

Page **2** of **2**

| Sample |                          | Blow Counts | Depth In Feet | Soil/Rock Description<br>And Geologic Origin For<br>Each Major Unit | U S C S | Graphic<br>Log  | Well<br>Diagram | PID/FID | Soil Properties         |                     |                 |                  |       | RQD/<br>Comments |  |
|--------|--------------------------|-------------|---------------|---|---------|---|-----------------|---------|-------------------------|---------------------|-----------------|------------------|-------|------------------|--|
| Number | Length (in)<br>Recovered |             |               |   |         |   |                 |         | Standard<br>Penetration | Moisture<br>Content | Liquid<br>Limit | Plastic<br>Limit | P 200 |                  |  |
| 1      | 12                       | 5           | 13            | CLAY and CEMENT Chips (Fill)  |         |  |                 |         | 22                      | D                   |                 |                  |       |                  |  |
|        |                          | 10          | 14            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          | 12          | 15            | Br C. SAND w/C. Gravel  |         |  |                 |         | 17                      | D                   |                 |                  |       |                  |  |
| 2      | 6                        | 4           | 16            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          | 8           | 17            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          | 9           | 18            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 19            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 20            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 21            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 22            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 23            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 24            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 25            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 26            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 27            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 28            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 29            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 30            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             | 31            |   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |
|        |                          |             |               | EOB 31.0<br>Well Set 30.0   |         |   |                 |         |                         |                     |                 |                  |       |                  |  |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>                             |  |  | License/Permit/Monitoring Number       |  | Boring Number<br><b>MW-4</b>   |  |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Boart Longyear-Paul Dickinson</b> |  |  | Date Drilling Started<br><b>8/8/96</b> |  | Date Drilling Completed<br><b>8/8/96</b>   |  |
| DNR Facility Well No.  |  |  | WI Unique Well No.                     |  | Common Well Name<br><b>MW-4</b>  |  |
| Final Static Water Level<br>Feet MSL   |  |  | Surface Elevation<br>Feet MSL          |  | Borehole Diameter<br><b>8.0</b> Inches   |  |
| Boring Location<br>State Plane<br>1/4 of      1/4 of Section                                 |  |  | N, E<br>T      N,R                     |  | Local Grid Location (If applicable)<br>Lat      0' "<br>Long      0' "<br>Feet <input type="checkbox"/> N <input type="checkbox"/> E<br>Feet <input type="checkbox"/> S <input type="checkbox"/> W |  |
| County<br><b>Waukesha</b>  |  |  | DNR County Code<br><b>68</b>           |  | Civil Town/City/ or Village<br><b>Waukesha</b>   |  |

| Number | Length (in) Recovered | Blow Counts | Depth In Feet   | Soil/Rock Description And Geologic Origin For Each Major Unit | U S C S | Graphic Log | Well Diagram | PID/FID | Soil Properties      |                  |              |               |       | RQD/ Comments |
|--------|-----------------------|-------------|---|---|---------|-------------|--------------|---------|----------------------|------------------|--------------|---------------|-------|---------------|
|        |                       |             |   |   |         |             |              |         | Standard Penetration | Moisture Content | Liquid Limit | Plastic Limit | P 200 |               |
|        |                       |             | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12 | EARTH DRILL   |         |             |              |         |                      |                  |              |               |       |               |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|               |   |
|---------------|---|
| Signature<br> | Firm<br><b>BOART LONGYEAR</b><br>101 Alderson Schofield, WI 54476-0109<br>Tel: (715) 359-7090 Fax: (715) 355-5715 |
|---------------|---|

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|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>                             |  |  | License/Permit/Monitoring Number       |  | Boring Number<br><b>MW-5</b>   |  |
| Boring Drilled By (Firm name and name of crew chief)<br><b>Boart Longyear-Paul Dickinson</b> |  |  | Date Drilling Started<br><b>8/8/96</b> |  | Date Drilling Completed<br><b>8/8/96</b>   |  |
| DNR Facility Well No.  |  |  | WI Unique Well No.                     |  | Common Well Name<br><b>MW-5</b>  |  |
| Final Static Water Level<br>Feet MSL   |  |  | Surface Elevation<br>Feet MSL          |  | Borehole Diameter<br><b>8.0</b> Inches   |  |
| Boring Location<br>State Plane<br>1/4 of    1/4 of Section                                   |  |  | N, E<br>T    N,R                       |  | Local Grid Location (If applicable)<br>Lat    0' ''<br>Long    0' ''<br>Feet <input type="checkbox"/> N <input type="checkbox"/> E<br>Feet <input type="checkbox"/> S <input type="checkbox"/> W |  |
| County<br><b>Waukesha</b>  |  |  | DNR County Code<br><b>68</b>           |  | Civil Town/City/ or Village<br><b>Waukesha</b>   |  |

| Sample Number | Length (in) Recovered | Blow Counts | Depth In Feet   | Soil/Rock Description And Geologic Origin For Each Major Unit | U S C S | Graphic Log | Well Diagram | PID/FID | Soil Properties      |                  |              |               |       | RQD/ Comments |
|---------------|-----------------------|-------------|---|---|---------|-------------|--------------|---------|----------------------|------------------|--------------|---------------|-------|---------------|
|               |                       |             |   |   |         |             |              |         | Standard Penetration | Moisture Content | Liquid Limit | Plastic Limit | P 200 |               |
|               |                       |             | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12 | EARTH DRILL   |         |             |              |         |                      |                  |              |               |       |               |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|               |   |
|---------------|---|
| Signature<br> | Firm<br><b>BOART LONGYEAR</b><br>101 Alderson Schofield, WI 54476-0109<br>Tel: (715) 359-7090 Fax: (715) 355-5715 |
|---------------|---|

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## **APPENDIX D**

### **BOREHOLE ABANDONMENT FORMS**



All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

|  |                           |  |  |
|--|---------------------------|--|--|
| (1) GENERAL INFORMATION  |                           | (2) FACILITY NAME  |  |
| Well/Drillhole/Borehole Location<br><u>B2</u>  | County<br><u>Waukesha</u> | Original Well Owner (If Known)<br><u>Johnson Sand and Gravel</u>     |  |
| NW 1/4 of NE 1/4 of Sec. <u>25</u> ; T. <u>7</u> N.; R. <u>19</u> W.   |                           | Present Well Owner   |  |
| (If applicable) Gov't Lot _____ Grid Number _____  |                           | Street or Route<br><u>Johnson Road</u>                               |  |
| Grid Location<br>R. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ E. <input type="checkbox"/> W. _____ |                           | City, State, Zip Code<br><u>Waukesha WI</u>                          |  |
| Civil Town Name<br><u>Pewaukee</u>   |                           | Facility Well No. and/or Name (If Applicable)   Well Unique Well No. |  |
| Street Address of Well<br><u>NB W22570 Johnson Rd</u>  |                           | Reason for Abandonment<br><u>soil boring</u>                         |  |
| City, Village<br><u>Waukesha</u>   |                           | Date of Abandonment<br><u>03-19-96</u>                               |  |

|  |   |  |  |
|--|---|--|--|
| WELL DRILLHOLE/BOREHOLE INFORMATION  |   | (4) Depth to Water (Feet) <u>NA</u>  |  |
| (3) Original Well/Drillhole/Borehole Construction Completed On (Date) <u>03-19-96</u>  |   | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If No, Explain: _____ |  |
| <input type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Drillhole<br><input checked="" type="checkbox"/> Borehole  | Construction Report Available?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If Yes, Was Hole Retapped? <input type="checkbox"/> Yes <input type="checkbox"/> No  |  |
| Construction Type:<br><input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input checked="" type="checkbox"/> Other (Specify) <u>Bored</u>  | Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock  | (5) Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Dump Bailer <input type="checkbox"/> Other (Explain) _____   |  |
| Total <del>Well</del> Depth (ft.) <u>29.5'</u> Casing Diameter (ins.) _____<br>(From ground surface)<br><br>Casing Depth (ft.) _____<br><br>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet | (6) Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout<br><input type="checkbox"/> Sand-Cement (Concrete) Grout<br><input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite Pellets<br><input type="checkbox"/> Clay-Sand Slurry <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Bentonite-Sand Slurry<br><input type="checkbox"/> Chipped Bentonite |  |  |

| 7) Sealing Material Used | From (Ft.) | To (Ft.) | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|--------------------------|------------|----------|------------------------------------|-------------------------|
|                          |            |          |                                    |                         |
|                          |            |          |                                    |                         |
|                          |            |          |                                    |                         |

8) Comments:

|  |                                |
|--|--------------------------------|
| Name of Person or Firm Doing Sealing Work<br><u>Midwest Engineering Services</u> |                                |
| Signature of Person Doing Work   | Date Signed<br><u>03-19-96</u> |
| Street or Route  | Telephone Number<br>( )        |
| City, State, Zip Code  |                                |

|                                 |                 |
|---------------------------------|-----------------|
| (10) FOR DNR OR COUNTY USE ONLY |                 |
| Date Received/Inspected         | District/County |
| Reviewer/Inspector              |                 |
| Follow-up Necessary             |                 |

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

|  |                           |   |  |
|--|---------------------------|---|--|
| (1) GENERAL INFORMATION  |                           | (2) FACILITY NAME   |  |
| Well/Drillhole/Borehole Location<br><u>B3</u>  | County<br><u>Waukesha</u> | Original Well Owner (If Known)<br><u>Johnson Sand and Gravel</u>    |  |
| NW 1/4 of NE 1/4 of Sec. <u>25</u> ; T. <u>7</u> N. R. <u>19</u>   |                           | Present Well Owner  |  |
| (If applicable) Gov't Lot _____ Grid Number _____  |                           | Street or Route<br><u>Johnson Road</u>                              |  |
| Grid Location<br>ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W. |                           | City, State, Zip Code<br><u>Waukesha WI</u>                         |  |
| Civil Town Name<br><u>Pewaukee</u>   |                           | Factory Well No. and/or Name (If Applicable)   Well Unique Well No. |  |
| Street Address of Well<br><u>NE W22570 Johnson Rd</u>  |                           | Reason for Abandonment<br><u>soil boring</u>                        |  |
| City, Village<br><u>Waukesha</u>   |                           | Date of Abandonment<br><u>03-19-96</u>                              |  |

|  |  |
|--|--|
| WELL/DRILLHOLE/BOREHOLE INFORMATION  |  |
| (3) Original Well/Drillhole/Borehole Construction Completed On<br>(Date) <u>03-19-96</u><br><br><input type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Drillhole<br><input checked="" type="checkbox"/> Borehole<br><br>Construction Report Available?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><br>Construction Type:<br><input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input checked="" type="checkbox"/> Other (Specify) <u>Bored</u><br><br>Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock<br><br>Total Well Depth (ft.) <u>29.5'</u> Casing Diameter (ins.) _____<br>(From ground surface)<br><br>Casing Depth (ft.) _____<br><br>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet | (4) Depth to Water (Feet) <u>NA</u><br>Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If No, Explain _____<br><br>Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>(5) Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Dump Bailer <input type="checkbox"/> Other (Explain) _____<br><br>(6) Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout<br><input type="checkbox"/> Sand-Cement (Concrete) Grout<br><input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite Pellets<br><input type="checkbox"/> Clay-Sand Slurry <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Bentonite-Sand Slurry<br><input type="checkbox"/> Chipped Bentonite |

| 7) | Sealing Material Used    | From (Ft.)     | To (Ft.)     | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|----|--------------------------|----------------|--------------|------------------------------------|-------------------------|
|    | <u>Chipped Bentonite</u> | <u>Surface</u> | <u>29.5'</u> |                                    |                         |
|    |                          |                |              |                                    |                         |
|    |                          |                |              |                                    |                         |

8) Comments: \_\_\_\_\_

|  |                                |
|--|--------------------------------|
| Name of Person or Firm Doing Sealing Work<br><u>Midwest Engineering Services</u> |                                |
| Signature of Person Doing Work   | Date Signed<br><u>03-19-96</u> |
| Street or Route  | Telephone Number<br>( )        |
| City, State, Zip Code  |                                |

|                                 |                 |
|---------------------------------|-----------------|
| (10) FOR DNR OR COUNTY USE ONLY |                 |
| Date Received/Inspected         | District/County |
| Reviewer/Inspector              |                 |
| Follow-up Necessary             |                 |

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

|   |                           |  |  |
|---|---------------------------|--|--|
| (1) GENERAL INFORMATION   |                           | (2) FACILITY NAME  |  |
| Well/Drillhole/Borehole Location<br><u>34</u>   | County<br><u>Waukesha</u> | Original Well Owner (If Known)<br><u>Johnson Sand and Gravel</u>     |  |
| NW 1/4 of NE 1/4 of Sec. <u>25</u> ; T. <u>7</u> N; R. <u>19</u> W                                  |                           | Present Well Owner   |  |
| (If applicable) Gov't Lot _____ Grid Number _____   |                           | Street or Route<br><u>Johnson Road</u>                               |  |
| Grid Location<br>N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W |                           | City, State, Zip Code<br><u>Waukesha WI</u>                          |  |
| Civil Town Name<br><u>Pewaukee</u>  |                           | Facility Well No. and/or Name (If Applicable)   Well Unique Well No. |  |
| Street Address of Well<br><u>18 W 22570 Johnson Rd</u>  |                           | Reason for Abandonment<br><u>soil boring</u>                         |  |
| City, Village<br><u>Waukesha</u>  |                           | Date of Abandonment<br><u>03-19-96</u>                               |  |

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On  
(Date) 03-19-96

Monitoring Well  
 Water Well  
 Drillhole  
 Borehole

Construction Report Available?  
 Yes  No

Construction Type:  
 Drilled  
 Driven (Sandpoint)  
 Dug  
 Other (Specify) Board

Formation Type:  
 Unconsolidated Formation  Bedrock

Total ~~Well~~ Depth (ft.) 18' Casing Diameter (ins.) \_\_\_\_\_  
(From ground surface)

Casing Depth (ft.) \_\_\_\_\_

Was Well Annular Space Grouted?  Yes  No  Unknown  
If Yes, To What Depth? \_\_\_\_\_ Feet

(4) Depth to Water (Feet) NA

Pump & Piping Removed?  Yes  No  Not Applicable  
Liner(s) Removed?  Yes  No  Not Applicable  
Screen Removed?  Yes  No  Not Applicable  
Casing Left in Place?  Yes  No  
If No, Explain \_\_\_\_\_

Was Casing Cut Off Below Surface?  Yes  No  
Did Sealing Material Rise to Surface?  Yes  No  
Did Material Settle After 24 Hours?  Yes  No  
If Yes, Was Hole Retopped?  Yes  No

(5) Required Method of Placing Sealing Material  
 Conductor Pipe-Gravity  Conductor Pipe-Pumped  
 Dump Bailer  Other (Explain) \_\_\_\_\_

(6) Sealing Materials For monitoring wells and monitoring well boreholes only  
 Neat Cement Grout  
 Sand-Cement (Concrete) Grout  
 Concrete  Bentonite Pellets  
 Clay-Sand Slurry  Granular Bentonite  
 Bentonite-Sand Slurry  
 Chipped Bentonite

| 7) Sealing Material Used | From (Ft.)     | To (Ft.)   | No. Yards, Sacks, Sealant, or Volume | Mix Ratio or Mud Weight |
|--------------------------|----------------|------------|--------------------------------------|-------------------------|
| <u>Chipped Bentonite</u> | <u>Surface</u> | <u>18'</u> |                                      |                         |
|                          |                |            |                                      |                         |
|                          |                |            |                                      |                         |

8) Comments:

9) Name of Person or Firm Doing Sealing Work  
Midwest Engineering Services

Signature of Person Doing Work [Signature] Date Signed 03-19-96

Street or Route Telephone Number ( )

City, State, Zip Code

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected \_\_\_\_\_ District/County \_\_\_\_\_

Reviewer/Inspector \_\_\_\_\_

Follow-up Necessary \_\_\_\_\_



All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

|  |                           |   |  |
|--|---------------------------|---|--|
| <b>(1) GENERAL INFORMATION</b>   |                           | <b>(2) FACILITY NAME</b>  |  |
| Well/Drillhole/Borehole Location<br><u>36</u>  | County<br><u>Waushara</u> | Original Well Owner (If Known)<br><u>Johnson Sand and Gravel</u>  |  |
| NW 1/4 of NE 1/4 of Sec. <u>25</u> ; T. <u>7</u> N.; R. <u>19</u> W.   |                           | Present Well Owner  |  |
| (If applicable) Gov't Lot _____ Grid Number _____  |                           | Street or Route<br><u>Johnson Road</u>                            |  |
| Grid Location<br>ft. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W. |                           | City, State, Zip Code<br><u>Waushara WI</u>                       |  |
| Civil Town Name<br><u>Pewaukee</u>   |                           | Factory Well No. and/or Name (If Applicable)   WI Unique Well No. |  |
| Street Address of Well<br><u>NB W22570 Johnson Rd</u>  |                           | Reason For Abandonment<br><u>Soil Baring</u>                      |  |
| City, Village<br><u>Waushara</u>   |                           | Date of Abandonment<br><u>03-20-96</u>                            |  |

|   |   |   |  |
|---|---|---|--|
| <b>WELL DRILLHOLE/BOREHOLE INFORMATION</b>  |   | <b>(4) Depth to Water (Feet)</b> <u>NA</u>  |  |
| (3) Original Well/Drillhole/Borehole Construction Completed On (Date)<br><u>03-20-96</u>  |   | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If No, Explain _____ |  |
| <input type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Drillhole<br><input checked="" type="checkbox"/> Borehole                               | Construction Report Available?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No   |  |
| Construction Type:<br><input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dig<br><input checked="" type="checkbox"/> Other (Specify) <u>Bored</u> |   | <b>(5) Required Method of Placing Sealing Material</b><br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Dump Bailer <input type="checkbox"/> Other (Explain) _____   |  |
| Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock  |   | <b>(6) Sealing Materials</b> For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout<br><input type="checkbox"/> Sand-Cement (Concrete) Grout<br><input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite Pellets<br><input type="checkbox"/> Clay-Sand Slurry <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Bentonite-Sand Slurry<br><input type="checkbox"/> Chipped Bentonite        |  |
| Total Well Depth (ft.) <u>28.5'</u> Casing Diameter (ins.) _____<br>(From ground surface)<br><br>Casing Depth (ft.) _____   |   |   |  |
| Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet                                      |   |   |  |

| 7) Sealing Material Used | From (Ft.)     | To (Ft.)     | No. Yards, Sacks, Sealant, or Volume | Mix Ratio or Mud Weight |
|--------------------------|----------------|--------------|--------------------------------------|-------------------------|
| <u>Chipped Bentonite</u> | <u>Surface</u> | <u>28.5'</u> |                                      |                         |
|                          |                |              |                                      |                         |
|                          |                |              |                                      |                         |

8) Comments: \_\_\_\_\_

|  |                                |
|--|--------------------------------|
| Name of Person or Firm Doing Sealing Work<br><u>Midwest Engineering Services</u> |                                |
| Signature of Person Doing Work   | Date Signed<br><u>03-20-96</u> |
| Street or Route  | Telephone Number<br>( )        |
| City, State, Zip Code  |                                |

|  |                 |
|--|-----------------|
| <b>(10) FOR DNR OR COUNTY USE ONLY</b> |                 |
| Date Received/Inspected                | District/County |
| Reviewer/Inspector                     |                 |
| Follow-up Necessary                    |                 |

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

|   |                           |  |  |
|---|---------------------------|--|--|
| (1) GENERAL INFORMATION   |                           | (2) FACILITY NAME  |  |
| Well/Drillhole/Borehole Location<br><u>87</u>   | County<br><u>Waukesha</u> | Original Well Owner (If Known)<br><u>Johnson Sand and Gravel</u>   |  |
| NW 1/4 of NE 1/4 of Sec. <u>25</u> ; T. <u>7</u> N.; R. <u>19</u> W.  |                           | Present Well Owner   |  |
| (If applicable) Gov't Lot _____ Grid Number _____   |                           | Street or Route<br><u>Johnson Road</u>                             |  |
| Grid Location<br>N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W. <input checked="" type="checkbox"/> |                           | City, State, Zip Code<br><u>Waukesha WI</u>                        |  |
| City/Town Name<br><u>Pewaukee</u>   |                           | Facility Well No. and/or Name (If Applicable)   WI Unique Well No. |  |
| Street Address of Well<br><u>NE W22570 Johnson Rd</u>   |                           | Reason for Abandonment<br><u>Soil Baring</u>                       |  |
| City, Village<br><u>Waukesha</u>  |                           | Date of Abandonment<br><u>03-20-96</u>                             |  |

|   |  |   |  |
|---|--|---|--|
| (3) WELL/DRILLHOLE/BOREHOLE INFORMATION   |  | (4) Depth to Water (Feet) <u>NA</u>   |  |
| Original Well/Drillhole/Borehole Construction Completed On (Date)<br><u>03-20-96</u>  |  | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If No, Explain _____ |  |
| <input type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Drillhole<br><input checked="" type="checkbox"/> Borehole                               | Construction Report Available?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No   |  |
| Construction Type:<br><input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input checked="" type="checkbox"/> Other (Specify) <u>Bored</u> | Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock   | (5) Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Dump Boiler <input type="checkbox"/> Other (Explain) _____  |  |
| Total <del>Well</del> Depth (ft.) <u>28'</u> Casing Diameter (ins.) _____<br>(From ground surface)<br><br>Casing Depth (ft.) _____  | Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet | (6) Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Bentonite Pellets<br><input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Concrete<br><input type="checkbox"/> Clay-Sand Slurry<br><input type="checkbox"/> Bentonite-Sand Slurry<br><input type="checkbox"/> Chipped Bentonite               |  |

| 7) Sealing Material Used | From (Ft.)     | To (Ft.)   | No. Yards,              | Mix Ratio or Mud Weight |
|--------------------------|----------------|------------|-------------------------|-------------------------|
|                          |                |            | Sacks Sealant or Volume |                         |
| <u>Chipped Bentonite</u> | <u>Surface</u> | <u>28'</u> |                         |                         |
|                          |                |            |                         |                         |
|                          |                |            |                         |                         |

8) Comments:

9) Name of Person or Firm Doing Sealing Work  
Midwest Engineering Services

Signature of Person Doing Work [Signature] Date Signed 03-20-96

Street or Route Telephone Number ( )

City, State, Zip Code

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected \_\_\_\_\_ District/County \_\_\_\_\_

Reviewer/Inspector \_\_\_\_\_

Follow-up Necessary \_\_\_\_\_

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

|  |                           |  |  |
|--|---------------------------|--|--|
| <b>(1) GENERAL INFORMATION</b>   |                           | <b>(2) FACILITY NAME</b>   |  |
| Well/Drillhole/Borehole Location<br><u>38</u>  | County<br><u>Waukesha</u> | Original Well Owner (If Known)<br><u>Johnson Sand and Gravel</u>   |  |
| NW 1/4 of NE 1/4 of Sec. <u>25</u> ; T. <u>7</u> N.; R. <u>19</u> W.   |                           | Present Well Owner   |  |
| (If applicable) Gov't Lot _____ Grid Number _____  |                           | Street or Route<br><u>Johnson Road</u>                             |  |
| Grid Location<br>ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W. |                           | City, State, Zip Code<br><u>Waukesha WI</u>                        |  |
| City/Town Name<br><u>Pewaukee</u>  |                           | Facility Well No. and/or Name (If Applicable)   WI Unique Well No. |  |
| Street Address of Well<br><u>NE W22570 Johnson Rd</u>  |                           | Reason for Abandonment<br><u>soil boring</u>                       |  |
| City, Village<br><u>Waukesha</u>   |                           | Date of Abandonment<br><u>03-20-96</u>                             |  |

|   |   |  |  |
|---|---|--|--|
| <b>WELL DRILLHOLE/BOREHOLE INFORMATION</b>  |   | <b>(4) Depth to Water (Feet)</b> <u>NA</u>   |  |
| (3) Original Well/Drillhole/Borehole Construction Completed On (Date)<br><u>03-20-96</u>  |   | Pump & Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable<br>Casing Left in Place? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If No, Explain: _____ |  |
| <input type="checkbox"/> Monitoring Well<br><input type="checkbox"/> Water Well<br><input type="checkbox"/> Drillhole<br><input checked="" type="checkbox"/> Borehole                               | Construction Report Available?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Sealing Material Rise to Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No  |  |
| Construction Type:<br><input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug<br><input checked="" type="checkbox"/> Other (Specify) <u>Bored</u> | (5) Required Method of Placing Sealing Material<br><input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped<br><input type="checkbox"/> Dump Bailer <input type="checkbox"/> Other (Explain) _____  |  |  |
| Formation Type:<br><input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock  | (6) Sealing Materials For monitoring wells and monitoring well boreholes only<br><input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Bentonite Pellets<br><input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Granular Bentonite<br><input type="checkbox"/> Concrete<br><input type="checkbox"/> Clay-Sand Slurry<br><input type="checkbox"/> Bentonite-Sand Slurry<br><input type="checkbox"/> Chipped Bentonite |  |  |
| Total Depth (ft.) <u>26'</u> Casing Diameter (ins.) _____<br>(From ground surface)<br><br>Casing Depth (ft.) _____  | Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>If Yes, To What Depth? _____ Feet  |  |  |

| 7) Sealing Material Used | From (Ft.)     | To (Ft.)   | No. Yards, Sacks Sealant or Volume | Mix Ratio or Mud Weight |
|--------------------------|----------------|------------|------------------------------------|-------------------------|
| <u>Chipped Bentonite</u> | <u>Surface</u> | <u>26'</u> |                                    |                         |
|                          |                |            |                                    |                         |
|                          |                |            |                                    |                         |

8) Comments: \_\_\_\_\_

|   |                                |
|---|--------------------------------|
| 9) Name of Person or Firm Doing Sealing Work<br><u>Midwest Engineering Services</u> |                                |
| Signature of Person Doing Work  | Date Signed<br><u>03-20-96</u> |
| Street or Route   | Telephone Number<br>( )        |
| City, State, Zip Code   |                                |

| (10) FOR DNR OR COUNTY USE ONLY |                 |
|---------------------------------|-----------------|
| Date Received/Inspected         | District/County |
| Reviewer/Inspector              |                 |
| Follow-up Necessary             |                 |

**APPENDIX E**

**WELL CONSTRUCTION  
AND DEVELOPMENT FORMS**

|   |   |  |
|---|---|--|
| Facility/Project Name<br><u>Former Johnson Sand and Gravel</u>  | Grid Location<br>ft. <input type="checkbox"/> N. <input type="checkbox"/> S.<br>ft. <input type="checkbox"/> E. <input type="checkbox"/> W.   | Well Name<br><u>M1</u>   |
| Facility License, Permit or Monitoring Number   |   | Wis. Unique well Number: _____ DNR Well Number: _____                          |
| Type of Well<br>Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location<br><u>NW 1/4 of NE 1/4 of Section 25</u>   | Date Well Installed<br><u>03/17/76</u><br>m m a a y y                          |
| Distance Well Is From Waste/Source Boundary<br>ft. <u>7</u>   | Location of Well Relative to Waste/Source<br><u>T 7 N. R 19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W  | Well Installed By: (Person's Name and Firm)<br><u>Midwest Geology Services</u> |
| Is well A Point of Enforcement Site Application?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       | Location of Well Relative to Waste/Source<br><input type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient<br><input type="checkbox"/> Downgradient <input checked="" type="checkbox"/> Not Known |  |

|   |   |
|---|---|
| A. Protective pipe, top elevation<br>ft. MSL _____  | 1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| B. Well casing, top elevation<br>ft. MSL _____  | 2. Protective cover pipe:<br>a. Inside diameter: <u>8.0</u> in.<br>b. Length: <u>1.0</u> ft.<br>c. Material: <u>Steel</u> <input checked="" type="checkbox"/> 04<br>Other <input type="checkbox"/> _____  |
| C. Land surface elevation<br>ft. MSL _____  | d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>If yes, describe: _____   |
| D. Surface seal, bottom<br>ft. MSL or ft. _____   | 3. Surface seal: <u>Bentonite</u> <input type="checkbox"/> 30<br><u>Concrete</u> <input checked="" type="checkbox"/> 01<br>Other <input type="checkbox"/> _____   |
| 12. USCS classification of soil near screens:<br><input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input checked="" type="checkbox"/> SW <input type="checkbox"/> SP<br><input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH<br><input type="checkbox"/> Bedrock | 4. Material between well casing and protective pipe:<br><u>Bentonite</u> <input type="checkbox"/> 30<br><u>Annular space seal</u> <input type="checkbox"/> _____<br>Other <input type="checkbox"/> _____  |
| 13. Sieve analysis attached? <input type="checkbox"/> Yes <input type="checkbox"/> No   | 5. Annular space seal: <u>Granular Bentonite</u> <input checked="" type="checkbox"/> 33<br><u>Lib/gal mud weight ... Bentonite-sand slurry</u> <input type="checkbox"/> 35<br><u>Lib/gal mud weight ... Bentonite slurry</u> <input type="checkbox"/> 31<br><u>% Bentonite ... Bentonite-cement grout</u> <input type="checkbox"/> 50<br>_____ Ft. <sup>3</sup> volume added for any of the above |
| 14. Drilling method used: Rotary <input type="checkbox"/> 50<br>Hollow Stem Auger <input checked="" type="checkbox"/> 41<br>Other <input type="checkbox"/> _____  | How installed: <u>Trundle</u> <input type="checkbox"/> 01<br><u>Trundle pumped</u> <input type="checkbox"/> 02<br><u>Gravity</u> <input checked="" type="checkbox"/> 08   |
| 15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01<br>Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99  | 6. Bentonite seal: <u>Bentonite granules</u> <input checked="" type="checkbox"/> 33<br><input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32<br>Other <input type="checkbox"/> _____   |
| 16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Describe: _____  | 7. Fine sand material: Manufacturer, product name and mesh size<br><u>Red Flint #55</u><br>Volume added _____ ft. <sup>3</sup>  |
| 17. Source of water (attach analysis): _____  | 8. Filter pack material: Manufacturer, product name and mesh size<br><u>Red Flint #3</u><br>Volume added _____ ft. <sup>3</sup>   |
| E. Bentonite seal, top<br>ft. MSL or <u>1.0</u> ft.   | 9. Well casing: <u>Flush threaded PVC schedule 40</u> <input checked="" type="checkbox"/> 23<br><u>Flush threaded PVC schedule 30</u> <input type="checkbox"/> 24<br>Other <input type="checkbox"/> _____   |
| F. Fine sand, top<br>ft. MSL or <u>19.0</u> ft.   | 10. Screen material: <u>PVC</u><br>Screen type: <u>Factory cut</u> <input checked="" type="checkbox"/> 11<br><u>Continuous slot</u> <input type="checkbox"/> 01<br>Other <input type="checkbox"/> _____   |
| G. Filter pack, top<br>ft. MSL or <u>21.0</u> ft.   | Manufacturer: <u>TIMCO</u><br>Slot size: <u>0.010</u> in.<br>Slotted length: <u>10.0</u> ft.  |
| H. Well screen, top<br>ft. MSL or <u>23.0</u> ft.   | 11. Backfill material (below filter pack): <u>None</u> <input checked="" type="checkbox"/><br>Other <input type="checkbox"/> _____  |
| I. Well screen, bottom<br>ft. MSL or <u>33.0</u> ft.  |   |
| J. Filter pack, bottom<br>ft. MSL or <u>37.0</u> ft.  |   |
| K. Borehole, bottom<br>ft. MSL or <u>37.0</u> ft.   |   |
| Borehole, diameter <u>8.0</u> in.   |   |
| L. O.D. well casing <u>2.25</u> in.   |   |
| M. I.D. well casing <u>2.00</u> in.   |   |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [Signature] Firm: MCI

Use complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code, in accordance with 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.  
NOTE: Shaded areas are for DNR use only. See instructions for more information.

|  |   |
|--|---|
| Facility/Project Name<br><i>Former Deasa Sand and Gravel</i> | Well Name<br><i>M1</i>                                |
| License, Permit or Monitoring Number<br>-----                | Wis. Unique Well Number: _____ DNR Well Number: _____ |

1. Can this well be purged dry?  Yes  No

2. Well development method

|                                      |                                     |                          |
|--------------------------------------|-------------------------------------|--------------------------|
| surged with bailer and bailed        | <input type="checkbox"/>            | 4 1                      |
| surged with bailer and pumped        | <input checked="" type="checkbox"/> | 6 1                      |
| surged with block and bailed         | <input type="checkbox"/>            | 4 2                      |
| surged with block and pumped         | <input type="checkbox"/>            | 6 2                      |
| surged with block, bailed and pumped | <input type="checkbox"/>            | 7 0                      |
| compressed air                       | <input type="checkbox"/>            | 2 0                      |
| bailed only                          | <input type="checkbox"/>            | 1 0                      |
| pumped only                          | <input type="checkbox"/>            | 5 1                      |
| pumped slowly                        | <input type="checkbox"/>            | 5 0                      |
| Other _____                          | <input type="checkbox"/>            | <input type="checkbox"/> |

