3-12-08 3-12-08 on Ri

6

GIS REGISTRY INFORMATION

SITE NAME:	Johnson	Sand & Grav	el	
BRRTS #:	03-68-0042		268438610	
COMMERCE # (if appropriate):	531810-11	061-90		
CLOSURE DATE:	2-1-08			
STREET ADDRESS:	N8 W22	590 Johnson	Drive	
CITY:	Pewanket	2		
SOURCE PROPERTY GPS COOR WTM91 projection):	DINATES (mete s in	x= 6666829	Y= 287128	
CONTAMINATED MEDIA:	Groundwater	Soil	Both	V
OFF-SOURCE GW CONTAMINAT	ION >ES:	Yes	No	
IF YES, STREET ADDRESS 1:			23HECEIVED AF	PR 18 2008
GPS COORDINATES (meters in W	/TM91 projection):	X=	Y=	•
OFF-SOURCE SOIL CONTAMINA Specific RCL (SSRCL):	TION >Generic or Site-	Yes	No RECEIVED A	APR 1 8 2008
IF YES, STREET ADDRESS 1:				
GPS COORDINATES (meters in W	/TM91 projection):	X=	Y=	
CONTAMINATION IN RIGHT OF V	VAY:	Yes	No	
DOCUMENTS NEEDED:				
Closure Letter, and any conditional of	losure letter issued			
Copy of most recent deed, including	legal description, for all aff	fected properties		-
Certified survey map or relevant port County Parcel ID number, if used for			tion) for all affected properties	V
Location Map which outlines all propertie parcels to be located easily (8.5x14" if pape potable wells within 1200' of the site.				U
Detailed Site Map(s) for all affected p and potable wells. (8.5x14", if paper copy) relation to the source property and in relatio ch. NR 720 generic or SSRCLs.	This map shall also show the loc	cation of all contaminated public streets	, highway and railroad rights-of-way in	
Tables of Latest Groundwater Analy	tical Results (no shading or	r cross-hatching)		
Tables of Latest Soil Analytical Resu				-
Isoconcentration map(s), if required extent of groundwater contamination define				
GW: Table of water level elevations, GW: Latest groundwater flow direct greater than 20 degrees)			mum variation in flow direction is	
SOIL: Latest horizontal extent of co			ur	
Geologic cross-sections, if required				
RP certified statement that legal des Copies of off-source notification lett		accurate		NA
Letter informing ROW owner of resident		cable)(public, highway or railroad F	ROW)	NA
Copy of (soil or land use) deed restr				NA
Missing monitor	ing wells -	MW-5 + MW	-6	
		Wel	I construction to	VM5 V



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.



Johnson Sand & Gravel February 1, 2008 Page 2 of 2

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

Frames M. Koonce



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/ 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,

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

Grantor, and

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

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

Grantee,

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

RETURN TO NEW 22590 JOHNSON 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 6 1140 00 FEE પ્રવા 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

Warrant and April , 1996

(SEAL) (SEAL)

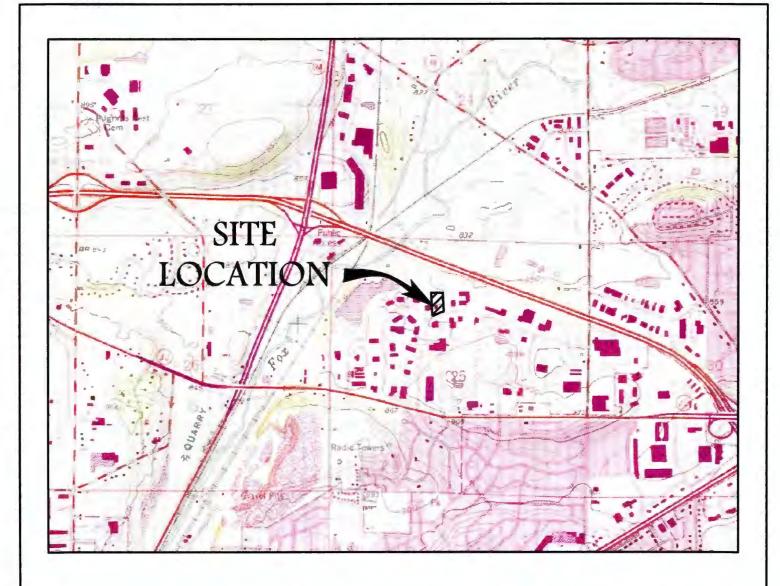
Dated this, 18TH day of April , 1996 ROBERT A. JOHNSON, SECRETARY		(SE
	(SEAL)	(SE
AUTHENTICATION Signature(s) of	_	ACKNOWLEDGEMENT STATE OF WISCONSIN (Vankesha county. } • County.
authenticated this day of .		Personally come before me this 3th day of 1900 to 1900 to 1900 the above named ROBERT A. JOHNSON, SECRETARY
TITLE: MEMBER STATE BAR OF WISCONSIN	_	to me known to be the perspn(a) who executed the foregoing
nulharizad by § 700.00, Wis. Stats.) THIS INSTRUMENT WAS DIMFTED BY		Instrument and acknowledge the same. Tirch the fisher k
J. BUSHNELL NIELSEN	-	Notary Public <u>(L.a.S.H.L.a.)</u> County, Wis. My Commission is permanent: (If not, state expiration date:

PARTY TO BE A TURN BENT THE SEAT OF THE SEAT AND SEAT OF THE SEATON.

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

19 (24.)

Sept 38





SCALE IN FEET 1" = 2000' 0 1000 2000 3000 4000 5000 6000 7000 8000

QUADRANGLE LOCATION

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

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

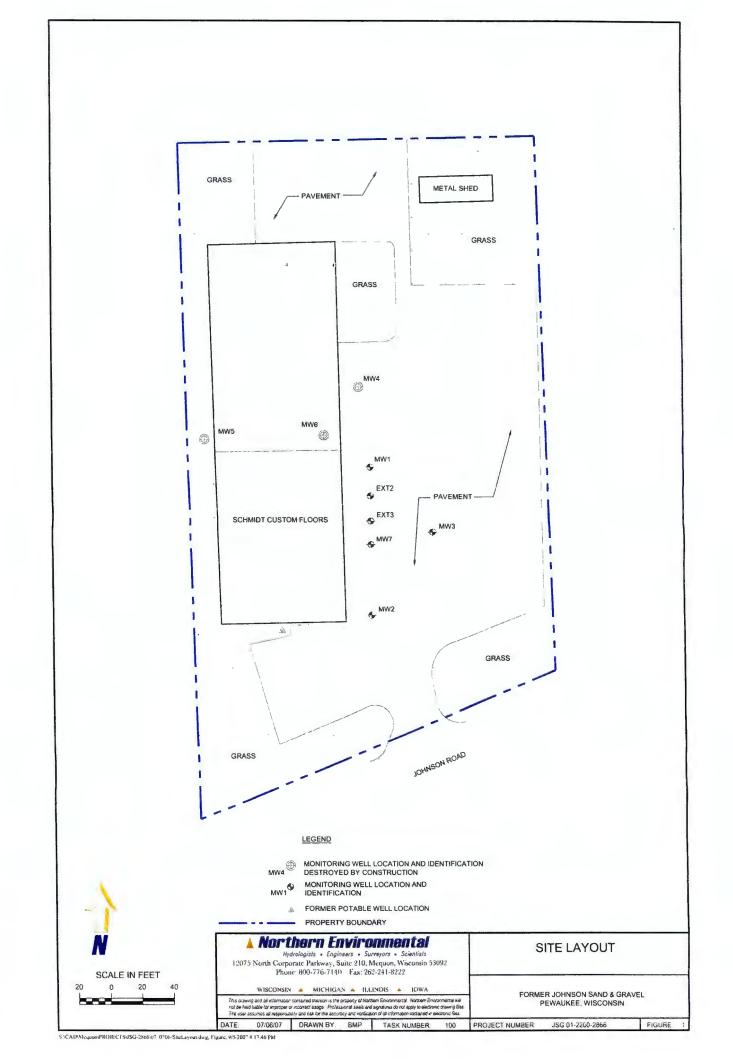
WISCONSIN A MICHIGAN A ILLINOIS A IOWA

This drawing and all information contained thereon is the property of Northern Environmental. Northern Environmental will not be held liable for improper or incorrect usage. Professional seals and signatures do not apply to electronic drawing files. The user assumes all responsibility and risk for the accuracy and verification of all information contained in electronic files.

SITE LOCATION & LOCAL TOPOGRAPHY

JOHNSON SAND & GRAVEL PEWAUKEE, WISCONSIN

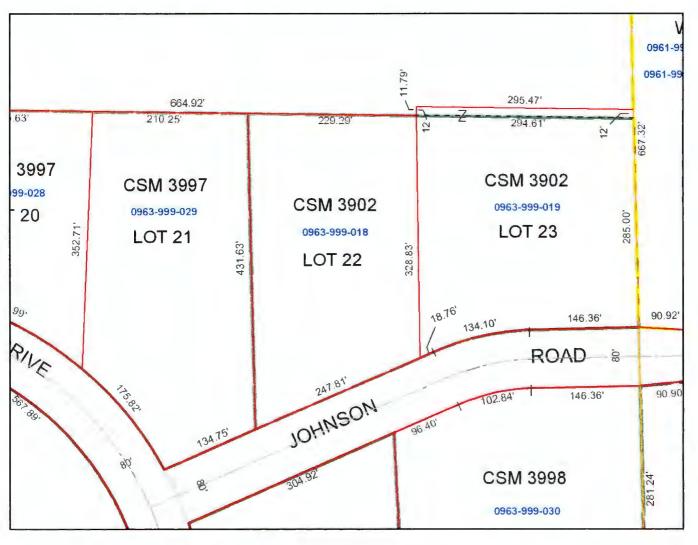
DATE: 07/06/07 DRAWN BY: BMP TASK NUMBER: 100 PROJECT NUMBER: JSG 01-2200-2866 FIGURE 1

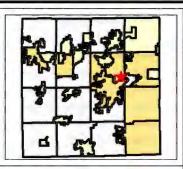


Internet Mapping Site



Waukesha County GIS





Legend Type + Airport Cemetery Fire Station

- Government Building
 Hospital
 Library
 Post Office

- A Park or Recreation
- School Unincorporated Place
- County Parks
- Sheriff Substation Civil Division Boundaries
- PLSS Section Lines
- PLSS Quarter Section Lines

- Easement Line (Major)
- Extended Tie Line
- Identification Arrow Meander 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
- Parceis
 Shared interest Parceis

Road Rights of Wa ROW Type Dedicated Proposed Reserved

- Vacated
 Assessor Plat
- Condo Plat CSM
- | Subdivision Plat

Railroad Rights of Way

RR ROW Status

Active

Retired

Lakes and Rivers

Streams and Creeks

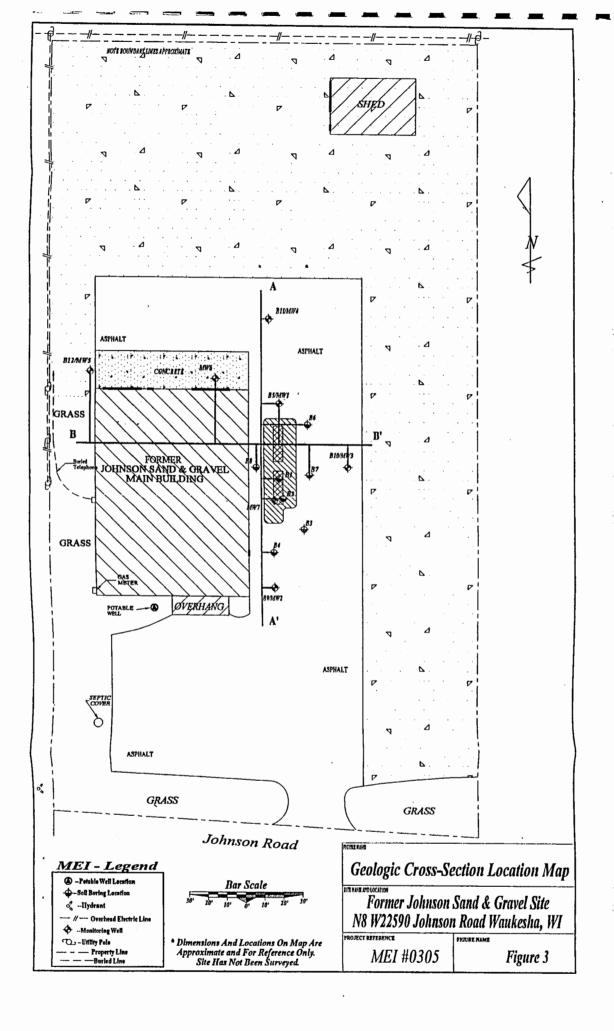


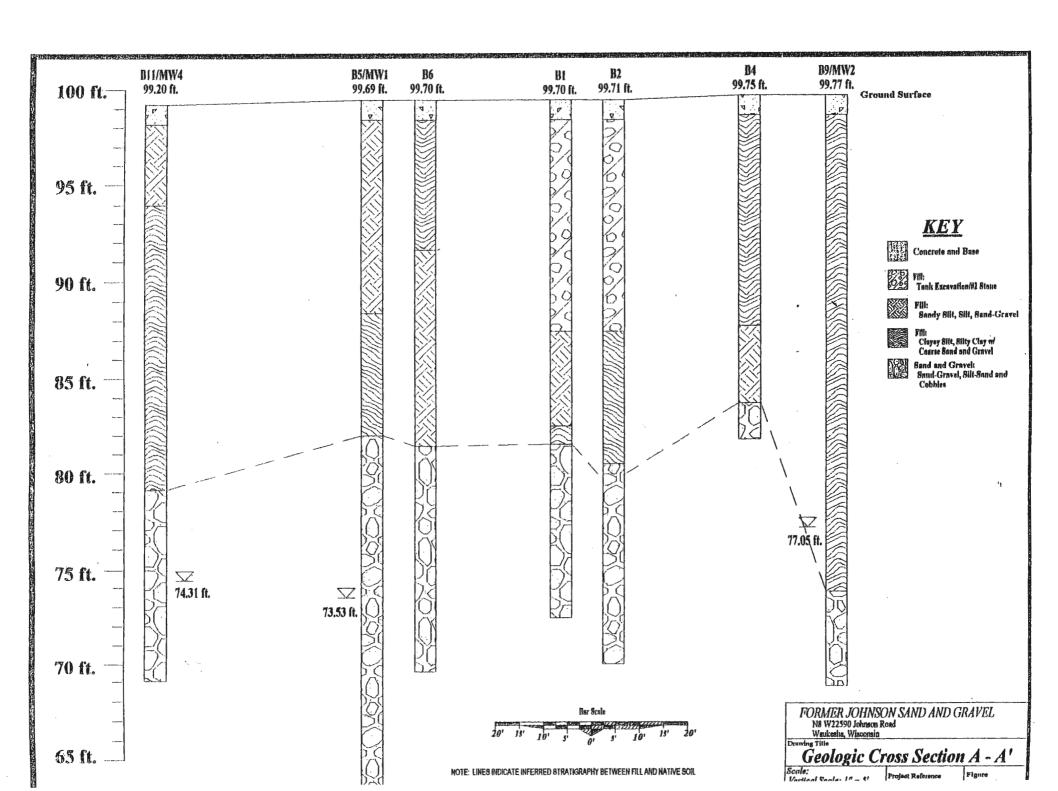
The information and depictions found on this site are for informational purposes only and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified 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 erein or for use which ignores this warning

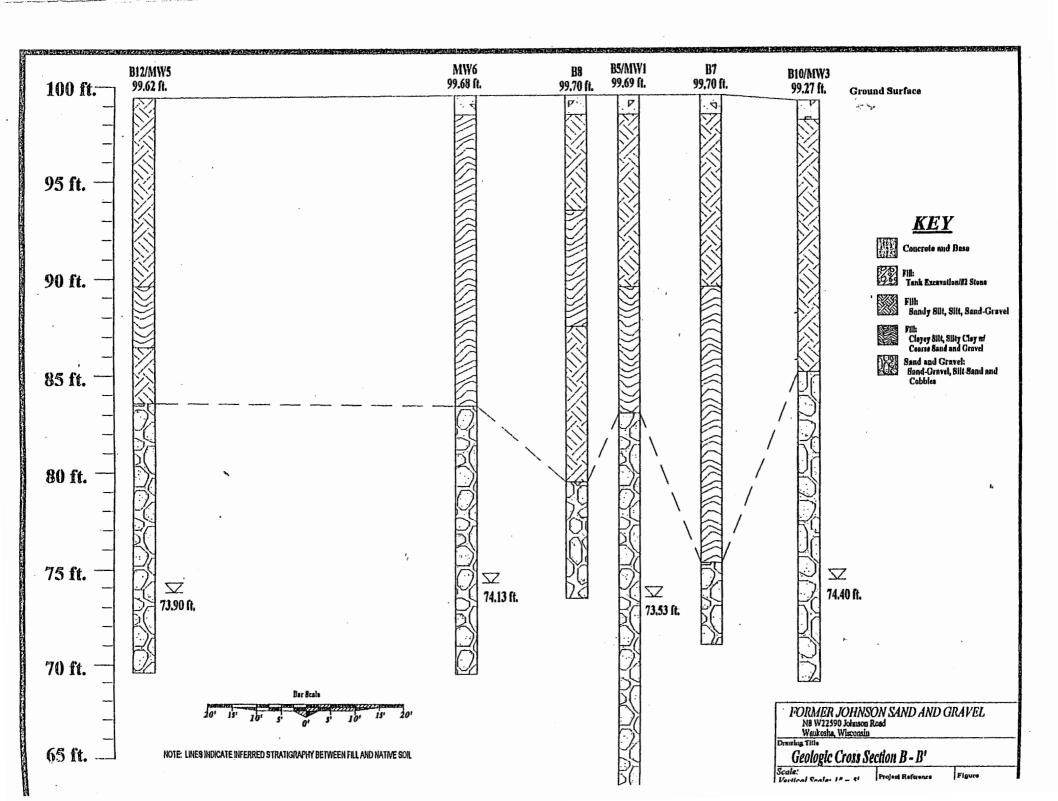
375 ft.