3. Time spent developing well 30 min.

4. Depth of well (from top of well casing) 33.0 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.

7. Volume of water removed from well 30.0 gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added \_\_\_\_\_

10. Analysis performed on water added?  Yes  No  
(If yes, attach results) \_\_\_\_\_

|   | Before Development   | After Development  |
|---|--|--|
| 11. Depth to Water (from top of well casing)                              | <u>9.75</u> ft.<br><u>25.12</u>  | <u>9.75</u> ft.<br><u>25.96</u>  |
| Date  | <u>03/20/96</u><br>m m d d y y   | <u>03/20/96</u><br>m m d d y y   |
| Time  | <u>9:15</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.   | <u>9:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.   |
| 12. Sediment in well bottom   | <u>1.0</u> inches  | _____ inches   |
| 13. Water clarity   | Clear <input type="checkbox"/> 10<br>Turbid <input checked="" type="checkbox"/> 15<br>(Describe) <u>strong discoloration</u><br><u>shallow</u> | Clear <input type="checkbox"/> 20<br>Turbid <input checked="" type="checkbox"/> 25<br>(Describe) <u>strong discoloration</u><br><u>shallow</u> |
| Fill in if drilling fluids were used and well is at solid waste facility: |  |  |
| 14. Total suspended solids  | _____ mg/l   | _____ mg/l   |
| 15. COD   | _____ mg/l   | _____ mg/l   |

Additional comments on development:

Well developed by: Person's Name and Firm

Name: Chris Hease

Firm: MEI

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: [Signature]

Firm: MEI

NOTE: Shaded areas are for DNR use only. See instructions for more information.

|  |  |   |
|--|--|---|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>   | Local Grid Location of Well<br>_____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E.<br>_____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.                  | Well Name<br><b>MW-2</b>  |
| Facility License, Permit or Monitoring Number  | Grid Origin Location<br>Lat. _____ " Long. _____ " or<br>St. Plane _____ ft. N, _____ ft. E.   | Wis. Unique Well Number: _____ DNR Well Number: _____   |
| Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location of Waste/Source<br>_____ 1/4 of _____ 1/4 of Sec. _____ T. _____ N, R. _____ <input type="checkbox"/> E.<br><input type="checkbox"/> W.   | Date Well Installed<br><b>08/07/96</b>  |
| Distance Well Is From Waste/Source Boundary<br>_____ ft.   | Location of Well Relative to Waste/Source<br>u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient<br>d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known | Well Installed By: (Person's Name and Firm)<br><b>Paul Dickinson</b><br><b>Boart Longyear</b> |
| Is Well A Point of Enforcement Std. Application?<br><input type="checkbox"/> Yes <input type="checkbox"/> No               |  |   |

|   |   |
|---|---|
| A. Protective pipe, top elevation _____ ft. MSL         | 1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| B. Well casing, top elevation <u>Flush</u> ft. MSL      | 2. Protective cover pipe:<br>a. Inside diameter: <u>8.0</u> in.<br>b. Length: <u>1.0</u> ft.<br>c. Material: Steel <input checked="" type="checkbox"/> 04<br>Other <input type="checkbox"/> |
| C. Land surface elevation _____ ft. MSL                 | d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If yes, describe: _____  |
| D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft. | 3. Surface seal: Bentonite <input type="checkbox"/> 30<br>Concrete <input checked="" type="checkbox"/> 01<br>Other <input type="checkbox"/>   |

12. USC classification of soil near screen:  
GP  GM  GC  GW  SW  SP   
SM  SC  ML  MH  CL  CH   
Bedrock

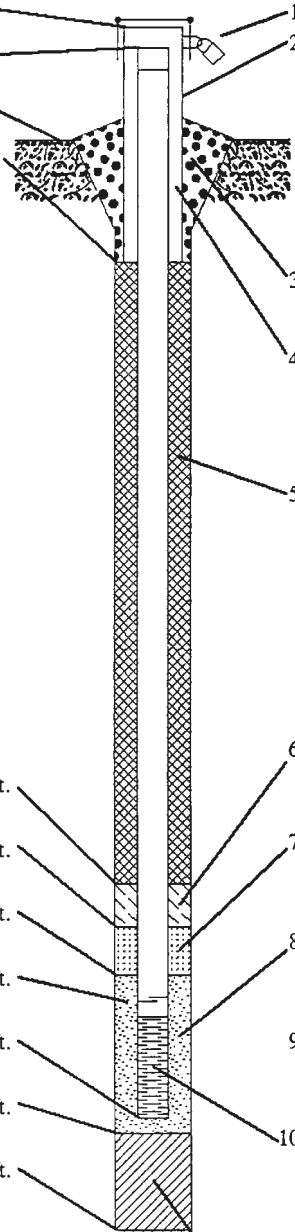
13. Sieve analysis attached?  Yes  No

14. Drilling method used: Rotary  50  
Hollow Stem Auger  41  
Other

15. Drilling fluid used: Water  02 Air  01  
Drilling Mud  03 None  99

16. Drilling additives used?  Yes  No  
Describe \_\_\_\_\_

17. Source of water (attach analysis):  
\_\_\_\_\_



|   |   |
|---|---|
| E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.  | 6. Bentonite seal: a. Bentonite granules <input checked="" type="checkbox"/> 33<br>b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32<br>c. _____ Other <input type="checkbox"/> |
| F. Fine sand, top _____ ft. MSL or <u>19.0</u> ft.      | 7. Fine sand material: Manufacturer, product name and mesh size<br>a. <u>#7 Badger</u><br>b. Volume added _____ ft <sup>3</sup>   |
| G. Filter pack, top _____ ft. MSL or <u>21.0</u> ft.    | 8. Filter pack material: Manufacturer, product name and mesh size<br>a. <u>#30 American Material</u><br>b. Volume added _____ ft <sup>3</sup>   |
| H. Screen joint, top _____ ft. MSL or <u>23.0</u> ft.   | 9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23<br>Flush threaded PVC schedule 80 <input type="checkbox"/> 24<br>Other <input type="checkbox"/>   |
| I. Well bottom _____ ft. MSL or <u>23.0</u> ft.         | 10. Screen material: <u>PVC</u><br>a. Screen Type: Factory cut <input checked="" type="checkbox"/> 11<br>Continuous slot <input type="checkbox"/> 01<br>Other <input type="checkbox"/>  |
| J. Filter pack, bottom _____ ft. MSL or <u>25.0</u> ft. | b. Manufacturer: <u>Boart Longyear</u><br>c. Slot size: <u>0.010</u> in.<br>d. Slotted length: <u>15.0</u> ft.  |
| K. Borehole, bottom _____ ft. MSL or <u>38.0</u> ft.    | 11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 14<br>Other <input type="checkbox"/>  |
| L. Borehole, diameter <u>10.0</u> in.                   |   |
| M. O.D. well casing <u>2.37</u> in.                     |   |
| N. I.D. well casing <u>2.06</u> in.                     |   |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                 |   |  |
|-----------------|---|--|
| Signature _____ | Firm <b>Boart Longyear</b><br>101 Alderson Street | Tel: (715) 359-7090<br>Fax: (715) 355-5715 |
|-----------------|---|--|

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

|  |   |
|--|---|
| Facility/Project Name<br><i>Former Johnson Sand and Gravel</i> | Well Name<br><i>M2</i>                                |
| License, Permit or Monitoring Number<br>_____                  | Wis. Unique Well Number: _____ DNR Well Number: _____ |

1. Can this well be purged dry?  Yes  No

2. Well development method

|                                      |                                     |                          |
|--------------------------------------|-------------------------------------|--------------------------|
| surged with bailer and bailed        | <input type="checkbox"/>            | 4 1                      |
| surged with bailer and pumped        | <input checked="" type="checkbox"/> | 6 1                      |
| surged with block and bailed         | <input type="checkbox"/>            | 4 2                      |
| surged with block and pumped         | <input type="checkbox"/>            | 6 2                      |
| surged with block, bailed and pumped | <input type="checkbox"/>            | 7 0                      |
| compressed air                       | <input type="checkbox"/>            | 2 0                      |
| bailed only                          | <input type="checkbox"/>            | 1 0                      |
| pumped only                          | <input type="checkbox"/>            | 5 1                      |
| pumped slowly                        | <input type="checkbox"/>            | 5 0                      |
| Other _____                          | <input type="checkbox"/>            | <input type="checkbox"/> |

3. Time spent developing well 30 min.

4. Depth of well (from top of well casing) 38.0 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.

7. Volume of water removed from well 30.9 gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added \_\_\_\_\_

10. Analysis performed on water added?  Yes  No  
(If yes, attach results) \_\_\_\_\_

|   | Before Development   | After Development  |
|---|--|--|
| 11. Depth to Water (from top of well casing)                              | <u>24.12</u> ft.   | <u>25.61</u> ft.   |
| Date  | <u>08, 07, 96</u><br><small>m m d d y y</small>  | <u>08, 07, 96</u><br><small>m m d d y y</small>  |
| Time  | <u>1:15</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.                     | <u>1:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.                     |
| 12. Sediment in well bottom   | <u>7.0</u> inches  | _____ inches   |
| 13. Water clarity   | Clear <input type="checkbox"/> 10<br>Turbid <input checked="" type="checkbox"/> 15<br>(Describe) _____ | Clear <input checked="" type="checkbox"/> 10<br>Turbid <input type="checkbox"/> 25<br>(Describe) _____ |
| Fill in if drilling fluids were used and well is at solid waste facility: |  |  |
| 14. Total suspended solids  | _____ mg/l   | _____ mg/l   |
| 15. COD   | _____ mg/l   | _____ mg/l   |

Additional comments on development:

Well developed by: Person's Name and Firm

Name: Brian Durkee

Firm: Moraine Environmental, Inc.

I hereby certify that the above information is true and correct to the best of my knowledge.

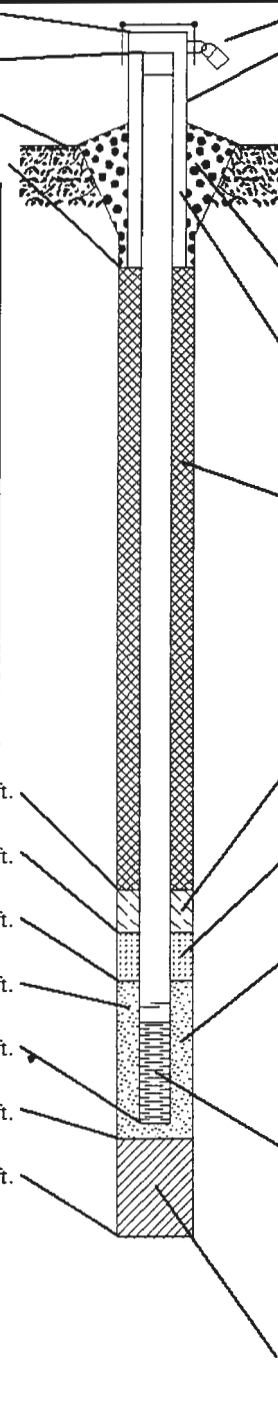
Signature: *Brian Durkee*

Firm: MET

NOTE: Shaded areas are for DNR use only. See instructions for more information.



|   |  |   |
|---|--|---|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>  | Local Grid Location of Well<br>_____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E.<br>_____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.                  | Well Name<br><b>MW-3</b>  |
| Facility License, Permit or Monitoring Number   | Grid Origin Location<br>Lat. _____ " Long. _____ " or<br>St. Plane _____ ft. N, _____ ft. E.   | Wis. Unique Well Number: _____ DNR Well Number: _____   |
| Type of Well<br>Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location of Waste/Source<br>_____ 1/4 of _____ 1/4 of Sec. _____ T. _____ N. R. _____ <input type="checkbox"/> E.<br>_____ <input type="checkbox"/> W.   | Date Well Installed<br><b>08/07/96</b>  |
| Distance Well Is From Waste/Source Boundary<br>_____ ft.  | Location of Well Relative to Waste/Source<br>u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient<br>d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known | Well Installed By: (Person's Name and Firm)<br><b>Paul Dickinson</b><br><b>Boart Longyear</b> |

|   |   |
|---|---|
| <p>A. Protective pipe, top elevation _____ ft. MSL</p> <p>B. Well casing, top elevation <u>Flush</u> ft. MSL</p> <p>C. Land surface elevation _____ ft. MSL</p> <p>D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>12. USC classification of soil near screen:<br/>             GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/><br/>             SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/><br/>             Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 5 0<br/>             Hollow Stem Auger <input checked="" type="checkbox"/> 4 1<br/>             _____ Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1<br/>             Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No<br/>             Describe _____</p> <p>17. Source of water (attach analysis):<br/>             _____</p> </div> <p>E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.</p> <p>F. Fine sand, top _____ ft. MSL or <u>16.0</u> ft.</p> <p>G. Filter pack, top _____ ft. MSL or <u>18.0</u> ft.</p> <p>H. Screen joint, top _____ ft. MSL or <u>20.0</u> ft.</p> <p>I. Well bottom _____ ft. MSL or <u>30.0</u> ft.</p> <p>J. Filter pack, bottom _____ ft. MSL or <u>31.0</u> ft.</p> <p>K. Borehole, bottom _____ ft. MSL or <u>31.0</u> ft.</p> <p>L. Borehole, diameter <u>10.0</u> in.</p> <p>M. O.D. well casing <u>2.37</u> in.</p> <p>N. I.D. well casing <u>2.06</u> in.</p> |  <p>1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Protective cover pipe:<br/>             a. Inside diameter: <u>8.0</u> in.<br/>             b. Length: <u>1.0</u> ft.<br/>             c. Material: Steel <input checked="" type="checkbox"/> 0 4<br/>             Other <input type="checkbox"/><br/>             d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br/>             If yes, describe: _____</p> <p>3. Surface seal: Bentonite <input type="checkbox"/> 3 0<br/>             Concrete <input checked="" type="checkbox"/> 0 1<br/>             Other <input type="checkbox"/></p> <p>4. Material between well casing and protective pipe:<br/>             Bentonite <input type="checkbox"/> 3 0<br/>             Annular space seal <input type="checkbox"/><br/>             Other <input type="checkbox"/></p> <p>5. Annular space seal:<br/>             a. Granular Bentonite <input checked="" type="checkbox"/> 3 3<br/>             b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 3 5<br/>             c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 3 1<br/>             d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 5 0<br/>             e. _____ Ft<sup>3</sup> volume added for any of the above<br/>             f. How installed: Tremie <input type="checkbox"/> 0 1<br/>             Tremie pumped <input type="checkbox"/> 0 2<br/>             Gravity <input checked="" type="checkbox"/> 0 8</p> <p>6. Bentonite seal:<br/>             a. Bentonite granules <input checked="" type="checkbox"/> 3 3<br/>             b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2<br/>             c. _____ Other <input type="checkbox"/></p> <p>7. Fine sand material: Manufacturer, product name and mesh size<br/>             a. <u>#7 Badger</u><br/>             b. Volume added _____ ft<sup>3</sup></p> <p>8. Filter pack material: Manufacturer, product name and mesh size<br/>             a. <u>#30 American Material</u><br/>             b. Volume added _____ ft<sup>3</sup></p> <p>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3<br/>             Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4<br/>             Other <input type="checkbox"/></p> <p>10. Screen material: <u>PVC</u><br/>             a. Screen Type: Factory cut <input checked="" type="checkbox"/> 1 1<br/>             Continuous slot <input type="checkbox"/> 0 1<br/>             Other <input type="checkbox"/><br/>             b. Manufacturer: <u>Boart Longyear</u><br/>             c. Slot size: <u>0.010</u> in.<br/>             d. Slotted length: <u>10.0</u> ft.</p> <p>11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4<br/>             Other <input type="checkbox"/></p> |
|---|---|

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                                 |   |  |
|---------------------------------|---|--|
| Signature <u>Boart Longyear</u> | Firm <b>Boart Longyear</b><br>101 Alderson Street | Tel: (715) 359-7090<br>Fax: (715) 355-5715 |
|---------------------------------|---|--|

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

|  |   |
|--|---|
| Facility/Project Name<br><i>Former Johnson Sand and Gravel</i> | Well Name<br><i>M3</i>                                |
| License, Permit or Monitoring Number<br>_____                  | Wis. Unique Well Number: _____ DNR Well Number: _____ |

1. Can this well be purged dry?  Yes  No

2. Well development method

|                                      |                                     |                          |
|--------------------------------------|-------------------------------------|--------------------------|
| surged with bailer and bailed        | <input type="checkbox"/>            | 4 1                      |
| surged with bailer and pumped        | <input checked="" type="checkbox"/> | 6 1                      |
| surged with block and bailed         | <input type="checkbox"/>            | 4 2                      |
| surged with block and pumped         | <input type="checkbox"/>            | 6 2                      |
| surged with block, bailed and pumped | <input type="checkbox"/>            | 7 0                      |
| compressed air                       | <input type="checkbox"/>            | 2 0                      |
| bailed only                          | <input type="checkbox"/>            | 1 0                      |
| pumped only                          | <input type="checkbox"/>            | 5 1                      |
| pumped slowly                        | <input type="checkbox"/>            | 5 0                      |
| Other _____                          | <input type="checkbox"/>            | <input type="checkbox"/> |

3. Time spent developing well 30 min.

4. Depth of well (from top of well casing) 30.0 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.

7. Volume of water removed from well 30.0 gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added \_\_\_\_\_

10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

|   | Before Development   | After Development  |
|---|--|--|
| 11. Depth to Water (from top of well casing)                              | <u>27.04</u> ft.   | <u>27.73</u> ft.   |
| Date  | <u>08/07/96</u><br>m m d d y y   | <u>08/07/96</u><br>m m d d y y   |
| Time  | <u>1:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m. | <u>2:15</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m. |
| 12. Sediment in well bottom   | _____ inches   | _____ inches   |
| 13. Water clarity   | Clear <input type="checkbox"/> 10  | Clear <input checked="" type="checkbox"/> 20                                       |
|   | Turbid <input checked="" type="checkbox"/> 15<br>(Describe)                        | Turbid <input type="checkbox"/> 25<br>(Describe)                                   |
| Fill in if drilling fluids were used and well is at solid waste facility: |  |  |
| 14. Total suspended solids  | _____ mg/l   | _____ mg/l   |
| 15. COD   | _____ mg/l   | _____ mg/l   |

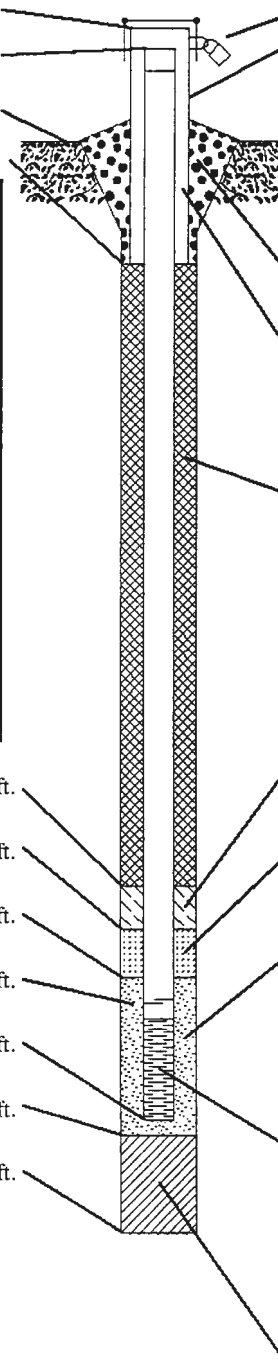
Additional comments on development:

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|  |   |
|--|---|
| Well developed by: Person's Name and Firm<br><br>Name: <u>Brian Durkee</u><br>Firm: <u>Moraine Environmental, Inc.</u> | I hereby certify that the above information is true and correct to the best of my knowledge.<br><br>Signature: <u><i>Brian Durkee</i></u><br>Firm: <u>Moraine</u> |
|--|---|

NOTE: Shaded areas are for DNR use only. See instructions for more information.

|  |  |   |
|--|--|---|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>   | Local Grid Location of Well<br>_____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E.<br>_____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.                  | Well Name<br><b>MW-4</b>  |
| Facility License, Permit or Monitoring Number  | Grid Origin Location<br>Lat. _____ " Long. _____ " or<br>St. Plane _____ ft. N, _____ ft. E.   | Wis. Unique Well Number: _____ DNR Well Number: _____   |
| Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location of Waste/Source<br>_____ 1/4 of _____ 1/4 of Sec. _____ T. _____ N. R. _____ <input type="checkbox"/> E.<br>_____ <input type="checkbox"/> W.   | Date Well Installed<br><b>08/08/96</b>  |
| Distance Well Is From Waste/Source Boundary<br>_____ ft.   | Location of Well Relative to Waste/Source<br>u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient<br>d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known | Well Installed By: (Person's Name and Firm)<br><b>Paul Dickinson</b><br><b>Boart Longyear</b> |
| Is Well A Point of Enforcement Std. Application?<br><input type="checkbox"/> Yes <input type="checkbox"/> No               |  |   |

|   |  |
|---|--|
| <p>A. Protective pipe, top elevation _____ ft. MSL</p> <p>B. Well casing, top elevation <u>Flush</u> ft. MSL</p> <p>C. Land surface elevation _____ ft. MSL</p> <p>D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>12. USC classification of soil near screen:<br/>             GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/><br/>             SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/><br/>             Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 5 0<br/>             Hollow Stem Auger <input checked="" type="checkbox"/> 4 1<br/>             _____ Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1<br/>             Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No<br/>             Describe _____</p> <p>17. Source of water (attach analysis):<br/>             _____</p> </div> <p>E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.</p> <p>F. Fine sand, top _____ ft. MSL or <u>16.0</u> ft.</p> <p>G. Filter pack, top _____ ft. MSL or <u>18.0</u> ft.</p> <p>H. Screen joint, top _____ ft. MSL or <u>20.0</u> ft.</p> <p>I. Well bottom _____ ft. MSL or <u>30.0</u> ft.</p> <p>J. Filter pack, bottom _____ ft. MSL or <u>31.0</u> ft.</p> <p>K. Borehole, bottom _____ ft. MSL or <u>31.0</u> ft.</p> <p>L. Borehole, diameter <u>10.0</u> in.</p> <p>M. O.D. well casing <u>2.37</u> in.</p> <p>N. I.D. well casing <u>2.06</u> in.</p> |  <p>1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Protective cover pipe:<br/>             a. Inside diameter: <u>8.0</u> in.<br/>             b. Length: <u>1.0</u> ft.<br/>             c. Material: Steel <input checked="" type="checkbox"/> 0 4<br/>             Other <input type="checkbox"/></p> <p>d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br/>             If yes, describe: _____</p> <p>3. Surface seal: Bentonite <input type="checkbox"/> 3 0<br/>             Concrete <input checked="" type="checkbox"/> 0 1<br/>             Other <input type="checkbox"/></p> <p>4. Material between well casing and protective pipe:<br/>             Bentonite <input type="checkbox"/> 3 0<br/>             Annular space seal <input type="checkbox"/><br/>             Other <input type="checkbox"/></p> <p>5. Annular space seal:<br/>             a. Granular Bentonite <input checked="" type="checkbox"/> 3 3<br/>             b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 3 5<br/>             c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 3 1<br/>             d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 5 0<br/>             e. _____ Ft<sup>3</sup> volume added for any of the above<br/>             f. How installed: Tremie <input type="checkbox"/> 0 1<br/>             Tremie pumped <input type="checkbox"/> 0 2<br/>             Gravity <input checked="" type="checkbox"/> 0 8</p> <p>6. Bentonite seal:<br/>             a. Bentonite granules <input checked="" type="checkbox"/> 3 3<br/>             b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2<br/>             c. _____ Other <input type="checkbox"/></p> <p>7. Fine sand material: Manufacturer, product name and mesh size<br/>             a. <u>#7 Badger</u><br/>             b. Volume added _____ ft<sup>3</sup></p> <p>8. Filter pack material: Manufacturer, product name and mesh size<br/>             a. <u>#30 American Material</u><br/>             b. Volume added _____ ft<sup>3</sup></p> <p>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3<br/>             Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4<br/>             Other <input type="checkbox"/></p> <p>10. Screen material: <u>PVC</u><br/>             a. Screen Type: Factory cut <input checked="" type="checkbox"/> 1 1<br/>             Continuous slot <input type="checkbox"/> 0 1<br/>             Other <input type="checkbox"/><br/>             b. Manufacturer <u>Boart Longyear</u><br/>             c. Slot size: <u>0.010</u> in.<br/>             d. Slotted length: <u>10.0</u> ft.</p> <p>11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4<br/>             Other <input type="checkbox"/></p> |
|---|--|

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                              |   |  |
|------------------------------|---|--|
| Signature <u>[Signature]</u> | Firm <b>Boart Longyear</b><br>101 Alderson Street | Tel: (715) 359-7090<br>Fax: (715) 355-5715 |
|------------------------------|---|--|

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|  |  |
|--|--|
| Facility/Project Name<br><i>Former Johnson Sand and Gravel</i> | Well Name<br><i>M4</i>                                   |
| License, Permit or Monitoring Number<br>_____                  | Wis. Unique Well Number: _____<br>DNR Well Number: _____ |

1. Can this well be purged dry?       Yes     No
2. Well development method
- surged with bailer and bailed       4 1
  - surged with bailer and pumped       6 1
  - surged with block and bailed       4 2
  - surged with block and pumped       6 2
  - surged with block, bailed and pumped       7 0
  - compressed air       2 0
  - bailed only       1 0
  - pumped only       5 1
  - pumped slowly       5 0
  - Other \_\_\_\_\_
3. Time spent developing well      30 min.
4. Depth of well (from top of well casing)      300 ft.
5. Inside diameter of well      200 in.
6. Volume of water in filter pack and well casing      42 gal.
7. Volume of water removed from well      300 gal.
8. Volume of water added (if any)      \_\_\_\_\_ gal.
9. Source of water added \_\_\_\_\_
10. Analysis performed on water added?       Yes     No  
(If yes, attach results) \_\_\_\_\_

|   | Before Development   | After Development  |
|---|--|--|
| 11. Depth to Water (from top of well casing)                              | <u>26.94</u> ft  | <u>27.51</u> ft  |
| Date  | <u>08, 08, 96</u><br><small>m m d d y y</small>                                    | <u>08, 08, 96</u><br><small>m m d d y y</small>                                    |
| Time  | <u>2:15</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m. | <u>2:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m. |
| 12. Sediment in well bottom   | _____ inches   | _____ inches   |
| 13. Water clarity   | Clear <input type="checkbox"/> 10  | Clear <input checked="" type="checkbox"/> 10                                       |
|   | Turbid <input checked="" type="checkbox"/> 15<br><small>(Describe)</small>         | Turbid <input type="checkbox"/> 25<br><small>(Describe)</small>                    |
| Fill in if drilling fluids were used and well is at solid waste facility: |  |  |
| 14. Total suspended solids  | _____ mg/l   | _____ mg/l   |
| 15. COD   | _____ mg/l   | _____ mg/l   |

Additional comments on development

Well developed by: Person's Name and Firm

Name: Brian Durkee

Firm: Morane Environmental, Inc.

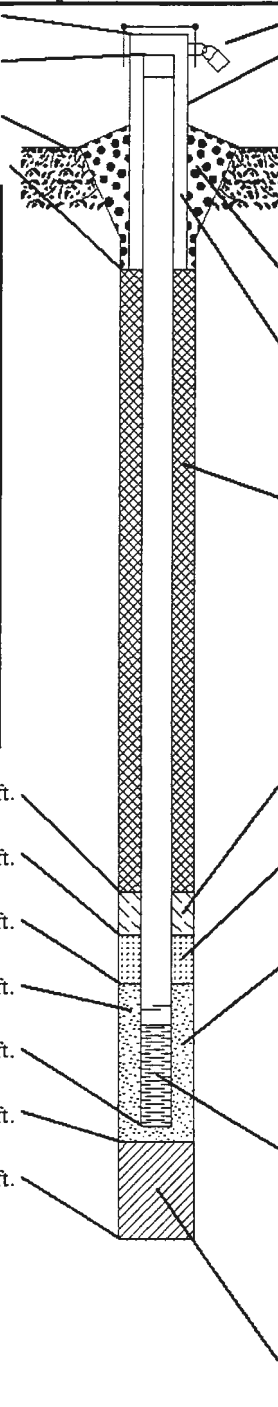
I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: *Brian Durkee*

Firm: Morane

NOTE: Shaded areas are for DNR use only. See instructions for more information.

|  |  |   |
|--|--|---|
| Facility/Project Name<br><b>Former Johnson Sand &amp; Gravel</b>   | Local Grid Location of Well<br>_____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E.<br>_____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.                  | Well Name<br><b>MW-5</b>  |
| Facility License, Permit or Monitoring Number  | Grid Origin Location<br>Lat. _____ " Long. _____ " or<br>St. Plane _____ ft. N, _____ ft. E.   | Wis. Unique Well Number: _____ DNR Well Number: _____   |
| Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location of Waste/Source<br>_____ 1/4 of _____ 1/4 of Sec. _____ T. _____ N, R. _____ <input type="checkbox"/> E.<br>_____ <input type="checkbox"/> W.   | Date Well Installed<br><b>08/08/96</b>  |
| Distance Well Is From Waste/Source Boundary<br>_____ ft.   | Location of Well Relative to Waste/Source<br>u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient<br>d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known | Well Installed By: (Person's Name and Firm)<br><b>Paul Dickinson</b><br><b>Boart Longyear</b> |
| Is Well A Point of Enforcement Std. Application?<br><input type="checkbox"/> Yes <input type="checkbox"/> No               |  |   |

|   |   |
|---|---|
| <p>A. Protective pipe, top elevation _____ ft. MSL</p> <p>B. Well casing, top elevation <u>Flush</u> ft. MSL</p> <p>C. Land surface elevation _____ ft. MSL</p> <p>D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>12. USC classification of soil near screen:<br/>             GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/><br/>             SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/><br/>             Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 5 0<br/>             Hollow Stem Auger <input checked="" type="checkbox"/> 4 1<br/>             _____ Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1<br/>             Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No<br/>             Describe _____</p> <p>17. Source of water (attach analysis):<br/>             _____</p> </div> <p>E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.</p> <p>F. Fine sand, top _____ ft. MSL or <u>16.0</u> ft.</p> <p>G. Filter pack, top _____ ft. MSL or <u>18.0</u> ft.</p> <p>H. Screen joint, top _____ ft. MSL or <u>20.0</u> ft.</p> <p>I. Well bottom _____ ft. MSL or <u>30.0</u> ft.</p> <p>J. Filter pack, bottom _____ ft. MSL or <u>31.0</u> ft.</p> <p>K. Borehole, bottom _____ ft. MSL or <u>31.0</u> ft.</p> <p>L. Borehole, diameter <u>10.0</u> in.</p> <p>M. O.D. well casing <u>2.37</u> in.</p> <p>N. I.D. well casing <u>2.06</u> in.</p> |  <p>1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Protective cover pipe:<br/>             a. Inside diameter: <u>8.0</u> in.<br/>             b. Length: <u>1.0</u> ft.<br/>             c. Material: Steel <input checked="" type="checkbox"/> 0 4<br/>             Other <input type="checkbox"/><br/>             d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br/>             If yes, describe: _____</p> <p>3. Surface seal:<br/>             Bentonite <input type="checkbox"/> 3 0<br/>             Concrete <input checked="" type="checkbox"/> 0 1<br/>             Other <input type="checkbox"/></p> <p>4. Material between well casing and protective pipe:<br/>             Bentonite <input type="checkbox"/> 3 0<br/>             Annular space seal <input type="checkbox"/><br/>             Other <input type="checkbox"/></p> <p>5. Annular space seal:<br/>             a. Granular Bentonite <input checked="" type="checkbox"/> 3 3<br/>             b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 3 5<br/>             c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 3 1<br/>             d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 5 0<br/>             e. _____ Ft<sup>3</sup> volume added for any of the above<br/>             f. How installed: Tremie <input type="checkbox"/> 0 1<br/>             Tremie pumped <input type="checkbox"/> 0 2<br/>             Gravity <input checked="" type="checkbox"/> 0 8</p> <p>6. Bentonite seal:<br/>             a. Bentonite granules <input checked="" type="checkbox"/> 3 3<br/>             b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2<br/>             c. _____ Other <input type="checkbox"/></p> <p>7. Fine sand material: Manufacturer, product name and mesh size<br/>             a. <u>#7 Badger</u><br/>             b. Volume added _____ ft<sup>3</sup></p> <p>8. Filter pack material: Manufacturer, product name and mesh size<br/>             a. <u>#30 American Material</u><br/>             b. Volume added _____ ft<sup>3</sup></p> <p>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3<br/>             Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4<br/>             Other <input type="checkbox"/></p> <p>10. Screen material: <u>PVC</u><br/>             a. Screen Type: Factory cut <input checked="" type="checkbox"/> 1 1<br/>             Continuous slot <input type="checkbox"/> 0 1<br/>             Other <input type="checkbox"/><br/>             b. Manufacturer <u>Boart Longyear</u><br/>             c. Slot size: <u>0.010</u> in.<br/>             d. Slotted length: <u>10.0</u> ft.</p> <p>11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4<br/>             Other <input type="checkbox"/></p> |
|---|---|