Notes: CSM 3902: Former Johnson Sand and Gravel Property

Map Generated: Aug 13, 2007







D CNT . I D	Waste Haz. Waste Waste		MONITORING WELL CONSTRUCTION
Department of Natural Resources Env. Response &	Repair Underground Ta	anks Other	Form 4400-113A Rev. 4-90
	ocal Grid Location of Well	ПЕ.	Well Name
	ft. S. —		
Facility License, Permit or Monitoring Number G	rid Origin Location	0 ' ''	Wis: Unimae Well Number: DNR Well Number. Date Well Installed
Type of Well Water Table Observation Well ⊠11	atLong	or	Does Well Leavilled
Piezometer	ection Location of Waste/Sour	rce	08/08/96 Well Installed By: (Person's Name and Firm) Paul Dickinson
Distance Well Is From Waste/Source Boundary	1/4 of 1/4 of Sec	T NR DW	Well Installed By: (Person's Name and Firm)
ft.			Paul Dickinson
	u 🗌 Upgradient 💢 s 🗀	Sidegradient	D. 4.7
☐ Yes ☐ No	d 🗌 Downgradient 🔝 n 🗀		Boart Longyear
A. Protective pipe, top elevation ft.	MSL	1. Cap and lock?	
B. Well casing, top elevation Flush ft.	MSI	2. Protective cov	er pipe:
	.	a. Inside diam	eter: $\frac{8.0}{1.0}$ in ft.
C. Land surface elevation ft.	MSL	b. Length:	
D. Surface seal, bottom ft. MSL or	O n 3283	c. Material:	Steel ⊠ 0.4
			Other 🗆 🔯
12. USC classification of soil near screen:			protection? ☐ Yes ⊠ No
GP □ GM □ GC □ GW □ SW □ SI		If yes, desc	ribe:
SM SC ML MH CL C		3. Surface seal:	Bentonite □ 30
		J. Guillace Seal.	Concrete ⊠ 0.1
13. Sieve analysis attached? ☐ Yes ☐ No		\	Other 🗆 🕮
14. Drilling method used: Rotary □ 5 0	I	4. Material betw	een well casing and protective pipe:
Hollow Stem Auger ⊠ 4.1			Bentonite □ 30
Other 🗆 🚉			Annular space seal 🔲 🏯
			Other 🗆 💥
15. Drilling fluid used: Water □02 Air □01		5. Annular space	seal: a. Granular Bentonite 🗵 3 3
Drilling Mud □ 0 3 None ⊠ 9 9		-	al mud weight Bentonite-sand slurry \(\square 3 5 \)
	1 🐰 🕷		al mud weight Bentonite slurry 3 1
16. Drilling additives used? ☐ Yes ☐ No			ntonite Bentonite-cement grout 5 0
		e.	Ft ³ volume added for any of the above
Describe	— l	f. How insta	
17. Source of water (attach analysis):	I		Tremie pumped □ 0 2
	1 🐰 🕷		Gravity ⊠ 0 8
		6. Bentonite seal	·
E. Bentonite seal, top ft. MSL or			□ 3/8 in. □1/2 in. Bentonite pellets □ 3 2
E. Bentonite sear, top it. MSL of	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	C 2171 III.	Other 🗆 🕮
F. Fine sand, topft. MSL or	5.0 ft. 3.0 ft.	7 Fine sand mat	erial: Manufacturer, product name and mesh size
F. Fine sand, top ft. MSL or	··· \ \ \	a	#7 Badger
G. Filter pack, top ft. MSL or			led ft ³
G. Filter pack, top ft. MSL or		,	terial: Manufacturer, product name and mesh size
H. Screen joint, top ft. MSL or			#30 American Material
H. Screen joint, top ft. MSL or	<u>,</u> π.		
1 W 11 - 1 - 20)O .		
I. Well bottom ft. MSL or30		9. Well casing:	
31			Flush threaded PVC schedule 80 2 4
J. Filter pack, bottom ft. MSL or	1.0 ft.	<u> </u>	Other DVC
		10. Screen materi	
K. Borehole, bottom ft. MSL or3	1.0 ft.	a. Screen Tyj	· ·
10.0	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Continuous slot 0 1
L. Borehole, diameter 10.0 in.	VIIII		other □ 並 rer- Boart Longyear
2.27	`	b. Manufactu	rer-Boart Longyear 0.010 in.
M. O.D. well casing 2.37 in.		c. Slot size:	10.0
2.00		d. Slotted len	~
N. I.D. well casing 2.06 in.		'II. Backfill mater	ial (below filter pack): None 1 4
<u></u>			Other 🗆 🖄
I hereby certify that the information on this		to the best of my kn	owledge.
Signature Jan 13	Firm Boart Longye	ar	Tel: (715) 359-7090
Service Service	101 Alderson Stre	eet	Fax: (715) 355-5715
Please complete both sides of this form and return to the	e appropriate DNR office list	ed at the top of this form	as required by chs. 144, 147 and 160, Wis.

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.

Department of Natural Resources		MONITORING WELL CONSTRUCTION Form 4400-113A 8-39
Facility/Project Name	rid Location	Weil Name
Former Johnson Sand and Gravel	fr 🗆 N	
Facility License, Permit or Monitoring Number	ft. [] E	. □ W. Wis Unique Weil Number DAR Weil Numb
/	ection Location	Date Weil installed 08.79.97
Piezometer 🗆 12	NW 1/4 of NE 1/4 of Section _	
Distance Well Is From WasterSource Boundary	1 7 N. R 19 KEOW	Weil Installed By: (Person's Name and Firm)
	ocation of Well Kelative to Waste/Source	
Is Weil A Point of Enforcement Std. Application? [] Yes [] No	☐ Upgradien ☐ Sidegradien☐ Downgradien☐ ☒ Not Know	l l
A Protective pipe, top elevationft.]		Tap and lock?
	VSI21	Protective cover pipe:
D. Will commit where the many and a many and	1HIV	Linside diameter:
		. Length:
D. Surface seal, bottom ft. MSL or		Cher []
12 USCS classification of soil near screen		L Additional protection?
GS GM GC GW XSW GSP V		If yes, describe:
Bestock		urface seal: Benumite 🔲 3 (
13. Sieve analysis attached? Yes No	3. S 4. M	Concrete 🔀 0 1
I4. Drilling method used: Rotary ☐ 50	\	Other Other
Hollow Sten Auger 241	\	Benonite [] 30
Other 🗆 💮		Armular space seal
	_	Ote 🛘 💮
15. Drilling fluid used: Water □ 02 Air □ 01 Drilling Mud □ 03 None ☑ 99	5. A	other 🗆 23 3 3 3 3 3 3
Drilling Mud □ 03 None 图 99	_	Lbs/gal mud weight Bentonite-sand shury 35
16. Drilling additives used?	- 8 8 -	Lbs/gal mud weight Bentonite sinny 3 1
	_	—— % Bentonite Bentonite-cement grout □ 50 ————————————————————————————————————
Describe	- B B F	re installed: Tremie 🔲 01
17. Source of water (attach analysis):		Tremie pemped 🗆 02
	5. A	Gravity P 08
		monite seal: Benonite granules 🖾 3 3
E Benomite seal, top ft. MSL or	_ ft	□1/4 in. □3/8 in. □1/2 in. Beatonite pelles □ 32
5 MSI - /	2 4 4 4 5 7 5	
F. Fine sand, top ft_ MSL or ft MSL or		ne sand material: Manufacturer, product name and mesh size Red Flint #55
G. Filter pack, top fr. MSL or _ / 7 .	7. Fr. 7.	iume addedft ³
H. Well screen, top ft. MSL or _ / 9	3. A.	ter pack material: Manufacturer, product name and mesh size
H. Well screen, top ft. MSL or _ / 7.5		home societfi ³
L Well screen, bottom ft. MSL or 29 3		Il casing: Flush threaded PVC schedule 40 DX 23
		Flush threaded PVC schedule 80 🔲 24
J. Filter pack, bottom ft_MSL or _ 20_0		con material: PVC
K. Borehole, bottom ft. MSL or 300) fr. 10. Sc	con type: Factory can A 11
		Communus slot 0 1
L Borehole, diameter 80 in.	_	Other []
226	•	1500 0.010 in.
M. O.D. well casing 225 in.	`	1.010 in. 1.010 length: 1.010 in.
N. I.D. well casing 2.00 in.	\	itill material (below filter pack): None DF
		Other 🗆
hereby certify that the information on this form		
	Fin	
Tatel Paller	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.

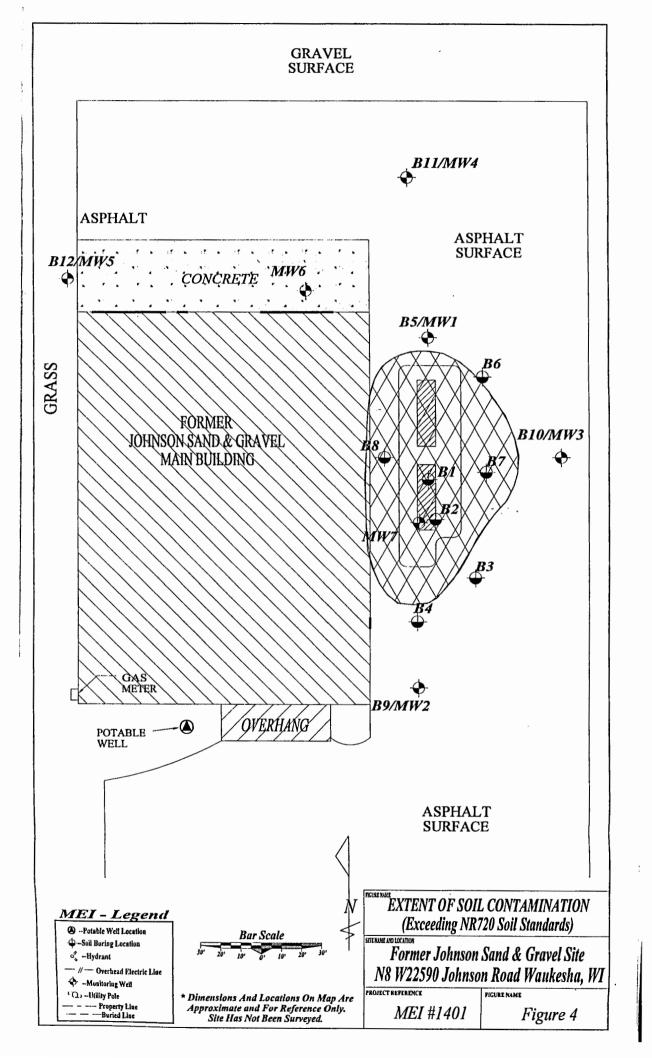


TABLE 3 SOIL QUALITY RESULTS

Former Johnson Sand and Gravel Site

	B1 (16-187)	B1 (24-26')	B2 (12-14)	B2 (22-24)	B2 (28-30')	B3 (12-14')	B3 (26-28')	B4 (8-10')	B4 (14-16)	B5 (6-8')	B5 (20-22)	B5 (28-30°)	B6 (12-14')	B6 (20-22)	B7 (4-6°)	B7 (14-16)	B7 (22-24')	B8 (10-12)	B8 (18-20')	B8 (22-247)	M3 composite	M3 (14-16')	Gene
GRO (mg/kg)	540	ND	350	250	708	ND	ND	ND	ND	ŊD	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	NSI
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	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

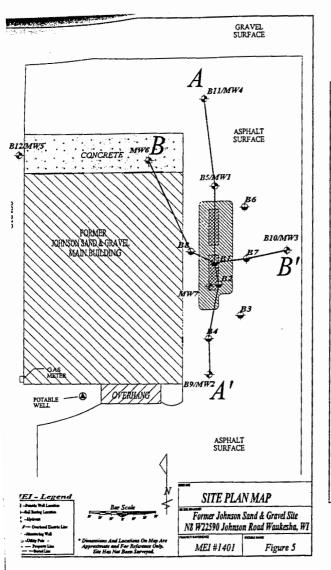
Notes:

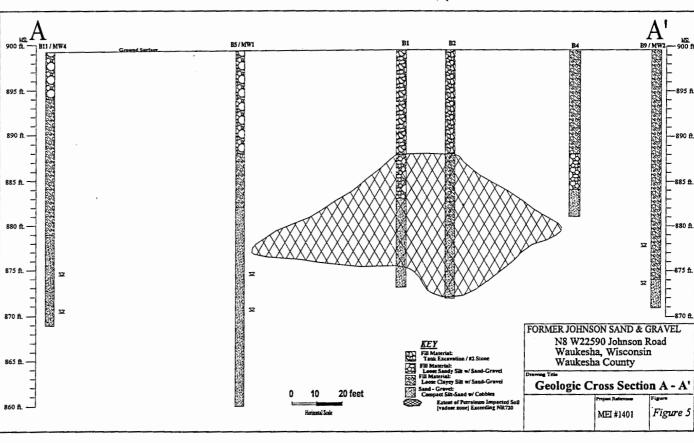
mg/kg - milligrams per kilogram ug/kg - micrograms per kilogram NA - Not Analyzed

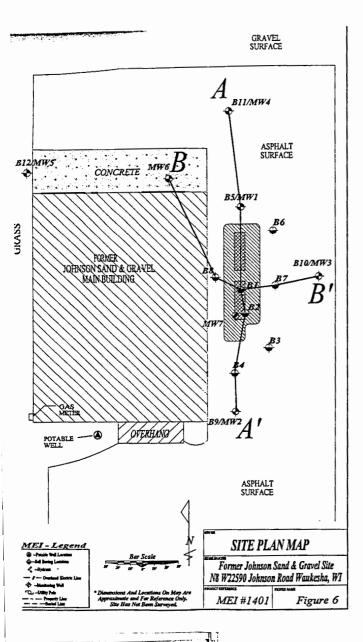
ND - Not Detected

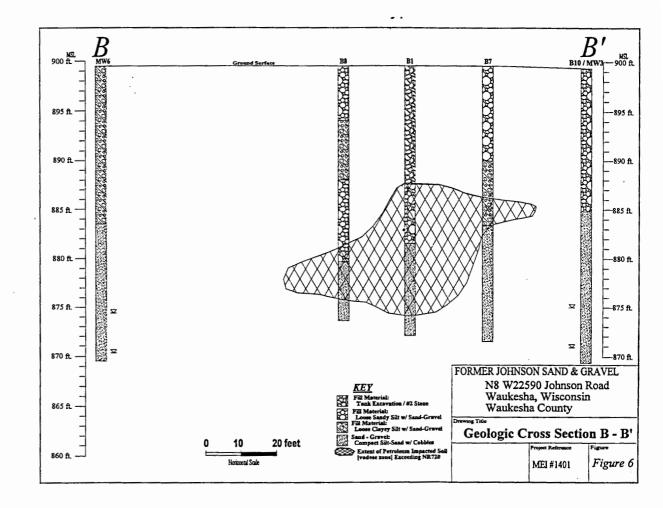
NSE - No Standard Established

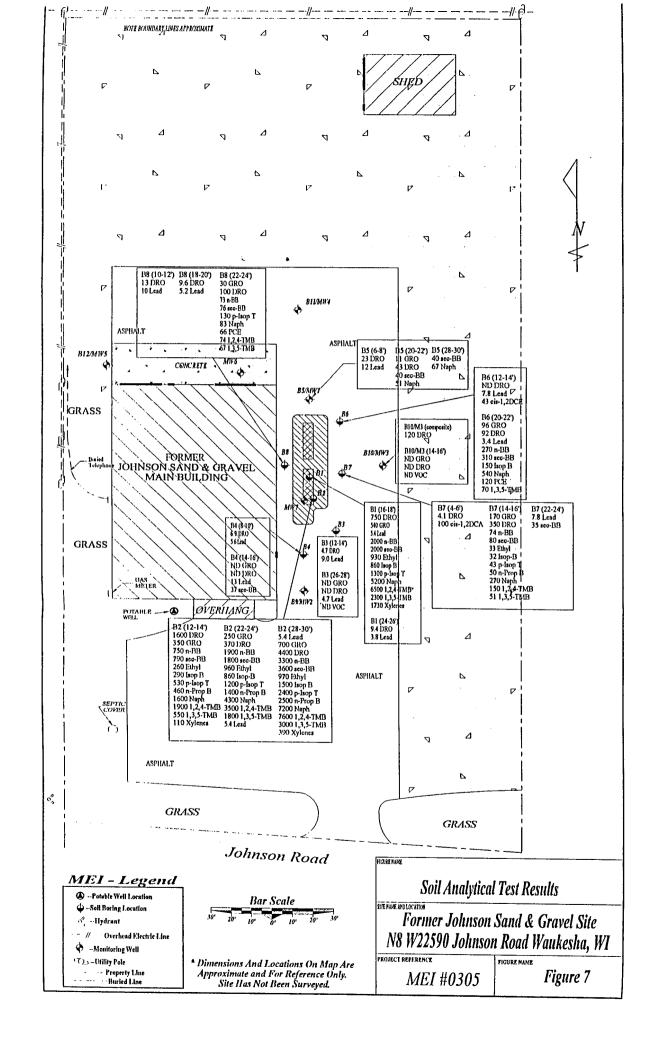
00.00 - Shaded numbers indicate concentrations exceeding WDNR soil cleanup guidelines in NR720











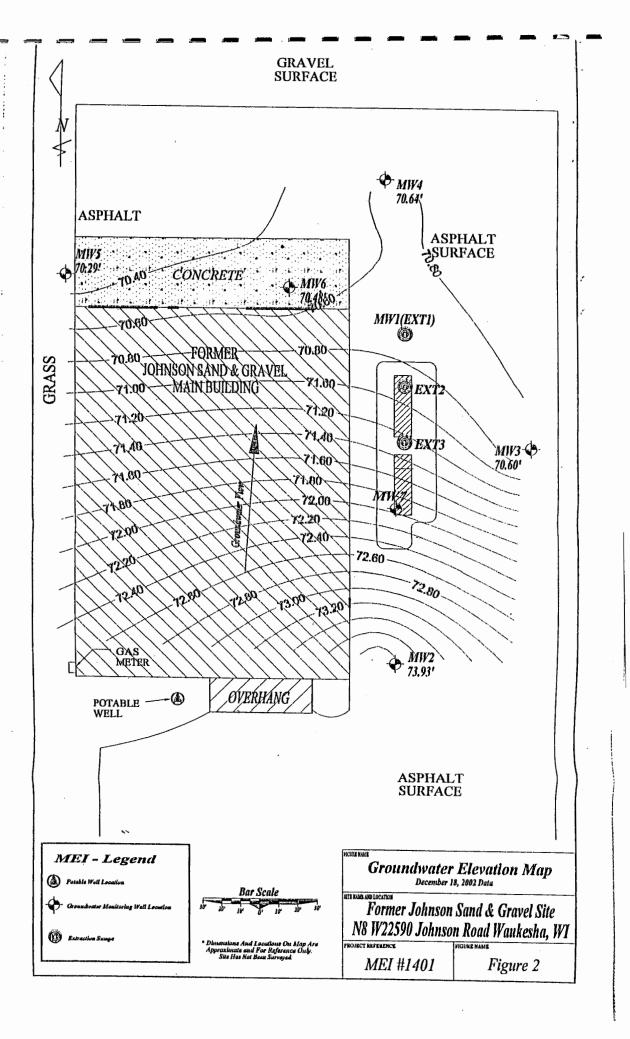


Table 1 Groundwater Elevation Data, Former Johnson Sand and Gravel, Pewaukee, Wisconsin

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
EATS	08/23/06	77.07	77.07	25.25	73.82
	11/30/06	İ		24.95	74.12
	02/23/07		Well Can I	Frozen in Ice - Could N	
	05/18/07			21.65	77.42
MW2	10/03/04	99.77	99.34	25.30	74.04
141 ** 2	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
141 44 3	08/23/06	77.27	70.01	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
	05, 10, 0,			20.12	, 0.15

Note:

Elevations are referenced to a site datum of 100 feet

^{*} Reference Point is the top of the monitoring well casing

GRAVEL SURFACE

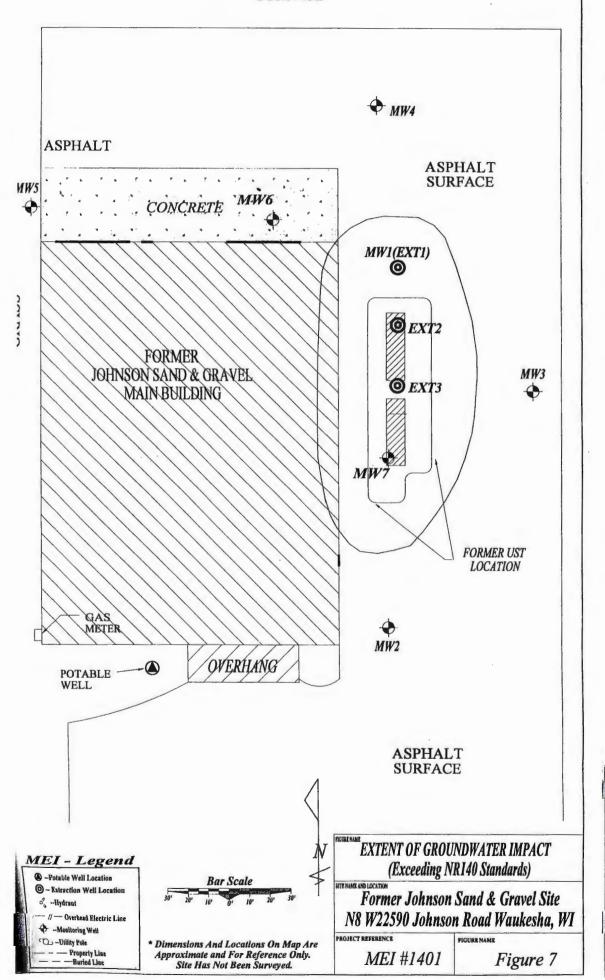


Table 2 Groundwater Volatile Organic Compound Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin

							Relavant	and Signific	ant Volatile	Organic Co	mpounds ((microgram	s per liter)				
Well ID	Date Sampled	Water Table Elevation (feet below grade)	Benzene	n-Butylbenzene	sec-Butylbenzene	cis-1,2-Dichloroethene	Di-Isopropyl Ether	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	Methyl-tertiary- butyl-ether	Naphthalene	n-Propylbenzene	Тошепе	Trimethylbenzenes	Vinyl Chloride	Xylenes
NR 14	40, Wis Adm	Code PAL	0.5	NE	NE	7	NE	140	NE	NE	12	8	NE	200	96		1000
NR 1	40, Wis Adn	n 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</p>

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	Water Table	1						Re	levent and Signific	nt Polynuclear	romatic Hydrocark	ons (micrograms pe	r liter)						
	Sampled	Elevation (fbg)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(u) unthrucene	Benzo(a) pyrene	Benzo(h) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorens	Indeno(1,2,3-cd) pyrene	1-Methyl Naphthalene	2-Methyl Naphthalene	Nuphthulene	Phenanthrene	Pyrene
NR 140, Wis A	idm Code Preve	ntive 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 Enfo	rcement 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	Q.	<1.8	3.0 "J"	<1.8	7.1	58	⋖	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	Q.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 b

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,

Kandy Jam

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.



Johnson Sand & Gravel February 1, 2008 Page 2 of 2

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

Frames M. Koonce

LETTER OF TRANSMITTAL

▲ Northern Environmental[™]

Hydrologists • Engineers • Geologists

	Phone: 800-776-7140 ot Line: 262-643-9171 FAX: 262-241-8222			
TO: Ms. Brenda Boyce WDNR 141 NW Barstow Street		WE ARE SENDING □ Attached □ Shop drawings	Under separate	
Waukesha, WI 53188		☐ Copy of letter	Samples	Change order
Final Closure Informatio (BRRTS #03-68-004228)				
		v.		
THESE ARE TRANSMITTED (see For approval For your use As requested For review and comment For bids due	e code) No exceptions taker Make noted correcti Amend & resubmit	n	copies for r copies for dist	eview tribution
Brenda,				
As instructed, I submitted the well barrel of well purge water to still be not owned by the RP anymore, and I cannot provide disposal document petroleum release remains at the S	be stored at the Site. However, the current site operate that it is the barrel of	owever, the barrel was or did not know wher purge water. No othe	s not at the site. The te the barrel went. 'er waste related to t	ne Site is Therefore,
COPY TO: file		SIGNED:	Mr. And	old
			Christopher C. H	latfield

	1. Name CHRIS HATFIELD
Letter Of Transmittal	Company NORTHERN ENVIRONMENTAL
Type of Submittal: 2 2 2008	Address 12075 N. CORPORATE PARKWAY
LUSTERPVPLEother (describe):	Phone 262-643-9171
To: Program Assistant/BRR Program VILIONA Stove	Date 1/17/08
Wisconsin Dept. of Natural Resources Box 12436 2300 N. Dr. Martin Luther King Jr. Dr. FOR:	Site Name FORMER JOHNSON SALM + GRAVEL
Milwaukee, WI 53212	Address N8 W225990 Johnson Drive
Check type(s) of documents enclosed. Submittals are tracked &	PEWAUKES, M
filed based on information you provide. Include FID & BRRTS	FID# <u>268438610</u>
numbers assigned to this site. Identify the intent of document(s) you are submitting in order to speed processing. Please attach	BRRTS# 03-68-004278
required fees to this form.	4

Are you requesting Department Review? YN 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	\$750 if review is requested	37,
	groundwater impacts above ES	•	137~,
	_ no groundwater impacts or gw impacts below ES (if petroleum co	nstituents only, case will be	76,
	transferred to Department of Commerce)	·	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~
	Other (please describe)		

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

Route to: Drinking Water Watershed/Wastewater Waste Manag				
(1) GENERAL INFORMATION WI Unique Well No. DNR Well ID No. County	(2) FACILITY/OWNER INFORMATION Earlier Name			
WAUKESHA	Facility Name Johnson Sand and Gravel			
	Facility ID License/Permit/Monitoring No.			
Common Well Name MW-1 Gov't Lot (If applicable)	2 world a maritament of the			
SE 1/4 of NW 1/4 of Sec. 25 ; T. 7 N; R. 19 [X] B	Street Address of Well			
Grid Location W	N8 W22590 Johnson Drive			
ft. N. S., ft. E. W.	City, Village, or Town			
Local Grid Origin (estimated:) or Well Location	Pewaukee Present Well Owner Original Owner			
0 1 11 0 1	Present well Owner Original Owner			
Lat Long or	Street Address or Route of Owner			
St. Planeft. Nft. E. S C N Zone Reason For Abandonment				
Reason For Abandonment WI Unique Well No.	City, State, Zip Code			
or replacement went				
(3) WELL/DRILLHOLE/BOREHOLE INFORMATION	(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL			
Original Construction Date unknown	Pump & Piping Removed? Yes No [X] Not Applicable			
X Monitoring Well	Liner(s) Removed? Yes No X Not Applicable			
Water Well If a Well Construction Report	Screen Removed? Yes No [X] Not Applicable Casing Left in Place? Yes X No			
Borehole / Drillhole is available, please attach.				
Construction Type:	Was Casing Cut Off Below Surface? X Yes No			
[X] Drilled Driven (Sandpoint) Dug	Did Sealing Material Rise to Surface? [X] Yes [] No			
Other (Specify)	Did Material Settle After 24 Hours? Yes [X] No			
V . V .	If Yes, Was Hole Retopped? Yes No			
Formation Type:	Required Method of Placing Sealing Material			
[X] Unconsolidated Formation Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped			
Total Well Depth (ft.) 35 Casing Diameter (in.) 8.62	Screened & Poured (Bentonite Chips) [X] Other (Explain) GRAVITY			
(From groundsurface) Casing Depth (ft.)	Sealing Materials For monitoring wells and			
Lower Drillhole Diameter (in.) 14.25	Neat Cement Grout monitoring well boreholes only			
Lowel Diminde Diameter (m.) 14.23	Sand-Cement (Concrete) Grout [X] Bentonite Chips			
Was Well Annular Space Grouted?	Concrete Granular Bentonite			
If Yes, To What Depth? Feet	Clay-Sand Shurry (11 lb./gal, wt.)			
	Bentonite-Sand Slurry " " Bentonite - Cement Groul			
Depth to Water (Feet) 26	☐ Bentonite Chips ☐ 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 Scaling Work Date of Abandon				
KITSON ENVIRONMENTAL SERVICES, INC 1/9/2008	FOR DNR OR COUNTY USE ONLY Date Received Noted By			
Signature of Person Doing Work Date Signed	Date Received hotel by			
Treyon / hets - 1-15-08	Comments			
Street or Rouse N4299 S HELENVILLE ROAD Telephone Number (920) 674-2378				
N4299 S HELENVILLE ROAD (920)674-2378 City, State, Zip Code				
HELENVILLE WI 53137-9794				

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

		ed/Wastewater		emediation/ReTY/OWNE			
(1) GENERAL INFORMATION WI Unique Well No. DNR Well ID No. County		Facility Nar		KHITOK	WATION		
WI Offique Well No.	DIAK WELLID NO.	WAUKESHA	_	and and Grav	el		
		WACKESHA	Facility ID	and and Grav		Permit/Mor	nitoring No.
Common Well Name	4W-2	Gov't Lot (If applicable)			2.002.00		
		; T. $\frac{7}{}$ N; R. $\frac{19}{}$ $\left[\begin{array}{c} \left[x \right] \text{ E} \\ \end{array} \right]$	Street Addre	ss of Well			
Grid Location	1/4 of Sec	; 1 N;R 🔲 w	N8 W2259) Johnson Dri	ve		
	1 v	ft. 🔲 E. 🔲 W.	City, Village	e, or Town			
			Pewaukee				
) or Well Location [Present Well Owner Original Owner				
Lat	. Long	or					
		S C N		ess or Route o	f Owner		
St. Plane Reason For Abandonme		ft. E. \[\bigcap \bigcap \bigcap \] Zone nique Well No.	City, State, 2	7:- Code			
To prevent contamanati		•	City, State, 2	zip Code			
(3) WELL/DRILLHO	0	placement Well	(4) DITMP	I DATED SCI	DEEN CA	CINC & C	BALING MATERIAL
							
Original Construction	on Date <u>unknov</u>	<u>vn</u>		Piping Remo Removed?	wed?	_	
[X] Monitoring We	u .			Removed?	Ļ	_	No [X] Not Applicable No [X] Not Applicable
Water Well		a Well Construction Report	1	Left in Place?	F	Yes X	• •
Borehole / Drill	hole 1 18	available, please attach.			<u> </u>		
Construction Type:			Was Ca	sing Cut Off I	Selow Surfa		Yes No
X Drilled	Driven (Sa	ndpoint) Dug	Did Sea	ling Material l	Rise to Surf		Yes No
	_			terial Settle A		_	Yes X No
U Other (Specify)			If Yes	, Was Hole Re	etopped?		Yes No
Formation Type:		_	Required Method of Placing Sealing Material				
[X] Unconsolidated	Formation	☐ Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped				
Total Well Depth (ft.)	38 Cas	ing Diameter (in.) 2.23	☐ Scre	ened & Pour	ęd [x] Other (E	xplain) GRAVITY
(From groundsurface)			<u> </u>	ntonite Chips)		
(<i>\</i>	Cas	ing Depth (ft.)	~	Materials			nonitoring wells and
Lower Drillhole Diam	neter (in.) <u>8</u>		. =	Cement Grov			toring well boreholes only
Was Well Annular St	nace Growted?	Yes No X Unknown	. =	l-Cement (Cor crete	ncrete) Oro	ur X	Bentonite Chips
					/11 lb /gol		Granular Bentonite
If Yes, To What	Depth?	Feet	Clay-Sand Shurry (11 lb./gal. wt.) Bentonite-Sand Shurry " " Bentonite - Cement Grout				
Depth to Water (Feet) 26			. =	tonite Chips	шту	'□	Bentonite - Sand Slurry
			L Dear				Mix Ratio
(5) Mater	rial Used To Fill W	/ell/Drillhole	From (Ft.)	To (Ft.)	Pound	S	or Mud Weight
			Surface				1000/
Bentonite Chips			Surface	38	60		100%
•							
						<u></u>	<u> </u>
			1				
			<u> </u>		<u> </u>		
(6) Comments:							
							· · · · · · · · · · · · · · · · · · ·
(7) Name of Person or I	žirm Doina Saalina	Work Date of Abandon				-	· · · · · · · · · · · · · · · · · · ·
	-		dream	FOR	DNROR	COUNTY U	SE ONLY
KITSON ENVIRONM			Date	Received		ted By	
Signature of Person Loi		Date Signed					
Street or Rouge Telephone Number			Com	ments			
N4299 S HELENVII	LE ROAD	(920)674-2378					
City, State, Zip Code							
HELENVILLE	wı	53137-9794					

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

Route to: Drinking Water Watershed/Wastewater Waste Manage (1) GENERAL INFORMATION	ement [X] Remediation/Redevelopment Other			
WI Unique Well No. DNR Well ID No. County	Facility Name			
WAUKESHA	Johnson Sand and Gravel			
	Facility ID License/Permit/Monitoring No.			
Common Well Name MW-3 Gov't Lot (If applicable)				
$\frac{\text{SE}}{\text{Grid Location}} \text{ 1/4 of Sec. } \frac{\text{NW}}{\text{1/4 of Sec. }} \text{ ; T. } \frac{7}{\text{N; R. }} \text{ N; R. } \frac{19}{} \text$	Street Address of Well			
	N8 W22590 Johnson Drive City, Village, or Town			
f. N. S.,f. E. W.	Pewaukee			
Local Grid Origin (estimated:) or Well Location	Present Well Owner Original Owner			
Lat Long or				
S_C_N	Street Address or Route of Owner			
St. Planeft. Nft. E. □□□ Zone Reason For Abandonment WI Unique Well No.	City, State, Zip Code			
To prevent contamanation of Replacement Well	City, State, Zip Code			
(3) WELL/DRILLHOLE/BOREHOLE INFORMATION	(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL			
	Pump & Piping Removed? Yes No X Not Applicable			
Original Construction Date unknown	Liner(s) Removed? Yes No [X] Not Applicable			
X Monitoring Well If a Well Construction Report	Screen Removed? Yes No X Not Applicable			
is available, please attach.	Casing Left in Place? Yes [X] No			
Borehole / Drillhole	Was Casing Cut Off Below Surface? X Yes			
Construction Type: [x] Drilled	Did Sealing Material Rise to Surface? X Yes No			
Driven (Sandpoint)	Did Material Settle After 24 Hours? Yes [X] No			
Other (Specify)	If Yes, Was Hole Retopped? Yes No			
Formation Type:	Required Method of Placing Sealing Material			
[X] Unconsolidated Formation Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped			
Total Well Depth (ft.) 30 Casing Diameter (in.) 2.32	Screened & Poured (Bentonite Chips) [X] Other (Explain) GRAVITY			
(From groundsurface) Casing Depth (ft.)	Sealing Materials For monitoring wells and			
Lower Drillhole Diameter (in.) 8	Neat Cement Grout monitoring well boreholes only			
	Sand-Cement (Concrete) Grout X Bentonite Chips			
Was Well Annular Space Grouted? Yes No [X] Unknown	Concrete Granular Bentonite			
If Yes, To What Depth? Feet	Clay-Sand Shurry (11 lb./gal. wt.) Bentonite - Cement Ground			
	Bentonice-Sand Slurry " " T			
Depth to Water (Feet) 26	Bentonite Chips 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:				
(7) Name of Person or Firm Doing Sealing Work Date of Abandon	ment			
KITSON ENVIRONMENTAL SERVICES, INC 1/9/2008	FOR DNR OR COUNTY USE ONLY			
RESOLVE TO THE SERVICE	Date Received Noted By			
Signature of Person Doing Work Date Signed				
Street or Route Telephone Number	Comments			
N4299 S HELENVILLE ROAD (920)674-2378				
City, State, Zip Code				
HELENVILLE WI 53137-9794				