I hereby certify that the information on this form is true and correct to the best of my knowledge.

|                              |   |  |
|------------------------------|---|--|
| Signature <i>[Signature]</i> | Firm <b>Boart Longyear</b><br>101 Alderson Street | Tel: (715) 359-7090<br>Fax: (715) 355-5715 |
|------------------------------|---|--|

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|  |   |
|--|---|
| Facility/Project Name<br><i>Former Johnson Sand and Gravel</i> | Well Name<br><i>MS</i>                                |
| License, Permit or Monitoring Number<br>_____                  | Wis. Unique Well Number: _____ DNR Well Number: _____ |

1. Can this well be purged dry?  Yes  No
2. Well development method
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - Other \_\_\_\_\_  \_\_\_\_\_
3. Time spent developing well \_\_\_\_\_ 30 min.
4. Depth of well (from top of well casing) \_\_\_\_\_ 30.0 ft.
5. Inside diameter of well \_\_\_\_\_ 2.00 in.
6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.
7. Volume of water removed from well \_\_\_\_\_ 30.9 gal.
8. Volume of water added (if any) \_\_\_\_\_ gal.
9. Source of water added \_\_\_\_\_
10. Analysis performed on water added?  Yes  No  
(If yes, attach results) \_\_\_\_\_

|   | Before Development   | After Development  |
|---|--|--|
| 11. Depth to Water (from top of well casing)                              | <u>28.17</u> ft  | <u>29.03</u> ft  |
| Date  | <u>08/08/96</u><br><small>m m d d y y</small>  | <u>08/08/96</u><br><small>m m d d y y</small>  |
| Time  | <u>1:35</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.                     | <u>2:05</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.                     |
| 12. Sediment in well bottom   | _____ inches   | _____ inches   |
| 13. Water clarity   | Clear <input type="checkbox"/> 10<br>Turbid <input checked="" type="checkbox"/> 15<br>(Describe) _____ | Clear <input checked="" type="checkbox"/> 10<br>Turbid <input type="checkbox"/> 25<br>(Describe) _____ |
| Fill in if drilling fluids were used and well is at solid waste facility: |  |  |
| 14. Total suspended solids  | _____ mg/l   | _____ mg/l   |
| 15. COD   | _____ mg/l   | _____ mg/l   |

Additional comments on development:

|  |   |
|--|---|
| Well developed by: Person's Name and Firm<br><br>Name: <u>Brian Durkee</u><br>Firm: <u>Moraine Environmental, Inc.</u> | I hereby certify that the above information is true and correct to the best of my knowledge.<br><br>Signature: <u><i>Brian Durkee</i></u><br>Firm: <u>MEI</u> |
|--|---|

NOTE: Shaded areas are for DNR use only. See instructions for more information.

|   |   |  |
|---|---|--|
| Facility/Project Name<br><u>Former Johnson Sand and Gravel</u>  | Grid Location<br>_____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S.<br>_____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.   | Well Name<br><u>M6</u>   |
| Facility License, Permit or Monitoring Number<br>_____  | Section Location<br><u>NW 1/4 of NE 1/4 of Section 25</u>   | Wis. Unique Well Number _____ DNR Well Number _____                        |
| Type of Well<br>Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Distance Well Is From Waste/Source Boundary<br>_____ ft.  | Date Well installed<br><u>08/29/97</u><br>m m d d y y                      |
| Is Well A Point of Enforcement Std. Application?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       | Location of Well Relative to Waste/Source<br><input type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient<br><input type="checkbox"/> Downgradient <input checked="" type="checkbox"/> Not Known | Well installed By: (Person's Name and Firm)<br><u>Briohn Environmental</u> |

|  |  |
|--|--|
| A. Protective pipe, top elevation _____ ft. MSL  | 1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |
| B. Well casing, top elevation _____ ft. MSL  | 2. Protective cover pipe:<br>a. Inside diameter: <u>8.0</u> in.  |
| C. Land surface elevation _____ ft. MSL  | b. Length: <u>1.0</u> ft.  |
| D. Surface seal, bottom _____ ft. MSL or <u>LO</u> ft.   | c. Material: Steel <input checked="" type="checkbox"/> 04<br>Other <input type="checkbox"/>  |
| 12. USCS classification of soil near screen:<br><input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input checked="" type="checkbox"/> SW <input type="checkbox"/> SP<br><input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH<br><input type="checkbox"/> Bedrock | d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If yes, describe: _____   |
| 13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | 3. Surface seal: Bentonite <input type="checkbox"/> 30<br>Concrete <input checked="" type="checkbox"/> 01<br>Other <input type="checkbox"/>  |
| 14. Drilling method used: Rotary <input type="checkbox"/> 50<br>Hollow Stem Auger <input checked="" type="checkbox"/> 41<br>Other <input type="checkbox"/>   | 4. Material between well casing and protective pipe:<br>Bentonite <input type="checkbox"/> 30<br>Annular space seal <input type="checkbox"/><br>Other <input type="checkbox"/>   |
| 15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01<br>Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99   | 5. Annular space seal: Granular Bentonite <input checked="" type="checkbox"/> 33<br>____ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35<br>____ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31<br>____ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50<br>____ Ft <sup>3</sup> volume added for any of the above |
| 16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No  | How installed: Tremie <input type="checkbox"/> 01<br>Tremie pumped <input type="checkbox"/> 02<br>Gravity <input checked="" type="checkbox"/> 08   |
| Describe _____   | 6. Bentonite seal: Bentonite granules <input checked="" type="checkbox"/> 33<br><input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32<br>Other <input type="checkbox"/>   |
| 17. Source of water (attach analysis): _____   | 7. Fine sand material: Manufacturer, product name and mesh size<br><u>Red Flint #95</u><br>Volume added _____ ft <sup>3</sup>  |
| E. Bentonite seal, top _____ ft. MSL or <u>LO</u> ft.  | 8. Filter pack material: Manufacturer, product name and mesh size<br><u>Red Flint #30</u><br>Volume added _____ ft <sup>3</sup>  |
| F. Fine sand, top _____ ft. MSL or <u>15.3</u> ft.   | 9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23<br>Flush threaded PVC schedule 80 <input type="checkbox"/> 24<br>Other <input type="checkbox"/>  |
| G. Filter pack, top _____ ft. MSL or <u>17.3</u> ft.   | 10. Screen material: <u>PVC</u><br>Screen type: Factory cut <input checked="" type="checkbox"/> 11<br>Continuous slot <input type="checkbox"/> 01<br>Other <input type="checkbox"/>  |
| H. Well screen, top _____ ft. MSL or <u>19.3</u> ft.   | Manufacturer <u>TIMCO</u><br>Slot size: <u>0.010</u> in.<br>Slotted length: <u>10.0</u> ft.  |
| I. Well screen, bottom _____ ft. MSL or <u>29.3</u> ft.  | 11. Backfill material (below filter pack): None <input checked="" type="checkbox"/><br>Other <input type="checkbox"/>  |
| J. Filter pack, bottom _____ ft. MSL or <u>30.0</u> ft.  |  |
| K. Borehole, bottom _____ ft. MSL or <u>30.0</u> ft.   |  |
| L. Borehole, diameter <u>8.0</u> in.   |  |
| M. O.D. well casing <u>2.25</u> in.  |  |
| N. I.D. well casing <u>2.00</u> in.  |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [Signature] Firm MEI

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.

NOTE: Shaded areas are for DNR use only. See instructions for more information.

|  |  |                          |                  |       |       |
|--|--|--------------------------|------------------|-------|-------|
| Facility/Project Name<br><i>Former Johnson Sand and Gravel</i> | Well Name<br><i>M6</i>   |                          |                  |       |       |
| License, Permit or Monitoring Number<br>-----                  | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">                     Wis. Unique Well Number:                 </td> <td style="width:50%; padding: 2px;">                     DNR Well Number:                 </td> </tr> <tr> <td style="height: 20px;">                     -----                 </td> <td style="height: 20px;">                     -----                 </td> </tr> </table> | Wis. Unique Well Number: | DNR Well Number: | ----- | ----- |
| Wis. Unique Well Number:                                       | DNR Well Number:   |                          |                  |       |       |
| -----  | -----  |                          |                  |       |       |

1. Can this well be purged dry?  Yes  No

2. Well development method
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - Other

3. Time spent developing well 30 min.

4. Depth of well (from top of well casing) 29.3 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.

7. Volume of water removed from well 30.9 gal.

8. Volume of water added (if any) \_\_\_\_\_ gal.

9. Source of water added \_\_\_\_\_

10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

|  | Before Development   | After Development  |
|--|--|--|
| 11. Depth to Water (from top of well casing) | <u>24.09</u> ft.   | <u>24.41</u> ft.   |
| Date   | <u>08, 29, 97</u><br><small>m m d d y y</small>                                    | <u>08, 29, 97</u><br><small>m m d d y y</small>                                    |
| Time   | <u>1:00</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m. | <u>1:30</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m. |
| 12. Sediment in well bottom                  | <u>1.0</u> inches  | _____ inches   |
| 13. Water clarity                            | Clear <input type="checkbox"/> 10  | Clear <input checked="" type="checkbox"/> 20                                       |
|  | Turbid <input checked="" type="checkbox"/> 15<br>(Describe)                        | Turbid <input type="checkbox"/> 25<br>(Describe)                                   |
|  | _____  | _____  |
|  | _____  | _____  |
|  | _____  | _____  |
|  | _____  | _____  |

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids \_\_\_\_\_ mg/l

15. COD \_\_\_\_\_ mg/l

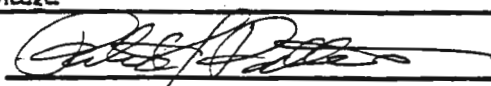
Additional comments on development:

Well developed by: Person's Name and Firm

Name: Brian Durkee

Firm: Movane Environmental, Inc.

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: 

Firm: MET



|   |   |  |
|---|---|--|
| Facility/Project Name<br><u>Former Johnson Sand and Gravel</u>  | Grid Location<br>ft. <input type="checkbox"/> N. <input type="checkbox"/> S.<br>ft. <input type="checkbox"/> E. <input type="checkbox"/> W.   | Well Name<br><u>M7</u>   |
| Facility License, Permit or Monitoring Number   |   | Wis. Unique Well Number: _____ DNR Well Number: _____                      |
| Type of Well<br>Water Table Observation Well <input checked="" type="checkbox"/> 11<br>Piezometer <input type="checkbox"/> 12 | Section Location<br><u>NW 1/4 of NE 1/4 of Section 25</u>   | Date Well Installed<br><u>08/29/97</u><br>m m d d y y                      |
| Distance Well Is From Waste/Source Boundary<br>ft.  | T <u>7</u> N. R. <u>19</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W   | Well Installed By: (Person's Name and Firm)<br><u>Briohn Environmental</u> |
| Is Well A Point of Enforcement Sta. Application?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       | Location of Well relative to Waste/Source<br><input type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient<br><input type="checkbox"/> Downgradient <input checked="" type="checkbox"/> Not Known |  |

|  |  |
|--|--|
| A. Protective pipe, top elevation _____ ft. MSL  | 1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |
| B. Well casing, top elevation _____ ft. MSL  | 2. Protective cover pipe:<br>a. Inside diameter: <u>8.0</u> in.<br>b. Length: <u>1.0</u> ft.<br>c. Material: Steel <input checked="" type="checkbox"/> 04<br>Other <input type="checkbox"/>  |
| C. Land surface elevation _____ ft. MSL  | d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If yes, describe: _____   |
| D. Surface seal, bottom _____ ft. MSL or <u>10</u> ft.   | 3. Surface seal: Bentonite <input type="checkbox"/> 30<br>Concrete <input checked="" type="checkbox"/> 01<br>Other <input type="checkbox"/>  |
| 12. USCS classification of soil near screen:<br><input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input checked="" type="checkbox"/> SW <input type="checkbox"/> SP<br><input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH<br><input type="checkbox"/> Bedrock | 4. Material between well casing and protective pipe:<br>Bentonite <input type="checkbox"/> 30<br>Annular space seal <input type="checkbox"/>   |
| 13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | 5. Annular space seal: Granular Bentonite <input checked="" type="checkbox"/> 33<br>____ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35<br>____ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31<br>____ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50<br>____ Ft <sup>3</sup> volume added for any of the above |
| 14. Drilling method used: Rotary <input type="checkbox"/> 50<br>Hollow Stem Auger <input checked="" type="checkbox"/> 41<br>Other <input type="checkbox"/>   | How installed: Tremie <input type="checkbox"/> 01<br>Tremie pumped <input type="checkbox"/> 02<br>Gravity <input checked="" type="checkbox"/> 08   |
| 15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01<br>Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99   | 6. Bentonite seal: Bentonite granules <input checked="" type="checkbox"/> 33<br><input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32<br>Other <input type="checkbox"/>   |
| 16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No  | 7. Fine sand material: Manufacturer, product name and mesh size<br><u>Red Flint #55</u><br>Volume added _____ ft <sup>3</sup>  |
| 17. Source of water (attach analysis): _____   | 8. Filter pack material: Manufacturer, product name and mesh size<br><u>Red Flint #30</u><br>Volume added _____ ft <sup>3</sup>  |
| E. Bentonite seal, top _____ ft. MSL or <u>70</u> ft.  | 9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23<br>Flush threaded PVC schedule 80 <input type="checkbox"/> 24<br>Other <input type="checkbox"/>  |
| F. Fine sand, top _____ ft. MSL or <u>157</u> ft.  | 10. Screen material: <u>PVC</u><br>Screen type: Factory cut <input checked="" type="checkbox"/> 11<br>Continuous slot <input type="checkbox"/> 01<br>Other <input type="checkbox"/>  |
| G. Filter pack, top _____ ft. MSL or <u>177</u> ft.  | Manufacturer: <u>TIMCO</u><br>Slot size: <u>0.010</u> in.<br>Slotted length: <u>10.0</u> ft.   |
| H. Well screen, top _____ ft. MSL or <u>197</u> ft.  | 11. Backfill material (below filter pack): None <input checked="" type="checkbox"/><br>Other <input type="checkbox"/>  |
| I. Well screen, bottom _____ ft. MSL or <u>297</u> ft.   |  |
| J. Filter pack, bottom _____ ft. MSL or <u>30.0</u> ft.  |  |
| K. Borehole, bottom _____ ft. MSL or <u>30.0</u> ft.   |  |
| L. Borehole, diameter <u>8.0</u> in.   |  |
| M. O.D. well casing <u>2.25</u> in.  |  |
| N. I.D. well casing <u>2.00</u> in.  |  |

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Patricia Patterson Firm: MEI

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.

NOTE: Shaded areas are for DNR use only. See instructions for more information.

|  |   |
|--|---|
| Facility/Project Name<br><i>Former Johnson Sand and Gravel</i> | Well Name<br><i>M7</i>                                |
| License, Permit or Monitoring Number<br>-----                  | Wis. Unique Well Number: _____ DNR Well Number: _____ |

1. Can this well be purged dry?  Yes  No
2. Well development method
- |                                      |                                     |                          |
|--------------------------------------|-------------------------------------|--------------------------|
| surged with bailer and bailed        | <input type="checkbox"/>            | 4 1                      |
| surged with bailer and pumped        | <input checked="" type="checkbox"/> | 6 1                      |
| surged with block and bailed         | <input type="checkbox"/>            | 4 2                      |
| surged with block and pumped         | <input type="checkbox"/>            | 6 2                      |
| surged with block, bailed and pumped | <input type="checkbox"/>            | 7 0                      |
| compressed air                       | <input type="checkbox"/>            | 2 0                      |
| bailed only                          | <input type="checkbox"/>            | 1 0                      |
| pumped only                          | <input type="checkbox"/>            | 5 1                      |
| pumped slowly                        | <input type="checkbox"/>            | 5 0                      |
| Other _____                          | <input type="checkbox"/>            | <input type="checkbox"/> |
3. Time spent developing well 30 min.
4. Depth of well (from top of well casing) 29.7 ft.
5. Inside diameter of well 2.00 in.
6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.
7. Volume of water removed from well 300 gal.
8. Volume of water added (if any) \_\_\_\_\_ gal.
9. Source of water added \_\_\_\_\_
10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

|   | Before Development  | After Development  |
|---|---|--|
| 11. Depth to Water (from top of well casing)                              | <u>24.10</u> ft.  | <u>24.36</u> ft.   |
| Date  | <u>08, 29, 97</u><br>m m d d y y  | <u>08, 29, 97</u><br>m m d d y y   |
| Time  | <u>2:00</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.  | <u>2:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.   |
| 12. Sediment in well bottom   | _____ inches  | _____ inches   |
| 13. Water clarity   | Clear <input type="checkbox"/> 10<br>Turbid <input checked="" type="checkbox"/> 15<br>(Describe) <u>strong discoloration</u><br><u>yellow</u><br><u>black color</u> | Clear <input checked="" type="checkbox"/> 0<br>Turbid <input type="checkbox"/> 25<br>(Describe) <u>strong discoloration</u><br><u>yellow</u><br><u>black color</u> |
| Fill in if drilling fluids were used and well is at solid waste facility: |   |  |
| 14. Total suspended solids  | _____ mg/l  | _____ mg/l   |
| 15. COD   | _____ mg/l  | _____ mg/l   |

Additional comments on development:

|   |  |
|---|--|
| Well developed by: Person's Name and Firm<br><br>Name: <u>Brian Durkee</u><br>Firm: <u>Morave Environmental, Inc.</u> | I hereby certify that the above information is true and correct to the best of my knowledge.<br><br>Signature: <u>[Signature]</u><br>Firm: <u>M7</u> |
|---|--|

NOTE: Shaded areas are for DNR use only. See instructions for more information.

**APPENDIX F**

**CHAIN OF CUSTODY FORMS**

Company Name: MORaine ENVIRONMENTAL, INC.  
 Branch or Location: (MEI) GRAFTON, WI  
 Project Contact: CHRIS HAASE  
 Telephone: 414-377-9060  
 Project Number: MEI# 0305  
 Project Name: JOHNSON-SAND & GRAVEL  
 Project Location: NW22590 JOHNSON DR. WAUKESHA, WI  
 Sampled By (Print): CHRIS HAASE - SA # 0516



1241 Bellevue St., Suite 9  
 Green Bay, WI 54302  
 414-469-2436 • 1-800-736-2436  
 FAX 414-469-8827

Mail Report To: (MEI)  
 Company:  
 Address: 1234 12<sup>TH</sup> AVE  
GRAFTON, WI 53024  
 Invoice To:  
 Company:  
 Address: SAME  
 P.O. No.: Quote No.:

Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NR Other

NR720 Confirmation Analysis Required?  
 (En Chem will confirm unless otherwise instructed.)

| Field ID       | Sample Description    | Collection |       | Field Screen | Matrix | Fill'd Y/N | Preserv'    | Analysis Requested | SHADED AREA FOR LABORATORY USE ONLY |                            |          |
|----------------|-----------------------|------------|-------|--------------|--------|------------|-------------|--------------------|-------------------------------------|----------------------------|----------|
|                |                       | Date       | Time  |              |        |            |             |                    | Good Cond.                          | Total Bottles              | Comments |
| SB1            | B1 (16-18)            | 3/19/96    |       | N/A          | SOIL   | No         | MEOH UNSTAB | DRO/GRO/VOC/pb     | X                                   | 1-502<br>2-202/1M<br>1-202 | 174927   |
| SB1            | B1 (24-26)            |            |       |              |        |            |             |                    |                                     |                            | 174928   |
| <del>SB1</del> | <del>B1 (24-26)</del> |            |       |              |        |            |             |                    |                                     |                            |          |
| SB2            | B2 (12-14)            |            |       |              |        |            |             |                    |                                     |                            | 174929   |
| SB2            | B2 (24-26)            |            |       |              |        |            |             |                    |                                     |                            | 174930   |
| SB2            | B2 (28-30) *          |            |       |              |        |            |             |                    |                                     |                            | 174931   |
| SB3            | B3 (12-14)            |            |       |              |        |            |             |                    |                                     |                            | 174932   |
| SB3            | B3 (26-28)            |            |       |              |        |            |             |                    |                                     |                            | 174933   |
| SB4            | B4 (8-10)             |            |       |              |        |            |             |                    |                                     |                            | 174934   |
| SB4            | B4 (14-16)            |            |       |              |        |            |             |                    |                                     |                            | 174935   |
|                | METH BLANK            |            | 7:00a |              | METH   |            | MEOH        | GRO/VOC            |                                     | 2-202/1M                   | 174936   |

\*Preservation Code  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol  
 G=NaOH O=Other (Indicate)  
 \*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By: [Signature]  
 Date/Time: 3/20/96 - 7:00a  
 Relinquished By: [Signature]  
 Date/Time: 3/21/96 12:00  
 Relinquished By: [Signature]  
 Date/Time: 3/21/96 3:10 pm

Received By: [Signature] 3/21/96 9:00  
 Received By: [Signature] 3/21/96  
 Received By (En Chem): [Signature]

En Chem Project No. 9603368  
 Sample Receipt Temp. (Must be rec'd at 4°C)  
ROI

Company Name: MORaine ENVIRONMENTAL, INC.  
 Branch or Location: (MEI) GRAFTON, WI  
 Project Contact: CHRIS HAASE  
 Telephone: 914-377-9060  
 Project Number: MEI# 0305  
 Project Name: JOHNSON - SAND & GRAVEL  
 Project Location: N8W22590 JOHNSON DR. WAUPESHA, WI  
 Sampled By (Print): CHRIS HAASE - SA# 0516



Mail Report To: (MEI)  
 Company: (MEI)  
 Address: 1234 12<sup>TH</sup> AVE  
GRAFTON, WI 53024  
 Invoice To:  
 Company: SAME  
 Address:  
 P.O. No.:  
 Quote No.:

Regulatory Program (circle): UST RCRA CLP SDWA W 30 NR720 Confirmation Analysis Required?  
 NPDES/WPDES CAA NR Other 30  
 (En Chem will confirm unless otherwise instructed.)

| Field ID | Sample Description | Collection |      | Field Screen | Matrix | Fill'd Y/N | Preserv* | Analysis Requested | SHADED AREA FOR LABORATORY USE ONLY |                            |          |                   |
|----------|--------------------|------------|------|--------------|--------|------------|----------|--------------------|-------------------------------------|----------------------------|----------|-------------------|
|          |                    | Date       | Time |              |        |            |          |                    | Good Cond.                          | Total Bottles              | Comments | Laboratory Number |
| SBS      | B5 (6-8)           | 3/20/96    |      | NA           | SOLL   | No         | Methanol | DR0/GRO/Voc/pb     | X                                   | 1-502<br>2-202/1M<br>2-202 |          | 174937            |
| SBS      | B5 (20-22)         |            |      |              |        |            |          |                    |                                     |                            |          | 174938            |
| SBS      | B5 (28-30)         |            |      |              |        |            |          |                    |                                     |                            |          | 174939            |
| SB6      | B6 (12-14)         |            |      |              |        |            |          |                    |                                     |                            |          | 174940            |
| SB6      | B6 (20-22)         |            |      |              |        |            |          |                    |                                     |                            |          | 174941            |
| SB7      | B7 (4-6)           |            |      |              |        |            |          |                    |                                     |                            |          | 174942            |
| SB7      | B7 (14-16)         |            |      |              |        |            |          |                    |                                     |                            |          | 174943            |
| SB7      | B7 (22-24)         |            |      |              |        |            |          |                    |                                     |                            |          | 174944            |
| SB8      | B8 (10-12)         |            |      |              |        |            |          |                    |                                     |                            |          | 174945            |
| SB8      | B8 (18-20)         |            |      |              |        |            |          |                    |                                     |                            |          | 174946            |
| SB8      | B8 (22-24)         |            |      |              |        |            |          |                    |                                     |                            |          | 174947            |

\*Preservation Code  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)

Relinquished By: Chris Haase Date/Time: 3/20/96 - 6:00 AM Received By: W. Kasper 3/21/96 9:00 En Chem Project No. 9603368

Relinquished By: W. Kasper Date/Time: 3/26/96 10:00 Received By: Bernie Kemper 3/21/96 Sample Receipt Temp. (Must be rec'd at 4°C)

Relinquished By: Bernie Kemper Date/Time: 3/21/96 3:10 PM Received By (En Chem): Rita Albert ROJ

\*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.





Telephone: 717-311-1060  
 Project Number: 0305  
 Project Name: JOHNSON SAND & GRAVEL PROP.  
 Project Location: N81W22S10 JOHNSON DR. WAUKESHA, WI  
 Sampled By (Print): CHES AARSE

1241 Bellevue St., Suite 9  
 Green Bay, WI 54302  
 414-469-2436 • 1-800-736-2436  
 FAX 414-469-8827

2231 Catlin Ave., Suite 420  
 Superior, WI 54880  
 715-392-5844 • 1-800-837-8238  
 FAX 715-392-5843

802 Deming Way  
 Madison, WI 53717  
 608-827-5501 • 1-888-5 ENCHEM  
 Fax: 608-827-5503

Address: 1254 12<sup>th</sup> AVE  
 GRATION, WI 53024

Invoice To:  
 Company: SARK  
 Address:  
 Mail Invoice To:

Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NR Other

NR720 Confirmation Analysis Required?  
 (En Chem will confirm unless otherwise instructed.)

| Field ID | Sample Description   | Collection |       | Field Screen | Matrix | Filt'd Y/N | Preserv' | Analysis Requested | SHADED AREA FOR LABORATORY USE ONLY |                         |          |                   |
|----------|--|------------|-------|--------------|--------|------------|----------|--------------------|-------------------------------------|-------------------------|----------|-------------------|
|          |  | Date       | Time  |              |        |            |          |                    | Good Cond.                          | Total Bottles           | Comments | Laboratory Number |
| 1        | MW-1 (Law-1)<br>* (CAUTION SAMPLE) *<br>(HAS FREE PRODUCT DIESEL/FUEL OIL) | 8/22/96    | 4:35P | *            | W      | Y          | U/L      | Gen/Pro/Vol/Pb     | ✓                                   | 4.40ml<br>1L<br>1-250ml |          | 195173            |
| 2        | MW-2   | 8:00P      |       | -            | W      | Y          | BD       |                    | ✓                                   | 4.40ml<br>1L<br>1-250ml |          | 195174            |
| 3        | MW-3   | 8:30P      |       | -            |        |            | VD       |                    | ✓                                   |                         |          | 195175            |
| 4        | MW-4   | 8:45P      |       | -            |        |            | VD       |                    | ✓                                   |                         |          | 195176            |
| 5        | MW-5   | 8:15P      |       | -            |        |            | VD       |                    | ✓                                   |                         |          | 195177            |
| TB       | Trip Blank   | 7:00A      |       | -            |        | N          |          | Voc w/Bubbles      |                                     | 3.40ml                  |          | 195178            |

\*Preservation Code  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol  
 G=NaOH O=Other (Indicate)

\*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

Relinquished By: *[Signature]*  
 Date/Time: 8/22/96 9:00

Relinquished By: *[Signature]*  
 Date/Time: 8/26/96 12:00

Relinquished By: *[Signature]*  
 Date/Time: 8/24/96 3:15 PM

Received By: *[Signature]*  
 Date/Time: 8/22/96 9:00

Received By: *[Signature]*  
 Date/Time: 8/26/96 12:00

Received By (En Chem): *[Signature]*  
 Date/Time: 8/24/96 3:15 PM

Received By: *[Signature]*  
 Date/Time: 8/22/96 9:00

Received By: *[Signature]*  
 Date/Time: 8/26/96 12:00

Received By (En Chem): *[Signature]*  
 Date/Time: 8/24/96 3:15 PM

En Chem Project No. 9608509  
 Sample Receipt Temp. (Must be rec'd at 4°C)  
 ROT





Company Name: MORaine ENVIRONMENTAL  
 Branch or Location: GRAFTON WI  
 Project Contact: PAT PATTERSON  
 Telephone: 414-377-9060  
 Project Number: #0305  
 Project Name: JOHNSON SAND & GRAVE  
 Project Location: Peewaukee  
 Sampled By (Print): BRIAN DURKEE  
 Regulatory Program (circle): UST RCRA CLP SDWA  
 NPDES/WPDES CAA NH  
 Other \_\_\_\_\_  
 NR720 Confirmation Analysis Required? (circle) Y N  
 (En Chem will not confirm unless otherwise instructed.)



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 FAX 715-392-5843

# CHAIN OF CUSTODY 7672

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: PAT PATTERSON

Company: MORaine ENVIRO.

Address: 12341 12<sup>th</sup> AVE

GRAFTON WI

Invoice To: PAT PATTERSON

Company: MORaine ENV.

Address: 12341 12<sup>th</sup> AVE

GRAFTON

Mail Invoice To: \_\_\_\_\_

FILTERED? (YES/NO) \_\_\_\_\_  
 PRESERVATION (CODE)\* \_\_\_\_\_

ANALYSES REQUESTED  
GRO  
DRO  
VOC  
PAH

| FIELD ID | SAMPLE DESCRIPTION | COLLECTION |       | SHADED AREA FOR LABORATORY USE ONLY |        |            |               |          |  |  |  |  |                   |  |  |  |  |     |
|----------|--------------------|------------|-------|-------------------------------------|--------|------------|---------------|----------|--|--|--|--|-------------------|--|--|--|--|-----|
|          |                    | DATE       | TIME  | FIELD SCREEN                        | MATRIX | GOOD COND. | TOTAL BOTTLES | COMMENTS |  |  |  |  | LABORATORY NUMBER |  |  |  |  |     |
| 1        | MW-1               | 8/29/97    | 1:11  | X                                   | X      | X          | X             | X        |  |  |  |  |                   |  |  |  |  | 001 |
| 2        | MW-2               |            | 12:10 | X                                   | X      | X          | X             | X        |  |  |  |  |                   |  |  |  |  | 002 |
| 3        | MW-3               |            | 11:25 | X                                   | X      | X          | X             | X        |  |  |  |  |                   |  |  |  |  | 003 |
| 4        | MW-4               |            | 10:41 | X                                   | X      | X          | X             | X        |  |  |  |  |                   |  |  |  |  | 004 |
| 5        | MW-5               |            | 9:50  | X                                   | X      | X          | X             | X        |  |  |  |  |                   |  |  |  |  | 005 |
| TB       | TRIP Blg/OK        |            | 8:00  |                                     |        |            |               |          |  |  |  |  |                   |  |  |  |  | 006 |

**\*Preservation Code**  
 A=None B=HCL C=H2SO4  
 D=HN03 E=EnCore F=Methanol\*\*  
 G=NaOH O=Other (Indicate)

\*\*If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples.

|  |   |                                      |
|--|---|--------------------------------------|
| Relinquished By: <u>Brian Durkee</u> Date/Time: <u>9/2/97 8:30</u> | Received By: <u>W. J. Bart</u> Date/Time: <u>9/2/97 8:30</u>            | En Chem Project No. <u>872276</u>    |
| Relinquished By: <u>W. J. Bart</u> Date/Time: <u>9/2/97 12:00</u>  | Received By: <u>Chil Rys</u> Date/Time: <u>9-2-97 12:00</u>             | Sample Receipt Temp. _____           |
| Relinquished By: <u>Chil Rys</u> Date/Time: <u>9-2-97 15:00</u>    | Received By: _____ Date/Time: _____                                     | Sample Receipt pH (Wet/Metals) _____ |
| Relinquished By: _____ Date/Time: _____                            | Received By (En Chem): <u>W. J. Bart</u> Date/Time: <u>9/2/97 15:00</u> |                                      |



**APPENDIX G**

**SOIL ANALYTICAL AND  
BIOLOGICAL LABORATORY DATA**



*...chemistry for the environment*

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
En Chem Proj# : 9603368  
Date Reported : 03/27/1996

Report to: MORAINÉ ENVIRONMENTAL

Thank you for using En Chem! Samples were analyzed according to strict EPA or Wisconsin DNR methodology. Any comments or problems associated with the receipt of or analysis are reported below:

The PQL for the VOC analysis is 60 ug/kg for those samples with a dilution factor of 50. Detection limits are corrected for percent solids for those parameters that were detected.