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

Route to: Drinking Water Watershed/Wastewater Waste Manag				
(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 MW-4 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 [X] E	Street Address of Well			
Grid Location	N8 W22590 Johnson Drive			
	City, Village, or Town			
ft. N. S.,ft. E W.	Pewaukee			
Local Grid Origin (estimated:) or Well Location	Present Well Owner Original Owner			
Lat or St. Plane ft. N ft. E. □□□ Zone	Street Address or Route of Owner			
Reason For Abandonment WI Unique Well No.	City, State, Zip Code			
To prevent contamanation of Replacement Well				
	(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL			
Original Construction Date unknown				
[X] Monitoring Well	Liner(s) Removed? Yes No [X] Not Applicable Screen Removed? Yes No [X] Not Applicable			
Water Well If a Well Construction Report				
Borehole / Drillhole is available, please attach.	Casing Left in Place? Yes X No Was Casing Cut Off Below Surface? X Yes No			
Construction Type:	Did Sealing Material Rise to Surface? [X] Yes No			
[X] Drilled Driven (Sandpoint) Dug	—			
Other (Specify)	Did Material Settle After 24 Hours? Yes [X] No			
	If Yes, Was Hole Retopped? Yes No			
Formation Type:	Required Method of Placing Sealing Material			
[X] Unconsolidated Formation	Conductor Pipe-Gravity Conductor Pipe-Pumped			
Total Well Depth (ft.) 30 Casing Diameter (in.) 2.32	Screened & Poured (Bentonite Chips) [X] Other (Explain) GRAVITY			
(From groundsurface) Casing Depth (ft.)	Scaling Materials For monitoring wells and			
Lower Drillhole Diameter (in.) 8	Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout			
Was Well Annular Space Grouted?	Connecte			
	Clay-Sand Shurry (11 lb./gal. wt.)			
If Yes, To What Depth? Feet	Bentonite-Sand Slurry " " Bentonite - Cement Grout			
Depth to Water (Feet) 26	Bentonite Chips 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:				
(7) Name of Person or Firm Doing Sealing Work Date of Abandon				
	FOR DNR OR COUNTY USE ONLY			
KITSON ENVIRONMENTAL SERVICES, INC 1/9/2008	Date Received Noted By			
Signature of Person Doing Work Date Signed				
Mring 1 125-08	Comments			
Street or Route / Telephone Number				
N4299 S HELENVILLE ROAD (920)674-2378				
City, State, Zip Code HELENVILLE WI 53137-9794				

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

Route to: Drinking Water Watershed/Wastewater Waste Manag				
(1) GENERAL INFORMATION WI Unique Well No. DNR Well ID No. County	(2) FACILITY/OWNER INFORMATION			
- I I	Facility Name Johnson Sand and Gravel			
WAUKESHA	Facility ID License/Permit/Manitoring No.			
Common Well Name MW-7 Gov't Lot (If applicable)	Patents 12			
SE 1/4 of NW 1/4 of Sec. 25 ; T. 7 N; R. 19 X B	Street Address of Well			
Grid Location W	N8 W22590 Johnson Drive			
ft. 🗌 N. 🔲 S., ft. 🔲 E. 🔲 W.	City, Village, or Town			
Local Grid Origin (estimated:) or Well Location	Pewaukee Present Well Owner Original Owner			
Lat Long or	Floodit Wolf Owner			
S C N	Street Address or Route of Owner			
St. Planeft. Nft. E. ☐ ☐ Zone Reason For Abandonment WI Unique Well No.				
	City, State, Zip Code			
To prevent contamanation of Replacement Well				
(3) WELL/DRILLHOLE/BOREHOLE INFORMATION	(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL			
Original Construction Date unknown	Pump & Piping Removed? Yes No [X] Not Applicable Liner(s) Removed? Yes No [X] Not Applicable			
[X] Monitoring Well	Liner(s) Removed? Yes No [X] Not Applicable Screen Removed? Yes No [X] Not Applicable			
Water Well If a Well Construction Report is available, please attach.	Casing Left in Place? Yes [X] No			
Borehole / Drillhole	Was Casing Cut Off Below Surface? X Yes No			
Construction Type:	Did Sealing Material Rise to Surface? X Yes No			
[X] Drilled Driven (Sandpoint) Dug	Did Material Settle After 24 Hours? Yes [X] No			
Other (Specify)	If Yes, Was Hole Retopped? Yes No			
Formation Type:	Required Method of Placing Sealing Material			
[X] Unconsolidated Formation	Conductor Pipe-Gravity Conductor Pipe-Pumped			
	Screened & Poured (Rentante Chins) (RAVITY			
Total Well Depth (ft.) 30 Casing Diameter (in.) 2.32 (From groundsurface) Casing Diameter (ft.)	(Bentonite Chips) GRAVIIY			
(From groundsurface) Casing Depth (ft.)	Sealing Materials For monitoring wells and			
Lower Drillhole Diameter (in.) 8	☐ Neat Cement Grout monitoring well boreholes only ☐ Sand-Cement (Concrete) Grout ! IX Rentonite Chins			
Was Well Annular Space Grouted? Yes No [X] Unknown	Consents			
If Yes, To What Depth? Feet	Clay-Sand Shurry (11 lb/gal, wt.)			
	Bentonite-Sand Slurry " " Bentonite - Cement Grou			
Depth to Water (Feet) 26	☐ Bentonite Chips ☐ 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:				
(7) Name of Person or Firm Doing Sealing Work Date of Abandon				
KITSON ENVIRONMENTAL SERVICES, INC 1/9/2008	FOR DNR OR COUNTY USE ONLY			
Signature of Person Doing Work Date Signed	Date Received Noted By			
Treven 1 titsc 1-15-08	Comments			
Street or Route / Telephone Number N4299 S HELENVILLE ROAD (920) 674-2378				
City, State, Zip Code				
HELENVILLE WI 53137-9794				

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

Route to: Drinking Water Waters	ned/Wastewater	Waste Manag				
(1) GENERAL INFORMATION					RINFORMATIC	ON
WI Unique Well No. DNR Well ID No.	1 -	745.	Facility Nar			
	WAUKES	SHA		and and Grav		(NT - 14 - 1 - NT
Common Well Name EXT-2	Gov't Lot	t (If applicable)	L		License/Permit/	wontoring No.
SE 1/4 of NW 1/4 of Sec. 25	; T. 7 N; R	19 X E	Street Addre			
Grid Location		LJ W		Johnson Dri	ve	
ft. 🔲 N. 🔲 S.,		— — i	City, Village, or Town Pewaukee			
Local Grid Origin (estimated:) or Well Local	tion 🔲 🖐	Present Well Owner Original Owner			
Lat Long		or or	64 4 4 1 1	ess or Route o		
St. Planeft. N.	ft F	S C N Zone		ess or Koute o	I Owner	
Reason For Abandonment WI U	Unique Well No.		City, State, 2	Zip Code		
	eplacement Well		0.0,, 0, 2.4			
(3) WELL/DRILLHOLE/BOREHOL	E INFORMATIC	ON	(4) PUMP,	LINER, SCI	REEN, CASING,	& SEALING MATERIAL
Original Construction Date unkno	13/P1		Pump &	Piping Remo	ved? Yes	No X Not Applicable
	W II			Removed?		No X Not Applicable
[X] Monitoring Well	f a Well Construct	ion Report	Screen F	Removed?	Yes	No X Not Applicable
Water Well is	s available, please	- 1	Casing I	eft in Place?	Ycs	X No
Borehole / Drillhole Construction Type:			Was Car	sing Cut Off I	Below Surface?	X Yes No
[x] Drilled Driven (S	Conformation	Dug	Did Seal	ling Material	Rise to Surface?	X Yes No
	анарошту —		Did Mat	erial Settle A	fter 24 Hours?	Yes X No
Other (Specify)			If Yes	, Was Hole R	etopped?	Yes No
Formation Type:			Require	d Method of I	Tacing Sealing Mat	crial
[X] Unconsolidated Formation	☐ Bedrock		Conductor Pipe-Gravity Conductor Pipe-Pumped			
Total Well Depth (ft.) 35 Casing Diameter (in.) 8.62			Screened & Poured (Rentonite Chins) [X] Other (Explain) GRAVITY			
(From groundsurface) Casing Depth (ft.)			(Bentonite Chips) Sealing Materials For monitoring wells and			
Lower Drillhole Diameter (in.) 14.25			Neat Cement Grout monitoring well boreholes only			
		Factor :	Sand-Cement (Concrete) Grout [X] Bentonite Chips			
Was Well Annular Space Grouted?	☐ Yes ☐ 140	[X] Unknown	Conc			Granular Bentonite
If Yes, To What Depth?	Feet	;	. = .	-	(11 lb./gal. wt.)	Bentonite - Cement Grou
Depth to Water (Feet) 26				onite-Sand Sl	uny " "	Bentonite - Sand Slurry
				onite Chips		Mix Ratio
(5) Material Used To Fill V	Well/Drillhole		From (Ft.)	To (Ft.)	Pounds	or Mud Weight
Bentonite Chips			Surface	35	850	100%
					 	
						1
(6) Comments:						
(7) Name of Person or Firm Doing Sealin	g Work I	Date of Abandon	ment			
KITSON ENVIRONMENTAL SERVICES, INC 1/9/2008			FOR DNR OR COUNTY USE ONLY			
Signature of Person Doing Work	Date Sig		— Date	Received	Noted By	
Gregger Miles		5-08				
Street or Koute	Telephone Numb	per	—— Com	ments		
N4299 S HELENVILLE ROAD	(920)674-2	2378				
City, State, Zip Code	#2.5= C=	0.4				
HELENVILLE WI	53137-979	94				

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5 2/2000 Page 1 of 2

Route to: Drinking Water Watershed/Wastewater Waste Manag				
(1) GENERAL INFORMATION	(2) FACILITY/OWNER INFORMATION			
WI Unique Well No. DNR Well ID No. County	Facility Name			
WAUKESHA	Johnson Sand and Gravel Facility ID License/Permit/Monitoring No.			
Common Well Name EXT-3 Gov't Lot (If applicable)				
SE 1/4 of NW 1/4 of Sec. 25; T. 7 N; R. 19 [X] E	Street Address of Well			
Grid Location	N8 W22590 Johnson Drive			
ft. N. S., ft. E W.	City, Village, or Town Pewaukee			
Local Grid Origin (estimated:) or Well Location	Present Well Owner Original Owner			
Lat Long or	Street Address or Route of Owner			
St. Planeft. Nft. E. S C N Zone	Street Address or Route of Owner			
Reason For Abandonment WI Unique Well No.	City, State, Zip Code			
To prevent contamanation of Replacement Well				
(3) WELL/DRILLHOLE/BOREHOLE INFORMATION	(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL			
Original Construction Date Unknown	Pump & Piping Removed? Yes No [X] Not Applicable			
	Liner(s) Removed? Yes No [X] Not Applicable			
X Monitoring Well If a Well Construction Report	Screen Removed? Yes No X Not Applicable			
Water Well is available, please attach.	Casing Left in Place? Yes X No			
Borehole / Drillhole Construction Type:	Was Casing Cut Off Below Surface? X Yes No			
[X] Drilled Driven (Sandpoint) Dug	Did Sealing Material Rise to Surface? [X] Yes [No			
	Did Material Settle After 24 Hours? Yes [X] No			
U Other (Specify)	If Yes, Was Hole Retopped? Yes No			
Formation Type:	Required Method of Placing Sealing Material			
[X] Unconsolidated Formation Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped			
Total Well Depth (ft.) 35 Casing Diameter (in.) 8.62	Screened & Poured (Bentonite Chips) [X] Other (Explain) GRAVITY			
(From groundsurface) Casing Depth (ft.)	Sealing Materials For monitoring wells and			
Lower Drillhole Diameter (in.) 14.25	Neat Cement Grout monitoring well boreholes only			
Was Well Annular Space Grouted?	Sand-Cement (Concrete) Grout X Bentonite Chips			
	Clay-Sand Shurry (11 lb/gal. wt.)			
If Yes, To What Depth? Feet	Bentonite-Sand Slurry " " Bentonite - Cement Grou			
Depth to Water (Feet) 26	☐ Bentonite Chips ☐ 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 Scaling Work Date of Abandon				
KITSON ENVIRONMENTAL SERVICES, INC 1/9/2008	FOR DINR OR COUNTY USE ONLY Date Received Roted By			
Signature of Person Dring, Work Date Signed	East Received Noted By			
Breguy 1 1-15-06	Comments			
Street or Rouse Telephone Number				
N4299 S HELENVILLE ROAD (920)674-2378				
City, State, Zip Code HELENVILLE WI 53137-9794				
EARTHURING TO TAIL AND THE STATE OF THE STAT				



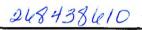
December 18, 2007

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



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

Usual & Customary Standardized Invoice

Commerce #:	53186-1661-90-A	,	Vendor Name:	provide the second		
BRRT's #:	03/68/004228		Involce #:	1 1 T		
Site Name:	Former Johnson, Sand & Graver		Invoice Date:			
Site Address:	N8:W225990:Johnson Drive		Check #:	ing a second of the		mara paraga
	Personal information you provide a	may be used for a secondar	y 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
1	GROUNDWATER SAMPLING					
GS05	Sample Collection	WELL	\$64.50	100	\$ 6 22 25 55	\$
GS10	Incremental Sample Collection (natural attentuation)	WELL,	\$42,40		Santillar Like	\$ -
G\$15	Incremental Sample Collection (cadmium & lead)	WELL	\$23.38		Supplied to	<u> </u>
GS20	Measure Water Levels (for wells not being sampled)	WELL	\$13.05	19 1	\$1000	<u>\$</u>
GS25	Primary Mob/Demob	SITE	\$487.36		3100 HSD 211	\$.
G\$30	Temp Well Abandonment	WELL	\$24.00	at a record	is and	<u> </u>
2	OPERATION & MAINTENANCE REPORTING					
OMR05	Annual GW Monitoring	REPORT	\$733.66	Current Is	nvoice Amount	S SECTION AND A SECTION
OMR10	Annual GW Monitoring (DNR Form 4400-194) with LNAPL Removal per SIR guidance document (RR- 628)	REPORT	\$926.72	Current Ir	nvoice Amount	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3	LNAPL ASSESSMENT & REMOVAL		***			
LAR05	Removal Activity (Limited to 12 per site)	WELL	\$42.37	10.1511		\$ -
LAR06	LNAPL Sample Collection (1 per site)	SITE	\$18.30		5 (15 %)	<u> </u>
LAR10	Primary Mob/Demob	SITE	\$389.27		\$2	<u> </u>
4	WASTE DISPOSAL					
	CONSULTANT SERVICES					
WD05	Consultant Coordination	SITE	\$122.10	1.00	\$ 122.10	\$ 122.10
WD10	COMMODITY SERVICES				\$175	\$ 159.88
WD15	Groundwater Sample and/or Purge Drill Cuttings	DRUM DRUM	\$79.94 \$138.80		7 5 2	\$ -
WD20	Free Product	DRUM	\$148.19	Control of the second	\$ 27,000 4524	\$ -
WD25	Primary Mob/Demob	SITE	\$188.87		'S . S. At . 188 87	\$ 188.87
5	CLOSURE REQUEST		·			
CR05	Primary Closure Request	SUBMITTAL	\$1,841.97	Current In	voice Amount	\$ - 3
	Closure Request with LNAPL Reporting (incremental	SUBMITTAL.	\$1,025.87	Current In	voice Amount	, Mi
CR10 CR15	to CR05) GIS Packet Submittal (For Source Property only)	PACKET	\$451.88		ivoice Amount	\$ 32% \$ 32%
CR20	GIS Packet Submittal (For off-site Properties only)	PER ADDITIONAL PROPERTY	\$198.29		nvoice Amount	S 15 2 3 3
6	LETTER REPORT/ADDENDUM					
LRA05	Letter Report/Addendum	LETTER	\$925.68	Current In	voice Amount	\$
7	REGULATORY CORRESPONDENCE		<u> </u>			
RC05	Regulatory Correspondence	LETTER/STATUS	\$114.80		-S 11480	\$ 114.80

TASK CODE/ACTIVITY REFERENCE CODE	TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAXIMUM REIMBURSEABLE UNIT COST	UNITS INVOICED	UNIT COST CLAIMED	AMOUNT CLAIME
8	WELL ABANDONMENT	10 m m 20				- Fire
	CONSULTANT SERVICES					
WAB05	Coordination	SITE	\$145.06	-15-15	145.06	\$ 145.08
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	2607	\$ 9.02	\$ 234.52
WAB25	Portland Cement (94lb bag)	BAG	\$6.07		3	\$ -
WAB30	Primary Mob/Demob	SITE	\$250.47		Carte	\$ -
	COMMODITY SERVICES			(A) (S) (S) (S) (S) (S) (S) (S) (S) (S) (S	Sampana	
WAB35	Well Abandonment Mob/Demob	SITE	\$232.70	1	\$ 25/4/0	\$ 232.70
WAB40	Well Abandonment (2 inch)	FT	\$4.90	80 -	\$ 490	\$ 392.00
WAB45	Well Abandonment (4 Inch)	FT	\$5.71		\$	\$ -
WAB50	Well Abandonment (6 inch)	FT	\$7.06	125	\$ 7.06	\$ 882.50
9	INVESTIGATION WORKPLAN PREPARATION					
IWP05	Investigation Workplan Preparation	REPORT	\$1,293.03	Current In	voice Amount	\$
	mrestigation violiplan repairation	KLIOKI	\$1,200.00		The state of the s	COLUMN TO THE PARTY OF THE PART
10	INITIAL SITE SURVEY - FEATURES AND WELL EL	EVATIONS				
	CONSULTANT SERVICES					
IS05	Consultant Coordination of Initial Site Survey - Features and Well Elevations	SURVEY	\$104.36			\$ -
1510	Subsequent Surveys	WELL	\$98.10		\$	\$ -
	COMMODITY SERVICES					
1\$15	Initial Survey	SURVEY	\$1,043.61		\$	\$ -
11	POTABLE WELL FIELD RECONNAISSANCE					
PWFR05	Potable Well Fleld Reconnaissance	SITE	\$519.72	4.00		\$ -
. 12	DIRECT PUSH	William Wall and The Control of the		Sylva San Market State of the Control of the Contro		
	CONSULTANT SERVICES					
DP05	0 - 24 ft bgs W/ Continuous Solf Sampling	FT	\$4.17		6	\$ -
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		97	\$ -
DP30	Primary Mob/Demob	SITE	\$456.06			\$ -
	COMMODITY SERVICES	OIL	9435.00		The state of the s	4
DP35	0 - 24 ft bgs W/ Continuous Soil Sampling	FT	\$6.16			\$ -
DP40	> 24 ft bgs W/ Continuous Soil Sampling	FT	\$8.04	in the second		\$ -
DP45						
DP50	Groundwater Profiling (no soil sampling)	FT	\$5.22		<u>.</u>	\$ -
DP55	Groundwater Sample Collection (cost for tubing) Expendable Drive Point		\$0.31			
DP60		EACH	\$8.35		Single Control	\$ -
DP65	Borehole Abandonment	FT	\$0.83		STATE OF THE STATE	
DP70	Concrete Penetration Groundwater Sample Collection (to be used in conjunction with activity DP35 or DP40)	EACH	\$10.44 \$24,32			\$ -
DP75	Temporary Well Installation (use DP45 to advance this borehole)	FT	\$3.65		Section	\$ -
DP80	Mob/Demob (Includes Decon)	CITE	6075 00		5	\$ -
DIV	Modrusmon (miclides Decorr)	SITE	\$275.30		WANTED THE PARTY OF THE PARTY O	Ψ