Sample no. 174927: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas. Front peaks outside of DRO window, indicating lighter fuels are present. Mainly diesel range peaks present. Elevated detection limits reported for VOC analysis due to the presence of heavy fuel.

Sample no. 174928: Slight fuel hump late in and beyond DRO window, with some baseline rise. Mainly diesel range peaks present. Large peak late in DRO window.

Sample no. 174930: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas. Front peaks outside of DRO window, indicating lighter fuels are present. Mainly diesel range peaks present. Elevated detection limits reported for VOC analysis due to the presence of heavy fuel.

Sample no. 174931: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas. Front peaks outside of DRO window, indicating lighter fuels are present. Mainly diesel range peaks present. Elevated detection limits reported for VOC analysis due to the presence of heavy fuel. VOC analysis not in the upper one half of the curve due to the presence of heavy fuel.

Sample no. 174932: Slight fuel hump late in and beyond DRO window, with some baseline rise. Large peak late in DRO window.

Sample no. 174934: Fuel hump late in and beyond DRO window, with some baseline rise. Large peak late in DRO window.



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Sample no. 174935: GRO chromatogram had low level late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.

Peaks late in DRO window and beyond DRO window; along with some baseline rise. The presence of sec-Butylbenzene was not confirmed on 03/25/96 by a second GC/MS analysis.

Sample no. 174937: Fuel hump late in and beyond DRO window, with some baseline rise.

Sample no. 174938: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.

The presence of sec-Butylbenzene was confirmed on 03/25/96 by a second GC/MS analysis.

Sample no. 174939: The presence of sec-Butylbenzene was confirmed on 03/25/96 by a second GC/MS analysis.

Sample no. 174940: Fuel hump late in and beyond DRO window, with some baseline rise.

The presence of cis-1,2-Dichloroethene was confirmed on 03/26/96 by a second GC/MS analysis.

Sample no. 174941: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.

Fuel hump late in and beyond DRO window, with some baseline rise. Mainly diesel range peaks present.

Complex chromatogram on VOC analysis with many late eluting peaks. This is indicative of DRO fuel contamination, heavy oils, or of weathered gasoline.

Sample no. 174942: Slight fuel hump late in and beyond DRO window, with some baseline rise.

Sample no. 174943: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.

Front peaks outside of DRO window, indicating lighter fuels are present. Fuel hump late in and beyond DRO window, with some baseline rise.

The presence of 1,3,5-Trimethylbenzene, Ethylbenzene, Isopropylbenzene, p-Isopropyltoluene, and n-propylbenzene were confirmed on 03/26/96 by a second GC/MS analysis.

Sample no. 174944: The presence of sec-Butylbenzene was confirmed on 03/26/96 by a second GC/MS analysis.



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Sample no. 174945: Fuel hump late in and beyond DRO window, with some baseline rise.

Sample no. 174947: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.

Front peaks outside of DRO window, indicating lighter fuels are present. Mainly diesel range peaks present.

Complex chromatogram on VOC analysis with many late eluting peaks. This is indicative of DRO fuel contamination, heavy oils, or of weathered gasoline.





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB1  
 Sample Desc. : B1 (16-18)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174927 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 90     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 5.4    | mg/kg   | 3.6             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 540    | mg/kg   | 28              |             | 03/22/1996 | WDNR MOD GRO    | 03/26/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 102    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 750    | mg/kg   | 27              |             | 03/22/1996 | WDNR MOD DRO    | 03/23/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 100             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | n-Butylbenzene                    | 2000   | ug/kg   | 110             |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 2000   | ug/kg   | 110             |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 100             |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 100             |             |            |                 |               |             |







...chemistry for the environment

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 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB1  
 Sample Desc. : B1 (16-18)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174927

Date Collected: 03/19/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 100             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Ethyl Benzene             | 930    | ug/kg | 110             |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Isopropylbenzene          | 860    | ug/kg | 110             |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | 1300   | ug/kg | 110             |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Naphthalene               | 5200   | ug/kg | 110             |             |            |                 |               |                      |
|            | n-Propylbenzene           | 1400   | ug/kg | 110             |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 100             |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S81  
Sample Desc. : 81 (16-18)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174927 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 100             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | 6500   | ug/kg | 110             |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | 2300   | ug/kg | 110             |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 100             |             |            |                 |               |                      |
|            | Xylenes, m + p         | 630    | ug/kg | 110             |             |            |                 |               |                      |
|            | Xylene, o              | 1100   | ug/kg | 110             |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Selva





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB1  
 Sample Desc. : B1 (24-26)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174928 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 96     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 3.8    | mg/kg   | 3.4             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.6             |             | 03/22/1996 | WDNR MOD GRO    | 03/26/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 102    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 9.4    | mg/kg   | 3.1             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB1  
 Sample Desc. : B1 (24-26)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174928 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB1  
Sample Desc. : B1 (24-26)  
Sample Matrix : SOIL                      Date Collected: 03/19/1996  
En Chem Proj# : 9603368                  Date Received : 03/21/1996  
En Chem Lab # : 174928                    Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Sulha





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 Green Bay, WI 54302  
 414-469-2436  
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 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB2  
 Sample Desc. : B2 (12-14)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174929 Date Reported : 03/29/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 92     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | ND     | mg/kg   | 3.5             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 350    | mg/kg   | 22              |             | 03/22/1996 | WDNR MOD GRO    | 03/28/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 102    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 1600   | mg/kg   | 67              |             | 03/22/1996 | WDNR MOD DRO    | 03/23/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 50              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | n-Butylbenzene                    | 750    | ug/kg   | 54              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 790    | ug/kg   | 54              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 50              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 50              |             |            |                 |               |             |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S82  
Sample Desc. : B2 (12-14)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174929 Date Reported : 03/29/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis | Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 50              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    |          | RJN         |
|            | Dibromomethane            | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Ethyl Benzene             | 260    | ug/kg | 54              |             |            |                 |               |          |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Isopropylbenzene          | 290    | ug/kg | 54              |             |            |                 |               |          |             |
|            | p-Isopropyltoluene        | 530    | ug/kg | 54              |             |            |                 |               |          |             |
|            | Methylene chloride        | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Naphthalene               | 1600   | ug/kg | 54              |             |            |                 |               |          |             |
|            | n-Propylbenzene           | 460    | ug/kg | 54              |             |            |                 |               |          |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Styrene                   | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Tetrachloroethene         | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | Toluene                   | ND     | ug/kg | 50              |             |            |                 |               |          |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 50              |             |            |                 |               |          |             |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB2  
Sample Desc. : 82 (12-14)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174929 Date Reported : 03/29/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 50              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 50              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 50              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 50              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 50              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 50              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | 1900   | ug/kg | 54              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | 550    | ug/kg | 54              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 50              |             |            |                 |               |                      |
|            | Xylenes, m + p         | 110    | ug/kg | 54              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 50              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silber







...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX:414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB2  
 Sample Desc. : B2 (22-24)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174930 Date Reported : 03/29/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 92     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 5.4    | mg/kg   | 3.5             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 250    | mg/kg   | 14              |             | 03/22/1996 | WDNR MOD GRO    | 03/28/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 102    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 370    | mg/kg   | 15              |             | 03/22/1996 | WDNR MOD DRO    | 03/23/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 130             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | n-Butylbenzene                    | 1900   | ug/kg   | 140             |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 1800   | ug/kg   | 140             |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 130             |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 130             |             |            |                 |               |             |





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB2  
 Sample Desc. : B2 (22-24)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174930 Date Reported : 03/29/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 130             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Ethyl Benzene             | 960    | ug/kg | 140             |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Isopropylbenzene          | 860    | ug/kg | 140             |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | 1200   | ug/kg | 140             |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Naphthalene               | 4300   | ug/kg | 140             |             |            |                 |               |                      |
|            | n-Propylbenzene           | 1400   | ug/kg | 140             |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 130             |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 130             |             |            |                 |               |                      |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB2  
Sample Desc. : B2 (22-24)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174930 Date Reported : 03/29/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis | Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------|-------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 130             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    |          | RJN         |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | Trichloroethene        | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | Trichlorofluoromethane | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | 1,2,4-Trimethylbenzene | 3500   | ug/kg | 140             |             |            |                 |               |          |             |
|            | 1,3,5-Trimethylbenzene | 1800   | ug/kg | 140             |             |            |                 |               |          |             |
|            | Vinyl chloride         | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | Xylenes, m + p         | ND     | ug/kg | 130             |             |            |                 |               |          |             |
|            | Xylene, o              | ND     | ug/kg | 130             |             |            |                 |               |          |             |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*M. Seba*





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB2  
 Sample Desc. : B2 (28-30)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174931 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 95     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 5.4    | mg/kg   | 3.3             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 700    | mg/kg   | 52              |             | 03/22/1996 | WDNR MOD GRO    | 03/26/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 102    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 4400   | mg/kg   | 170             |             | 03/22/1996 | WDNR MOD DRO    | 03/23/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 250             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | n-Butylbenzene                    | 3300   | ug/kg   | 260             |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 3600   | ug/kg   | 260             |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 250             |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 250             |             |            |                 |               |             |





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB2  
 Sample Desc. : B2 (28-30)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174931 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 250             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Ethyl Benzene             | 970    | ug/kg | 260             |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Isopropylbenzene          | 1500   | ug/kg | 260             |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | 2400   | ug/kg | 260             |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Naphthalene               | 7200   | ug/kg | 260             |             |            |                 |               |                      |
|            | n-Propylbenzene           | 2500   | ug/kg | 260             |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 250             |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S82  
Sample Desc. : B2 (28-30)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174931 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 250             | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | 7600   | ug/kg | 260             |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | 3000   | ug/kg | 260             |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 250             |             |            |                 |               |                      |
|            | Xylenes, m + p         | 390    | ug/kg | 260             |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 250             |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB3  
 Sample Desc. : B3 (12-14)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174932 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| TOTSOLID   | Total Solids                      | 95     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS                  |
| PB-S       | Lead, soil                        | 9.0    | mg/kg   | 3.4             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM                  |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.6             |             | 03/22/1996 | WDNR MOD GRO    | 03/26/1996    | BSJ                  |
|            | Soil spike                        | 105 %  | RECOV   | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 102 %  | RECOV   | 50              |             |            |                 |               |                      |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 4.7    | mg/kg   | 3.4             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS                  |
|            | Soil spike                        | 93 %   | RECOV   | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 88 %   | RECOV   | 50              |             |            |                 |               |                      |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |                      |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB3  
Sample Desc. : 83 (12-14)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174932 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJH         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |







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Green Bay, WI 54302  
414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB3  
Sample Desc. : B3 (12-14)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174932 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S83  
 Sample Desc. : B3 (26-28)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174933 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 86     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 4.7    | mg/kg   | 3.7             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.9             |             | 03/22/1996 | WONR MOD GRO    | 03/25/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 103    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | ND     | mg/kg   | 3.9             |             | 03/22/1996 | WONR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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 Green Bay, WI 54302  
 414-469-2436  
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 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB3  
 Sample Desc. : B3 (26-28)  
 Sample Matrix : SOIL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174933 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJM         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S83  
Sample Desc. : B3 (26-28)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174933 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Gilha





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S84  
 Sample Desc. : B4 (8-10)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174934  
 Date Collected: 03/19/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 93     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 5.6    | mg/kg   | 3.5             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.7             |             | 03/22/1996 | WDNR MOD GRO    | 03/25/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 103    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 6.9    | mg/kg   | 3.4             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB4  
 Sample Desc. : B4 (8-10)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174934

Date Collected: 03/19/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB4  
Sample Desc. : B4 (8-10)  
Sample Matrix : SOIL  
En Chem Proj# : 9603368  
En Chem Lab # : 174934  
Date Collected: 03/19/1996  
Date Received : 03/21/1996  
Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

  
\_\_\_\_\_





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S84  
 Sample Desc. : B4 (14-16)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174935  
 Date Collected: 03/19/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 83     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 13     | mg/kg   | 4.0             | SW846 3050  | 03/22/1996 | SW846 7421      | 03/22/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 3.0             |             | 03/22/1996 | WDNR MOD GRO    | 03/25/1996    | BSJ         |
|            | Soil spike                        | 105    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 103    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | ND     | mg/kg   | 3.5             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 37     | ug/kg   | 30              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |







...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB4  
Sample Desc. : B4 (14-16)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174935 Date Reported : 03/28/1996

Report to: MORAINÉ ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORAINÉ ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |





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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB4  
Sample Desc. : B4 (14-16)  
Sample Matrix : SOIL Date Collected: 03/19/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174935 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID:

Sample Desc. : METH BLANK

Sample Matrix : METHANOL

Date Collected: 03/19/1996

En Chem Proj# : 9603368

Date Received : 03/21/1996

En Chem Lab # : 174936

Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis | Analyzed By |
|----------|------------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------|-------------|
| GRO      | Gasoline Range Organics(GRO)-Water | ND     | ug/l    | 2500            |             | 03/22/1996 | WDNR MOD GRO    | 03/25/1996    |          | BSJ         |
|          | Blank spike                        | 105    | % RECOV | 50              |             |            |                 |               |          |             |
|          | Blank spike duplicate              | 103    | % RECOV | 50              |             |            |                 |               |          |             |
| 8260+    | Benzene                            | ND     | ug/l    | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    |          | CJG         |
|          | Bromobenzene                       | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Bromochloromethane                 | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Bromodichloromethane               | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Bromoform                          | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Bromomethane                       | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | n-Butylbenzene                     | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | sec-Butylbenzene                   | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | tert-Butylbenzene                  | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Carbon tetrachloride               | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Chlorobenzene                      | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Chlorodibromomethane               | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Chloroethane                       | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Chloroform                         | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Chloromethane                      | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 2-Chlorotoluene                    | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 4-Chlorotoluene                    | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,2-Dibromo-3-chloropropane        | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,2-Dibromoethane                  | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Dibromomethane                     | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,2-Dichlorobenzene                | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,3-Dichlorobenzene                | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,4-Dichlorobenzene                | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | Dichlorodifluoromethane            | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,1-Dichloroethane                 | ND     | ug/l    | 25              |             |            |                 |               |          |             |
|          | 1,2-Dichloroethane                 | ND     | ug/l    | 25              |             |            |                 |               |          |             |





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 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID:  
 Sample Desc. : METH BLANK  
 Sample Matrix : METHANOL Date Collected: 03/19/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174936 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                   | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|-----------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+    | 1,1-Dichloroethene          | ND     | ug/l  | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | CJG                  |
|          | cis-1,2-Dichloroethene      | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | trans-1,2-Dichloroethene    | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,2-Dichloropropane         | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,3-Dichloropropane         | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 2,2-Dichloropropane         | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,1-Dichloropropene         | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Di-isopropyl ether          | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Ethyl Benzene               | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Hexachlorobutadiene         | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Isopropylbenzene            | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | p-Isopropyltoluene          | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Methylene chloride          | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Methyl-tert-butyl-ether     | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Naphthalene                 | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | n-Propylbenzene             | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,1,1,2-Tetrachloroethane   | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,1,1,2,2-Tetrachloroethane | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Styrene                     | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Tetrachloroethene           | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Toluene                     | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,2,3-Trichlorobenzene      | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,2,4-Trichlorobenzene      | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,1,1-Trichloroethane       | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,1,2-Trichloroethane       | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Trichloroethene             | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Trichlorofluoromethane      | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,2,3-Trichloropropane      | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,2,4-Trimethylbenzene      | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | 1,3,5-Trimethylbenzene      | ND     | ug/l  | 25              |             |            |                 |               |                      |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID:  
Sample Desc. : METH BLANK  
Sample Matrix : METHANOL Date Collected: 03/19/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174936 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter      | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|----------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+    | Vinyl chloride | ND     | ug/l  | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | CJG                  |
|          | Xylenes, m + p | ND     | ug/l  | 25              |             |            |                 |               |                      |
|          | Xylene, o      | ND     | ug/l  | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S85  
 Sample Desc. : B5 (6-8)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174937  
 Date Collected: 03/20/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 86     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 12     | mg/kg   | 3.7             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MM          |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.9             |             | 03/22/1996 | WDR MOD GRO     | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 23     | mg/kg   | 3.6             |             | 03/22/1996 | WDR MOD DRO     | 03/23/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | JJB         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S85  
 Sample Desc. : B5 (6-8)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174937

Date Collected: 03/20/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | JJB                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB5  
Sample Desc. : B5 (6-8)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174937 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | JJB                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Selva







...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB5  
 Sample Desc. : B5 (20-22)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174938 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| TOTSOLID   | Total Solids                      | 95     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS                  |
| PB-S       | Lead, soil                        | ND     | mg/kg   | 3.4             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM                  |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 11     | mg/kg   | 2.6             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ                  |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |                      |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 43     | mg/kg   | 3.1             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS                  |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |                      |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG                  |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | sec-Butylbenzene                  | 40     | ug/kg   | 26              |             |            |                 |               |                      |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |                      |



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 414-469-2436  
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 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB5  
 Sample Desc. : B5 (20-22)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174938 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | 51     | ug/kg | 26              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |





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Green Bay, WI 54302  
414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S85  
Sample Desc. : B5 (20-22)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174938 Date Reported : 03/28/1996

Report to: MORAINÉ ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORAINÉ ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB5  
 Sample Desc. : B5 (28-30)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174939 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| TOTSOLID   | Total Solids                      | 92     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS                  |
| PB-S       | Lead, soil                        | ND     | mg/kg   | 3.6             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM                  |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.7             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ                  |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |                      |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | ND     | mg/kg   | 3.4             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS                  |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |                      |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG                  |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | sec-Butylbenzene                  | 40     | ug/kg   | 27              |             |            |                 |               |                      |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |                      |



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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB5  
 Sample Desc. : B5 (28-30)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174939 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | 67     | ug/kg | 27              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S85  
Sample Desc. : B5 (28-30)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174939 Date Reported : 03/28/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/22/1996    | CJG                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*M. Silva*



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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB6  
 Sample Desc. : B6 (12-14)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174940 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 92     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 7.8    | mg/kg   | 3.5             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.7             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 32     | mg/kg   | 3.4             |             | 03/22/1996 | WDNR MOD DRO    | 03/23/1996    | PHS         |
|            | Soil spike                        | 93     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB6  
 Sample Desc. : B6 (12-14)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174940 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | 43     | ug/kg | 27              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |







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Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB6  
Sample Desc. : B6 (12-14)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174940 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*M. Silva*



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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB6  
 Sample Desc. : B6 (20-22)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174941 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 96     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 3.4    | mg/kg   | 3.4             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 96     | mg/kg   | 2.6             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 92     | mg/kg   | 5.9             |             | 03/22/1996 | WDNR MOD DRO    | 03/26/1996    | PHS         |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | 270    | ug/kg   | 26              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 310    | ug/kg   | 26              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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Green Bay, WI 54302  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB6  
Sample Desc. : B6 (20-22)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174941 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | 150    | ug/kg | 26              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | 540    | ug/kg | 26              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | 120    | ug/kg | 26              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB6  
 Sample Desc. : B6 (20-22)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174941 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | 70     | ug/kg | 26              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





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1795 Industrial Drive  
 Green Bay, WI 54302  
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 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB7  
 Sample Desc. : B7 (4-6)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174942

Date Collected: 03/20/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 94     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | ND     | mg/kg   | 3.5             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.7             |             | 03/22/1996 | WDNR MOD GRO    | 03/25/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 4.1    | mg/kg   | 3.3             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB7  
 Sample Desc. : B7 (4-6)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174942  
 Date Collected: 03/20/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/26/1996

Report to: MORAIN ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORAIN ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | 100    | ug/kg | 27              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB7  
Sample Desc. : B7 (4-6)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174942 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN               |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                   |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*M. Silva*





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 Green Bay, WI 54302  
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 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB7  
 Sample Desc. : B7 (14-16)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174943 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| TOTSOLID   | Total Solids                      | 94     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS                  |
| PB-S       | Lead, soil                        | ND     | mg/kg   | 3.5             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM                  |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 170    | mg/kg   | 13              |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ                  |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |                      |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 350    | mg/kg   | 12              |             | 03/22/1996 | WDNR MOD DRO    | 03/25/1996    | PHS                  |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |                      |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |                      |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | n-Butylbenzene                    | 74     | ug/kg   | 27              |             |            |                 |               |                      |
|            | sec-Butylbenzene                  | 80     | ug/kg   | 27              |             |            |                 |               |                      |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |                      |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |                      |







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Green Bay, WI 54302  
414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S87  
Sample Desc. : B7 (14-16)  
Sample Matrix : SOIL  
En Chem Proj# : 9603368  
En Chem Lab # : 174943  
Date Collected: 03/20/1996  
Date Received : 03/21/1996  
Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | 33     | ug/kg | 27              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | 32     | ug/kg | 27              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | 43     | ug/kg | 27              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | 270    | ug/kg | 27              |             |            |                 |               |                      |
|            | n-Propylbenzene           | 50     | ug/kg | 27              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB7  
Sample Desc. : B7 (14-16)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174943 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJH                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | 150    | ug/kg | 27              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | 51     | ug/kg | 27              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Salha





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 Green Bay, WI 54302  
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 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB7  
 Sample Desc. : B7 (22-24)  
 Sample Matrix : SOIL  
 En Chem Proj# : 9603368  
 En Chem Lab # : 174944

Date Collected: 03/20/1996  
 Date Received : 03/21/1996  
 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 90     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 7.8    | mg/kg   | 3.6             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.8             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | ND     | mg/kg   | 3.3             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 35     | ug/kg   | 28              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S87  
 Sample Desc. : 87 (22-24)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174944 Date Reported : 03/27/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB7  
Sample Desc. : 87 (22-24)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174944 Date Reported : 03/27/1996

Report to: MORAIN ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORAIN ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*M. Selva*





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB8  
 Sample Desc. : B8 (10-12)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174945 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 90     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 10.0   | mg/kg   | 3.7             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.8             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 13     | mg/kg   | 3.3             |             | 03/22/1996 | WDNR MOD DRO    | 03/26/1996    | PHS         |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: S88  
 Sample Desc. : B8 (10-12)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174945 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |                      |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S88  
Sample Desc. : B8 (10-12)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj#: 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174945 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJM                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva







...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB8  
 Sample Desc. : B8 (18-20)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174946 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 89     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | 5.2    | mg/kg   | 3.6             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.8             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 9.6    | mg/kg   | 3.5             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB8  
 Sample Desc. : B8 (18-20)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174946 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |





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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: SB8  
Sample Desc. : B8 (18-20)  
Sample Matrix : SOIL Date Collected: 03/20/1996  
En Chem Proj# : 9603368 Date Received : 03/21/1996  
En Chem Lab # : 174946 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN               |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,2,4-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | 1,3,5-Trimethylbenzene | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                   |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                   |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB8  
 Sample Desc. : B8 (22-24)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj#: 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174947 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 92     | percent |                 |             |            | EPA 160.3       | 03/22/1996    | PHS         |
| PB-S       | Lead, soil                        | ND     | mg/kg   | 3.5             | SW846 3050  | 03/25/1996 | SW846 7421      | 03/25/1996    | MWM         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | 30     | mg/kg   | 2.7             |             | 03/22/1996 | WDNR MOD GRO    | 03/24/1996    | BSJ         |
|            | Soil spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 108    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | 100    | mg/kg   | 3.7             |             | 03/22/1996 | WDNR MOD DRO    | 03/22/1996    | PHS         |
|            | Soil spike                        | 81     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 72     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | 73     | ug/kg   | 27              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | 76     | ug/kg   | 27              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |





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1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON-SAND & GRAVEL/ #0305  
 Your Sample ID: SB8  
 Sample Desc. : B8 (22-24)  
 Sample Matrix : SOIL Date Collected: 03/20/1996  
 En Chem Proj# : 9603368 Date Received : 03/21/1996  
 En Chem Lab # : 174947 Date Reported : 03/26/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dibromoethane         | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN         |
|            | Dibromomethane            | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | 130    | ug/kg | 27              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | 83     | ug/kg | 27              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | 66     | ug/kg | 27              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |





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414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON-SAND & GRAVEL/ #0305  
Your Sample ID: S88  
Sample Desc. : 88 (22-24)  
Sample Matrix : SOIL  
En Chem Proj# : 9603368  
En Chem Lab # : 174947  
Date Collected: 03/20/1996  
Date Received : 03/21/1996  
Date Reported : 03/26/1996

Report to: MORAIN ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORAIN ENVIRONMENTAL

| Analysis   | Parameter              | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,2,4-Trichlorobenzene | ND     | ug/kg | 25              | SW846 5030  | 03/22/1996 | SW846 8260      | 03/25/1996    | RJN                  |
|            | 1,1,1-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,1,2-Trichloroethane  | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene | 74     | ug/kg | 27              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene | 67     | ug/kg | 27              |             |            |                 |               |                      |
|            | Vinyl chloride         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p         | ND     | ug/kg | 25              |             |            |                 |               |                      |
|            | Xylene, o              | ND     | ug/kg | 25              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

M. Silva





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Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL / #0305  
En Chem Proj# : 9608168  
Date Reported : 08/14/1996

Report to: MORaine ENVIRONMENTAL

Thank you for using En Chem! Samples were analyzed according to strict EPA or Wisconsin DNR methodology. Any comments or problems associated with the receipt of or analysis are reported below:

The PQL for the VOC analysis is 60 ug/kg for those samples with a dilution factor of 50. Detection limits are not corrected for percent solids.

Sample no.193247: Fuel hump late in and beyond DRO window, with some baseline rise. Mainly diesel range peaks present.





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Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL / #0305  
 Your Sample ID: 1  
 Sample Desc. : MW3 (14-16')  
 Sample Matrix : SOIL Date Collected: 08/07/1996  
 En Chem Proj# : 9608168 Date Received : 08/08/1996  
 En Chem Lab # : 193246 Date Reported : 08/13/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                         | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|------------|-----------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| TOTSOLID   | Total Solids                      | 93     | percent |                 |             |            | SM2540G         | 08/09/1996    | PHS         |
| GRO-S      | Gasoline Range Organics(GRO)-Soil | ND     | mg/kg   | 2.7             |             | 08/09/1996 | WDNR MOD GRO    | 08/12/1996    | BSJ         |
|            | Soil spike                        | 106    | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 104    | % RECOV | 50              |             |            |                 |               |             |
| DRO-S      | Diesel Range Organics(DRO)-Soil   | ND     | mg/kg   | 3.6             |             | 08/09/1996 | WDNR MOD DRO    | 08/09/1996    | PHS         |
|            | Soil spike                        | 99     | % RECOV | 50              |             |            |                 |               |             |
|            | Soil spike duplicate              | 88     | % RECOV | 50              |             |            |                 |               |             |
| 8260+-S-ME | Benzene                           | ND     | ug/kg   | 25              | SW846 5030  | 08/09/1996 | SW846 8260      | 08/09/1996    | CJG         |
|            | Bromobenzene                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromochloromethane                | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromodichloromethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromoform                         | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Bromomethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | n-Butylbenzene                    | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | sec-Butylbenzene                  | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | tert-Butylbenzene                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Carbon tetrachloride              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorobenzene                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chlorodibromomethane              | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroethane                      | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloroform                        | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Chloromethane                     | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 2-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 4-Chlorotoluene                   | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromo-3-chloropropane       | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | 1,2-Dibromoethane                 | ND     | ug/kg   | 25              |             |            |                 |               |             |
|            | Dibromomethane                    | ND     | ug/kg   | 25              |             |            |                 |               |             |







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 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL / #0305  
 Your Sample ID: 1  
 Sample Desc. : MW3 (14-16')  
 Sample Matrix : SOIL Date Collected: 08/07/1996  
 En Chem Proj#: 9608168 Date Received : 08/08/1996  
 En Chem Lab # : 193246 Date Reported : 08/13/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analized By |
|------------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+-S-ME | 1,2-Dichlorobenzene       | ND     | ug/kg | 25              | SW846 5030  | 08/09/1996 | SW846 8260      | 08/09/1996    | CJG         |
|            | 1,3-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,4-Dichlorobenzene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Dichlorodifluoromethane   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloroethane        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloroethene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | cis-1,2-Dichloroethene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | trans-1,2-Dichloroethene  | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,3-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 2,2-Dichloropropane       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1-Dichloropropene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Di-isopropyl ether        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Ethyl Benzene             | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Hexachlorobutadiene       | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Isopropylbenzene          | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | p-Isopropyltoluene        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methylene chloride        | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Methyl-tert-butyl-ether   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Naphthalene               | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | n-Propylbenzene           | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,2,2-Tetrachloroethane | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Styrene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Tetrachloroethene         | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | Toluene                   | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,3-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,2,4-Trichlorobenzene    | ND     | ug/kg | 25              |             |            |                 |               |             |
|            | 1,1,1-Trichloroethane     | ND     | ug/kg | 25              |             |            |                 |               |             |





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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL / #0305  
Your Sample ID: 1  
Sample Desc. : MW3 (14-16')  
Sample Matrix : SOIL Date Collected: 08/07/1996  
En Chem Proj# : 9608168 Date Received : 08/08/1996  
En Chem Lab # : 193246 Date Reported : 08/13/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis   | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|------------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+-S-ME | 1,1,2-Trichloroethane     | ND     | ug/kg  | 25              | SW846 5030  | 08/09/1996 | SW846 8260      | 08/09/1996    | CJG                  |
|            | Trichloroethene           | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | Trichlorofluoromethane    | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | 1,2,3-Trichloropropane    | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | 1,2,4-Trimethylbenzene    | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | 1,3,5-Trimethylbenzene    | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | Vinyl chloride            | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | Xylenes, m + p            | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | Xylene, o                 | ND     | ug/kg  | 25              |             |            |                 |               |                      |
|            | Dibromofluoromethane (SS) | 104    | %Recov | 1               |             |            |                 |               |                      |
|            | Toluene-d8 (SS)           | 111    | %Recov | 1               |             |            |                 |               |                      |
|            | 4-Bromofluorobenzene (SS) | 97     | %Recov | 1               |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

    *J. Durancan*    





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FAX:414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL / #0305  
Your Sample ID: 2  
Sample Desc. : MW3 (COMPOSITE)  
Sample Matrix : SOIL Date Collected: 08/07/1996  
En Chem Proj# : 9608168 Date Received : 08/08/1996  
En Chem Lab # : 193247 Date Reported : 08/13/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                       | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|---------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| TOTSOLID | Total Solids                    | 94     | percent |                 |             |            | SM2540G         | 08/09/1996    | PHS                  |
| DRO-S    | Diesel Range Organics(DRO)-Soil | 120    | mg/kg   | 3.3             |             | 08/09/1996 | WDNR MOD DRO    | 08/12/1996    | PHS                  |
|          | Soil spike                      | 99 %   | RECOV   | 50              |             |            |                 |               |                      |
|          | Soil spike duplicate            | 88 %   | RECOV   | 50              |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*J.A. Duranseau*





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 Green Bay, WI 54302  
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Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL / #0305  
 Your Sample ID: 3  
 Sample Desc. : TRIP BLANK/ MEOH  
 Sample Matrix : METHANOL Date Collected: 08/07/1996  
 En Chem Proj# : 9608168 Date Received : 08/08/1996  
 En Chem Lab # : 193248 Date Reported : 08/14/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result | Units   | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analzyec By |
|----------|------------------------------------|--------|---------|-----------------|-------------|------------|-----------------|---------------|-------------|
| GRO      | Gasoline Range Organics(GRO)-Water | ND     | ug/l    | 2500            |             | 08/12/1996 | WDNR MOD GRO    | 08/13/1996    | PMS         |
|          | Blank spike                        | 108    | % RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 102    | % RECOV | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND     | ug/l    | 25              | SW846 5030  | 08/09/1996 | SW846 8260      | 08/13/1996    | RJN         |
|          | Bromobenzene                       | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Bromochloromethane                 | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Bromodichloromethane               | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Bromoform                          | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Bromomethane                       | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | n-Butylbenzene                     | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | sec-Butylbenzene                   | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Chlorobenzene                      | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Chloroethane                       | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Chloroform                         | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Chloromethane                      | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Dibromomethane                     | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,2-Dichlorobenzene                | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,3-Dichlorobenzene                | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene                | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | Dichlorodifluoromethane            | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,1-Dichloroethane                 | ND     | ug/l    | 25              |             |            |                 |               |             |
|          | 1,2-Dichloroethane                 | ND     | ug/l    | 25              |             |            |                 |               |             |





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Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL / #0305  
 Your Sample ID: 3  
 Sample Desc. : TRIP BLANK/ MEOH  
 Sample Matrix : METHANOL Date Collected: 08/07/1996  
 En Chem Proj# : 9608168 Date Received : 08/08/1996  
 En Chem Lab # : 193248 Date Reported : 08/14/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyst |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|---------|
| 8260+    | 1,1-Dichloroethene        | ND     | ug/l  | 25              | SW846 5030  | 08/09/1996 | SW846 8260      | 08/13/1996    | RJN     |
|          | cis-1,2-Dichloroethene    | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,1-Dichloropropene       | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Di-isopropyl ether        | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Ethyl Benzene             | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Hexachlorobutadiene       | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Isopropylbenzene          | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | p-Isopropyltoluene        | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Methylene chloride        | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Naphthalene               | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | n-Propylbenzene           | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Styrene                   | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Tetrachloroethene         | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Toluene                   | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,1,2-Trichloroethane     | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Trichloroethene           | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | Trichlorofluoromethane    | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,2,3-Trichloropropane    | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,2,4-Trimethylbenzene    | ND     | ug/l  | 25              |             |            |                 |               |         |
|          | 1,3,5-Trimethylbenzene    | ND     | ug/l  | 25              |             |            |                 |               |         |





...chemistry for the environment

1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL / #0305  
Your Sample ID: 3  
Sample Desc. : TRIP BLANK/ MEOH  
Sample Matrix : METHANOL Date Collected: 08/07/1996  
En Chem Proj# : 9608168 Date Received : 08/08/1996  
En Chem Lab # : 193248 Date Reported : 08/14/1996

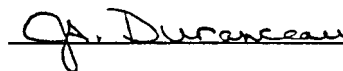
Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyst |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|---------|
| 8260+    | Vinyl chloride            | ND     | ug/l   | 25              | SW846 5030  | 08/09/1996 | SW846 8260      | 08/13/1996    | RJN     |
|          | Xylenes, m + p            | ND     | ug/l   | 25              |             |            |                 |               |         |
|          | Xylene, o                 | ND     | ug/l   | 25              |             |            |                 |               |         |
|          | Dibromofluoromethane (SS) | 92     | %Recov | 1               |             |            |                 |               |         |
|          | Toluene-d8 (SS)           | 96     | %Recov | 1               |             |            |                 |               |         |
|          | 4-Bromofluorobenzene (SS) | 92     | %Recov | 1               |             |            |                 |               |         |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:





**Facsimile Cover Sheet**

To: **Chris Haase**  
Company: **Moraine Environmental, Inc.**  
Phone: **414/377-9060**  
Fax: **414/377-9770**

From: **Allen Price**  
Company: **BioRenewal Technologies, Inc.**  
Phone: **608/ 276-8980**  
Fax: **608/ 273-6989**

NOTICE: This facsimile is intended only for the addressee shown below and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this transmission in error, please notify us immediately by telephone and return the original material to BioRenewal Technologies at the below address via U.S. Postal Service. Thank you for your cooperation.

Date: **April 16, 1996**  
Pages (incl cover): **5**

If there is a problem with this transmission, please call (608) 276-8980

**Comments:****FAXED**  
4-16-96

re: BioRenewal Job Code AJE

Dear Chris:

This report presents the results from Comparative Enumeration Assays and nutrient analyses performed on 3 soil samples we received on 3/21/96 in connection with the Johnson-Sand & Gravel site located in Waukesha WI (project number MEI 0305). The invoice and chain-of-custody for this project will accompany a confirmation copy sent via mail.

The analytical results requested are presented in the following sections:

- Site suitability for passive bioremediation in relation to suggested guidelines
- Microbial data summary
- Nutrient conditions
- Soil physical conditions

These samples were analyzed by BioRenewal using weathered gasoline:diesel fuel (1:1) as the sole carbon source for enumerating the "degrader" microbial populations. Samples were received on ice.

Please give me a call if you have any questions or wish to discuss these results further. We look forward to working with you in the future.

Sincerely,



Wm. Allen Price II  
Laboratory Services Manager

Enclosures: Analytical results  
Invoice  
Chain-of-custody

Site Information

|                |                              |                     |           |
|----------------|------------------------------|---------------------|-----------|
| Site Name      | Johnson Sand and Gravel      | Number samples      | 3         |
| Location       | Waukesha, WI                 | Sample Type         | soil      |
| Contaminant    | gasoline (50%), diesel (50%) |                     |           |
| Consultant     | Moraine Environmental, Inc.  | Date received       | 21-Mar-96 |
| Proj. Contact  | Chris Haase                  | Date of this Report | 16-Apr-96 |
| Project Ref ID | MEI 0305                     | BioRenewal Job Code | AJE       |

Section I - Summary of Bioremediation Data

Nutrient/physical factors are as suggested by Wisconsin DNR guidelines for site characterization requirements for natural biodegradation. Microbial factors are shown according to bio-engineering norms.

|                     | Soil microbial populations:<br><u>Exceeds norm for:</u> |        | Soil moist content: | %                     | pH      | % TON of         | C:N | C:P  |
|---------------------|---|--------|---------------------|-----------------------|---------|------------------|-----|------|
|                     | Passive   | Active | % of field capacity | Air-filled pore space |         | % organic matter |     |      |
| Suggested guideline | >1E+06  | >1E+03 | 25-85%              | >10%                  | 5.5-8.5 | >1.5%            | <40 | <120 |
| Note Ref.           | 1   | 2      | 3                   | 4                     | 5       | 6                | 7   | 8    |
| B2; 24-26ft         | x   | x      | NR                  | NR                    | x       | ✓                | x   | x    |
| B5; 22-24ft         | x   | x      | NR                  | NR                    | ✓       | ✓                | ✓   | x    |
| B7; 12-14ft         | x   | x      | NR                  | NR                    | ✓       | ✓                | x   | x    |

The nutrient/physical parameters summarized above, in the case of unsaturated zone soils, reflect suggested minimum Wis Dept of Nat Res "site characterization requirements for natural biodegradation projects" as presented on pp 10-11 in Interim Guidance for Natural Biodegradation as a Remedial Action Option Dated February 8, 1993. BioRenewal stress that these "suggested guidelines" are only intended to provide a working frame of reference for evaluation. Each site is unique and requires professional judgement in order to select an appropriate remedial design. We provide this information in recognition that our clients need to work within the guidelines suggested by the state. Further, we hope this will facilitate continued evolution of a working framework for evaluating sites as to the potential for bioremediation whether through site augmentation or natural attenuation.

Notes: Check indicates that sample meets guideline. Blank indicates no detect or data not available for that sample.

x indicates sample does not meet guideline.

- 1) Microbial population levels in soils generally accepted as potentially adequate to support passive biodegradation. These levels are based on bio-engineering norms and not WDNR guidelines.
- 2) Microbial population levels in soils generally accepted as minimum to serve as an "inoculum" for implementing active bioremediation strategies.
- 3) See page 10, WDNR as referenced above. The suggested optimum range is 50-80% (P. 6).
- 4) See page 8 and 10, WDNR. WDNR suggests a minimum air-filled porosity in soil of 10% is necessary for adequate oxygen diffusion in the soil gas to support biodegradation.
- 5) See pages 7 and 11, WDNR.
- 6) See pages 9 and 11, WDNR. Total Organic Nitrogen (calculated from TKN values minus ammonium nitrogen values) divided by organic matter.
- 7) See pages 9 and 11, WDNR.
- 8) See pages 9 and 11, WDNR.



**Section II - Microbial Data Summary**

All values in cfu/gm (DSW)

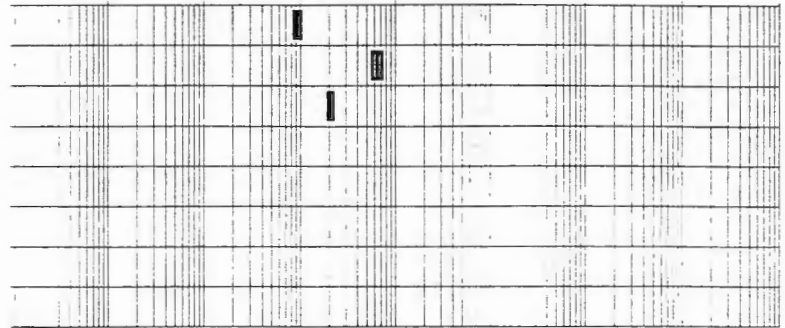
**Soil Samples**

**Total populations**

|             | Mean     | Low      | High     |
|-------------|----------|----------|----------|
| B2; 24-26ft | 9.32E+03 | 8.57E+03 | 1.01E+04 |
| B5; 22-24ft | 6.48E+04 | 5.73E+04 | 7.29E+04 |
| B7; 12-14ft | 2.08E+04 | 1.96E+04 | 2.22E+04 |

Low and High indicate 95% Confidence Range

1.00E+01 1.00E+02 1.00E+03 1.00E+04 1.00E+05 1.00E+06 1.00E+07 1.00E+08 1.00E+09



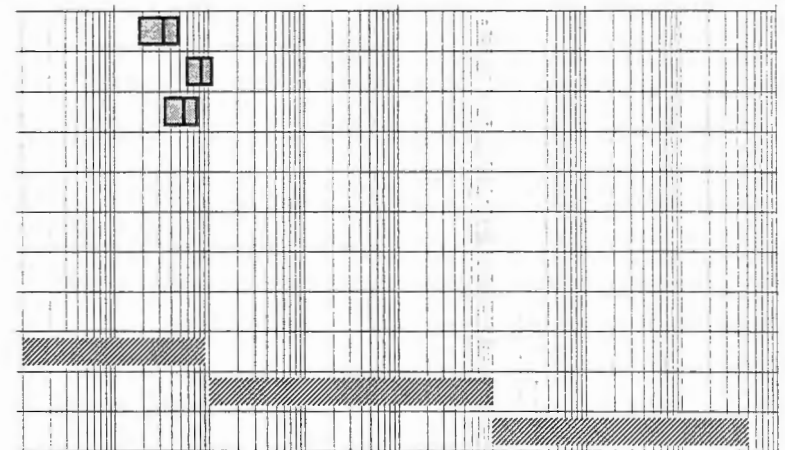
**Soil Samples**

**Degrader populations**

|             | Mean     | Low      | High     |
|-------------|----------|----------|----------|
| B2; 24-26ft | 3.10E+02 | 1.87E+02 | 4.84E+02 |
| B5; 22-24ft | 8.16E+02 | 5.95E+02 | 1.09E+03 |
| B7; 12-14ft | 5.22E+02 | 3.46E+02 | 7.59E+02 |

Low and High indicate 95% Confidence Range

1.00E+01 1.00E+02 1.00E+03 1.00E+04 1.00E+05 1.00E+06 1.00E+07 1.00E+08 1.00E+09



**Marginal inoculum**

**Inoculum levels**

**Active degradation levels**

Marginal inoculum = Degrader populations below 1.0E+03 are indicative of severe limitations and likely require major augmentation of site conditions to attain adequate cell mass to attain measurable biotransformation rates.

Inoculum levels = Degrader populations between 1.0E+03 and 1.0E+06 are amenable to site augmentation but generally are insufficient to attain adequate biotransformation without increased populations.

Active degradation levels = Degrader populations greater than 1.0E+06 are generally of sufficient magnitude to support measurable biotransformation. Additional site augmentation may still be required to attain desirable rates of transformation.

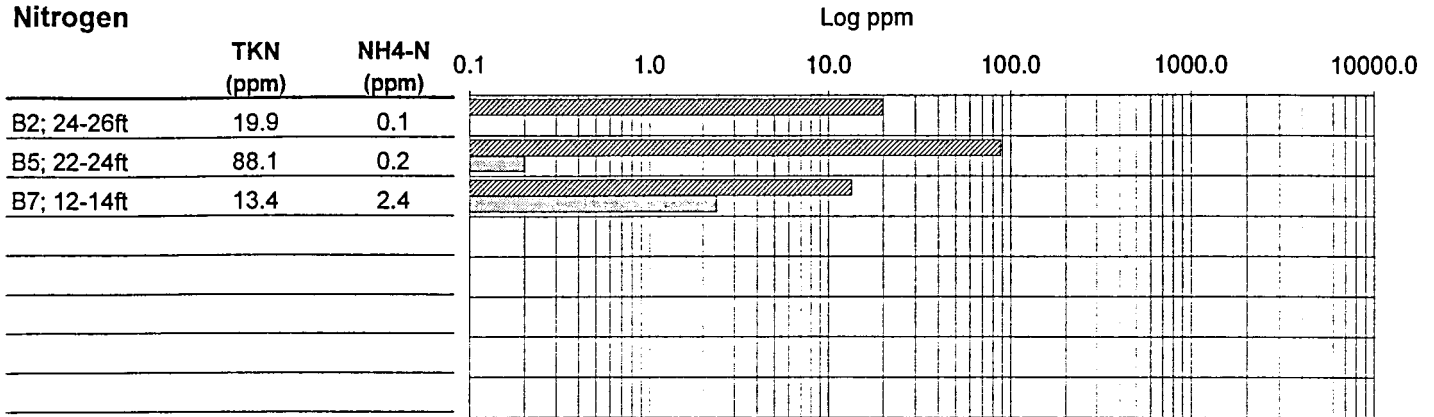
| Assay conditons | Carbon source                | % Carbon (v/v) | Incubation Temperature | Growth Conditions | Degrees of Freedom** |           |
|-----------------|------------------------------|----------------|------------------------|-------------------|----------------------|-----------|
|                 |                              |                |                        |                   | Totals               | Degraders |
| B2; 24-26ft     | gasoline (50%), diesel (50%) | 1.0            | 22                     | Aerobic           | 9                    | 4         |
| B5; 22-24ft     | gasoline (50%), diesel (50%) | 1.0            | 22                     | Aerobic           | 9                    | 4         |
| B7; 12-14ft     | gasoline (50%), diesel (50%) | 1.0            | 22                     | Aerobic           | 9                    | 4         |

\* cfu/gm (DSW) = colony forming units per gm of dry soil weight

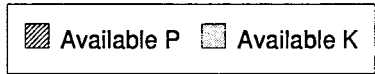
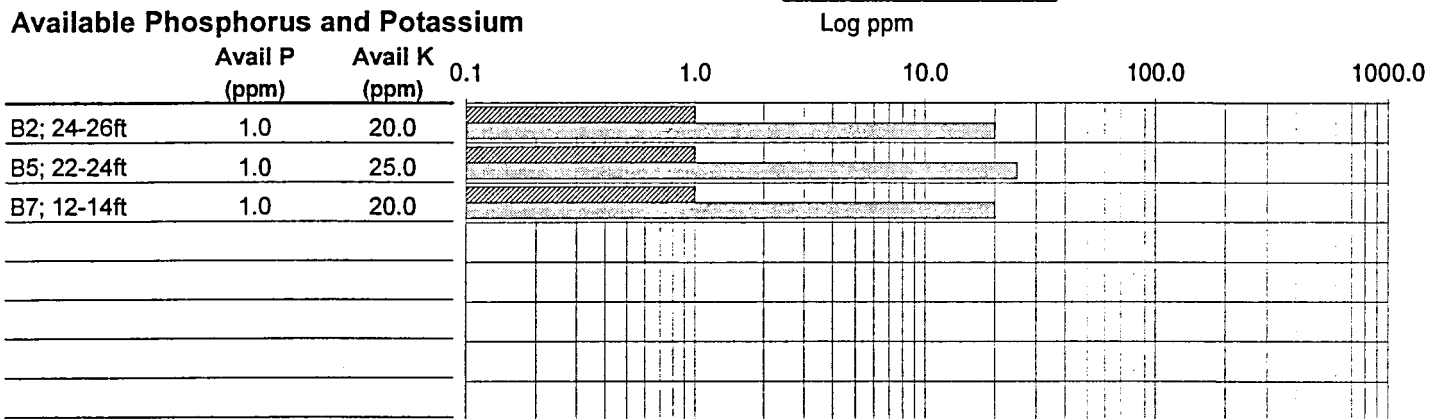
\*\* Degrees of freedom is number of replicates minus one. This parameter is used in calculation of 95% confidence intervals.

Section III - Nutrient Conditions

Nitrogen



Available Phosphorus and Potassium



Organic Matter and Related Analyses

| Guideline Published Thresholds* | C:N       | C:P |
|---------------------------------|-----------|-----|
| Wis Dept. Natural Resources     | Below: 40 | 120 |
| Nat'l Academy of Sciences       | Below: 6  | 30  |

|             | % Organic Matter | TOC**<br>ppm | Calculated Ratios |       | Soluble Salts<br>mhos x 10-5 | Cation Exc<br>Capacity<br>Mec/100g | pH  | SO4-S<br>ppm | NO3-N<br>ppm |
|-------------|------------------|--------------|-------------------|-------|------------------------------|------------------------------------|-----|--------------|--------------|
|             |                  |              | C:N               | C:P   |                              |                                    |     |              |              |
| B2; 24-26ft | 0.5%             | 1,950        | 98                | 1,950 | NR                           | NR                                 | 8.7 | NR           | NR           |
| B5; 22-24ft | 0.6%             | 2,340        | 27                | 2,340 | NR                           | NR                                 | 8.0 | NR           | NR           |
| B7; 12-14ft | 0.5%             | 1,950        | 177               | 1,950 | NR                           | NR                                 | 8.4 | NR           | NR           |

\* Sources: Natural Biodegradation as a Remedial Action Option - Interim Guidance, Wisconsin Dept of Nat Res. (1993) and In-situ Bioremediation: When Does it Work?, B. Rittman, Ed., National Academy of Sciences, 1993 p 117.

\*\* Estimated total organic carbon (expressed in ppm) calculated from % organic matter - See Methods.

n/a = Not applicable

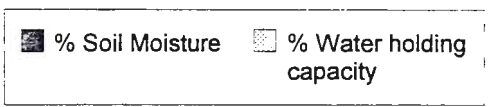
Note To determine C:N and C:P ratios, phosphorus is expressed as available phosphorus, total organic carbon (TOC) is calculated from percent organic matter and total organic nitrogen is calculated as total Kjeldahl nitrogen (TKN) minus ammonium nitrogen.

Section IV - Soil Physical Conditions

Soil Oxygen and Moisture Conditions

|             | % Air-filled<br>pore space | %<br>Moisture | %<br>Solids | %<br>Water<br>Holding<br>Capacity | Moisture<br>as % Water<br>Holding<br>Capacity | Bulk<br>Density<br>(g/cc) | 0.0% | 10.0% | 20.0% | 30.0% | 40.0% | 50.0% |
|-------------|----------------------------|---------------|-------------|-----------------------------------|---|---------------------------|------|-------|-------|-------|-------|-------|
| B2; 24-26ft | NR                         | 3.8%          | 96.2%       | NR                                | NR  | NR                        |      |       |       |       |       |       |
| B5; 22-24ft | NR                         | 8.9%          | 91.1%       | NR                                | NR  | NR                        |      |       |       |       |       |       |
| B7; 12-14ft | NR                         | 6.3%          | 93.7%       | NR                                | NR  | NR                        |      |       |       |       |       |       |
|             |                            |               |             |                                   |   |                           |      |       |       |       |       |       |
|             |                            |               |             |                                   |   |                           |      |       |       |       |       |       |
|             |                            |               |             |                                   |   |                           |      |       |       |       |       |       |
|             |                            |               |             |                                   |   |                           |      |       |       |       |       |       |

NR=not requested  
n/a=not applicable



Contact person Tom Sweet (MEI) Sampler Charles Amos  
 Project name Johnson Sand & Gravel Project # MEI# 0325  
 Project location NB W22590 JOHNSON DR. WATKINSHA, WI  
 (City) (state)

Site contaminant \* DIESEL & GASOLINE  
 (used to determine degrader microbial populations)

\* If available, a sample of free product is preferred for use as the carbon source for enumerating the degrader microbial populations. Free product included?  yes  No

| Requested analyses (✓)  |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|---|---|---------------------------------|-------------------------------|--------------------------------|-------------|----|--------------|---------------------|-----------------------------|---------------------------|-------|-------|
| Comparative Enumeration Assay<br><input checked="" type="checkbox"/> Aerobic, <input type="checkbox"/> Anaerobic (soil or gw) | Standard nutrient panel (soil or gw)<br>- incl. TKN, ammonium nitrogen, available P and K, pH, % OM (s), % solids (s) | Cation exchange capacity (soil) | Particle size analysis (soil) | % air-filled pore space (soil) | Intact core |    |              | Bulk density (soil) | Total minerals (soil or gw) | Heavy metals (soil or gw) | Other | Other |
|   |   |                                 |                               |                                | Soil        | Gw | Sample depth |                     |                             |                           |       |       |
| B5(22-24)   | 3/20/96 11:00A  | X                               | 22-24                         | 1                              | AJED01      | X  | X            |                     |                             |                           |       |       |
| B2(24-26)   | 3/20/96 12:30P  | X                               | 24-26                         | 1                              | AJED02      | X  | X            |                     |                             |                           |       |       |
| B7(12-14)   | 3/20/96 1:00P   | X                               | 12-14                         | 1                              | AJED03      | X  | X            |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |
|   |   |                                 |                               |                                |             |    |              |                     |                             |                           |       |       |

Relinquished by: [Signature] Date/time: 3/20/96 - 6:00P Comments: COLLECTED IMMEDIATELY FROM SPLIT SPAD (JUST ABOVE WATER) TABLE  
 Received by: [Signature] Date/time: 120 REG HSH 3.25" Sample condition upon arrival:



**BioRenewal**  
 Technologies, Inc.  
 The Faraday Center  
 2800 S. Fish Hatchery Rd.  
 Madison, WI 53711  
 (608) 276-8980  
 Fax (608) 273-6989

Send results to: (Charles)  
 Name MORNING ENVIRONMENTAL, INC.  
 Company MEI  
 Address 1234 12TH AVE  
 City GRANSON State WI Zip 53024  
 Phone 414377 9060 Fax 414377 9770

Send invoice to:  Same as results  
 Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone \_\_\_\_\_ Fax \_\_\_\_\_

**APPENDIX H**

**GROUNDWATER ANALYTICAL  
LABORATORY DATA**



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1795 Industrial Drive  
Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
En Chem Proj# : 9608509  
Date Reported : 09/04/1996

Report to: MORAINÉ ENVIRONMENTAL

Thank you for using En Chem! Samples were analyzed according to strict EPA or Wisconsin DNR methodology. Any comments or problems associated with the receipt of or analysis are reported below:

The trip blank was non En Chem in origin.

Sample no. 195173: GRO chromatogram had late eluting peaks outside of GRO window. This is indicative of DRO or heavier fuels or extremely weathered gas.

Front peaks outside of DRO window, indicating lighter fuels are present. Mainly diesel range peaks present. DRO sample had final volume of 3.0 mls.

Elevated detection limits reported for VOC analysis due to the presence of heavy fuel.

Sample nos. 195176-195177: Fuel hump late in and beyond DRO window, with some baseline rise.





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 1  
 Sample Desc. : MW-1  
 Sample Matrix : WATER  
 En Chem Proj#: 9608509  
 En Chem Lab # : 195173  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result  | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|------------------------------------|---------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| M-PB-W-D | Lead, dissolved                    | 2.6     | ug/l  | 2.0             |             |            | SW846 7421      | 09/04/1996    | SAB         |
| GRO      | Gasoline Range Organics(GRO)-Water | 2300    | ug/l  | 100             |             | 08/27/1996 | WDNR MOD GRO    | 08/27/1996    | CAR2        |
|          | Blank spike                        | 107 %   | RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 108 %   | RECOV | 50              |             |            |                 |               |             |
| DRO      | Diesel Range Organics(DRO)-Water   | 1300000 | ug/l  | 60000           |             | 08/27/1996 | WDNR MOD DRO    | 08/29/1996    | PHS         |
|          | Blank spike                        | 100 %   | RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 99 %    | RECOV | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND      | ug/l  | 3.0             | SW846 5030  | 08/29/1996 | SW846 8260      | 08/29/1996    | HW          |
|          | Bromobenzene                       | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Bromochloromethane                 | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Bromodichloromethane               | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Bromoform                          | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Bromomethane                       | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | n-Butylbenzene                     | 28      | ug/l  | 5.0             |             |            |                 |               |             |
|          | sec-Butylbenzene                   | 37      | ug/l  | 5.0             |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Chlorobenzene                      | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Chloroethane                       | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Chloroform                         | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Chloromethane                      | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND      | ug/l  | 5.0             |             |            |                 |               |             |
|          | Dibromomethane                     | ND      | ug/l  | 5.0             |             |            |                 |               |             |





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 1  
 Sample Desc. : MW-1  
 Sample Matrix : WATER Date Collected: 08/23/1996  
 En Chem Proj# : 9608509 Date Received : 08/26/1996  
 En Chem Lab # : 195173 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | 1,2-Dichlorobenzene       | ND     | ug/l  | 5.0             | SW846 5030  | 08/29/1996 | SW846 8260      | 08/29/1996    | HW          |
|          | 1,3-Dichlorobenzene       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Dichlorodifluoromethane   | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethane        | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,2-Dichloroethane        | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethene        | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | cis-1,2-Dichloroethene    | 11     | ug/l  | 5.0             |             |            |                 |               |             |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,1-Dichloropropene       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Di-isopropyl ether        | 50     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Ethyl Benzene             | 36     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Hexachlorobutadiene       | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Isopropylbenzene          | 29     | ug/l  | 5.0             |             |            |                 |               |             |
|          | p-Isopropyltoluene        | 85     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Methylene chloride        | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Naphthalene               | 97     | ug/l  | 5.0             |             |            |                 |               |             |
|          | n-Propylbenzene           | 18     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Styrene                   | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | Tetrachloroethene         | 8.5    | ug/l  | 5.0             |             |            |                 |               |             |
|          | Toluene                   | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 5.0             |             |            |                 |               |             |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 5.0             |             |            |                 |               |             |







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Green Bay, WI 54302  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: 1  
Sample Desc. : MW-1  
Sample Matrix : WATER  
En Chem Proj# : 9608509  
En Chem Lab # : 195173  
Date Collected: 08/23/1996  
Date Received : 08/26/1996  
Date Reported : 09/04/1996

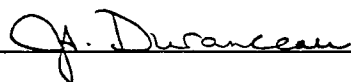
Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+    | 1,1,2-Trichloroethane     | ND     | ug/l   | 5.0             | SW846 5030  | 08/29/1996 | SW846 8260      | 08/29/1996    | HW                   |
|          | Trichloroethene           | ND     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | Trichlorofluoromethane    | ND     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | 1,2,3-Trichloropropane    | ND     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | 1,2,4-Trimethylbenzene    | 27     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | 1,3,5-Trimethylbenzene    | 43     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | Vinyl chloride            | ND     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | Xylenes, m + p            | ND     | ug/l   | 5.0             |             |            |                 |               |                      |
|          | Xylene, o                 | 8.7    | ug/l   | 5.0             |             |            |                 |               |                      |
|          | Dibromofluoromethane (SS) | 106    | %Recov | 1               |             |            |                 |               |                      |
|          | Toluene-d8 (SS)           | 105    | %Recov | 1               |             |            |                 |               |                      |
|          | 4-Bromofluorobenzene (SS) | 105    | %Recov | 1               |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:







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Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 2  
 Sample Desc. : MW-2  
 Sample Matrix : WATER  
 En Chem Proj#: 9608509  
 En Chem Lab # : 195174  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result      | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|------------------------------------|-------------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| M-PB-W-D | Lead, dissolved                    | ND          | ug/l  | 2.0             |             |            | SW846 7421      | 09/04/1996    | SAB         |
| GRO      | Gasoline Range Organics(GRO)-Water | ND          | ug/l  | 50              |             | 08/27/1996 | WDNR MOD GRO    | 08/27/1996    | CAR2        |
|          | Blank spike                        | 107 % RECOV |       | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 108 % RECOV |       | 50              |             |            |                 |               |             |
| DRO      | Diesel Range Organics(DRO)-Water   | 130         | ug/l  | 100             |             | 08/27/1996 | WDNR MOD DRO    | 08/27/1996    | PHS         |
|          | Blank spike                        | 100 % RECOV |       | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 99 % RECOV  |       | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND          | ug/l  | 0.6             | SW846 5030  | 08/29/1996 | SW846 8260      | 08/29/1996    | HW          |
|          | Bromobenzene                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromochloromethane                 | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromodichloromethane               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromoform                          | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromomethane                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Butylbenzene                     | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | sec-Butylbenzene                   | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorobenzene                      | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroethane                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroform                         | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloromethane                      | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dibromomethane                     | ND          | ug/l  | 1.0             |             |            |                 |               |             |





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 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 2  
 Sample Desc. : MW-2  
 Sample Matrix : WATER  
 En Chem Proj# : 9608509  
 En Chem Lab # : 195174  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzec By |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | 1,2-Dichlorobenzene       | ND     | ug/l  | 1.0             | SW846 5030  | 08/29/1996 | SW846 8260      | 08/29/1996    | HW          |
|          | 1,3-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dichlorodifluoromethane   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | cis-1,2-Dichloroethene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloropropene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Di-isopropyl ether        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Ethyl Benzene             | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Hexachlorobutadiene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Isopropylbenzene          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | p-Isopropyltoluene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methylene chloride        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Naphthalene               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Propylbenzene           | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Styrene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Tetrachloroethene         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Toluene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 1.0             |             |            |                 |               |             |





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 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 2  
 Sample Desc. : MW-2  
 Sample Matrix : WATER  
 En Chem Proj# : 9608509  
 En Chem Lab # : 195174  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+    | 1,1,2-Trichloroethane     | ND     | ug/l   | 1.0             | SW846 5030  | 08/29/1996 | SW846 8260      | 08/29/1996    | HW                   |
|          | Trichloroethene           | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Trichlorofluoromethane    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,2,3-Trichloropropane    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,2,4-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,3,5-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Vinyl chloride            | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Xylenes, m + p            | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Xylene, o                 | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Dibromofluoromethane (SS) | 106    | %Recov | 1               |             |            |                 |               |                      |
|          | Toluene-d8 (SS)           | 105    | %Recov | 1               |             |            |                 |               |                      |
|          | 4-Bromofluorobenzene (SS) | 104    | %Recov | 1               |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

*J. Dwan*





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 Green Bay, WI 54302  
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 FAX:414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 3  
 Sample Desc. : MW-3  
 Sample Matrix : WATER  
 En Chem Proj# : 9608509  
 En Chem Lab # : 195175  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result      | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|------------------------------------|-------------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| M-PB-W-D | Lead, dissolved                    | ND          | ug/l  | 2.0             |             |            | SW846 7421      | 09/04/1996    | SAB         |
| GRO      | Gasoline Range Organics(GRO)-Water | ND          | ug/l  | 50              |             | 08/27/1996 | WDR MOD GRO     | 08/27/1996    | CAR2        |
|          | Blank spike                        | 107 % RECOV |       | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 108 % RECOV |       | 50              |             |            |                 |               |             |
| DRO      | Diesel Range Organics(DRO)-Water   | ND          | ug/l  | 100             |             | 08/27/1996 | WDR MOD DRO     | 08/27/1996    | PHS         |
|          | Blank spike                        | 100 % RECOV |       | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 99 % RECOV  |       | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND          | ug/l  | 0.6             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | Bromobenzene                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromochloromethane                 | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromodichloromethane               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromoform                          | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromomethane                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Butylbenzene                     | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | sec-Butylbenzene                   | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorobenzene                      | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroethane                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroform                         | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloromethane                      | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dibromomethane                     | ND          | ug/l  | 1.0             |             |            |                 |               |             |





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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: 3  
Sample Desc. : MW-3  
Sample Matrix : WATER Date Collected: 08/23/1996  
En Chem Proj#: 9608509 Date Received : 08/26/1996  
En Chem Lab # : 195175 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | 1,2-Dichlorobenzene       | ND     | ug/l  | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | 1,3-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dichlorodifluoromethane   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | cis-1,2-Dichloroethene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloropropene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Di-isopropyl ether        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Ethyl Benzene             | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Hexachlorobutadiene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Isopropylbenzene          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | p-Isopropyltoluene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methylene chloride        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Naphthalene               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Propylbenzene           | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Styrene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Tetrachloroethene         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Toluene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 1.0             |             |            |                 |               |             |