						r
TASK CODE/ACTIVITY REFERENCE CODE	TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAXIMUM REIMBURSEABLE UNIT COST	UNITS INVOICED	UNIT COST CLAIMED	AMOUNT CLAIMED
13	DRILLING	· · · · · · · · · · · · · · · · · · ·		<u> </u>		
	CONSULTANT SERVICES	1	<u> </u>			
13.a	CONSULTANT OVERSIGHT DRILLING IN UNCONS	SOLIDATED SOILS	WITH SOIL SAMPLI	I NG		
DR05		FT	\$4.70	427052236580	S. Constant	\$ -
	10.4004			rantana da	Secondition	\$ -
DR10		FT	\$5.01	ALCOHOLD TO THE	\$12,107	\$ -
DR15	-	FT	\$6.37		12.	
DR20	Primary Mob/Demob	SITE	\$456.06	を できる とうない はいまま かんしょう しゅうしょう しゅう しゅうしゃ しゅん しゅうしゃ しゅう しゅう しゅう しゅう しゃ	\$4.60	\$
13.b	CONSULTANT OVERSIGHT DRILLING IN UNCONS	SOLIDATED SOILS -	WITHOUT SOIL AND)/OR		
DR25	Consultant Oversight	FT	\$1.36		S Contraction	\$ -
DR30	Primary Mob/Demob	SITE	\$377.79	10.0	\$ 1000000	\$ -
13.c	CONSULTANT OVERSIGHT DRILLING IN BEDROO	K				
DR35	Consultant Oversight	FT	\$5.43	DATE:	\$00.000.500	\$ -
DR40	Primary Mob/Demob	SITE	\$456.06	56 - Sec.	4\$3427207347442323243	\$ -
				Particular de la companya della companya della companya della companya de la companya de la companya della comp	<u> </u>	
	COMMODITY SERVICES	011 0411511110				
13.d	DRILLING IN UNCONSOLIDATED SOILS - WITH SO			Composite Care and the Control		
DR45	0 - 25 ft bgs	FT	\$13.15	1111111	\$35X1355555	\$ -
DR50	26 - 50 ft bgs	FT	\$13.67	as activities	\$ 14 A 14	\$ -
DR55	51 - 75 ft bgs	FT	\$16.59		15 -70 (5-70)	\$ -
13.e	DRILLING IN UNCONSOLIDATED SOILS - WITHOU	JT SOIL AND/OR GR	OUNDWATER SAME	LING		
DR60	Drilling In Unconsolidated Soils	FT	\$10.33	Mara - Day	S C L C C C C C C C C C C C C C C C C C	\$ -
13.f	DRILLING IN BEDROCK		VIOLO	・事業はおきます いんかかられるというがられ、	of the contract of the contract of	
DR65	Drilling in Bedrock	FT	\$29.53	300 E-12 (12 (12 (12 (12 (12 (12 (12 (12 (12 (\$	\$ -
DR70	Bedrock Drilling Setup Charge	EACH	\$104.36	and the second	\$ 1000000000000000000000000000000000	\$ -
DR75		DAY	\$317.05		5	\$ -
DK13	Air Compressor	DAT	\$317.00	AND THE PERSON NAMED IN	LA TONIS MANAGEMENT OF THE PARTY OF THE PART	<u> </u>
14	MONITORING WELL INSTALLATION					
	CONSULTANT SERVICES					
	CONSULTANT OVERSIGHT MONITORING WELL II	NSTALLATION				
MWI05	0 - 25 ft bgs	FT	\$3.44	312 4339	3 34426	\$ -
MWI10	26 - 75 ft bgs	FT	\$2.40	DOT SHARE	\$	\$ -
	COMMODITY SERVICES					
MWI15		ET	\$11.79		\$	\$ -
	2 inch PVC Casing	FT			\$ 1000000000000000000000000000000000000	\$.
MWI20	Well Development	WELL	\$115.32	244	Per La restaura de la companya del companya de la companya del companya de la com	•
MW125	Mob/Demob (For development of grout or slurry sealed wells)	SITE	\$295.34		\$	<u>\$</u> -
15	MISCELLANEOUS DRILLING ACTIVITIES AN	ID SUPPLIES				
MDT05	Drill Rig Mob/Demob (Includes decontamination)	MOB/DEMOB	\$664.78	400	\$ 175-176-176-176-	\$ -
MDT10	Well Cover/flushmount	EACH	\$131.49	Transfer and	\$ 2000 000 000 000	\$
MDT15	Stickup Well Cover	EACH	\$122.42	(1) 30 年 1 年 1 日 1 日 1 日 1 日 1 日 1 日 1 日 1 日 1	\$ () () () () () () () () () (\$ -
MDT20	Bumper Guard Posts	EACH	\$41.74	SHE SHAP	S	\$ -
MDT25	Commodity service provider (drilling & direct push) Per Diem (includes meals and overnight stay per person, maximum of 2 persons)	. EACH	\$125.75		`\$	ş
MDT30	Well Repair (Department approval is required prior to conducting this activity.)	LUMP SUM	\$65.75		\$	\$ -
MDT35	Borehole Abandonment	FT	\$3.55		\$ 1000	<u>\$</u>
MDT40	Concrete Penetration	EACH	\$43.52		\$	\$ -
1110140	0011001011		440.02	142 A. S.	P	
MDT41	Private Utility Locate	EACH	\$104.36		\$ // (C) 3 \$'	\$ -

TASK CODE/ACTIVITY REFERENCE CODE	TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAXIMUM REIMBURSEABLE UNIT COST	UNITS INVOICED	UNIT COST CLAIMED	AMOUNT CLAIM
16	HAND AUGER BORING				•	
HA05	Hand Augering	BORING	\$38.09		\$	\$ -
HA10	Primary Mob/Demob	SITE	\$422.68		\$	\$ -
17	SURFACE SOIL/SEDIMENT/WATER SAMPLING					
SSWS05	Sampling	SAMPLE LOCATION	\$19.10	mary sure		\$ -
SSWS10	Primary Mob/Demob	SITE	\$330.82		5	\$ -
18	VAPOR SCREENING					
VS05	Vapor Screening	SITE	\$189.21		5	\$ -
19	HYDRAULIC CONDUCTIVITY TESTING					
HCT05	Hydraulic Conductivity Testing	WELL	\$52.18			\$ -
HCT10	Mob/Demob	SITE	\$509.28			\$ -
20	SOIL BORING/MONITORING WELL PERMITS					
SBMWP05	Soll Boring/Monitoring Well Permit	PERMIT	\$219.16			\$ -
SBMWP10	Permit Fee (copy of permit & fee receipt required)	PERMIT FEE	PERMIT FEE			\$ -
21	ACCESS AGREEMENTS					
AA05	Access Agreements	PROPERTY	\$357.96			\$ -
22	SOIL INVESTIGATION REPORT					
SIR05	Soil Investigation Report	REPORT	\$2,986.98	Current li	voice Amount	
23	SOIL AND GROUNDWATER INVESTIGATION	ON REPORT				
SGIR05	Soil and Groundwater Investigation Report	REPORT	\$4,422.81	Current Ir	voice Amount	
24	LIMITED SOIL EXCAVATION					
	CONSULTANT SERVICES					
LSE05	Consultant Oversight for Limited Soil Excavation	TON	\$4.38		\$	\$ -
LSE10	Mob/Demob	SITE	\$740.96		\$	\$ -
	COMMODITY SERVICES					
LSE13	Laboratory	LAB SCHEDULE	See Lab Schedule Task 24 total		3	\$
LSE15	Limited Soil Excavation	TON	\$43.94			\$ -
25	REMEDIATION SYSTEM SHUT DOWN					
SSD05	Permanent	SITE	\$975,77		S .	\$ -
SSD10	Temporary	SITE	\$293.25		\$	\$ -
SSD15	Primary Mob/Demob	SITE	\$349.61		\$	\$ -
26	SITE SPECIFIC RCL CALCULATIONS FOR D	RECT CONTACT RI	SK			
SSRCL05	SSRCL Calculations	SITE	\$344.39		\$	\$ -
27	CLAIM SUBMITTAL					
CS05	Claim Submittal	CLAIM	\$521.80		\$ 521.80	\$ 521.
28	STANDARDIZED INVOICE					
\$105	Standardized Invoice	INVOICE	\$15.65		\$ 15.65	\$ 31.
29	OCCURRENCE CLASSIFICATION					l
OCD5	Occurrence Classification	LETTER/STATUS UPDATE	\$111.67	e sur year i	\$	\$
30	MEETING WITH REGULATORS					

TASK CODE/ACTIVITY REFERENCE CODE	TASK DESCRIPTIONS/ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAXIMUM REIMBURSEABLE UNIT COST	UNITS INVOICED	UNIT COST CLAIMED	AMOUNT (CLAIMED
31	CONSULTANT OVERNIGHT PER DIEM						
COPD05	Overnight	NIGHT	\$101.23	建設成 2000年	\$ 1000000000000000000000000000000000000	\$	
32	DEED RESTRICTION PREPARATION						
DRP05	Deed Restriction Preparation	DEED	\$158.63		S	\$	
33	SCHEDULE OF LABORATORY MAXIMUMS		SEE ATTACHE	D SCHEDULE		\$	
34	CONSULTANT INCREMENTAL MOB/DEMOB						
IMD05	Incremental Mob/Demob	SITE	\$183.68	3544345	\$ 1000000000000000000000000000000000000	\$	
35	CAP MAINTENANCE PLAN						
CMP05	Cap Maintenance Plan	PLAN	\$285.00	E RECEIVE	\$1,64100 143	\$	
36	CHANGE ORDER REQUEST (includes cost cap exceedence requests)						
COR05	Change Order Request	CHANGE ORDER	\$340.00	663個打扮的6	(第4年)(4年)(4年)	\$	340.00
				TOTAL AM	OUNT CLAIMED	\$	3,365.53



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/ 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,

Brenda H. Boyce, PG

Hydrogeologist

Bureau for Remediation & Redevelopment

c: Chris Hatfield – Northern Environmental

Letter Of Transmittal	FROM: Name Chil Hattald Company Nothern Environmental
Type of Submittal:LUSTERPVPLE other (describe):	Address
To: Program Assistant/BRR Program Wisconsin Dept. of Natural Resources Box 12436 2300 N. Dr. Martin Luther King Jr. Dr. Milwaukee, WI 53212	SEP 2 4 2 Date FOR: Site Name Johnson Sand + Glass Address
Check type(s) of documents enclosed. Submittals are tracked filed based on information you provide. Include FID & BRRT numbers assigned to this site. Identify the intent of document(you are submitting in order to speed processing. Please attach required fees to this form.	FD# (s) RRPTS# $03 - 64 - 004224$

1	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	\$750 if review is requested	37,
	groundwater impacts above ES		137~,
	_ no groundwater impacts or gw impacts below ES (if petroleum co	nstituents only, case will be	76,
	transferred to Department of Commerce)		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~
	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 letter of transmittal.doc 2/24/99 Remarks:

Case Summary and Close Out Request

Form 4400-202 (R 5/04)

Page 1 of 10

WDNR BRRTS CASE # 03.68 -004228

WDNR SITE NAME:

Robert Johnson Sand+ Granel

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.

Case Summary and Close Out Request Form 4400-202 (R 5/04) Page 2 of 10

^*	2	113		47717
WDNR BRRTS CASE # 🔘	2	68	00'	1978

s. NR 720.19(5) Direct Contact s. NR 720.19(6) Other Pathways

WDNR SITE NAME: Johnson Sand + Grave/

Section A: Case History and Closure Pathway Selected

ATTACHMENTS:	
description of any residual soil and/or groundy	vestigative activities, interim and remedial actions taken, a vater contamination and their locations, a description of how actual and potential impacts to receptors have been
/ addressed.	, , , , , , , , , , , , , , , , , , , ,
Site location map on USGS topographic base	
Site map including buildings, utilities, property	lines of source property and impacted non-source
properties, ground cover and supply wells. Th	ese maps may be combined. A copy of the map(s) from
Section I, #5 may be used.	
Verification of the zoning for affected properties	2 \$.
INFORMATION NEEDED:	
1. Site Name Johson Sand + Gravel (F	ormer)
Street Address: NB W22 590 Johnson	Dr
City/Zip Code: Pewaukee, WI	
2. BRRTS#: 03-68-00'4238	
3. DNR FID #: 26843 8610 PECFA	A Claim#: 53/86 - 166/-90
4. Responsible Party Name John Son Sand +	Gravel Incorporated
Mailing Address: 20685 West National AveCity	y/Zip Code: New Berlin, WI 53146
Phone number: Cont	act Person: Randy Johnson
5. Date of Incident/Discovery: <u>63/31/1994</u> Contamina	ant Type(s): Petroleum
6. Quantity Released: Un Known	
7 Lond Lloo:	
Current: Residential	Commercial Industrial Other
It other specify:	
	Commercial Industrial Other
If other, specify:	
8. Is a zoning change required?	Y <u>X</u> N
If so, has it been completed for post remedial land use?	YN
9. 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 concu	
10. Geographic Coordinates (meters/ WTM83/91) E6(
11. Method Used to Obtain Geographic Coordinates:	
On-site using GPS equipment, converted or pro	ected into WTM83/91 coordinates
✓ Used RR GIS Registry web site to get WTM83/9	1 coordinates
Other (specify):	
12. *Groundwater Contamination Remaining (>ES):	
On Source Property X'Y N	
Off Source Property Y X N	
13. *Residual Soil Contamination > Generic or Site-Specific R	CL:
On Source Property XY N	
Off Source Property Y VIN	
14. Contamination in Right of Way:Y V IN	
15. Closure Pathway Selected: check all that apply	
•	
CLOSURE via NR 726	
Soil	Groundwater
< s. NR 720.09/720.11 Generic RCLs	< s. NR 140.10 Table 1 & Table 2 Values
s. NR 720.19(2) Soil Performance Standards	s. NR 140.28(2) PAL Exemption
s. NR 720.19(2) Soli Performance Standards	s, NR 726.05(2)(b), ≥ ES Natural Attenuation
3. 141. 120.13(7) GIOGIGWALGI I ALIWAY	5. THE FEO.OGERON, E EO HARUTAI MILLOTTALION

Case Summary and Close Out Request Form 4400-202 (R 5/04) Page 3 of 10

WDNR BRRTS CASE # 03 - 68 - 004228 WDNR S	ITE NAME: Johnson Sand + Grave/
CLOSUDE via ND 746 and ND 726	
CLOSURE via NR 746 and NR 726	
Petroleum Storage Tank Soil Options for Closure:	
s. NR 746.07 Requirements Met-Post Investigation	
s. NR 746.08 Requirements Met-Post Remed.	
Petroleum Storage Tank GW Options for Closure:	Petroleum Storage Tank GW Options for Closure:
Within Permeable Material:	Within Low Permeability Material:
s. NR 746.07(3) ≥PAL <es, investigation<="" post="" td=""><td>s. NR 746.07(2), Post Investigation</td></es,>	s. NR 746.07(2), Post Investigation
s. NR746.07(4) >ES, Post Investigation	s. NR 746.08(2), Post Remediation
s. NR 746.08(3)≥ PAL, <es, post="" remediation<="" td=""><td></td></es,>	
s. NR 746.08(4) >ES, Post Remediation	
Notification(s) regarding contamination in RO Notification(s) to off-source property owners INFORMATION NEEDED: 1. Identify all pre-remedial actual receptors, the assessed ricorridors, basements or sumps of nearby buildings, direct sediments, vapors, etc.) For definitions, refer to s. NR 70 hours 2. Have the remedial actions addressed the potential or activities.	sk and their locations (e.g., both on- and off-site utility t contact threat from soil, water supplies, surface waters, 00.03 (47), Wis. Adm. Code.
✓ Y (Details in the case history summary (SectionN If no, please identify the nature of the remain	n A)).
Section C: Soil Investigation Information	
detects, regardless of ch. NR 720 standards, Identify exceedances. Map(s) of all pre-remedial soil sampling local facilities. Note in bold font those sample local location) and delineate the extent of contami Pre-remedial geologic cross-sections; including the section of the	reening and laboratory analytical results, including all with dates, sample locations, depths and detection limits. tions: depicting all soil sample locations relative to site tions that exceed ch. NR 720 RCLs (including free product nation. ng geology, source location(s), extent of soil and tion/depth, soil sample locations, water table elevation, and
2. Soil Type(s): <u>layer</u> silt and Sand 1. 3. Depth of Contamination: Too: 10 fbg. 4. Type of Bedrock:	Bottom: 22 flag Depth to Bedrock: greater than 38f1

Case Summary and Close Out Request
Form 4400-202 (R 5/04) Page 4 of 10

WD	NR BRRTS CASE # WDNR SITE NAME :
5. 6.	Is Any Contaminated Soil (Unsaturated or Saturated) in Contact With the Bedrock?YN Measurable Free Product?YN Depth/Location:Y
Se	ction D: Soil Remediation Information
AT	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 soi 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
	FORMATION NEEDED: Remedial Action Completed? Were immediate or interim actions conducted? YN If yes, what action was taken?
3.	Brief description of remedial action taken:
4.5.6.	Were soils excavated?YN Quantity: Disposal Method: Final Confirmation Sample Collection Methods: 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?YN Performance Standard -NR 720.19(2) SSRCL - NR 720.19(3) and (4),(5) or (6)
11.	If the remedy includes a Soil Performance Standard, what type? not applicable Cap Soil Building Natural Attenuation of Groundwater Other Specify other: Will the maintenance of the SPS be consistent with the planned post remediation land use? Y N If No, please explain: 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?
Se	ction E: Groundwater Information
AT	TACHMENTS: 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.