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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: 3  
Sample Desc. : MW-3  
Sample Matrix : WATER Date Collected: 08/23/1996  
En Chem Proj# : 9608509 Date Received : 08/26/1996  
En Chem Lab # : 195175 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis | Analyzed By |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|----------|-------------|
| 8260+    | 1,1,2-Trichloroethane     | ND     | ug/l   | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    |          | HW          |
|          | Trichloroethene           | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | Trichlorofluoromethane    | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | 1,2,3-Trichloropropane    | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | 1,2,4-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | 1,3,5-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | Vinyl chloride            | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | Xylenes, m + p            | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | Xylene, o                 | ND     | ug/l   | 1.0             |             |            |                 |               |          |             |
|          | Dibromofluoromethane (SS) | 105    | %Recov | 1               |             |            |                 |               |          |             |
|          | Toluene-d8 (SS)           | 105    | %Recov | 1               |             |            |                 |               |          |             |
|          | 4-Bromofluorobenzene (SS) | 104    | %Recov | 1               |             |            |                 |               |          |             |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:





...chemistry for the environment

1795 Industrial Drive  
 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 4  
 Sample Desc. : MW-4  
 Sample Matrix : WATER  
 En Chem Proj# : 9608509  
 En Chem Lab # : 195176

Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|------------------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| M-PB-W-D | Lead, dissolved                    | 3.9    | ug/l  | 2.0             |             |            | SW846 7421      | 09/04/1996    | SAB         |
| GRO      | Gasoline Range Organics(GRO)-Water | ND     | ug/l  | 50              |             | 08/27/1996 | WDNR MOD GRO    | 08/27/1996    | CAR2        |
|          | Blank spike                        | 107 %  | RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 108 %  | RECOV | 50              |             |            |                 |               |             |
| DRO      | Diesel Range Organics(DRO)-Water   | 140    | ug/l  | 100             |             | 08/27/1996 | WDNR MOD DRO    | 08/27/1996    | PHS         |
|          | Blank spike                        | 100 %  | RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 99 %   | RECOV | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND     | ug/l  | 0.6             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | Bromobenzene                       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromochloromethane                 | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromodichloromethane               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromoform                          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromomethane                       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Butylbenzene                     | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | sec-Butylbenzene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorobenzene                      | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroethane                       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroform                         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloromethane                      | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dibromomethane                     | ND     | ug/l  | 1.0             |             |            |                 |               |             |







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414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: 4  
Sample Desc. : MW-4  
Sample Matrix : WATER Date Collected: 08/23/1996  
En Chem Proj# : 9608509 Date Received : 08/26/1996  
En Chem Lab # : 195176 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | 1,2-Dichlorobenzene       | ND     | ug/l  | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | 1,3-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dichlorodifluoromethane   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | cis-1,2-Dichloroethene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Di-isopropyl ether        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Ethyl Benzene             | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Hexachlorobutadiene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Isopropylbenzene          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | p-Isopropyltoluene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methylene chloride        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Naphthalene               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Propylbenzene           | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Styrene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Tetrachloroethene         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Toluene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 1.0             |             |            |                 |               |             |





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414-469-2436  
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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: 4  
Sample Desc. : MW-4  
Sample Matrix : WATER Date Collected: 08/23/1996  
En Chem Proj#: 9608509 Date Received : 08/26/1996  
En Chem Lab # : 195176 Date Reported : 09/04/1996

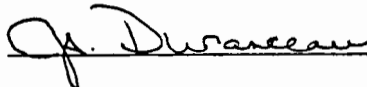
Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+    | 1,1,2-Trichloroethane     | ND     | ug/l   | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW                   |
|          | Trichloroethene           | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Trichlorofluoromethane    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,2,3-Trichloropropane    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,2,4-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,3,5-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Vinyl chloride            | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Xylenes, m + p            | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Xylene, o                 | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Dibromofluoromethane (SS) | 105    | %Recov | 1               |             |            |                 |               |                      |
|          | Toluene-d8 (SS)           | 106    | %Recov | 1               |             |            |                 |               |                      |
|          | 4-Bromofluorobenzene (SS) | 101    | %Recov | 1               |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

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Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 5  
 Sample Desc. : MW-5  
 Sample Matrix : WATER  
 En Chem Proj# : 9608509  
 En Chem Lab # : 195177  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzec By |
|----------|------------------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| M-PB-W-D | Lead, dissolved                    | ND     | ug/l  | 2.0             |             |            | SW846 7421      | 09/04/1996    | SAB         |
| GRO      | Gasoline Range Organics(GRO)-Water | ND     | ug/l  | 50              |             | 08/27/1996 | WDNR MOD GRO    | 08/27/1996    | CAR2        |
|          | Blank spike                        | 107 %  | RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 108 %  | RECOV | 50              |             |            |                 |               |             |
| DRO      | Diesel Range Organics(DRO)-Water   | 150    | ug/l  | 100             |             | 08/27/1996 | WDNR MOD DRO    | 08/27/1996    | PHS         |
|          | Blank spike                        | 100 %  | RECOV | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 99 %   | RECOV | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND     | ug/l  | 0.6             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | Bromobenzene                       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromochloromethane                 | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromodichloromethane               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromoform                          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromomethane                       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Butylbenzene                     | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | sec-Butylbenzene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorobenzene                      | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroethane                       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroform                         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloromethane                      | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dibromomethane                     | ND     | ug/l  | 1.0             |             |            |                 |               |             |





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: 5  
 Sample Desc. : MW-5  
 Sample Matrix : WATER  
 En Chem Proj# : 9608509  
 En Chem Lab # : 195177  
 Date Collected: 08/23/1996  
 Date Received : 08/26/1996  
 Date Reported : 09/04/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzec By |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | 1,2-Dichlorobenzene       | ND     | ug/l  | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | 1,3-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dichlorodifluoromethane   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloroethane        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | cis-1,2-Dichloroethene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloropropene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Di-isopropyl ether        | 4.4    | ug/l  | 1.0             |             |            |                 |               |             |
|          | Ethyl Benzene             | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Hexachlorobutadiene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Isopropylbenzene          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | p-Isopropyltoluene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methylene chloride        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Naphthalene               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Propylbenzene           | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Styrene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Tetrachloroethene         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Toluene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 1.0             |             |            |                 |               |             |





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Green Bay, WI 54302  
414-469-2436  
800-7-ENCHEM  
FAX:414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: 5  
Sample Desc. : MW-5  
Sample Matrix : WATER  
En Chem Proj# : 9608509  
En Chem Lab # : 195177  
Date Collected: 08/23/1996  
Date Received : 08/26/1996  
Date Reported : 09/04/1996

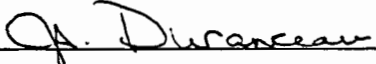
Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysis Analyzed By |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|----------------------|
| 8260+    | 1,1,2-Trichloroethane     | ND     | ug/l   | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW                   |
|          | Trichloroethene           | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Trichlorofluoromethane    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,2,3-Trichloropropane    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,2,4-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | 1,3,5-Trimethylbenzene    | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Vinyl chloride            | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Xylenes, m + p            | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Xylene, o                 | ND     | ug/l   | 1.0             |             |            |                 |               |                      |
|          | Dibromofluoromethane (SS) | 106    | %Recov | 1               |             |            |                 |               |                      |
|          | Toluene-d8 (SS)           | 105    | %Recov | 1               |             |            |                 |               |                      |
|          | 4-Bromofluorobenzene (SS) | 104    | %Recov | 1               |             |            |                 |               |                      |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:

  
\_\_\_\_\_





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 Green Bay, WI 54302  
 414-469-2436  
 800-7-ENCHEM  
 FAX: 414-469-8827

Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL/ #0305  
 Your Sample ID: TB  
 Sample Desc. : TRIP BLANK  
 Sample Matrix : WATER Date Collected: 08/23/1996  
 En Chem Proj# : 9608509 Date Received : 08/26/1996  
 En Chem Lab # : 195178 Date Reported : 08/29/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                          | Result      | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzec By |
|----------|------------------------------------|-------------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| GRO      | Gasoline Range Organics(GRO)-Water | ND          | ug/l  | 50              |             | 08/27/1996 | WDNR MOD GRO    | 08/27/1996    | CAR2        |
|          | Blank spike                        | 107 % RECOV |       | 50              |             |            |                 |               |             |
|          | Blank spike duplicate              | 108 % RECOV |       | 50              |             |            |                 |               |             |
| 8260+    | Benzene                            | ND          | ug/l  | 0.6             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | Bromobenzene                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromochloromethane                 | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromodichloromethane               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromoform                          | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Bromomethane                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Butylbenzene                     | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | sec-Butylbenzene                   | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | tert-Butylbenzene                  | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Carbon tetrachloride               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorobenzene                      | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chlorodibromomethane               | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroethane                       | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloroform                         | 1.4         | ug/l  | 1.0             |             |            |                 |               |             |
|          | Chloromethane                      | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2-Chlorotoluene                    | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 4-Chlorotoluene                    | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromo-3-chloropropane        | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dibromoethane                  | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dibromomethane                     | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichlorobenzene                | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3-Dichlorobenzene                | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,4-Dichlorobenzene                | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | Dichlorodifluoromethane            | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloroethane                 | ND          | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloroethane                 | ND          | ug/l  | 1.0             |             |            |                 |               |             |





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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: TB  
Sample Desc. : TRIP BLANK  
Sample Matrix : WATER Date Collected: 08/23/1996  
En Chem Proj# : 9608509 Date Received : 08/26/1996  
En Chem Lab # : 195178 Date Reported : 08/29/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzec By |
|----------|---------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | 1,1-Dichloroethene        | ND     | ug/l  | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | cis-1,2-Dichloroethene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | trans-1,2-Dichloroethene  | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 2,2-Dichloropropane       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1-Dichloropropene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Di-isopropyl ether        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Ethyl Benzene             | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Hexachlorobutadiene       | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Isopropylbenzene          | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | p-Isopropyltoluene        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methylene chloride        | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Methyl-tert-butyl-ether   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Naphthalene               | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | n-Propylbenzene           | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,2,2-Tetrachloroethane | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Styrene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Tetrachloroethene         | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Toluene                   | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,3-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,4-Trichlorobenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,1-Trichloroethane     | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,1,2-Trichloroethane     | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Trichloroethene           | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | Trichlorofluoromethane    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,3-Trichloropropane    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,2,4-Trimethylbenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |
|          | 1,3,5-Trimethylbenzene    | ND     | ug/l  | 1.0             |             |            |                 |               |             |





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FAX: 414-469-8827

Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL/ #0305  
Your Sample ID: TB  
Sample Desc. : TRIP BLANK  
Sample Matrix : WATER Date Collected: 08/23/1996  
En Chem Proj# : 9608509 Date Received : 08/26/1996  
En Chem Lab # : 195178 Date Reported : 08/29/1996

Report to: MORaine ENVIRONMENTAL  
1234 12TH AVENUE  
GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                 | Result | Units  | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analysed By |
|----------|---------------------------|--------|--------|-----------------|-------------|------------|-----------------|---------------|-------------|
| 8260+    | Vinyl chloride            | ND     | ug/l   | 1.0             | SW846 5030  | 08/28/1996 | SW846 8260      | 08/28/1996    | HW          |
|          | Xylenes, m + p            | ND     | ug/l   | 1.0             |             |            |                 |               |             |
|          | Xylene, o                 | ND     | ug/l   | 1.0             |             |            |                 |               |             |
|          | Dibromofluoromethane (SS) | 105    | %Recov | 1               |             |            |                 |               |             |
|          | Toluene-d8 (SS)           | 106    | %Recov | 1               |             |            |                 |               |             |
|          | 4-Bromofluorobenzene (SS) | 104    | %Recov | 1               |             |            |                 |               |             |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:







...chemistry for the environment

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Lab Certification No. 405132750  
Location : JOHNSON SAND & GRAVEL / #0305  
En Chem Proj# : 9609124  
Date Reported : 09/12/1996

Report to: MORAINÉ ENVIRONMENTAL

Thank you for using En Chem! Samples were analyzed according to strict EPA or Wisconsin DNR methodology. Any comments or problems associated with the receipt of or analysis are reported below:

Sample no. 196855: PAH surrogate recovery not available due to high dilution.





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Lab Certification No. 405132750  
 Location : JOHNSON SAND & GRAVEL / #0305  
 Your Sample ID: 1  
 Sample Desc. : MW-1  
 Sample Matrix : WATER  
 En Chem Proj# : 9609124  
 En Chem Lab # : 196855  
 Date Collected: 09/06/1996  
 Date Received : 09/09/1996  
 Date Reported : 09/12/1996

Report to: MORaine ENVIRONMENTAL  
 1234 12TH AVENUE  
 GRAFTON, WI 53024-1924

Bill to: MORaine ENVIRONMENTAL

| Analysis | Parameter                    | Result | Units | Detection Limit | Prep Method | Prep Date  | Analysis Method | Analysis Date | Analyzed By |
|----------|------------------------------|--------|-------|-----------------|-------------|------------|-----------------|---------------|-------------|
| PAH      | Acenaphthene                 | 530    | ug/L  | 500             | SW846 3510  | 09/10/1996 | SW846 8310      | 09/12/1996    | MAR         |
|          | Acenaphthylene               | ND     | ug/L  | 1000            |             |            |                 |               |             |
|          | Anthracene                   | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | Benzo (a) anthracene         | ND     | ug/L  | 250             |             |            |                 |               |             |
|          | Benzo (a) pyrene             | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | Benzo (b) fluoranthene       | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | Benzo (ghi) perylene         | ND     | ug/L  | 300             |             |            |                 |               |             |
|          | Benzo (k) fluoranthene       | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | Chrysene                     | ND     | ug/L  | 250             |             |            |                 |               |             |
|          | Dibenzo (a,h) anthracene     | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | Fluoranthene                 | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | Fluorene                     | 1000   | ug/L  | 1000            |             |            |                 |               |             |
|          | Indeno (1,2,3-cd) pyrene     | ND     | ug/L  | 200             |             |            |                 |               |             |
|          | 1-Methylnaphthalene          | 6900   | ug/L  | 5000            |             |            |                 |               |             |
|          | 2-Methylnaphthalene          | 7500   | ug/L  | 5000            |             |            |                 |               |             |
|          | Naphthalene                  | 610    | ug/L  | 500             |             |            |                 |               |             |
|          | Phenanthrene                 | 2300   | ug/L  | 1000            |             |            |                 |               |             |
|          | Pyrene                       | ND     | ug/L  | 1000            |             |            |                 |               |             |
|          | 9,10-Diphenylanthracene (SS) | NA     |       |                 |             |            |                 |               |             |

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

These results have been reviewed and their authenticity verified by:





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

WI DNR LAB ID : 40513270

Client: MORaine ENVIRONMENTAL INC

Report Date : 9/9/97

| Sample No. | Field ID   | Collection Date | Sample No. | Field ID | Collection Date |
|------------|------------|-----------------|------------|----------|-----------------|
| 872276-001 | MW-1       | 8/29/97         |            |          |                 |
| 872276-002 | MW-2       | 8/29/97         |            |          |                 |
| 872276-003 | MW-3       | 8/29/97         |            |          |                 |
| 872276-004 | MW-4       | 8/29/97         |            |          |                 |
| 872276-005 | MW-5       | 8/29/97         |            |          |                 |
| 872276-006 | TRIP BLANK | 8/29/97         |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

J. Duranceau  
Approval Signature

9/9/97  
Date



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---

| Lab#:      | TestGroupID: | Comment:   |
|------------|--------------|--|
| 872276-001 | PAHLC-W      | Surrogate recoveries not available due to high dilution of sample.   |
|            | PAHLC-W      | Hump in the chromatogram; elevated detection limits.   |
|            | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline. GRO value not in the upper half of the curve. Insufficient vials for reanalysis. Free product present in the sample. |
|            | 8260+-W      | Elevated detection limit due to oily sample with hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.   |
| 872276-005 | DRO-W        | Early peaks present outside of window of analysis.   |
| 872276-006 | 8260+-W      | Methylene chloride is present in the laboratory environment. Detects should be considered suspect.   |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-1

Lab Sample Number : 872276-001

WI DNR LAB ID : 40513270

Client : MORAIN ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO Prep Date: 9/3/97 Analyst: NJS

| Analyte               | Result   | LOD | LOQ | EQL    | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|----------|-----|-----|--------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 22000000 |     |     | 800000 | ug/l   |      | 9/3/97        | WI MOD DRO      |
| Blank spike           | 93       |     |     | 50     | %Recov |      | 9/3/97        | WI MOD DRO      |
| Blank spike duplicate | 91       |     |     | 50     | %Recov |      | 9/3/97        | WI MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030 Prep Date: 9/4/97 Analyst: HW

| Analyte                     | Result | LOD | LOQ | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|-----|-----|-----|-------|------|---------------|-----------------|
| Benzene                     | < 4.1  | 4.1 | 13  |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Bromobenzene                | < 2.9  | 2.9 | 9.2 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Bromochloromethane          | < 2.9  | 2.9 | 9.2 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Bromodichloromethane        | < 1.8  | 1.8 | 5.7 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Bromoform                   | < 3.1  | 3.1 | 9.9 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Bromomethane                | < 3.0  | 3.0 | 9.6 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| s-Butylbenzene              | 36     | 2.3 | 7.3 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| t-Butylbenzene              | < 2.4  | 2.4 | 7.6 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| n-Butylbenzene              | 33     | 3.1 | 9.9 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Carbon tetrachloride        | < 2.3  | 2.3 | 7.3 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Chloroform                  | < 2.5  | 2.5 | 8.0 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Chlorobenzene               | < 2.7  | 2.7 | 8.6 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Chlorodibromomethane        | < 2.3  | 2.3 | 7.3 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Chloroethane                | < 2.5  | 2.5 | 8.0 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| Chloromethane               | < 1.5  | 1.5 | 4.8 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| 2-Chlorotoluene             | < 2.7  | 2.7 | 8.6 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| 4-Chlorotoluene             | < 3.0  | 3.0 | 9.6 |     | ug/L  |      | 9/5/97        | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 5.8  | 5.8 | 18  |     | ug/L  |      | 9/5/97        | SW846 8260      |
| 1,2-Dibromoethane           | < 2.4  | 2.4 | 7.6 |     | ug/L  |      | 9/5/97        | SW846 8260      |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW-1**

**Lab Sample Number : 872276-001**

**WI DNR LAB ID : 40513270**

**Client : MORAINE ENVIRONMENTAL INC**

**Report Date : 9/9/97**

**Collection Date : 8/29/97**

**Matrix Type : WATER**

|                           |       |     |     |      |          |            |
|---------------------------|-------|-----|-----|------|----------|------------|
| Dibromomethane            | < 2.8 | 2.8 | 8.9 | ug/L | 9/5/97   | SW846 8260 |
| 1,3-Dichlorobenzene       | < 2.8 | 2.8 | 8.9 | ug/L | 9/5/97   | SW846 8260 |
| 1,4-Dichlorobenzene       | < 2.9 | 2.9 | 9.2 | ug/L | 9/5/97   | SW846 8260 |
| 1,2-Dichloroethane        | < 2.4 | 2.4 | 7.6 | ug/L | 9/5/97   | SW846 8260 |
| 1,2-Dichlorobenzene       | < 3.2 | 3.2 | 10  | ug/L | 9/5/97   | SW846 8260 |
| 1,1-Dichloroethene        | < 2.8 | 2.8 | 8.9 | ug/L | 9/5/97   | SW846 8260 |
| cis-1,2-Dichloroethene    | 24    | 2.8 | 8.9 | ug/L | 9/5/97   | SW846 8260 |
| Dichlorodifluoromethane   | < 2.5 | 2.5 | 8.0 | ug/L | 9/5/97   | SW846 8260 |
| trans-1,2-Dichloroethene  | < 2.5 | 2.5 | 8.0 | ug/L | 9/5/97   | SW846 8260 |
| 1,2-Dichloropropane       | < 2.4 | 2.4 | 7.6 | ug/L | 9/5/97   | SW846 8260 |
| 1,1-Dichloroethane        | < 2.6 | 2.6 | 8.3 | ug/L | 9/5/97   | SW846 8260 |
| 1,3-Dichloropropane       | < 2.7 | 2.7 | 8.6 | ug/L | 9/5/97   | SW846 8260 |
| 2,2-Dichloropropane       | < 4.5 | 4.5 | 14  | ug/L | 9/5/97   | SW846 8260 |
| 1,1-Dichloropropene       | < 2.6 | 2.6 | 8.3 | ug/L | 9/5/97   | SW846 8260 |
| cis-1,3-Dichloropropene   | < 4.8 | 4.8 | 15  | ug/L | 9/5/97   | SW846 8260 |
| trans-1,3-Dichloropropene | < 4.5 | 4.5 | 14  | ug/L | 9/5/97   | SW846 8260 |
| Diisopropyl ether         | 99    | 4.3 | 14  | ug/L | 9/5/97   | SW846 8260 |
| Ethylbenzene              | 54    | 2.3 | 7.3 | ug/L | 9/5/97   | SW846 8260 |
| Fluorotrichloromethane    | < 2.9 | 2.9 | 9.2 | ug/L | 9/5/97   | SW846 8260 |
| Hexachlorobutadiene       | < 3.1 | 3.1 | 9.9 | ug/L | 9/5/97   | SW846 8260 |
| Isopropylbenzene          | 36    | 2.7 | 8.6 | ug/L | 9/5/97   | SW846 8260 |
| p-Isopropyltoluene        | 26    | 2.2 | 7.0 | ug/L | 9/5/97   | SW846 8260 |
| Methylene chloride        | < 2.2 | 2.2 | 7.0 | ug/L | 9/5/97   | SW846 8260 |
| Methyl-tert-butyl-ether   | < 5.3 | 5.3 | 17  | ug/L | 9/5/97   | SW846 8260 |
| Naphthalene               | 130   | 6.6 | 21  | ug/L | 9/5/97   | SW846 8260 |
| n-Propylbenzene           | 43    | 2.7 | 8.6 | ug/L | 9/5/97   | SW846 8260 |
| Styrene                   | < 1.9 | 1.9 | 6.1 | ug/L | 9/5/97   | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 4.6 | 4.6 | 15  | ug/L | 9/5/97   | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 2.1 | 2.1 | 6.7 | ug/L | 9/5/97   | SW846 8260 |
| Tetrachloroethene         | 7.8   | 2.7 | 8.6 | ug/L | Q 9/5/97 | SW846 8260 |
| Toluene                   | < 2.8 | 2.8 | 8.9 | ug/L | 9/5/97   | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 3.2 | 3.2 | 10  | ug/L | 9/5/97   | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 4.8 | 4.8 | 15  | ug/L | 9/5/97   | SW846 8260 |
| 1,1,1-Trichloroethane     | < 2.7 | 2.7 | 8.6 | ug/L | 9/5/97   | SW846 8260 |
| 1,1,2-Trichloroethane     | < 3.0 | 3.0 | 9.6 | ug/L | 9/5/97   | SW846 8260 |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL  
 Project Number : 0305  
 Field ID : MW-1  
 Lab Sample Number : 872276-001  
 WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC  
 Report Date : 9/9/97  
 Collection Date : 8/29/97  
 Matrix Type : WATER

|                        |       |     |     |        |   |        |            |
|------------------------|-------|-----|-----|--------|---|--------|------------|
| 1,2,4-Trimethylbenzene | 29    | 3.0 | 9.6 | ug/L   |   | 9/5/97 | SW846 8260 |
| Trichloroethene        | 2.5   | 2.0 | 6.4 | ug/L   | Q | 9/5/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 4.8 | 4.8 | 15  | ug/L   |   | 9/5/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | 44    | 2.5 | 8.0 | ug/L   |   | 9/5/97 | SW846 8260 |
| Vinyl chloride         | < 2.3 | 2.3 | 7.3 | ug/L   |   | 9/5/97 | SW846 8260 |
| Xylenes, -m, -p        | 6.7   | 5.1 | 16  | ug/L   | Q | 9/5/97 | SW846 8260 |
| Xylene, -o             | 4.0   | 2.8 | 8.9 | ug/L   | Q | 9/5/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 98    |     |     | %Recov |   | 9/5/97 | SW846 8260 |
| Dibromofluoromethane   | 91    |     |     | %Recov |   | 9/5/97 | SW846 8260 |
| Toluene-d8             | 99    |     |     | %Recov |   | 9/5/97 | SW846 8260 |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO    Prep Date: 9/3/97    Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 3000   |     |     | 1000 | ug/l   |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike             | 94     |     |     | 1.0  | %Recov |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike Duplicate   | 95     |     |     | 1.0  | %Recov |      | 9/5/97        | WDNR MOD GRO    |

### Organic Results

#### PAH (HPLC) LIST - SEMIVOLATILES

Prep Method: SW846 3510    Prep Date: 9/3/97    Analyst: ARO

| Analyte              | Result | LOD | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|----------------------|--------|-----|------|-----|-------|------|---------------|-----------------|
| Acenaphthene         | 4300   | 920 | 2900 |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Acenaphthylene       | < 830  | 830 | 2600 |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Anthracene           | < 410  | 410 | 1300 |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Benzo(a)anthracene   | 2900   | 240 | 760  |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Benzo(a)pyrene       | 21     | 20  | 64   |     | ug/L  | Q    | 9/5/97        | SW846 8310      |
| Benzo(b)fluoranthene | < 110  | 110 | 350  |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Benzo(g,h,i)perylene | < 20   | 20  | 64   |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Benzo(k)fluoranthene | 130    | 14  | 45   |     | ug/L  |      | 9/5/97        | SW846 8310      |
| Chrysene             | 790    | 140 | 450  |     | ug/L  |      | 9/5/97        | SW846 8310      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-1

Lab Sample Number : 872276-001

WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

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|                         |       |      |       |        |   |        |            |
|-------------------------|-------|------|-------|--------|---|--------|------------|
| Dibenzo(a,h)anthracene  | < 130 | 130  | 410   | ug/L   |   | 9/5/97 | SW846 8310 |
| Fluoranthene            | 310   | 240  | 760   | ug/L   | Q | 9/5/97 | SW846 8310 |
| Fluorene                | 6700  | 1300 | 4100  | ug/L   |   | 9/5/97 | SW846 8310 |
| Indeno(1,2,3-cd)pyrene  | < 22  | 22   | 70    | ug/L   |   | 9/5/97 | SW846 8310 |
| 1-Methylnaphthalene     | 46000 | 4900 | 16000 | ug/L   |   | 9/5/97 | SW846 8310 |
| 2-Methylnaphthalene     | 56000 | 4500 | 14000 | ug/L   |   | 9/5/97 | SW846 8310 |
| Naphthalene             | 7600  | 860  | 2700  | ug/L   |   | 9/5/97 | SW846 8310 |
| Phenanthrene            | 14000 | 1600 | 5100  | ug/L   |   | 9/5/97 | SW846 8310 |
| Pyrene                  | 430   | 220  | 700   | ug/L   | Q | 9/5/97 | SW846 8310 |
| 9,10-Diphenylanthracene | NA    |      |       | %Recov |   | 9/5/97 | SW846 8310 |





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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Client : MORAINE ENVIRONMENTAL INC

Field ID : MW-2

Report Date : 9/9/97

Lab Sample Number : 872276-002

Collection Date : 8/29/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO Prep Date: 9/3/97 Analyst: NJS

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 9/3/97        | WI MOD DRO      |
| Blank spike           | 93     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |
| Blank spike duplicate | 91     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030 Prep Date: 9/3/97 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Client : MORAINE ENVIRONMENTAL INC

Field ID : MW-2

Report Date : 9/9/97

Lab Sample Number : 872276-002

Collection Date : 8/29/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

|                           |        |      |      |      |        |            |
|---------------------------|--------|------|------|------|--------|------------|
| Dibromomethane            | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,3-Dichlorobenzene       | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,4-Dichlorobenzene       | < 0.29 | 0.29 | 0.92 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichloroethane        | < 0.24 | 0.24 | 0.76 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichlorobenzene       | < 0.32 | 0.32 | 1.0  | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethene        | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| Dichlorodifluoromethane   | < 0.25 | 0.25 | 0.80 | ug/L | 9/3/97 | SW846 8260 |
| trans-1,2-Dichloroethene  | < 0.25 | 0.25 | 0.80 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L | 9/3/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L | 9/3/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| Diisopropyl ether         | < 0.43 | 0.43 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L | 9/3/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L | 9/3/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L | 9/3/97 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L | 9/3/97 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L | 9/3/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L | 9/3/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L | 9/3/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L | 9/3/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L | 9/3/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L | 9/3/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 9/3/97 | SW846 8260 |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 0305

**Client :** MORAINE ENVIRONMENTAL INC

**Field ID :** MW-2

**Report Date :** 9/9/97

**Lab Sample Number :** 872276-002

**Collection Date :** 8/29/97

**WI DNR LAB ID :** 40513270

**Matrix Type :** WATER

|                        |        |      |      |        |        |            |
|------------------------|--------|------|------|--------|--------|------------|
| 1,2,4-Trimethylbenzene | < 0.30 | 0.30 | 0.96 | ug/L   | 9/3/97 | SW846 8260 |
| Trichloroethene        | < 0.20 | 0.20 | 0.64 | ug/L   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 0.48 | 0.48 | 1.5  | ug/L   | 9/3/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | < 0.25 | 0.25 | 0.80 | ug/L   | 9/3/97 | SW846 8260 |
| Vinyl chloride         | < 0.23 | 0.23 | 0.73 | ug/L   | 9/3/97 | SW846 8260 |
| Xylenes, -m, -p        | < 0.51 | 0.51 | 1.6  | ug/L   | 9/3/97 | SW846 8260 |
| Xylene, -o             | < 0.28 | 0.28 | 0.89 | ug/L   | 9/3/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 97     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Dibromofluoromethane   | 93     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Toluene-d8             | 99     |      |      | %Recov | 9/3/97 | SW846 8260 |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO

Prep Date: 9/3/97

Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50  | ug/l   |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike             | 94     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike Duplicate   | 95     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-3

Lab Sample Number : 872276-003

WI DNR LAB ID : 40513270

Client : MORAIN ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO Prep Date: 9/3/97 Analyst: NJS

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 9/3/97        | WI MOD DRO      |
| Blank spike           | 93     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |
| Blank spike duplicate | 91     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030 Prep Date: 9/3/97 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-3

Lab Sample Number : 872276-003

WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

|                           |        |      |      |      |        |            |
|---------------------------|--------|------|------|------|--------|------------|
| Dibromomethane            | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,3-Dichlorobenzene       | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,4-Dichlorobenzene       | < 0.29 | 0.29 | 0.92 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichloroethane        | < 0.24 | 0.24 | 0.76 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichlorobenzene       | < 0.32 | 0.32 | 1.0  | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethene        | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| Dichlorodifluoromethane   | < 0.25 | 0.25 | 0.80 | ug/L | 9/3/97 | SW846 8260 |
| trans-1,2-Dichloroethene  | < 0.25 | 0.25 | 0.80 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L | 9/3/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L | 9/3/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| Diisopropyl ether         | < 0.43 | 0.43 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L | 9/3/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L | 9/3/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L | 9/3/97 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L | 9/3/97 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L | 9/3/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L | 9/3/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L | 9/3/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L | 9/3/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L | 9/3/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L | 9/3/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 9/3/97 | SW846 8260 |



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## - Analytical Report -

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW-3**

**Lab Sample Number : 872276-003**

**WI DNR LAB ID : 40513270**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 9/9/97**

**Collection Date : 8/29/97**

**Matrix Type : WATER**

|                        |        |      |      |        |        |            |
|------------------------|--------|------|------|--------|--------|------------|
| 1,2,4-Trimethylbenzene | < 0.30 | 0.30 | 0.96 | ug/L   | 9/3/97 | SW846 8260 |
| Trichloroethene        | < 0.20 | 0.20 | 0.64 | ug/L   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 0.48 | 0.48 | 1.5  | ug/L   | 9/3/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | < 0.25 | 0.25 | 0.80 | ug/L   | 9/3/97 | SW846 8260 |
| Vinyl chloride         | < 0.23 | 0.23 | 0.73 | ug/L   | 9/3/97 | SW846 8260 |
| Xylenes, -m, -p        | < 0.51 | 0.51 | 1.6  | ug/L   | 9/3/97 | SW846 8260 |
| Xylene, -o             | < 0.28 | 0.28 | 0.89 | ug/L   | 9/3/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 97     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Dibromofluoromethane   | 91     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Toluene-d8             | 100    |      |      | %Recov | 9/3/97 | SW846 8260 |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO

Prep Date: 9/3/97

Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50  | ug/l   |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike             | 94     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike Duplicate   | 95     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-4

Lab Sample Number : 872276-004

WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

### Organic Results

#### DIESEL RANGE ORGANICS - WATER

Prep Method: WI MOD DRO Prep Date: 9/3/97 Analyst: NJS

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | < 100  |     |     | 100 | ug/l   |      | 9/3/97        | WI MOD DRO      |
| Blank spike           | 93     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |
| Blank spike duplicate | 91     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: : SW846 5030 Prep Date: 9/3/97 Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-4