Case Summary and Close Out Request Form 4400-202 (R 5/04) Page 5 of 10

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.
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
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.
applicable. A copy of the cross-section(s) from Section 1, #11 may be used.
INFORMATION NEEDED:
 Extent of Contamination Defined? YNN/A Remedial Action Completed? YNN/A
Brief Description of Remedial Action Taken: (2 cound water Quiped from extraction
wells during five events over 5 month perded
 Depth(s) to Groundwater 1 to 30ft Flow Direction(s): North Field Analyses?Y N
4. Field Analyses?Y _X_N Lab,Analyses?YN
5. 4 # of Sample Rounds
of Sampling Points
NR 141 Monitoring Wells Sampled # Temporary GW Sampling Points Sampled
Recovery Sumps Sampled
Municipal Wells Sampled
Private Wells Sampled 6. Was DNR notified of substances in groundwater without standards?YNN/A
If yes, how many? What substances?
7 Design to the state of the st
7. Preventive Action Limit currently exceeded? XYN If yes, identify location(s)
8. Enforcement Standard currently exceeded?YN If yes, identify location(s)
 Measurable free product detected? Y N Pre-remediation N Post-remediation
10. Was free product remediated?
Method: bround water pumped from extraction wells during over
Purge water or free product-groundwater mixture disposal method?
Purge Water Containerized of sent to treatment facility
11. Potable wells within 1200 feet of site?
Have they been sampled?YN 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?
13. Have well owners/occupants been notified of results? (Sec. B Attachments)YN (Results also need to be sent to the DNR Water Supply Specialist)
Section F. Other Contaminated Media Information:

ATTACHMENTS:

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

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WI	VDNR BRRTS CASE #	- WDNR SITE NAME :
	NFORMATION NEEDED: Have other media been in Briefly describe type and	npacted (either on-site or off-site e.g. sediment, utilities, air)?YN extent of all contamination found in media other than soil or groundwater:
2.	Remedial action complet Brief description of remed	d?YNN/A ial action taken:
3.	# of Post Remedial Sam # of Sampling Points: Field Analyses?Y Lab Analyses?Y	
Se	Section G. Associated S	te Closure Information:
AT	interim action Maps and ph Description of the requirem public health	documentation or as-built report for any constructed remedial action or portion of, or specified in s. NR 724.02(1), in accordance with s. NR 724.15. bitos documenting the cap area, and/or integrity of the cap, with date. If any soil performance standard cover system used, including a description of how it meets ent to be protective until residual contaminant concentrations no longer pose a threat to safety, welfare or the environment, per s. NR 720.19(2), s. NR 722.09(2) and (3). plan with deed restriction for performance standard remedy. (per ss. NR 720.19(2) and
IN! 1.	NFORMATION NEEDED: Enforcement actions clos	ed out?YNN/A
	. Permits closed out?	YNN/A
3.	Describe how the following	pathways are protected:
	a) Direct Contact Pathy	ау:
	b) Groundwater:	
	c) Other:	
н.	Proposed Institution	l Controls: (See Pub. RR-606)
AT_V	ATTACHMENTS: RR GIS Reg	stry of Closed Remediation Sites _ Soil _ Groundwater
	Draft deed d	Both cument (Contact your DNR project manager for a template or guidance.) Deed Restriction Deed Notice Maintenance Agreement Other:

State of Wisconsin Department of Natural Resources

Case Summary and Close Out Request

http://dnr.wi.gov	Form 4400-202 (R 5/04)	Page 7 of 10
WDNR BRRTS CASE #	WDNR SITE NAME :	
I. Required GIS Registry Information in the order specified.	on: Provide the following information, as a separate, stand-	alone attachment,
within the contaminated site boundary. (N has not yet received a deed, a copy of the	including legal description(s), for all affected properties with OTE: If a property has been purchased with a land contract land contract which includes the legal description shall be s	and the purchase ubmitted instead
submitted along with the most recent deed	as been inherited, written documentation of the property trand.) p(s), as required by s. NR 716.15(2)(j)2., or the relevant sec	
map or a recorded plat map (lots on subdiv	ere the legal description in the most recent deed refers to a evided or platted property (e.g., lot 2 of xyz subdivision).	·
boundaries. Include the address of each p id # exists). Geographic position data fo requirements of s. NR 716.15 (2)(k), unles	ber (if county uses them) for each property within the contart property within the contaminated site boundary (regardless or each property (meters in WTM83/91 projection) in compliants this information was previously submitted to the agency westigation report, or unless the agency with administrative auxiliary.	of whether parcel nce with the ith administrative
directed that the responsible party does no	of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site boundaries of the sall properties within the contaminated site of the sall properties within the sall pro).
topographic map or plat map in sufficient decceeded, the map must also include the l	detail to permit the easy location of all parcels. If groundwate ocation of all municipal and potable wells within 1200 feet of	er standards are
boundaries, contaminant sources, utility lin	erties within the site boundary showing buildings, roads, pnes, monitoring wells and potable wells. This map shall also	show the location
relation to the boundaries of groundwater of	nway and railroad rights-of-way in relation to the source prop contamination exceeding ch. NR 140 enforcement standards ation exceeding generic or site-specific residual contaminan	s, and/or in
determined under s. NR 720.09, 720.11 ar 6. A table of the most recent and	nd 720.19. alytical results, with sample collection dates from all monito	oring wells, and
	been collected for groundwater, and/or showing results for a most recent soil sampling event, for soils (without shading o	
7. A groundwater isoconcentrate properties within the site boundaries. The PALS and the areal extent of groundwater most recent data, and sample collection data.	ion map, if required as part of the site investigation (SI), of the map must include the areal extent of groundwater contaming contamination exceeding ESs, groundwater flow direction(states. If an isoconcentration map was not required as parktent of contamination, based on the most recent data. Note	ation exceeding) based on the t of the SI,
with the date measurements were made, is	er level elevation measurements from all monitoring wells to be included. If present, note free product elevation and	
varies by more than 20° over the history of	map representative of groundwater movement at the site. If the site, 2 groundwater flow maps showing the maximum v	ariation in flow
716. <u>1</u> 5(2)(h)1-2.	aps according to the applicable portions of ss. NR 716.15(2) soil contamination, include a map showing the location o	
and a single contour showing the horizontageneric or site specific residual contamina	al extent of each area of contiguous residual soil contaminat nt levels.	ion that exceeds
11. A geologic cross section, if r contamination exceeding generic or site splocation, isoconcentrations for all groundw water table and piezometric elevations, an	required as part of the SI, showing vertical extent and location pecific RCLs and residual groundwater contamination, source atter contaminants that exceed PALs that remain when closured the location and elevation of geologic units, bedrock, and the location.	e extent and ire is requested;
description has been attached for each pro-	esponsible party, which states that he or she believes that operty that is within, or partially within, the contaminated site description for each of the contaminated properties has been yof the attached legal descriptions.)	boundary. (The

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WDNR BRRTS CASE # WDNR SITE NAME :
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. 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. 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
Printed Name: CHR 15to PHER HATFIELD
Company Name: NORTHERON ENVIRONMENTAR TECH
Email address: CHATFIELD WI, RR. com
If not site owner, relationship to site owner:
Address: 12075 N. CORPORATE' PKLY City/Zip Code MEaua 53092
Telephone Number: (262) 24) - 3133 FAX Number: (262) 24) - 8222
Environmental Consultant (if different than above):
Address:City/Zip Code
Telephone Number: (FAX Number: ()

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	- WDNR SITE NA	AME:	
	FOR DEPARTMENT U	SE ONLY	
PROJECT MANAGER:	Date	Reviewed:	
() Approved () Denied () Sent to Committee		
CLOSURE COMMITTEE DECIS	ION ON CLOSURE:		
FIRST COMMITTEE REVIEW I	OATE:	()Approve	ed () Denied
(Signature) (Signat	ure) (Signa	ature)	(Signature)
Listing on C Zoning Ve Deed Res Deed Noti Site Speci Well Aban Soil Dispo NR 140 E: VPLE Insu	d With: tions GIS Registry due to Groundwa GIS Registry due to Soil impact ification riction ce Tic Close Out Letter donment Documentation ceal Documentation cemption For:	ets	
Soil Reme	on ter Monitoring diation ter Remediation ation of Soil Landspreading or		

Case Summary and Close Out Request Form 4400-202 (R 5/04) Page 10 of 10

	FOR DEPA	ARTMENT USE ONLY	
ROJECT MANA	GER:	Date Reviewed: _	
) Approved () Denied () Sent to Com	nmittee	
LOSURE COMM	IITTEE DECISION ON CLOS	JRE:	
ECOND COMM	TTEE REVIEW DATE:	() Ap	proved () Denied
(Signature)	(Signature)	(Signature)	(Signature)
OMMITTEE RE	COMMENDATION:		
Clos	sure Approved With:		
	No Restrictions	a ta Craundwatar impaata	
	Listing on GIS Registry du Listing on GIS Registry due		
	Zoning Verification	o to con impacto	
	Deed Restriction		
	Deed Notice	Har	
	Site Specific Close Out Le Well Abandonment Docum		
	Soil Disposal Documentati		
	NR 140 Exemption For:		
	VPLE Insurance needed		
	Other Conditions/Commer	1lS	
_			
Clos	sure Denied, Needs More:		
	Investigation		
	Groundwater Monitoring Soil Remediation		
	Soir Remediation Groundwater Remediation	1	
	Documentation of Soil Lar		ny
	Specific Comments:		<u> </u>

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

Grantor, and

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

Grantes.

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

REGISTER'S OFFICE AURESHA COURTY, WIS SS 96 APR 29 AM 9: 17 REEL 2222 HAST 0823

REGISTER OF DEEDS

RETURN TO

NEW 22590 Johnson

WAURESIA, 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.

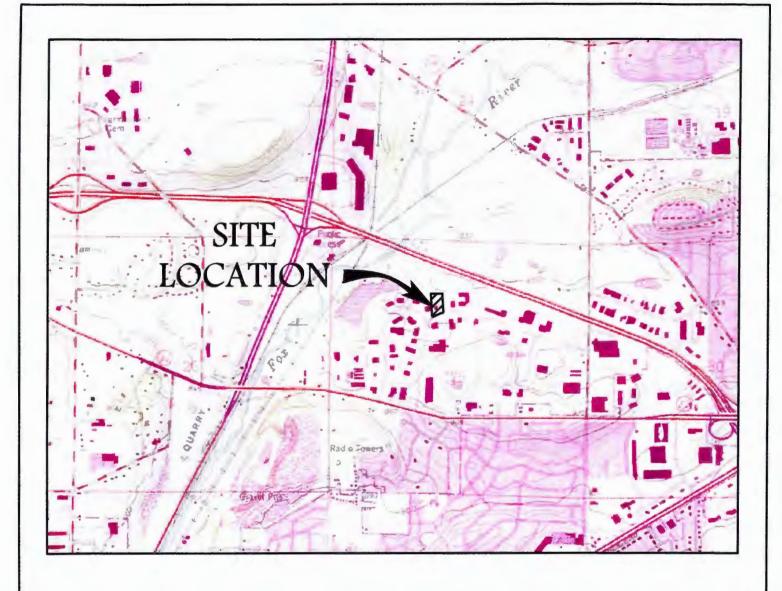
Tax Key No. PWT 0963.999.018

ADDRESS: N8 W22590 Johnson Drive

DLE/TS/JT

TRANSFER \$ 1140 00 FEE 70

This is not homestead property. Together with all and singular the hereditaments and appurte And JOHNSON SAND & GRAVEL, INC., a Wi- warrants that the title is good, indefeasible in fee simple and i municipal and zoning ordinances and agreements entered un taxes levied in the year of closing and subsequent years, and and will warrant and defend the same. Dated this, 18TH day of April 1996 AROBERT A. JOHNSON, SECRETARY	sconsir ree and cit ader them, recorded e	n Componation arr of encumbrances except recorded building and use restrictions and covenants, and genera	il (SEAL)
	(SEAL)		(SEAL)
AUTHENTICATION Signature(s) of		ACKNOWLEDGEMENT	
		STATE OF WISCONSIN LUaukesha county. Personally carrie before me this 13th day of	
authenticated this day of .		Personally carrie before me this day of	
* TITLE: MEMBER STATE BAR OF WISCONSIN		to me known to be the person(a) who executed the foregoing	-
authorized by § 700.00, Wis. Stats.) THIS INSTITUMENT WAS DIMETED BY		Instrument and acknowledge the same.	-
J. BUSHNELL NIELSEN		Notary Public <u>II. (18.1) (18.1)</u> County, Wis. My Commission is permanent: (If not, et ale expiration date:	
(Signifures may be authorificated or acknowledged. Goth are not necessary.)		19/10	- 1





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

07/06/07

DRAWN BY:

WISCONSIN MICHIGAN LILLINOIS IOWA

TASK NUMBER:

100

This drawing and all information contained thereon is the property of Northern Environmental. Northern Environmental will not be held liable for improper or incorrect usage. Professional seals and signatures do not apply to electronic drawing files. The user assumes all responsibility and risk for the accuracy and verification of all information contained in electronic files.

BMP

JOHNSON SAND & GRAVEL PEWAUKEE, WISCONSIN

SITE LOCATION

& LOCAL TOPOGRAPHY

PROJECT NUMBER:

JSG 01-2200-2866

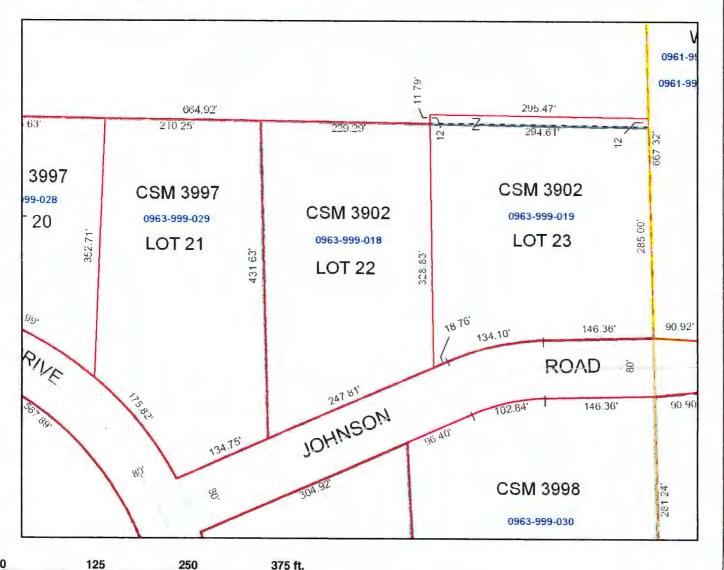
FIGURE

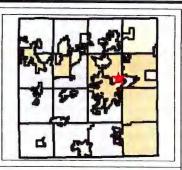






Waukesha County GIS





Legend

Туре

- н Аироп
- Centetery Fire Station
- Government Building
- **W** Hospital
- M Library
- Post Office
- A Park or Recreation
- School
- Unincorporated Place County Parks
- Police Station
- Sherift Substation Civil Division Boundaries
- PLSS Section Lines
- PLSS Quarter Section Lines

- Easement Line (Major) Dimension arrow
- Extended Tie Line
- identification Arroy Meander 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