Lab Sample Number : 872276-004

WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

|                           |        |      |      |      |        |            |
|---------------------------|--------|------|------|------|--------|------------|
| Dibromomethane            | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,3-Dichlorobenzene       | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,4-Dichlorobenzene       | < 0.29 | 0.29 | 0.92 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichloroethane        | < 0.24 | 0.24 | 0.76 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichlorobenzene       | < 0.32 | 0.32 | 1.0  | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethene        | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| Dichlorodifluoromethane   | < 0.25 | 0.25 | 0.80 | ug/L | 9/3/97 | SW846 8260 |
| trans-1,2-Dichloroethene  | < 0.25 | 0.25 | 0.80 | ug/L | 9/3/97 | SW846 8260 |
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L | 9/3/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L | 9/3/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| Diisopropyl ether         | 2.0    | 0.43 | 1.4  | ug/L | 9/3/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L | 9/3/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L | 9/3/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L | 9/3/97 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L | 9/3/97 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L | 9/3/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L | 9/3/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L | 9/3/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L | 9/3/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L | 9/3/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L | 9/3/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L | 9/3/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L | 9/3/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L | 9/3/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 9/3/97 | SW846 8260 |





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**- Analytical Report -**

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : MW-4

Lab Sample Number : 872276-004

WI DNR LAB ID : 40513270

Client : MORAINE ENVIRONMENTAL INC

Report Date : 9/9/97

Collection Date : 8/29/97

Matrix Type : WATER

|                        |        |      |      |        |        |            |
|------------------------|--------|------|------|--------|--------|------------|
| 1,2,4-Trimethylbenzene | < 0.30 | 0.30 | 0.96 | ug/L   | 9/3/97 | SW846 8260 |
| Trichloroethene        | < 0.20 | 0.20 | 0.64 | ug/L   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 0.48 | 0.48 | 1.5  | ug/L   | 9/3/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | < 0.25 | 0.25 | 0.80 | ug/L   | 9/3/97 | SW846 8260 |
| Vinyl chloride         | < 0.23 | 0.23 | 0.73 | ug/L   | 9/3/97 | SW846 8260 |
| Xylenes, -m, -p        | < 0.51 | 0.51 | 1.6  | ug/L   | 9/3/97 | SW846 8260 |
| Xylene, -o             | < 0.28 | 0.28 | 0.89 | ug/L   | 9/3/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 97     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Dibromofluoromethane   | 93     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Toluene-d8             | 99     |      |      | %Recov | 9/3/97 | SW846 8260 |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO

Prep Date: 9/3/97

Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50  | ug/l   |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike             | 94     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike Duplicate   | 95     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 0305

**Client :** MORAINE ENVIRONMENTAL INC

**Field ID :** MW-5

**Report Date :** 9/9/97

**Lab Sample Number :** 872276-005

**Collection Date :** 8/29/97

**WI DNR LAB ID :** 40513270

**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** WI MOD DRO    **Prep Date:** 9/3/97    **Analyst:** NJS

| Analyte               | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 170    |     |     | 100 | ug/l   |      | 9/3/97        | WI MOD DRO      |
| Blank spike           | 93     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |
| Blank spike duplicate | 91     |     |     | 50  | %Recov |      | 9/3/97        | WI MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

**Prep Method:** SW846 5030    **Prep Date:** 9/3/97    **Analyst:** HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Client : MORAINE ENVIRONMENTAL INC

Field ID : MW-5

Report Date : 9/9/97

Lab Sample Number : 872276-005

Collection Date : 8/29/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

|                           |        |      |      |      |   |        |            |
|---------------------------|--------|------|------|------|---|--------|------------|
| Dibromomethane            | < 0.28 | 0.28 | 0.89 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,3-Dichlorobenzene       | < 0.28 | 0.28 | 0.89 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,4-Dichlorobenzene       | < 0.29 | 0.29 | 0.92 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,2-Dichloroethane        | < 0.24 | 0.24 | 0.76 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,2-Dichlorobenzene       | < 0.32 | 0.32 | 1.0  | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethene        | < 0.28 | 0.28 | 0.89 | ug/L |   | 9/3/97 | SW846 8260 |
| cis-1,2-Dichloroethene    | < 0.28 | 0.28 | 0.89 | ug/L |   | 9/3/97 | SW846 8260 |
| Dichlorodifluoromethane   | < 0.25 | 0.25 | 0.80 | ug/L |   | 9/3/97 | SW846 8260 |
| trans-1,2-Dichloroethene  | < 0.25 | 0.25 | 0.80 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L |   | 9/3/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L |   | 9/3/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L |   | 9/3/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L |   | 9/3/97 | SW846 8260 |
| Diisopropyl ether         | 1.3    | 0.43 | 1.4  | ug/L | Q | 9/3/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L |   | 9/3/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L |   | 9/3/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L |   | 9/3/97 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L |   | 9/3/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L |   | 9/3/97 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L |   | 9/3/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L |   | 9/3/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L |   | 9/3/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L |   | 9/3/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L |   | 9/3/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L |   | 9/3/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L |   | 9/3/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L |   | 9/3/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L |   | 9/3/97 | SW846 8260 |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Field ID : MW-5**

**Lab Sample Number : 872276-005**

**WI DNR LAB ID : 40513270**

**Client : MORaine ENVIRONMENTAL INC**

**Report Date : 9/9/97**

**Collection Date : 8/29/97**

**Matrix Type : WATER**

|                        |        |      |      |        |        |            |
|------------------------|--------|------|------|--------|--------|------------|
| 1,2,4-Trimethylbenzene | < 0.30 | 0.30 | 0.96 | ug/L   | 9/3/97 | SW846 8260 |
| Trichloroethene        | < 0.20 | 0.20 | 0.64 | ug/L   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 0.48 | 0.48 | 1.5  | ug/L   | 9/3/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | < 0.25 | 0.25 | 0.80 | ug/L   | 9/3/97 | SW846 8260 |
| Vinyl chloride         | < 0.23 | 0.23 | 0.73 | ug/L   | 9/3/97 | SW846 8260 |
| Xylenes, -m, -p        | < 0.51 | 0.51 | 1.6  | ug/L   | 9/3/97 | SW846 8260 |
| Xylene, -o             | < 0.28 | 0.28 | 0.89 | ug/L   | 9/3/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 98     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Dibromofluoromethane   | 93     |      |      | %Recov | 9/3/97 | SW846 8260 |
| Toluene-d8             | 98     |      |      | %Recov | 9/3/97 | SW846 8260 |

**Organic Results**

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO

Prep Date: 9/3/97

Analyst: PMS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | < 50   |     |     | 50  | ug/l   |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike             | 94     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |
| Blank Spike Duplicate   | 95     |     |     | 1.0 | %Recov |      | 9/5/97        | WDNR MOD GRO    |



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## - Analytical Report -

Project Name : JOHNSON SAND & GRAVEL

Project Number : 0305

Field ID : TRIP BLANK

Lab Sample Number : 872276-006

WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC

Report Date : 9/4/97

Collection Date : 8/29/97

Matrix Type : WATER

### Organic Results

#### EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030

Prep Date: 9/3/97

Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Dibromomethane              | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,3-Dichlorobenzene         | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,4-Dichlorobenzene         | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dichloroethane          | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,2-Dichlorobenzene         | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 9/3/97        | SW846 8260      |
| 1,1-Dichloroethene          | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| cis-1,2-Dichloroethene      | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| Dichlorodifluoromethane     | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |
| trans-1,2-Dichloroethene    | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/3/97        | SW846 8260      |



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## - Analytical Report -

**Project Name :** JOHNSON SAND & GRAVEL

**Project Number :** 0305

**Field ID :** TRIP BLANK

**Lab Sample Number :** 872276-006

**WI DNR LAB ID :** 40513270

**Client :** MORAINE ENVIRONMENTAL INC

**Report Date :** 9/4/97

**Collection Date :** 8/29/97

**Matrix Type :** WATER

|                           |        |      |      |        |   |        |            |
|---------------------------|--------|------|------|--------|---|--------|------------|
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L   |   | 9/3/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L   |   | 9/3/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L   |   | 9/3/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L   |   | 9/3/97 | SW846 8260 |
| Diisopropyl ether         | < 0.43 | 0.43 | 1.4  | ug/L   |   | 9/3/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L   |   | 9/3/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L   |   | 9/3/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L   |   | 9/3/97 | SW846 8260 |
| isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L   |   | 9/3/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L   |   | 9/3/97 | SW846 8260 |
| Methylene chloride        | 0.39   | 0.22 | 0.70 | ug/L   | Q | 9/3/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L   |   | 9/3/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L   |   | 9/3/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L   |   | 9/3/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L   |   | 9/3/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L   |   | 9/3/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,2,4-Trimethylbenzene    | < 0.30 | 0.30 | 0.96 | ug/L   |   | 9/3/97 | SW846 8260 |
| Trichloroethene           | < 0.20 | 0.20 | 0.64 | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,2,3-Trichloropropane    | < 0.48 | 0.48 | 1.5  | ug/L   |   | 9/3/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene    | < 0.25 | 0.25 | 0.80 | ug/L   |   | 9/3/97 | SW846 8260 |
| Vinyl chloride            | < 0.23 | 0.23 | 0.73 | ug/L   |   | 9/3/97 | SW846 8260 |
| Xylenes, -m, -p           | < 0.51 | 0.51 | 1.6  | ug/L   |   | 9/3/97 | SW846 8260 |
| Xylene, -o                | < 0.28 | 0.28 | 0.89 | ug/L   |   | 9/3/97 | SW846 8260 |
| 4-Bromofluorobenzene      | 97     |      |      | %Recov |   | 9/3/97 | SW846 8260 |
| Dibromofluoromethane      | 93     |      |      | %Recov |   | 9/3/97 | SW846 8260 |



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**- Analytical Report -**

**Project Name : JOHNSON SAND & GRAVEL**

**Project Number : 0305**

**Client : MORaine ENVIRONMENTAL INC**

**Field ID : TRIP BLANK**

**Report Date : 9/4/97**

**Lab Sample Number : 872276-006**

**Collection Date : 8/29/97**

**WI DNR LAB ID : 40513270**

**Matrix Type : WATER**

---

|            |    |        |        |            |
|------------|----|--------|--------|------------|
| Toluene-d8 | 99 | %Recov | 9/3/97 | SW846 8260 |
|------------|----|--------|--------|------------|



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**- Analytical Report -**

Project Name : FORMER JOHNSON SAND'S GRAVEL

Project Number : 305

WI DNR LAB ID : 40513270

Client: MORaine ENVIRONMENTAL INC

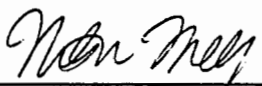
Report Date : 9/17/97

| Sample No. | Field ID   | Collection Date | Sample No. | Field ID | Collection Date |
|------------|------------|-----------------|------------|----------|-----------------|
| 872485-001 | MW-6       | 9/8/97          |            |          |                 |
| 872485-002 | MW-7       | 9/8/97          |            |          |                 |
| 872485-003 | TRIP BLANK | 9/8/97          |            |          |                 |

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

  
Approval Signature

9/17/97  
Date





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---

| Lab#:      | TestGroupID: | Comment:  |
|------------|--------------|---|
| 872485-001 | GRO-W        | Value reported due to single peak in window.  |
|            | DRO-W        | Hump was present late in chromatogram.  |
| 872485-002 | 8260+-W      | Sample exhibits hydrocarbon pattern resembling gasoline. Early and late peaks were present. |
|            | GRO-W        | Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline. |
|            | PAHLC-W      | Surrogate recoveries not available due to high dilution of sample.                          |
|            | PAHLC-W      | Hump in the chromatogram; elevated detection limits.  |



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## - Analytical Report -

**Project Name :** FORMER JOHNSON SAND'S GRAVEL

**Project Number :** 305

**Client :** MORaine ENVIRONMENTAL INC

**Field ID :** MW-6

**Report Date :** 9/15/97

**Lab Sample Number :** 872485-001

**Collection Date :** 9/8/97

**WI DNR LAB ID :** 40513270

**Matrix Type :** WATER

### Organic Results

**DIESEL RANGE ORGANICS - WATER**

**Prep Method:** WI MOD DRO    **Prep Date:** 9/11/97    **Analyst:** PHS

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 150    |     |     | 100  | ug/l   |      | 9/11/97       | WI MOD DRO      |
| Blank spike           | 104    |     |     | 50.0 | %Recov |      | 9/11/97       | WI MOD DRO      |
| Blank spike duplicate | 100    |     |     | 50.0 | %Recov |      | 9/11/97       | WI MOD DRO      |

### Organic Results

**EPA 8260 VOLATILE LIST- WATER**

**Prep Method:** SW846 5030    **Prep Date:** 9/11/97    **Analyst:** HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/11/97       | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/11/97       | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/11/97       | SW846 8260      |



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## - Analytical Report -

Project Name : FORMER JOHNSON SAND'S GRAVEL

Project Number : 305

Client : MORaine ENVIRONMENTAL INC

Field ID : MW-6

Report Date : 9/15/97

Lab Sample Number : 872485-001

Collection Date : 9/8/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

|                           |        |      |      |      |         |            |
|---------------------------|--------|------|------|------|---------|------------|
| Dibromomethane            | < 0.28 | 0.28 | 0.89 | ug/L | 9/11/97 | SW846 8260 |
| 1,3-Dichlorobenzene       | < 0.28 | 0.28 | 0.89 | ug/L | 9/11/97 | SW846 8260 |
| 1,4-Dichlorobenzene       | < 0.29 | 0.29 | 0.92 | ug/L | 9/11/97 | SW846 8260 |
| 1,2-Dichloroethane        | < 0.24 | 0.24 | 0.76 | ug/L | 9/11/97 | SW846 8260 |
| 1,2-Dichlorobenzene       | < 0.32 | 0.32 | 1.0  | ug/L | 9/11/97 | SW846 8260 |
| 1,1-Dichloroethene        | < 0.28 | 0.28 | 0.89 | ug/L | 9/11/97 | SW846 8260 |
| cis-1,2-Dichloroethene    | 1.5    | 0.28 | 0.89 | ug/L | 9/11/97 | SW846 8260 |
| Dichlorodifluoromethane   | < 0.25 | 0.25 | 0.80 | ug/L | 9/11/97 | SW846 8260 |
| trans-1,2-Dichloroethene  | < 0.25 | 0.25 | 0.80 | ug/L | 9/11/97 | SW846 8260 |
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L | 9/11/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L | 9/11/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L | 9/11/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L | 9/11/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L | 9/11/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L | 9/11/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L | 9/11/97 | SW846 8260 |
| Diisopropyl ether         | 130    | 0.43 | 1.4  | ug/L | 9/11/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L | 9/11/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L | 9/11/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L | 9/11/97 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L | 9/11/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L | 9/11/97 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L | 9/11/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L | 9/11/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L | 9/11/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L | 9/11/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L | 9/11/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L | 9/11/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L | 9/11/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L | 9/11/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L | 9/11/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L | 9/11/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L | 9/11/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L | 9/11/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L | 9/11/97 | SW846 8260 |



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## - Analytical Report -

|   |                                    |
|---|------------------------------------|
| Project Name : FORMER JOHNSON SAND'S GRAVEL | Client : MORaine ENVIRONMENTAL INC |
| Project Number : 305                        | Report Date : 9/15/97              |
| Field ID : MW-6                             | Collection Date : 9/8/97           |
| Lab Sample Number : 872485-001              | Matrix Type : WATER                |
| WI DNR LAB ID : 40513270                    |                                    |

|                        |        |      |      |        |         |            |
|------------------------|--------|------|------|--------|---------|------------|
| 1,2,4-Trimethylbenzene | < 0.30 | 0.30 | 0.96 | ug/L   | 9/11/97 | SW846 8260 |
| Trichloroethene        | < 0.20 | 0.20 | 0.64 | ug/L   | 9/11/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 0.48 | 0.48 | 1.5  | ug/L   | 9/11/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | < 0.25 | 0.25 | 0.80 | ug/L   | 9/11/97 | SW846 8260 |
| Vinyl chloride         | < 0.23 | 0.23 | 0.73 | ug/L   | 9/11/97 | SW846 8260 |
| Xylenes, -m, -p        | < 0.51 | 0.51 | 1.6  | ug/L   | 9/11/97 | SW846 8260 |
| Xylene, -o             | < 0.28 | 0.28 | 0.89 | ug/L   | 9/11/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 85     |      |      | %Recov | 9/11/97 | SW846 8260 |
| Dibromofluoromethane   | 87     |      |      | %Recov | 9/11/97 | SW846 8260 |
| Toluene-d8             | 85     |      |      | %Recov | 9/11/97 | SW846 8260 |

### Organic Results

#### GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO    Prep Date: 9/10/97    Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 100    |     |     | 50  | ug/l   |      | 9/12/97       | WDNR MOD GRO    |
| Blank Spike             | 93     |     |     | 1.0 | %Recov |      | 9/12/97       | WDNR MOD GRO    |
| Blank Spike Duplicate   | 92     |     |     | 1.0 | %Recov |      | 9/12/97       | WDNR MOD GRO    |



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**- Analytical Report -**

Project Name : FORMER JOHNSON SAND'S GRAVEL  
 Project Number : 305 Client : MORaine ENVIRONMENTAL INC  
 Field ID : MW-7 Report Date : 9/16/97  
 Lab Sample Number : 872485-002 Collection Date : 9/8/97  
 WI DNR LAB ID : 40513270 Matrix Type : WATER

**Organic Results**

**DIESEL RANGE ORGANICS - WATER**

Prep Method: WI MOD DRO Prep Date: 9/11/97 Analyst: PHS

| Analyte               | Result | LOD | LOQ | EQL  | Units  | Code | Analysis Date | Analysis Method |
|-----------------------|--------|-----|-----|------|--------|------|---------------|-----------------|
| DIESEL RANGE ORGANICS | 71000  |     |     | 2000 | ug/l   |      | 9/13/97       | WI MOD DRO      |
| Blank spike           | 104    |     |     | 50.0 | %Recov |      | 9/13/97       | WI MOD DRO      |
| Blank spike duplicate | 100    |     |     | 50.0 | %Recov |      | 9/13/97       | WI MOD DRO      |

**Organic Results**

**EPA 8260 VOLATILE LIST- WATER**

Prep Method: SW846 5030 Prep Date: 9/15/97 Analyst: RJN

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.82 | 0.82 | 2.6  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Bromobenzene                | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Bromochloromethane          | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Bromodichloromethane        | < 0.36 | 0.36 | 1.1  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Bromoform                   | < 0.62 | 0.62 | 2.0  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Bromomethane                | < 0.60 | 0.60 | 1.9  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| s-Butylbenzene              | 27     | 0.46 | 1.5  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| t-Butylbenzene              | < 0.48 | 0.48 | 1.5  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| n-Butylbenzene              | 20     | 0.62 | 2.0  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Carbon tetrachloride        | < 0.46 | 0.46 | 1.5  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Chloroform                  | < 0.50 | 0.50 | 1.6  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Chlorobenzene               | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Chlorodibromomethane        | < 0.46 | 0.46 | 1.5  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Chloroethane                | < 0.50 | 0.50 | 1.6  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| Chloromethane               | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/13/97       | SW846 8260      |
| 2-Chlorotoluene             | < 0.54 | 0.54 | 1.7  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| 4-Chlorotoluene             | < 0.60 | 0.60 | 1.9  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 1.2  | 1.2  | 3.8  |     | ug/L  |      | 9/13/97       | SW846 8260      |
| 1,2-Dibromoethane           | < 0.48 | 0.48 | 1.5  |     | ug/L  |      | 9/13/97       | SW846 8260      |



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## - Analytical Report -

Project Name : FORMER JOHNSON SAND'S GRAVEL

Project Number : 305

Field ID : MW-7

Lab Sample Number : 872485-002

WI DNR LAB ID : 40513270

Client : MORaine ENVIRONMENTAL INC

Report Date : 9/16/97

Collection Date : 9/8/97

Matrix Type : WATER

|                           |        |      |     |      |   |         |            |
|---------------------------|--------|------|-----|------|---|---------|------------|
| Dibromomethane            | < 0.56 | 0.56 | 1.8 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,3-Dichlorobenzene       | < 0.56 | 0.56 | 1.8 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,4-Dichlorobenzene       | < 0.58 | 0.58 | 1.8 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,2-Dichloroethane        | < 0.48 | 0.48 | 1.5 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,2-Dichlorobenzene       | < 0.64 | 0.64 | 2.0 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1-Dichloroethene        | < 0.56 | 0.56 | 1.8 | ug/L |   | 9/13/97 | SW846 8260 |
| cis-1,2-Dichloroethene    | 4.6    | 0.56 | 1.8 | ug/L |   | 9/13/97 | SW846 8260 |
| Dichlorodifluoromethane   | < 0.50 | 0.50 | 1.6 | ug/L |   | 9/13/97 | SW846 8260 |
| trans-1,2-Dichloroethene  | < 0.50 | 0.50 | 1.6 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,2-Dichloropropane       | < 0.48 | 0.48 | 1.5 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.52 | 0.52 | 1.7 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.54 | 0.54 | 1.7 | ug/L |   | 9/13/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.90 | 0.90 | 2.9 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.52 | 0.52 | 1.7 | ug/L |   | 9/13/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.96 | 0.96 | 3.1 | ug/L |   | 9/13/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.90 | 0.90 | 2.9 | ug/L |   | 9/13/97 | SW846 8260 |
| Diisopropyl ether         | < 0.86 | 0.86 | 2.7 | ug/L |   | 9/13/97 | SW846 8260 |
| Ethylbenzene              | 80     | 0.46 | 1.5 | ug/L |   | 9/13/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.58 | 0.58 | 1.8 | ug/L |   | 9/13/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.62 | 0.62 | 2.0 | ug/L |   | 9/13/97 | SW846 8260 |
| Isopropylbenzene          | 39     | 0.54 | 1.7 | ug/L |   | 9/13/97 | SW846 8260 |
| p-Isopropyltoluene        | 4.0    | 0.44 | 1.4 | ug/L |   | 9/13/97 | SW846 8260 |
| Methylene chloride        | < 0.44 | 0.44 | 1.4 | ug/L |   | 9/13/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 1.1  | 1.1  | 3.5 | ug/L |   | 9/13/97 | SW846 8260 |
| Naphthalene               | 220    | 1.3  | 4.1 | ug/L |   | 9/13/97 | SW846 8260 |
| n-Propylbenzene           | 45     | 0.54 | 1.7 | ug/L |   | 9/13/97 | SW846 8260 |
| Styrene                   | < 0.38 | 0.38 | 1.2 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.92 | 0.92 | 2.9 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.42 | 0.42 | 1.3 | ug/L |   | 9/13/97 | SW846 8260 |
| Tetrachloroethene         | 1.1    | 0.54 | 1.7 | ug/L | Q | 9/13/97 | SW846 8260 |
| Toluene                   | 0.60   | 0.56 | 1.8 | ug/L | Q | 9/13/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.64 | 0.64 | 2.0 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.96 | 0.96 | 3.1 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.54 | 0.54 | 1.7 | ug/L |   | 9/13/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.60 | 0.60 | 1.9 | ug/L |   | 9/13/97 | SW846 8260 |



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## - Analytical Report -

**Project Name :** FORMER JOHNSON SAND'S GRAVEL

**Project Number :** 305

**Client :** MORAINES ENVIRONMENTAL INC

**Field ID :** MW-7

**Report Date :** 9/16/97

**Lab Sample Number :** 872485-002

**Collection Date :** 9/8/97

**WI DNR LAB ID :** 40513270

**Matrix Type :** WATER

|                        |        |      |     |        |         |            |
|------------------------|--------|------|-----|--------|---------|------------|
| 1,2,4-Trimethylbenzene | 140    | 0.60 | 1.9 | ug/L   | 9/13/97 | SW846 8260 |
| Trichloroethene        | < 0.40 | 0.40 | 1.3 | ug/L   | 9/13/97 | SW846 8260 |
| 1,2,3-Trichloropropane | < 0.96 | 0.96 | 3.1 | ug/L   | 9/13/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene | 44     | 0.50 | 1.6 | ug/L   | 9/13/97 | SW846 8260 |
| Vinyl chloride         | < 0.46 | 0.46 | 1.5 | ug/L   | 9/13/97 | SW846 8260 |
| Xylenes, -m, -p        | 23     | 1.0  | 3.2 | ug/L   | 9/13/97 | SW846 8260 |
| Xylene, -o             | 4.1    | 0.56 | 1.8 | ug/L   | 9/13/97 | SW846 8260 |
| 4-Bromofluorobenzene   | 107    |      |     | %Recov | 9/13/97 | SW846 8260 |
| Dibromofluoromethane   | 94     |      |     | %Recov | 9/13/97 | SW846 8260 |
| Toluene-d8             | 99     |      |     | %Recov | 9/13/97 | SW846 8260 |

### Organic Results

**GASOLINE RANGE ORGANICS - WATER**

Prep Method: WI MOD.GRO

Prep Date: 9/10/97

Analyst: EGS

| Analyte                 | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|-------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS | 2300   |     |     | 100 | ug/l   |      | 9/12/97       | WDNR MOD GRO    |
| Blank Spike             | 93     |     |     | 1.0 | %Recov |      | 9/12/97       | WDNR MOD GRO    |
| Blank Spike Duplicate   | 92     |     |     | 1.0 | %Recov |      | 9/12/97       | WDNR MOD GRO    |

### Organic Results

**PAH (HPLC) LIST - SEMIVOLATILES**

Prep Method: SW846 3510

Prep Date: 9/10/97

Analyst: ARO

| Analyte              | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|----------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Acenaphthene         | 27     | 10   | 32   |     | ug/L  | Q    | 9/11/97       | SW846 8310      |
| Acenaphthylene       | < 9.2  | 9.2  | 29   |     | ug/L  |      | 9/11/97       | SW846 8310      |
| Anthracene           | 2.3    | 1.5  | 4.8  |     | ug/L  | Q    | 9/11/97       | SW846 8310      |
| Benzo(a)anthracene   | 10     | 2.0  | 6.4  |     | ug/L  |      | 9/11/97       | SW846 8310      |
| Benzo(a)pyrene       | < 0.22 | 0.22 | 0.70 |     | ug/L  |      | 9/11/97       | SW846 8310      |
| Benzo(b)fluoranthene | < 0.80 | 0.80 | 2.5  |     | ug/L  |      | 9/11/97       | SW846 8310      |
| Benzo(g,h,i)perylene | < 0.88 | 0.88 | 2.8  |     | ug/L  |      | 9/11/97       | SW846 8310      |
| Benzo(k)fluoranthene | 0.50   | 0.16 | 0.51 |     | ug/L  | Q    | 9/11/97       | SW846 8310      |
| Chrysene             | 16     | 2.3  | 7.3  |     | ug/L  |      | 9/11/97       | SW846 8310      |



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### - Analytical Report -

Project Name : FORMER JOHNSON SAND'S GRAVEL

Project Number : 305

Client : MORaine ENVIRONMENTAL INC

Field ID : MW-7

Report Date : 9/16/97

Lab Sample Number : 872485-002

Collection Date : 9/8/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

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|                         |        |      |     |        |   |         |            |
|-------------------------|--------|------|-----|--------|---|---------|------------|
| Dibenzo(a,h)anthracene  | < 0.96 | 0.96 | 3.1 | ug/L   |   | 9/11/97 | SW846 8310 |
| Fluoranthene            | 1.9    | 0.88 | 2.8 | ug/L   | Q | 9/11/97 | SW846 8310 |
| Fluorene                | 30     | 11   | 35  | ug/L   | Q | 9/11/97 | SW846 8310 |
| Indeno(1,2,3-cd)pyrene  | < 0.96 | 0.96 | 3.1 | ug/L   |   | 9/11/97 | SW846 8310 |
| 1-Methylnaphthalene     | 380    | 36   | 110 | ug/L   |   | 9/11/97 | SW846 8310 |
| 2-Methylnaphthalene     | 360    | 34   | 110 | ug/L   |   | 9/11/97 | SW846 8310 |
| Naphthalene             | 120    | 38   | 120 | ug/L   |   | 9/11/97 | SW846 8310 |
| Phenanthrene            | 65     | 9.0  | 29  | ug/L   |   | 9/11/97 | SW846 8310 |
| Pyrene                  | 11     | 1.8  | 5.7 | ug/L   |   | 9/11/97 | SW846 8310 |
| 9,10-Diphenylanthracene | NA     |      |     | %Recov |   | 9/11/97 | SW846 8310 |





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## - Analytical Report -

Project Name : FORMER JOHNSON SAND'S GRAVEL

Project Number : 305

Client : MORAINÉ ENVIRONMENTAL INC

Field ID : TRIP BLANK

Report Date : 9/15/97

Lab Sample Number : 872485-003

Collection Date : 9/8/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

### Organic Results

EPA 8260 VOLATILE LIST- WATER

Prep Method: SW846 5030

Prep Date: 9/10/97

Analyst: HW

| Analyte                     | Result | LOD  | LOQ  | EQL | Units | Code | Analysis Date | Analysis Method |
|-----------------------------|--------|------|------|-----|-------|------|---------------|-----------------|
| Benzene                     | < 0.41 | 0.41 | 1.3  |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Bromobenzene                | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Bromochloromethane          | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Bromodichloromethane        | < 0.18 | 0.18 | 0.57 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Bromoform                   | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Bromomethane                | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| s-Butylbenzene              | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| t-Butylbenzene              | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| n-Butylbenzene              | < 0.31 | 0.31 | 0.99 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Carbon tetrachloride        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Chloroform                  | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Chlorobenzene               | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Chlorodibromomethane        | < 0.23 | 0.23 | 0.73 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Chloroethane                | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Chloromethane               | < 0.15 | 0.15 | 0.48 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 2-Chlorotoluene             | < 0.27 | 0.27 | 0.86 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 4-Chlorotoluene             | < 0.30 | 0.30 | 0.96 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,2-Dibromo-3-chloropropane | < 0.58 | 0.58 | 1.8  |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,2-Dibromoethane           | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Dibromomethane              | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,3-Dichlorobenzene         | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,4-Dichlorobenzene         | < 0.29 | 0.29 | 0.92 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,2-Dichloroethane          | < 0.24 | 0.24 | 0.76 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,2-Dichlorobenzene         | < 0.32 | 0.32 | 1.0  |     | ug/L  |      | 9/10/97       | SW846 8260      |
| 1,1-Dichloroethene          | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| cis-1,2-Dichloroethene      | < 0.28 | 0.28 | 0.89 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| Dichlorodifluoromethane     | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/10/97       | SW846 8260      |
| trans-1,2-Dichloroethene    | < 0.25 | 0.25 | 0.80 |     | ug/L  |      | 9/10/97       | SW846 8260      |



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## - Analytical Report -

**Project Name :** FORMER JOHNSON SAND'S GRAVEL

**Project Number :** 305

**Client :** MORaine ENVIRONMENTAL INC

**Field ID :** TRIP BLANK

**Report Date :** 9/15/97

**Lab Sample Number :** 872485-003

**Collection Date :** 9/8/97

**WI DNR LAB ID :** 40513270

**Matrix Type :** WATER

|                           |        |      |      |        |         |            |
|---------------------------|--------|------|------|--------|---------|------------|
| 1,2-Dichloropropane       | < 0.24 | 0.24 | 0.76 | ug/L   | 9/10/97 | SW846 8260 |
| 1,1-Dichloroethane        | < 0.26 | 0.26 | 0.83 | ug/L   | 9/10/97 | SW846 8260 |
| 1,3-Dichloropropane       | < 0.27 | 0.27 | 0.86 | ug/L   | 9/10/97 | SW846 8260 |
| 2,2-Dichloropropane       | < 0.45 | 0.45 | 1.4  | ug/L   | 9/10/97 | SW846 8260 |
| 1,1-Dichloropropene       | < 0.26 | 0.26 | 0.83 | ug/L   | 9/10/97 | SW846 8260 |
| cis-1,3-Dichloropropene   | < 0.48 | 0.48 | 1.5  | ug/L   | 9/10/97 | SW846 8260 |
| trans-1,3-Dichloropropene | < 0.45 | 0.45 | 1.4  | ug/L   | 9/10/97 | SW846 8260 |
| Diisopropyl ether         | < 0.43 | 0.43 | 1.4  | ug/L   | 9/10/97 | SW846 8260 |
| Ethylbenzene              | < 0.23 | 0.23 | 0.73 | ug/L   | 9/10/97 | SW846 8260 |
| Fluorotrichloromethane    | < 0.29 | 0.29 | 0.92 | ug/L   | 9/10/97 | SW846 8260 |
| Hexachlorobutadiene       | < 0.31 | 0.31 | 0.99 | ug/L   | 9/10/97 | SW846 8260 |
| Isopropylbenzene          | < 0.27 | 0.27 | 0.86 | ug/L   | 9/10/97 | SW846 8260 |
| p-Isopropyltoluene        | < 0.22 | 0.22 | 0.70 | ug/L   | 9/10/97 | SW846 8260 |
| Methylene chloride        | < 0.22 | 0.22 | 0.70 | ug/L   | 9/10/97 | SW846 8260 |
| Methyl-tert-butyl-ether   | < 0.53 | 0.53 | 1.7  | ug/L   | 9/10/97 | SW846 8260 |
| Naphthalene               | < 0.66 | 0.66 | 2.1  | ug/L   | 9/10/97 | SW846 8260 |
| n-Propylbenzene           | < 0.27 | 0.27 | 0.86 | ug/L   | 9/10/97 | SW846 8260 |
| Styrene                   | < 0.19 | 0.19 | 0.61 | ug/L   | 9/10/97 | SW846 8260 |
| 1,1,2,2-Tetrachloroethane | < 0.46 | 0.46 | 1.5  | ug/L   | 9/10/97 | SW846 8260 |
| 1,1,1,2-Tetrachloroethane | < 0.21 | 0.21 | 0.67 | ug/L   | 9/10/97 | SW846 8260 |
| Tetrachloroethene         | < 0.27 | 0.27 | 0.86 | ug/L   | 9/10/97 | SW846 8260 |
| Toluene                   | < 0.28 | 0.28 | 0.89 | ug/L   | 9/10/97 | SW846 8260 |
| 1,2,3-Trichlorobenzene    | < 0.32 | 0.32 | 1.0  | ug/L   | 9/10/97 | SW846 8260 |
| 1,2,4-Trichlorobenzene    | < 0.48 | 0.48 | 1.5  | ug/L   | 9/10/97 | SW846 8260 |
| 1,1,1-Trichloroethane     | < 0.27 | 0.27 | 0.86 | ug/L   | 9/10/97 | SW846 8260 |
| 1,1,2-Trichloroethane     | < 0.30 | 0.30 | 0.96 | ug/L   | 9/10/97 | SW846 8260 |
| 1,2,4-Trimethylbenzene    | < 0.30 | 0.30 | 0.96 | ug/L   | 9/10/97 | SW846 8260 |
| Trichloroethene           | < 0.20 | 0.20 | 0.64 | ug/L   | 9/10/97 | SW846 8260 |
| 1,2,3-Trichloropropane    | < 0.48 | 0.48 | 1.5  | ug/L   | 9/10/97 | SW846 8260 |
| 1,3,5-Trimethylbenzene    | < 0.25 | 0.25 | 0.80 | ug/L   | 9/10/97 | SW846 8260 |
| Vinyl chloride            | < 0.23 | 0.23 | 0.73 | ug/L   | 9/10/97 | SW846 8260 |
| Xylenes, -m, -p           | < 0.51 | 0.51 | 1.6  | ug/L   | 9/10/97 | SW846 8260 |
| Xylene, -o                | < 0.28 | 0.28 | 0.89 | ug/L   | 9/10/97 | SW846 8260 |
| 4-Bromofluorobenzene      | 97     |      |      | %Recov | 9/10/97 | SW846 8260 |
| Dibromofluoromethane      | 90     |      |      | %Recov | 9/10/97 | SW846 8260 |



1795 Industrial Drive  
Green Bay, WI 54302  
920-469-2436  
800-7-ENCHEM  
FAX: 920-469-8827

### - Analytical Report -

Project Name : FORMER JOHNSON SAND'S GRAVEL

Project Number : 305

Client : MORaine ENVIRONMENTAL INC

Field ID : TRIP BLANK

Report Date : 9/15/97

Lab Sample Number : 872485-003

Collection Date : 9/8/97

WI DNR LAB ID : 40513270

Matrix Type : WATER

---

|            |    |        |         |            |
|------------|----|--------|---------|------------|
| Toluene-d8 | 98 | %Recov | 9/10/97 | SW846 8260 |
|------------|----|--------|---------|------------|

### Organic Results

GASOLINE RANGE ORGANICS - WATER

Prep Method: WI MOD.GRO

Prep Date: 9/10/97

Analyst: EGS

| Analyte                   | Result | LOD | LOQ | EQL | Units  | Code | Analysis Date | Analysis Method |
|---------------------------|--------|-----|-----|-----|--------|------|---------------|-----------------|
| GASOLINE RANGE ORGANICS < | 50     |     |     | 50  | ug/l   |      | 9/12/97       | WDNR MOD GRO    |
| Blank Spike               | 93     |     |     | 1.0 | %Recov |      | 9/12/97       | WDNR MOD GRO    |
| Blank Spike Duplicate     | 92     |     |     | 1.0 | %Recov |      | 9/12/97       | WDNR MOD GRO    |

**REMEDATION AND REDEVELOPMENT PROGRAM  
PETROLEUM ASSESSMENT FORM (revised 7-9-99)**

NOTE: This revised form will help to sort out categorized (H-M-L) petroleum tank release sites (PECFA eligible and non eligible) by the jurisdiction specified for DNR and COMM, in the Joint Finance Comm. decision for the 1999-01 Budget Session. For each question, you must check either yes or no using information from local knowledge of the site, or from site specific information such as a site investigation, remedial action plan or other documents. If no information exists that would allow a yes answer then check no. If you are unsure of how to interpret a question or definition, contact the RR Program Supervisor first to discuss it. They may contact, or have you contact, an appropriate PIT crew member for further clarification. It is important that the definitions are understood, and the information on the form is interpreted consistently statewide. For tracking and analysis purposes, send completed spread sheets or forms in an envelope labeled "Petroleum Assessment Forms" with your region's name to Shelley Magsamen, RR/3.

Region: SER Person/phone completing form: NANCY RYAN  
 Site Name/Location: JOHNSON SAND + GRAVEL  
 BRRTS # 0368004228 FID#268438610 Date: 8-27-99

**Answer 1-4 for Lists 3 & 4. If all answers are no, sites will be transferred to COMM.**

- |  | <u>YES</u> | <u>NO</u> |
|--|------------|-----------|
| 1. Active Enforcement Action.<br>(negotiated compliance schedule, Administrative Order or DOJ referral only)   | _____      | _____✓    |
| 2. Groundwater Contamination > or = ES.  | _____✓     | _____     |
| 3. Co – Contamination <sup>(a)</sup> petroleum and other compound(s).<br><ul style="list-style-type: none"> <li>• In soils (specify contaminant <u>CIS1, 2-DCE</u>) <u>PCE</u></li> <li>• In GW (specify contaminant <u>PCE</u>) <u>TCE</u></li> </ul> | _____✓     | _____✓    |
| 4. Two or more gw samples confirm > NR 140 PAL in a public or private well.  | _____      | _____✓    |

**In addition, answer 5-8 just for the list of clay sites screened from the GIS.**

- |   |        |        |
|---|--------|--------|
| 5. Clay site verification <sup>(b)</sup> (Please read definition before answering). | _____  | _____✓ |
| 6. GW > NR 140 ES within 100' of a private well or 1000' or a public well.          | _____✓ | _____  |
| 7. Free product of .01 foot or more in repeated measurements.                       | _____✓ | _____  |
| 8. GW > NR 140 ES in bedrock.   | _____  | _____✓ |

**Footnotes:**

- (a) Co-contamination includes all non-petroleum contaminants originating on site that **were not from a petroleum release**. Petroleum contamination includes petroleum additives that result **from a petroleum release** at the site.
- (b) A clay site has a hydraulic conductivity of < or =  $1 \times 10^{-5}$  cm/sec. (ie.  $1 \times 10^{-6}$  or  $1 \times 10^{-9}$ , etc.). If the geologic setting results in the site being classified as low-permeability and the site does not have **significant naturally occurring permeable lenses** (ie: there are no buried river beds or gravel lenses that cause the transport of contamination) then the site should be classified as clay. Do not exclude sites from this clay definition because they have utility trenches or localized areas of more permeable backfill.

**PETROLEUM ASSESSMENT FORM 3-19-99**

NOTE: Please use whatever information is available for the site to complete this form for all petroleum tank release sites (PECFA eligible and non eligible) such as the SIR, RAP, O&M forms, etc. While some adequacy reviews have been completed for different file information, it is recognized that for purposes of this form, the review of many file documents is assumed to be cursory and does not constitute an "adequacy" or "completeness" review. Please answer each question based on conditions at a site prior to remediation unless otherwise noted. Send bundles of at least 25 forms in an envelope labeled with both "Petroleum Assessment Forms" and your region name to Sally Kefer, RR/3.

Region: SE

Site Name/Location: JOHNSON SAND & GRAVEL WAUWATOSA

BRRTS # 368004228 FID 268438610

Active Enforcement Action (NON, NOV, Admin. Order, etc.) Yes/No

|  | <u>YES</u>                          | <u>NO</u>                           | <u>UNKNOWN</u>                      |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. SIR Submitted   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • SIR complete   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| • Petroleum contamination in soil only, no PAL exceedances)<br>(if yes, please transfer site to COMM, do not fill in rest of form)   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 2. Co - Contamination <sup>(1)</sup> petroleum and other compound(s)   |                                     |                                     |                                     |
| • In soils (specify contaminant <u>CIS-12-DCE</u> ) <u>PCE</u>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • In GW (specify contaminant <u>PCE</u> ) <u>TCE</u>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3. Contaminant Type  |                                     |                                     |                                     |
| • Fuel Oil/ Diesel   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • Gasoline   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • Contaminant with no NR 140 standard  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| • Waste oil  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4. Groundwater contamination > PAL & < ES in NR 140.<br>If no co-contamination and/or compound(s) w/out NR 140 standard(s) exist,<br>please fill out this form and transfer site to COMM as soon as possible.) |                                     |                                     |                                     |
| • On site  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • Off Site   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5. Clay sites <sup>(2)</sup> N/A <input checked="" type="checkbox"/> (Go to #6)  |                                     |                                     |                                     |
| • On site  |                                     |                                     |                                     |
| • GW contamination < or = 300x ES in clay  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • GW contamination > or = 300x ES in clay  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • Off site   |                                     |                                     |                                     |
| • GW contamination < or = 300x ES in clay  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • GW contamination > or = 300x ES in clay  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6. GW contamination in non-clay formation > or = ES.   |                                     |                                     |                                     |
| • On site  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| • Off site   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

**PETROLEUM ASSESSMENT FORM 3-19-99**

|  | <u>YES</u>  | <u>NO</u>   | <u>UNKNOWN</u> |
|--|-------------|-------------|----------------|
| 7. Environmental Factor(s) (ever) present                          |             |             |                |
| • Expanding plume  | _____       | _____       | _____          |
| • Free product >.01 foot thick                                     | _____✓_____ | _____       | _____          |
| • Potable well w/confirmed impacts > PAL                           | _____       | _____       | _____          |
| • Contamination in/within 1m bedrock                               | _____       | _____       | _____          |
| • Discharge surface water/wetland                                  | _____       | _____       | _____          |
| • EF(s) still present (name if more than one) _____                | _____       | _____       | _____          |
| 8. Other impacted receptors of concern: (ie. basements, utilities) |             |             |                |
| • Vapors   | _____       | _____       | _____          |
| • Seepage  | _____       | _____       | _____          |
| • Public well w/in 1000' of monitoring well w/ > ES                | _____       | _____       | _____          |
| • Private well w/in 100' of monitoring well w/ > ES                | _____       | _____       | _____          |
| • other: _____   | _____       | _____       | _____          |
| 9. Remediation Method:      Not proposed _____                     |             |             |                |
| • Soil remediation/startup date <sup>(3)</sup> _____               | _____       | _____       | _____          |
| • In-situ engineered   | _____       | _____       | _____          |
| • Ex-situ engineered (biopiles, landsread )                        | _____       | _____       | _____          |
| • Soil excavated/landfilled  | _____       | _____       | _____          |
| • Remedy still in use?   | _____       | _____       | _____          |
| • Groundwater remediation/startup date <sup>(3)</sup> _____        | _____       | _____       | _____          |
| • Active engineered (ORC, pump & treat, etc.)                      | _____       | _____       | _____          |
| • Passive system (natural attenuation)                             | _____       | _____       | _____          |
| • Remedy still in use?   | _____       | _____       | _____          |
| 10. Site eligible for proactive closure (see 12-14-98 memo)        | _____       | _____✓_____ | _____          |
| 11. Other relevant information                                     |             |             |                |
| _____  |             |             |                |
| _____  |             |             |                |
| _____  |             |             |                |

**Footnotes:**

- (1) Petroleum includes all contaminants that have been released from a petroleum tank system at the site. C contamination includes all non-petroleum contaminants (found with petroleum) that were not released from petroleum tank system.
- (2) DNR-COMM MOU Definition of Clay Site: "A site with fine-grained soils, for a depth of 3 meters or more, v soils have an in-situ hydraulic conductivity of 10-6 centimeters per second; the site does not contain depc laterally extensive coarse grained materials, and the site does not contain utility trenches, areas of grave' fractures in the clay, which would act as contaminant migration pathways."  
**NOTE: 0.2 gpm is closer to 10-5 cm/sec.** Use site boring logs / well development forms to obtain this
- (3) If remedy not implemented, write "Not Started". For NA monitoring, date on which data was initially col and used as demonstration of effectiveness of NA.

Name of person completing form: J. Krahling Date: 4-7-99  
 Email: \_\_\_\_\_ Phone: \_\_\_\_\_



Fax: (414) 220-5374

Tommy G. Thompson, Governor  
William J. McCoshen, Secretary

---

December 8, 1997

Mr. Robert Johnson  
Johnson Sand and Gravel  
20685 W. National Ave.  
New Berlin, WI 53186

**RE: COMMERCE # 53186-1661-90, Former Johnson Sand & Gravel Site,  
N8 W22590 Johnson Road, Pewaukee, WI 53186**

**Transfer of this site to the Department of Natural Resources**

Dear Mr. Johnson:

After reviewing information provided by Moraine Environmental, Inc. (Correspondence: *Site Investigation Report and Remedial Work Plan, November 17, 1997*), it is apparent that there is groundwater contamination at the subject site. Therefore, this site falls under the jurisdiction of and is being transferred from the Wisconsin Department of Commerce to the WDNR. This office has forwarded the site investigation report to Mr. Mike Farley at the WDNR. Future correspondence regarding this site should be directed to Mr. Mike Farley (414-229-0808) at

Wisconsin Department of Natural Resources  
Southeast Region  
P.O. Box 12436  
Milwaukee, WI 53212

Information required by the PECFA program should be directed to letterhead address:

Wisconsin Department of Commerce  
101 W. Pleasant St., Suite 205  
Milwaukee, WI 53212

Any questions pertaining to this transfer, you may contact me at 414.220.5375.

Sincerely,

COPY

Gregory S. Michael  
Hydrogeologist  
PECFA Site Review Section

Cc: Thomas Sweet, Moraine Environmental  
Electronic filing: pecfa:\\531\53186\166190\transbak.doc



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
Gloria L. McCutcheon, District Director

Southeast District Annex  
4041 N. Richards Street, Box 12436  
Milwaukee, WI 53212-0436  
TELEPHONE 414-229-0800  
FAX 414-229-0810

July 9, 1996  
FID#: 268438610

Site ID#: 0368004228

JOHNSON SAND & GRAVEL  
~~N8 W22590 JOHNSON DR~~ 20685 W. National Ave  
~~WAUKESHA WI 53186~~ New Berlin WI 53146

SUBJECT: Transfer of Your File for JOHNSON SAND & GRAVEL to the Department of Commerce

This letter is to notify you that the Department of Natural Resources (DNR) has an open file regarding contamination at the above site, and this file is being transferred to the newly created Department of Commerce (DCOM).

The 1995-97 state budget bill changed the way state government manages discharges to the environment from petroleum storage tanks. As of July 1, 1996, DCOM is responsible for governmental oversight of environmental cleanup at properties contaminated by petroleum storage tanks when contamination has not impacted groundwater above state preventative action levels.

Information presented to DNR shows that this site falls into the group identified for transfer. Therefore, we are transferring your file to DCOM immediately. DCOM will provide all future oversight, including determination of file closure. Thank you for the efforts you have made to date.

All future contacts regarding this case should be directed to DCOM at either (608) 266-2424 or (608) 267-3753. Correspondence should be addressed to:

PECFA Bureau, Environmental & Regulatory Services  
Department of Commerce  
P.O. Box 7969  
Madison, WI 53707-7969

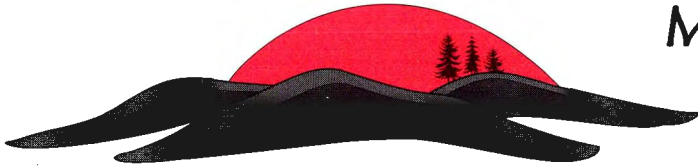
Please include both your PECFA claim number, if you have one, and your DNR site ID number in your correspondence. The PECFA program reimbursement staff have also been transferred to DCOM from the Department of Industry, Labor and Human Relations (DILHR), effective July 1, 1996.

Please advise your consultant about this transfer. Thank you.

Sincerely,

Frank Schultz  
Solid & Hazardous Waste Supervisor





# Moraine Environmental, Inc.

Environmental Management Services

March 8, 1996

Project Reference #0305

Mike Farley  
Wisconsin Department of Natural Resources  
Southeast District - Annex Building  
P.O. Box 12436  
Milwaukee, Wisconsin 53212

Re: Johnson Sand & Gravel, Located at N8 W22590  
Johnson Drive Waukesha, Wisconsin 53186  
WDNR File Ref: 268438610 (Mr. Robert Johnson-R/P)

Dear Mike:

This correspondence is to notify you that *Moraine Environmental, Inc.* (MEI) has been selected as the environmental consultant for the above referenced site.

MEI intends to proceed with a limited subsurface investigation consisting of eight conventionally drilled-HSA borings followed by a report of findings and conclusions with recommendations for remediation. A work plan addressing the scope of the investigation will be submitted prior to drilling.

Should you have any questions or comments, please do not hesitate to contact me at (414) 377-9060.

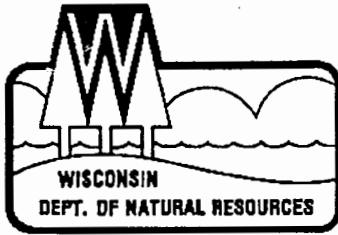
Sincerely,

*Moraine Environmental, Inc.*

Thomas C. Sweet  
President

TCS/cah

E:\WPWIN\MEITECH\0305\DNRR.LTR



George E. Meyer  
Secretary

**State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES**

**Southeast District**  
Post Office Box 12436  
4041 N. Richards Street  
Milwaukee, Wisconsin 53212  
TELEPHONE: 414-961-2727  
TELEFAX #: 414-961-2770

May 20, 1994

File Ref: 268438610  
ER-LUST

Mr. Robert Johnson  
Johnson Sand & Gravel  
N8 W22590 Johnson Drive  
Waukesha, WI 53186

RE: Johnson Sand & Gravel, N8 W22590 Johnson Drive, Waukesha, WI 53186

Dear Mr. Johnson:

Wisconsin Department of Natural Resources (WDNR) has been notified that petroleum contamination was discovered March 31, 1994 at the above referenced location. Based on the site specific information provided, this case has been assigned to the Low Priority Rank group. The purpose of this letter is to inform you of your legal responsibilities to address this situation.

Releases from underground storage tanks regulated under Subtitle I of the Resource Conservation and Recovery Act require compliance with the provisions of 40 CFR Parts 280 and 281. The Environmental Protection Agency (EPA) has the authority to take enforcement action at any time, but will generally not take action against parties cooperating with the state. The WDNR proceeds in LUST cases under the authority of s. 144.76, Wisconsin Statutes, commonly referred to as Wisconsin's Hazardous Substance Spill Law. The definition of "hazardous substance" as found in s. 144.01(4m), Wisconsin Statutes, includes petroleum products.

Wisconsin Statute 144.76(2a) states: "A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall notify the Department immediately of any discharge not exempted under sub.(9)."

Wisconsin Statute 144.76(3) states: "A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of this state."

Because you possess or control a hazardous substance which has been released to the environment, the Department identifies you as the party responsible for taking the actions necessary to restore the environment. You are required to:

1. Immediately notify the WDNR Spills Hotline at (414) 263-8491 should emergency conditions involving explosive vapors and/or well contamination develop.

2. Conduct an investigation to determine the extent of soil and groundwater contamination.
3. Remediate all of the environmental impacts caused by this situation.
4. Sample private water supply wells which may have been impacted by the release.

The Department suggests that you have a qualified environmental engineer or hydrogeologist direct the remedial investigation, assess the environmental impact, and coordinate the implementation of a cleanup program. Within 30 days of receiving this letter, you should provide the WDNR with the following information:

1. The name of the individual/firm directing the investigation.
2. The date the remedial investigation will begin.

The Department requires that the location of the tank and/or release be submitted with the work plan. Requirements for location are Latitude, Longitude, 1/4, 1/4, Township, and Range (east or west).

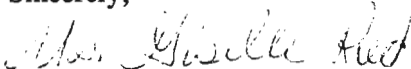
Final documentation of the investigation and cleanup should be prepared according to the guidance enclosed and sent to this office on completion of compliance with all applicable federal, state and local laws and regulations. Remedial actions must adequately cleanup contaminated soil and/or groundwater to current WDNR guidelines and/or standards. All product, soil, wastewater, and sludge must be disposed of in compliance with all applicable federal, state and local laws and regulations. Because the Department is experiencing a backlog of leaking underground storage tank cases of emergency status and your case is not currently ranked as an emergency, your submittals will be reviewed as time permits. Investigation and cleanup should not, however, be delayed pending WDNR review of your case.

The WDNR requests that concise LUST project updates be submitted every six months for all low priority sites; biannual updates will enable WDNR project managers to monitor the status of remedial investigations and/or corrective actions on projects which are not under direct WDNR oversight.

You are encouraged to contact the Department of Industry, Labor, and Human Relations (DILHR), the state agency that administers the Petroleum Environmental Cleanup Fund (PECFA). This fund may reimburse you for eligible costs associated with the remedial investigation and cleanup. DILHR should be contacted at (608) 266-2424 to obtain current information regarding the PECFA program.

Please be aware that your ability to utilize PECFA funds will be dependent on your cooperation in adequately addressing this problem.

Sincerely,



Giselle Red  
Program Assistant, Environmental Repair Section

c: Ms. Amy Bucher - Moraine Environmental, P. O. Box 488, Mequon, WI 53092  
SED Case File

*Gina LUST 268438610 entered 5/20/94gr*

UID Number: #4228 FID Number: \_\_\_\_\_ PMN Number: \_\_\_\_\_

County: 68 Initial Contact Date: 3, 31, 94

Site Name: Johnson Land + Leavel Date RPLetter Sent: 5, 20, 94

Address: NS W22540 Johnson Ln  
Waukesha 53186 Date Closure Approved:     

Municipality: \_\_\_\_\_ Person/Firm Reporting: \_\_\_\_\_

Legal Descript.:      1/4      1/4 sec.      T      N R      (E/W) Phone Number: (      )     

Lat.: \_\_\_\_\_ Long.: \_\_\_\_\_

| Priority Screening      | Scoring Criteria | Funding Source        | Effective Date                          | LUST Trust Eligible         |
|-------------------------|------------------|-----------------------|---|-----------------------------|
| <u>    </u> 1 = High    | 1. _____         | <u>X</u> 1 = RP       | <u>    </u> / <u>    </u> / <u>    </u> | <u>    </u> 1 = Federal     |
| <u>    </u> 2 = Medium  | 2. _____         | <u>    </u> 2 = LTF   | <u>    </u> / <u>    </u> / <u>    </u> | <u>    </u> 2 = Non-Federal |
| <u>X</u> 3 = Low        | 3. _____         | <u>    </u> 3 = EF    | <u>    </u> / <u>    </u> / <u>    </u> |                             |
| <u>    </u> 4 = Unknown | 4. _____         | <u>    </u> 4 = Other | <u>    </u> / <u>    </u> / <u>    </u> |                             |
|                         | 5. _____         |                       |   |                             |

Score: \_\_\_\_\_ Init.: \_\_\_\_\_ Date: \_\_\_\_\_

**Case Status**

|  | Start Date                              | End Date                                |
|--|---|---|
| <u>    </u> (F) Free Product Removal   | <u>    </u> / <u>    </u> / <u>    </u> | <u>    </u> / <u>    </u> / <u>    </u> |
| <u>    </u> (E) RP Emergency Response  | <u>    </u> / <u>    </u> / <u>    </u> | <u>    </u> / <u>    </u> / <u>    </u> |
| <u>    </u> (R) LTF Emergency Response | <u>    </u> / <u>    </u> / <u>    </u> | <u>    </u> / <u>    </u> / <u>    </u> |
| <u>    </u> (L) Long Term Monitoring   | <u>    </u> / <u>    </u> / <u>    </u> | <u>    </u> / <u>    </u> / <u>    </u> |

**Responsible Party**

Contact Person: Felbert Johnson

Company Name: (Same as above)

Address: \_\_\_\_\_

Phone Number: (414) 542-9429

CC's: \_\_\_\_\_

**Impacts**

Enter "P" for potential and "K" for known

     (1) Fire/Explosion Threat

     (2) Contaminated Private Well(s) \_\_\_\_\_ # of Wells

     (3) Contaminated Public Well

     (4) Groundwater Contamination

K (5) Soil Contamination

     (6) Other: \_\_\_\_\_

     (7) Surface Water Impacts

     (9) Floating Product

**Consultant**

Contact Name: Angie Bucher

Company Name: Yieldmore Inc

Address: P.O. Box 488  
Waukesha WI 53186

Telephone: (      )     

| Substances                      | # Tank(s)   | Size          |
|---------------------------------|-------------|---------------|
| <u>    </u> (1) Leaded Gas      | <u>    </u> | <u>    </u>   |
| <u>    </u> (2) Unleaded Gas    | <u>1</u>    | <u>10,000</u> |
| <u>    </u> (3) Diesel          | <u>1</u>    | <u>10,000</u> |
| <u>    </u> (4) Fuel Oil        | <u>    </u> | <u>    </u>   |
| <u>    </u> (5) Unkwn Hydrocrbn | <u>    </u> | <u>    </u>   |
| <u>    </u> (8) Other           | <u>    </u> | <u>    </u>   |
| <u>    </u> (12) Waste Oil      | <u>    </u> | <u>    </u>   |





**PRIORITY SCREENING WORKSHEET**

**HIGH FACTORS:** (DEFINITION: Any case which presents an actual threat to human health, or has a high potential of causing a threat to human health and property; and/or any case which has caused or has a high potential of causing substantial impacts to the soil, waters and air of the State of Wisconsin).

**EMERGENCY FACTORS:**

- Contaminated private or public well >NR 140 enf. std.
- Explosive or toxic vapors in structures
- Threat of fire

**HIGH FACTORS:**

- Floating product (including sheen)
- GW contamination (>140 enf. std.)
- Impacted surface water - - wetland, trout stream, etc. impacted
- Saturated soil contamination posing a risk to groundwater

**MEDIUM FACTORS:** (DEFINITION: Any case which does not appear to be an immediate threat to human health or vital natural resources but which shows levels of contamination that may cause substantial environmental impacts if left unaddressed.)

- Moderate soil contamination with potential for impacting groundwater.
- Impacted surface water - - no critical habitat threats.
- Groundwater contamination >NR 140 PAL.

**LOW FACTORS:** (DEFINITION: Any case where contamination has been documented, but which presents limited potential for immediate threat to human health and vital natural resources.)

- Soil contamination which appears to have a limited potential for impacting groundwater.
- Initial Remedial action has substantially reduced environmental threat.

**UNKNOWN FACTORS:** (DEFINITION: Any case where some indication of contamination is present, but due to incomplete or inaccurate information the level of threat to human health or the environment can not be assessed at this time.)

- Inadequate information to assign a high, medium, or low ranking.

**NUMERICAL LUST SCORING WORKSHEET**

1. **GROUNDWATER & SOILS:**

**POINTS:**

- 20 Municipal well impacted
- 18 >6 private wells impacted
- 16 4 - 6 private wells impacted
- 14 2 - 3 private wells impacted
- 12 1 private well impacted

**Points:**

- 10 Major soil and/or gw >ES within 1200' of a public well
- 8 Major soil and/or gw >ES within 1200' of one or more private wells
- 6 Groundwater contamination >ES
- 4 Groundwater contamination <ES
- 2 Soil contamination

For purposes of this scoring, private well includes any non-municipal water supply system (e.g. non-community and other than municipal)

2. **EXPLOSIVE OR TOXIC VAPORS:**

**POINTS:**

- CONFIRMED
- 20
- 16
- 12

**POTENTIAL**

- 10
- 8
- 6

- Explosive levels in a residence or building
- Explosive levels in a sewer or other confined space
- Toxic levels in a residence or building

NOTE: Explosive levels determined to be >20% LEL as per an explosivity meter, toxicity levels are based on OSHA permissible exposure limits (PEL's)

3. **SURFACE WATER IMPACTS:**

**POINTS:**

- CONFIRMED
- 14
- 10
- 6

**POTENTIAL**

- 7
- 5
- 3

- Visible sheen or product on sensitive surface water environment (e.g. wetland, trout stream)
- Visible sheen or product on non-sensitive surface water area.
- Exceedance of NR 102, 103 or 104 surface water quality standards.

Request assistance from District Water Resources staff in evaluating surface water impacts.

4. **HYDROGEOLOGIC SETTING:**

**Points:**

- 12 Permeable stratigraphy (gravel, sand, fractured bedrock or utilities capable of intercepting and directing flow) and groundwater within 25 feet of the ground surface.
- 10 Permeable stratigraphy and groundwater greater than 25 feet below ground surface.
- 8 Moderately permeable stratigraphy (silty sands, silty gravel, clayey sands) and groundwater within 25 feet of ground surface.
- 6 Moderately permeable stratigraphy and groundwater greater than 25 feet below ground surface.
- 4 Low permeability stratigraphy (silt, clayey silt, sand clays) and groundwater within 25 feet of ground surface.
- 2 Low permeability stratigraphy and groundwater greater than 25 feet below ground surface.

5. **TYPE OF PRODUCT:**

**POINTS:**

- FREE PRODUCT
- 12
- 10
- 6

**DISSOLVED PRODUCT**

- 8
- 6
- 2

- Gasoline, mixture of gasoline and other products, other light petroleum products.
- Diesel, fuel oil.
- Bunker oil, other heavy oils or crude fractions.

REMARKS:

- dispensers leaked
- 26 highest PID readings
- under tank locks o.k.
- no GW @ 14 1/2 ft
- a lot of fill in this area.

DEPARTMENT OF  
NATURAL RESOURCES  
SED  
8804 MAY 20 AM 9:49

Revised + FID#  
D. Smith



REC: 4-4-94  
LUST-DNR

TID # 268438610



## Moraine Environmental, Inc.

Environmental Management Services

March 31, 1994

Project Reference #0290

Ms. Gina Keenan  
Wisconsin Department of Natural Resources  
Southeast District - Annex Building  
P. O. Box 12436  
Milwaukee, Wisconsin 53212

Re: Underground Storage Tank (UST) Release  
Mr. Robert Johnson  
Johnson Sand & Gravel, Inc.  
N8 W22590 Johnson Drive  
Waukesha, Wisconsin 53186

Dear Ms. Keenan:

In accordance with the Wisconsin Department of Natural Resources reporting requirements, please be advised that Moraine Environmental, Inc. (MEI) discovered a petroleum release at the above referenced property on March 30, 1994. This letter will confirm MEI's phone conversation with the WDNR on March 31, 1994.

Specifically, MEI was on site to collect soil samples following the removal of two (2) 10,000 gallon UST's, one which contained unleaded gasoline and the other diesel. Soils within the tank excavation did not appear to be impacted, however, stained soils and strong odors were noted to exist beneath the dispenser area.

Accordingly, MEI, on behalf of the owner, would like to formally report a petroleum product release at the above referenced property. The responsible party letter should be addressed to the owner of the property at the site address listed above.

If you have any questions, please contact me at (414) 242-8998.

Sincerely,

MORaine ENVIRONMENTAL, INC.

Amy Bucher  
Environmental Scientist

cc: Mr. Robert Johnson

mei-tech\0290dnr.ltr