ROW Type

- Dedicated
 Proposed
 Reserved
- Vacated
 Assessor Plat
- Condo Plai

| Subdivision Plat

RR ROW Status

Active Reyed

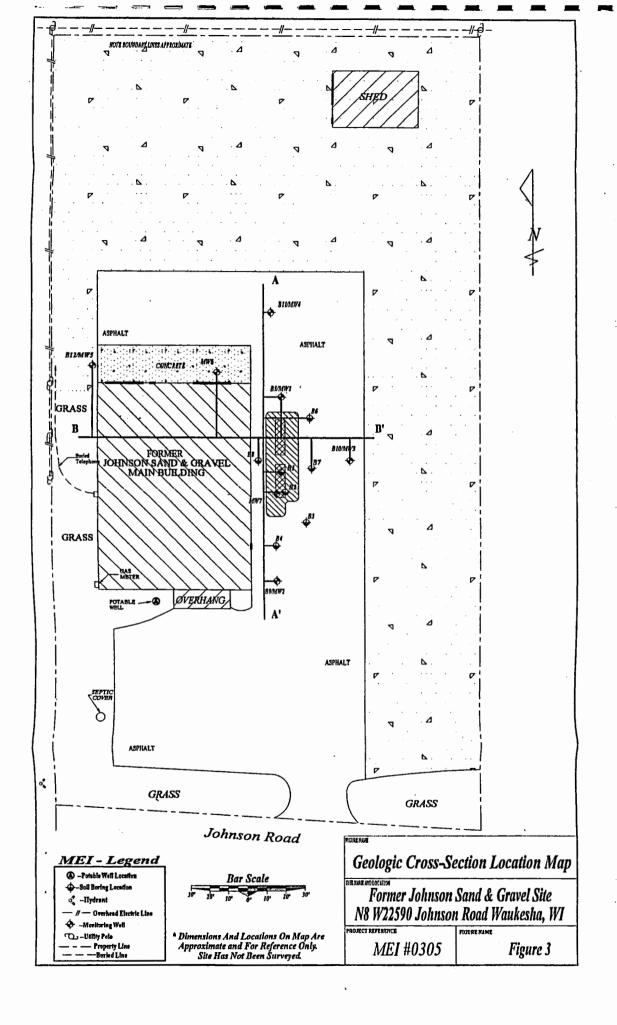
Lakes and Rivers Streams and Creeks

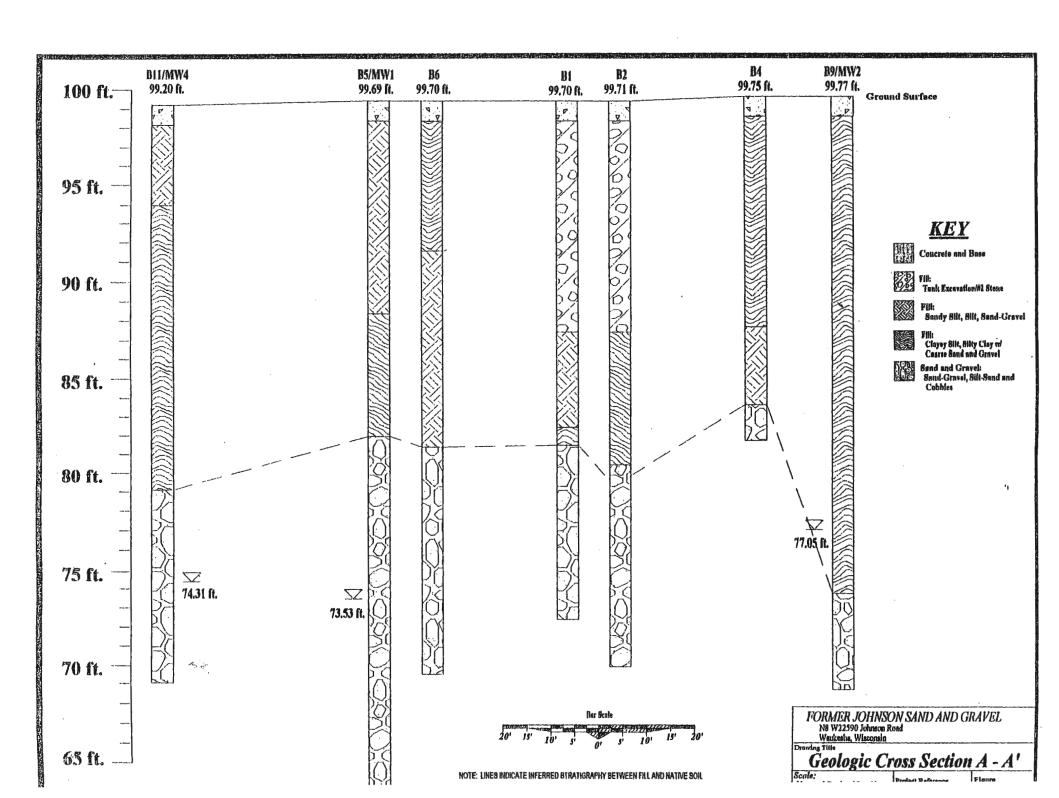


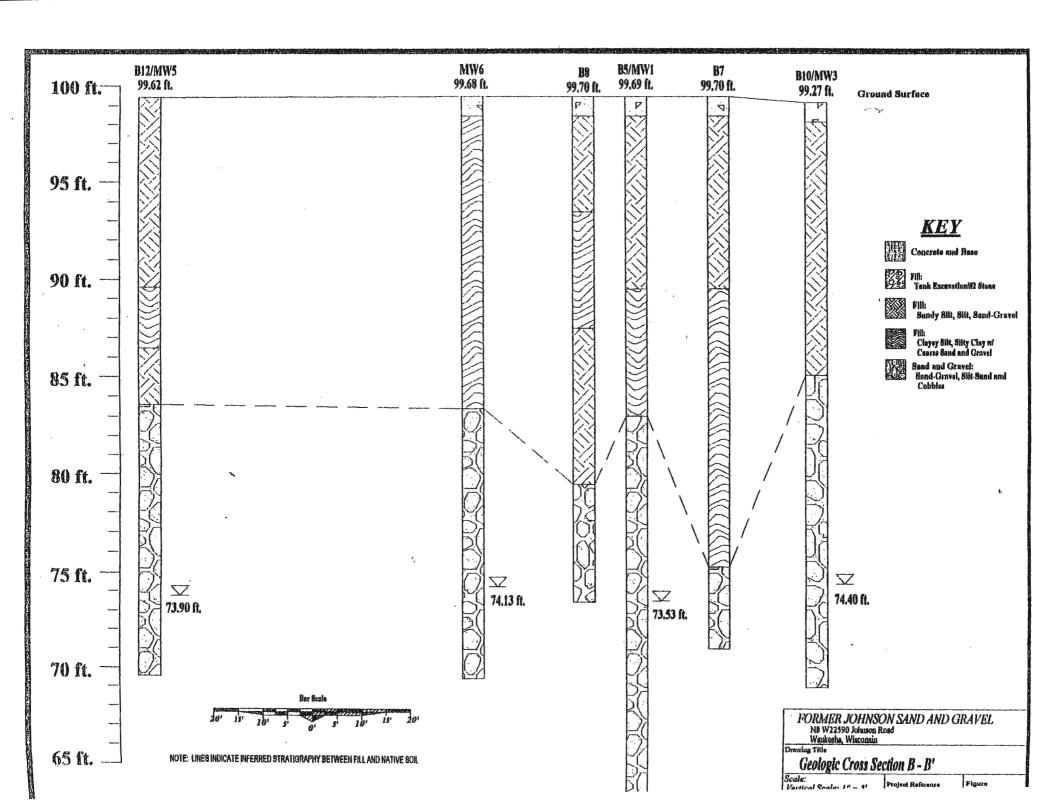
The information and depictions found on this site are for informational purposes only and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified 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 ingrores this warring.

Notes: CSM 3902: Former Johnson Sand and Gravel Property

Map Generated. Aug 13, 2007







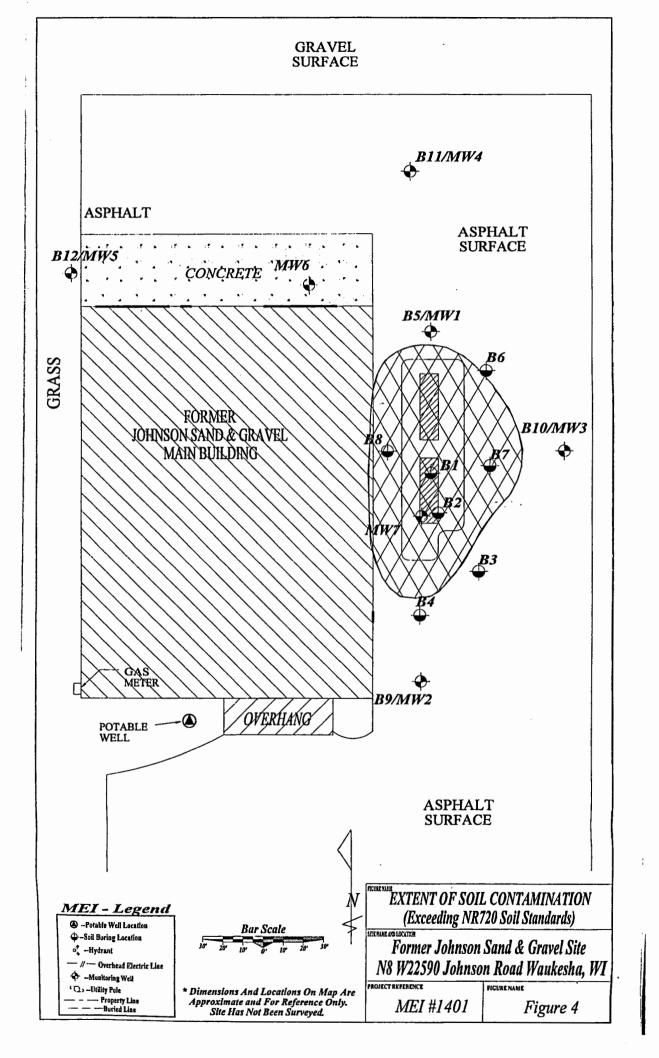


TABLE 3 SOIL QUALITY RESULTS

Former Johnson Sand and Gravel Site

	B1 (16-18')	B1 (24-26')	B2 (12-14')	B2 (22-24')	B2 (28-30')	B3 (12-14')	B3 (26-28')	B4 (8-10')	B4 (14-16')	B5 (6-8')	B5 (20-22')	B5 (28-30°)	B6 (12-14')	B6 (20-22')	B7 (4-6')	B7 (14-16')	B7 (22-24')	B8 (10-12')	B8 (18-20')	B8 (22-24')	M3 composite	M3 (14-16')	Gen
GRO (mg/kg)	540	ND	350	250	708	ND	ND	ND	ND	ND	11	ND	ND	96	ND	170	ND	ND	ND	30	NA	ND	10
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	10
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	NA	ND	5.								
n-Butvlbenzene	2000	ND	750	1900	3300	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	74	ND_	ND	ND	73	NA	ND	NS
sec-Butvlbenzene	2000	ND	790	1800	3600	ND	ND	ND	37	ND	40	40	ND	310	ND	80	35	ND	ND	76	NA	ND	NS
cis-1.2 Dichloroethene	ND ND	ND	ND	ND	43	ND	100	ND	ND	ND	ND	ND	NA	ND	NS								
Ethylbenzene	930	ND	260	960	970	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	ND	ND	ND	NA	ND	290
Isopropylbenzene	860	ND	290	860	1500	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	32	ND	ND	ND	ND	NA	ND	NS
p-Isopropyltoluene	1300	ND	530	1200	2400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	ND	ND	ND	130	NA	ND	NS
n-Propvlbenzene	ND	ND	460	1400	2500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	NA	ND	NS
Naphthalene	5200	ND	1600	4300	7200	ND	ND	ND	ND	ND	51	67	ND	540	ND.	270	ND	ND	ND	83	NA	ND	NS
Tetrachloroethene	ND ND	ND	ND	ND	ND	120	ND	ND	ND	ND	ND	66	NA	ND	NS								
Toluene	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	150								
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	NS
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	NS
Total Xylenes	1730	ND	110	ND	390	ND	ND	ND	ND	ND	ND	ND	ND _	ND	ND	ND	ND	ND	ND	ND	NA	ND	410

Notes

mg/kg - milligrams per kilogram

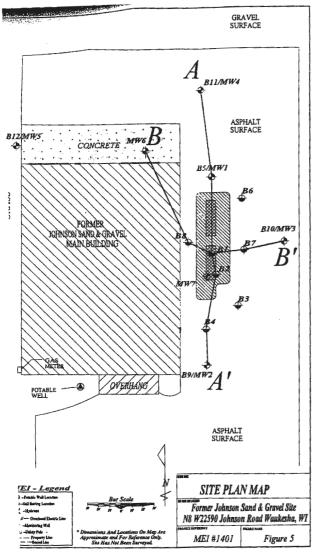
ug/kg - micrograms per kilogram

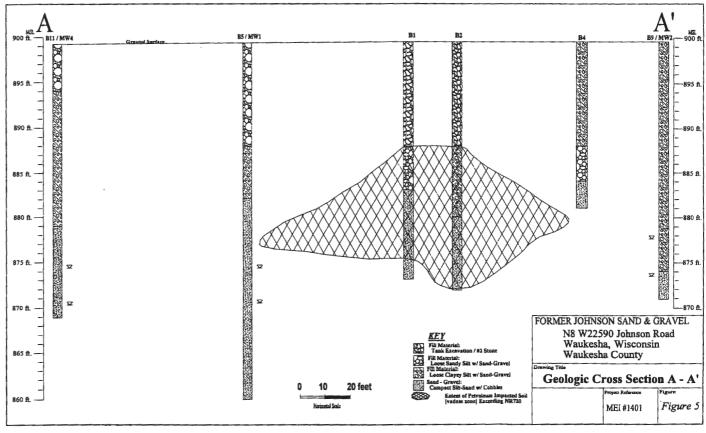
NA - Not Analyzed

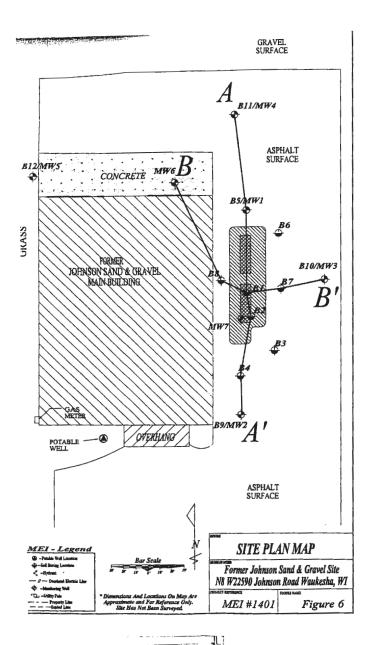
ND - Not Detected

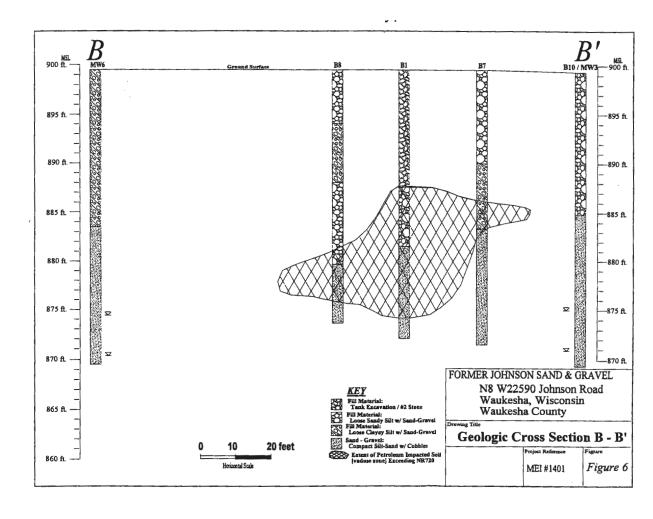
NSE - No Standard Established

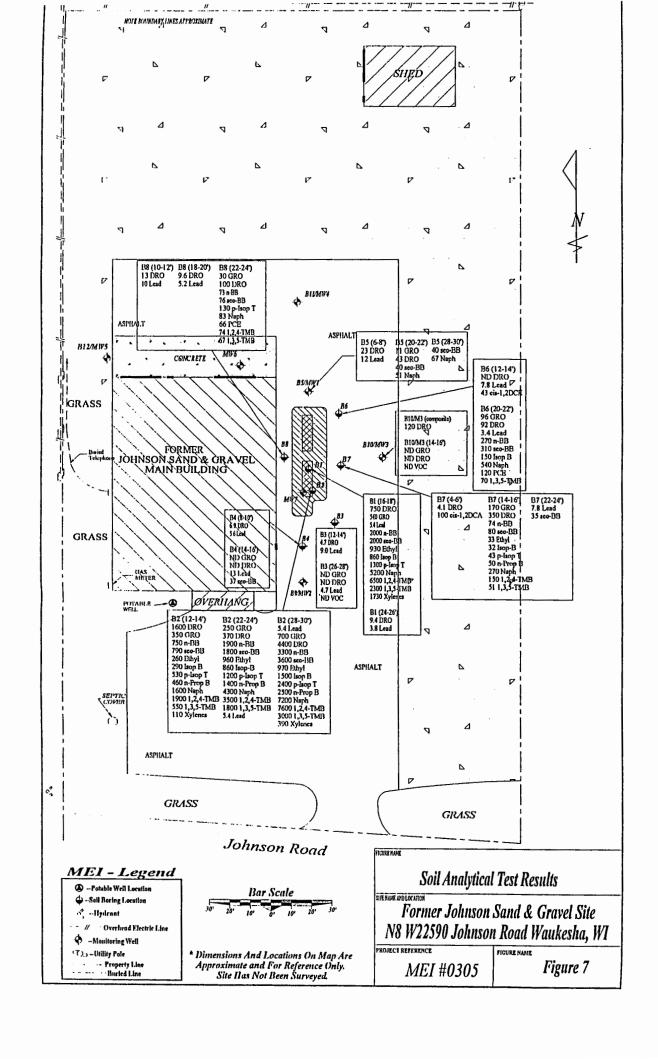
00.00 - Shaded numbers indicate concentrations exceeding WDNR soil cleanup guidelines in NR720











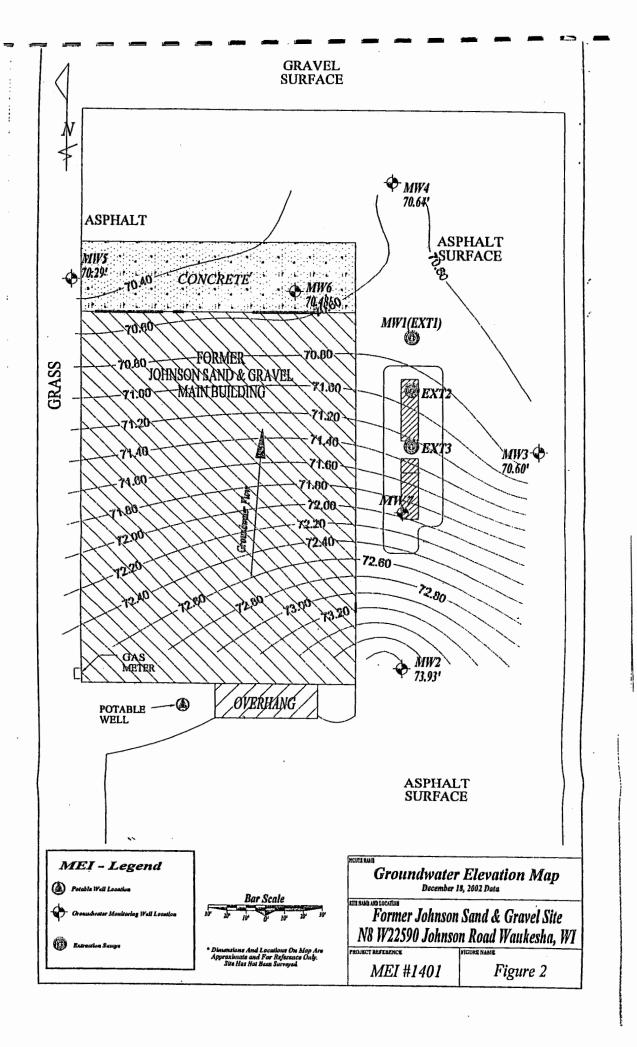


Table 1 Groundwater Elevation Data, Former Johnson Sand and Gravel, Pewaukee, Wisconsin

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
23773	08/23/06	33.03	<i>33.67</i>	25.25	73.82
	11/30/06			24.95	74.12
	02/23/07		Well Cap F	Frozen in Ice - Could N	
	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
1,1,1,5	08/23/06		2002	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		22.00	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

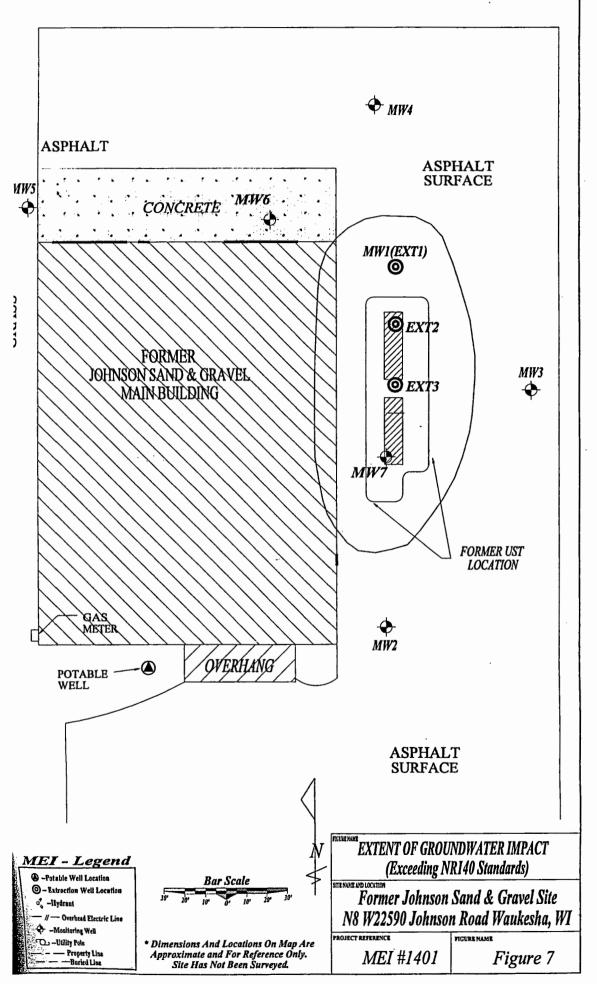


Table 2 Groundwater Volatile Organic Compound Analytical Results, Former Johnson Sand and Gravel, Pewaukee, Wisconsin

							Relavant	and Signific	ant Volatile	Organic Co	mpounds ((micrograms	s per liter)				
Well ID	Date Sampled	Water Table Elevation (feet below grade)	Вепхепе	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	NR 140, Wis Adm Code ES			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</p>

[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	Water Table							Re	levent and Signific	ent Polynuclear A	romatic Hydrocarb	ons (mkrograms pe	r liter)						$\overline{}$
	Sampled	Elevation (fbg)	Acensphthene	Acensphthylene	Anthrecene	Benzo(a) anthrecene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) Nuoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) pyrene	1-Methyl Naphthalene	2-Methyl Naphthalene	Nuphthalene	Phenanthrene	Pyrene
NR 140, Wis A	Adm Code Preve	ntive 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, Wie Adm Code Enforcement Standard		rcoment Standard	NE	NÉ	3000	NE	0.2	0.2	NE	NE	0.2	NE	400	400	NE SN	NE	NE	40	NE	NE
MWI/EXT-I	08/23/06	75.48	22	5.6 "J"	6.1 "J"	3.6 "]"	<1.6	<1.8	4	<1.8	3.0 "J"	<1.8	7.1	58	٥	107	62	13 -1-	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	1	<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
1	11/30/06	73.92	3.7	0.98	2.7	0.32	0.12 "J"	0.15	0.072 *3*	0.066 "J"	1.2	<0.045	1.7	6.0	<0.075	11	2.5	1.4	5.1	7.3
ļ	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
l	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	B.5	0.267	17.5	3.6	1.73	13.2	22.7

Key:

Ibg = feet below grade

NE = Not established

J = snalyte detected between Limit of Detection and Limit of Quantitation
<x = not detected above laboratory Limit of Detection of X

XXX - exceeds Chepter 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, Raylay 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,

Randy Jam

Enclosures

	FROM: Name CHRIS HATFIELD
Letter Of Transmittal	PET TOMPANY NORTHERN ENVIRONMENTAL
Type of Submittal:	Address 12075 NORTH CORPOLATE YKWY
LUSTERPVPLE other (describe):	SE? 12 2001 MEQUON, WI 53092
	Phone 262-241-3133
To: Program Assistant/BRR Program	Date 9/10/07
Wisconsin Dept. of Natural Resources Box 12436 2300 N. Dr. Martin Luther King Jr. Dr.	FOR: Site Name JOHNSON SAND & GRAVER
Milwaukee, WI 53212	Address N8 W22590 JOHNSON DRIVE
Check type(s) of documents enclosed. Submittals are tracked a	PEWALKEE, M
filed based on information you provide. Include FID & BRRT	S FID#
numbers assigned to this site. Identify the intent of document(you are submitting in order to speed processing. Please attach	BRRTS# 03-68-004228

required fees to this form.

Are you requesting Department Review? Y \(\sum_{N} \subseteq \)

√	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	\$750 if review is requested	37,
	groundwater impacts above ES	·	137~,
	no groundwater impacts or gw impacts below ES (if petroleum contransferred to Department of Commerce)	nstituents only, case will be	76, 96
	Request to Transfer Case to Department of Commerce	попе	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~
X	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~

* 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

letter of transmittal.doc 2/24/99

Remarks:



12075 North Corporate Parkway, Suite 210 Mequon, WI 53092 (262) 241-3133 (800) 776-7140 Fax (262) 241-8222 www.northemenvironmental.com

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) preformed 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

Pumping Event	Gallons Pumped
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



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	1		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 I	Frozen in Ice - Could N	
	05/18/07		1	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
112 11 3	08/23/06)).27	70.01	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		22.55	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

							Relavant	and Signific	ant Volatile	Organic Co	mpounds	(microgram	s per liter)				
Well ID	Date Sampled	Water Table Elevation (feet below grade)	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 1	40, Wis Adm	Code PAL	0.5	NE	NE	7	NE	140	NE	NE	12	8	NE	200	96		1000
NR	40, 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

 $\leq x$ = 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	Water Table	1			· ····································			Rel	evant and Signific	ant Polynuclear	Aromatic Hydrocar	bons (micrograms pe	er liter)						
	Sampled	Elevation (fbg)	Acenaphthene	Acenapbthylene	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 A	Adm Code Preve	ntive 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 Enfo	rcement 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

Kev:

bg = feet below grad

IE = Not established

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

<x = not detected above laboratory Limit of Detection of X</p>

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 Sample

MW1/EXT-1 Water

Sample Date

8/23/2006

Sample Date	0,23,2000									
		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/I	1.6	5.2	200	M8270	8/30/2006	MJR	1
Benzo(b)fluoranther	ne	< 1.8	ug/l	1.8	5.8	200	M8270	8/30/2006	MJR	1
Benzo(g,h,i)perylene	e	< 2	ug/l	2	6.6	200	M8270	8/30/2006	MJR	1
Benzo(k)fluoranthen		< 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)anthrac	ene	< 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)pyro	ene	< 3	ug/l	3	9.4	200	M8270	8/30/2006	MJR	1
1-Methyl naphthalen	ne	107	ug/l	3.6	11.6	200	M8270	8/30/2006	MJR	1
2-Methyl naphthalen	ne	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
Bromodichlorometha	ane	< 0.82	ug/I	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	e	< 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

Invoice # E14020

Project Name Project #	WAUKESHA JSG 01-2200-2506	;					Invoice #	E14020		
Lab Sample ID Sample Sample Date	5014020A MW1/EXT-1 Water 8/23/2006									
-		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 1	8260B 8260B	8/29/2006 8/29/2006	CJR CJR	1 1
4-Chlorotoluene	Llowonenna	< 0.62 < 2.5	ug/l ug/l	0.62 2.5	2 8.1	1	8260B	8/29/2006	CJR	1
1,2-Dibromo-3-cl Dibromochlorom	• •	< 0.65	ug/l	0.65	2.1	i	8260B	8/29/2006	CJR	i
1.4-Dichlorobenz		< 0.68	ug/l	0.68	2.2	i	8260B	8/29/2006	CJR	1
1,3-Dichlorobenz		< 0.72	ug/l	0.72	2.3	1	8260B	8/29/2006	CJR	1
1,2-Dichlorobenz		< 0.69	ug/l	0.69	2.2	1	8260B	8/29/2006	CJR	1
Dichlorodifluoro	methane	< 0.5	ug/l	0.5	1.6	1	8260B	8/29/2006	CJR	1
1,2-Dichloroethan		< 0.72	ug/l	0.72	2.3	1	8260B	8/29/2006	CJR	1 1
1,1-Dichloroethau		< 0.22	ug/l	0.22	0.69 0.97	1 1	8260B 8260B	8/29/2006 8/29/2006	CJR CJR	1
1,1-Dichloroether		< 0.3 1.48 "J"	ug/l ug/l	0.3 0.5	1.6	1	8260B	8/29/2006	CJR	1
cis-1,2-Dichloroe trans-1,2-Dichlor		< 0.65	ug/l ug/l	0.65	2.1	1	8260B	8/29/2006	CJR	i
1,2-Dichloroprop		< 0.21	ug/l	0.21	0.67	i	8260B	8/29/2006	CJR	1
2,2-Dichloroprop		< 1.2	ug/l	1.2	4	1	8260B	8/29/2006	CJR	1
1,3-Dichloroprop		< 0.67	ug/l	0.67	2.1	1	8260B	8/29/2006	CJR	1
Di-isopropyl ethe		29.6	ug/l	0.079	0.25	1	8260B	8/29/2006	CJR	1
EDB (1,2-Dibron	noethane)	< 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 CJR	1 4
Hexachlorobutad		< 2.1	ug/l	2.1 0.99	6.7 3.2	1 1	8260B 8260B	8/29/2006 8/29/2006	CJR	1
Isopropylbenzene		1.39 "J" 1.08 "J"	ug/l ug/l	0.99	2.6	i	8260B	8/29/2006	CJR	i
p-Isopropyltoluer Methylene chlorid		< 0.61	ug/l	0.61	1.9	i	8260B	8/29/2006	CJR	1
Methyl tert-butyl		< 0.34	ug/l	0.34	1.1	ī	8260B	8/29/2006	CJR	1
Naphthalene	calci (IIIIDE)	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-Tetrachlo	roethane	< 0.89	ug/l	0.89	2.8	1	8260B	8/29/2006	CJR	1
1,1,1,2-Tetrachlo		< 0.48	ug/l	0.48	1.5	1	8260B	8/29/2006	CJR	1
Tetrachloroethene	e	< 0.37	ug/l	0.37	1.2	1	8260B	8/29/2006	CJR CJR	1 1
Toluene		< 0.59	ug/l	0.59 1.5	1.9 4.8	1 1	8260B 8260B	8/29/2006 8/29/2006	CJR	1
1,2,4-Trichlorobe 1,2,3-Trichlorobe		< 1.5 < 1.4	ug/l ug/l	1.3	4.8 4.4	1	8260B	8/29/2006	CJR	1
1,1,1-Trichloroet		< 0.42	ug/l	0.42	1.3	i	8260B	8/29/2006	CJR	1
1,1,2-Trichloroet		< 0.36	ug/l	0.36	1.1	i	8260B	8/29/2006	CJR	1
Trichloroethene (< 0.39	ug/l	0.39	1.3	1	8260B	8/29/2006	CJR	1
Trichlorofluorom		< 0.22	ug/l	0.22	0.71	1	8260B	8/29/2006	CJR	1
1,2,4-Trimethylbe		0.48 "J"	ug/l	0.16	0.5	1	8260B	8/29/2006	CJR	1
1,3,5-Trimethylbe	enzene	< 1.2	ug/l	1.2	3.7	1	8260B	8/29/2006	CJR CJR	1
Vinyl Chloride		0.16 "J"	ug/l	0.11	0.35 3.4	1	8260B 8260B	8/29/2006 8/29/2006	CJR CJR	1
m&p-Xylene o-Xylene		< 1.1 < 0.18	ug/l ug/l	1.1 0.18	0.56	1 1	8260B	8/29/2006	CJR	1
Lab Sample ID Sample	5014020B MW3 Water		-g -							
Sample Date	8/23/2006	D	WT **	100	100	D.II	Masked	D	Anches	Codo
Organic PAH SIM		Result	Unit	LOD		Dil	Method	Run	Analyst	
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 0.012	0.04 0.037	1	M8270 M8270	8/30/2006 8/30/2006	MJR MJR	1 1
Benzo(a)anthrace	ne .	< 0.012	ug/l	0.012	0.037	•	14102/V	0,30,2000		•

Invoice # E14020

Project Name Project #	WAUKESHA JSG 01-2200-2506
Lab	5014020B
Sample ID	MW3
Sample	Water
Sample Date	8/23/2006

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)anthrace	ene	< 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)pyre	ne	< 0.015	ug/l	0.015	0.047	1	M8270	8/30/2006	MJR	1
1-Methyl naphthalene	e	< 0.018	ug/l	0.018	0.058	1	M8270	8/30/2006	MJR	1
2-Methyl naphthalene	e	< 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 ethe	er (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-Trimethylbenze	ene	< 0.85	ug/l	0.85	2.7	1	GRO95/8021	8/29/2006	CJR	1
1,3,5-Trimethylbenze		< 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/1	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 Sample Date MW7 Water 8/23/2006

Sample Date	8/23/2000									
		Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	
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 Tetrachlori	ide	< 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-chl	loropropane	< 2.5	ug/l	2.5	8.1	1	8260B	8/29/2006	CJR	1
Dibromochloromet		< 0.65	ug/l	0.65	2.1	1	8260B	8/29/2006	CJR	1
1.4-Dichlorobenze		< 0.68	ug/l	0.68	2.2	1	8260B	8/29/2006	CJR	1
1,3-Dichlorobenze		< 0.72	ug/l	0.72	2.3	1	8260B	8/29/2006	CJR	1
1,2-Dichlorobenze		< 0.69	ug/l	0.69	2.2	1	8260B	8/29/2006	CJR	1
Dichlorodifluorom		< 0.5	ug/l	0.5	1.6	1	8260B	8/29/2006	CJR	1
		< 0.72	ug/l	0.72	2.3	1	8260B	8/29/2006	CJR	1
1,2-Dichloroethane		< 0.22	ug/l	0.22	0.69	1	8260B	8/29/2006	CJR	1
1,1-Dichloroethane		< 0.3	ug/l	0.3	0.97	1	8260B	8/29/2006	CJR	1
1,1-Dichloroethene		< 0.5	ug/l	0.5	1.6	ī	8260B	8/29/2006	CJR	1
cis-1,2-Dichloroetl		< 0.65	ug/l	0.65	2.1	ī	8260B	8/29/2006	CJR	1
trans-1,2-Dichloro		< 0.21	ug/l	0.21	0.67	ī	8260B	8/29/2006	CJR	1
1,2-Dichloropropa		< 1.2	ug/l	1.2	4	i	8260B	8/29/2006	CJR	1
2,2-Dichloropropa		< 0.67	ug/l	0.67	2.1	i	8260B	8/29/2006	CJR	1
1,3-Dichloropropa		0.29	ug/l	0.079	0.25	i	8260B	8/29/2006	CJR	1
Di-isopropyl ether		< 0.21	ug/l	0.075	0.67	i	8260B	8/29/2006	CJR	1
EDB (1,2-Dibromo	oetnane)	< 0.21	ug/l	0.21	0.62	i	8260B	8/29/2006	CJR	1
Ethylbenzene		< 2.1		2.1	6.7	i	8260B	8/29/2006	CJR	4
Hexachlorobutadie	ene		ug/I	0.99	3.2	i	8260B	8/29/2006	CJR	i
Isopropylbenzene		< 0.99	ug/l	0.99	2.6	i	8260B	8/29/2006	CJR	1
p-Isopropyltoluene		< 0.81	ug/l	0.61	1.9	1	8260B	8/29/2006	CJR	i
Methylene chloride		< 0.61	ug/l		1.1	1	8260B	8/29/2006	CJR	i
Methyl tert-butyl e	ther (MTBE)	< 0.34	ug/l	0.34 2.2	6.8	1	8260B	8/29/2006	CJR	i
Naphthalene		< 2.2	ug/l		2	1	8260B	8/29/2006	CJR	i
n-Propylbenzene		< 0.61	ug/l	0.61	2.8	1	8260B	8/29/2006	CJR	i
1,1,2,2-Tetrachloro		< 0.89	ug/l	0.89	1.5	1	8260B	8/29/2006	CJR	i
1,1,1,2-Tetrachlore		< 0.48	ug/l	0.48		1	8260B	8/29/2006	CJR	i
Tetrachloroethene		< 0.37	ug/l	0.37	1.2		8260B	8/29/2006	CJR	1
Toluene		< 0.59	ug/l	0.59	1.9	1		8/29/2006	CJR	i
1,2,4-Trichloroben		< 1.5	ug/l	1.5	4.8	1	8260B		CJR	1
1,2,3-Trichloroben	zene	< 1.4	ug/l	1.4	4.4	1	8260B	8/29/2006	CJR	1
1,1,1-Trichloroeth		< 0.42	ug/l	0.42	1.3	1	8260B	8/29/2006	CJR	1
1,1,2-Trichloroeth	ane	< 0.36	ug/l	0.36	1.1	1	8260B	8/29/2006	CJR	1
Trichloroethene (T		< 0.39	ug/l	0.39	1.3	1	8260B	8/29/2006		1
Trichlorofluorome	thane	< 0.22	ug/l	0.22	0.71	1	8260B	8/29/2006	CJR	-
1,2,4-Trimethylber	nzene	0.37 "J"	ug/l	0.16	0.5	1	8260B	8/29/2006	CJR	1 1
1,3,5-Trimethylber	nzene	< 1.2	ug/l	1.2	3.7	1	8260B	8/29/2006	CJR	_
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

Code Comment

1 Laboratory QC within limits.

4 The continuing calibration standard not within established limits.

Authorized Signature $\it Michael J. Ricker$

▲ Northern Environmental*

CHAIN OF CUSTODY ... CORD REQUEST FOR ANALYSIS

Pag 1 of 1

Hydrologists • Engineers • Surveyors • Scientists Check office originating request 330 South 4th Avenue 647 Academy Drive 954 Circle Drive 3349 Southgate Court SW #102 Cedar Rapids, IA 52404 Green Bay, WI 54304 Park Falls, WI 54552 Northbrook, IL 60062 920-592-8400 715-762-1544 847-562-8577 319-365-0466 FAX 920-592-8444 Fax 715-762-1844 FAX 847-562-8552 FAX 319-365-0464 1214 W. Venture Ct. 203 West Upham Street 15851 S. U.S. 27 - Blg. 30, Suite 318 1203 Storbeck Drive Meauon, WI 53092 Waupun, WI 53963 Marshlield, WI 54449 Lansing, MI 48906 262-241-3133 920-324-8600 715-486-1300 517-702-0470 FAX 262-241-8222 FAX 920-324-3023 FAX 715-486-1313 FAX 517-702-0477 Sample Integrity - To be completed by receiving lab Laboratory: 100 Wisconsin DNR Certification #: Project Location: Laboratory Contact: Project Manager: **ANALYSES REQUESTED** Sampler: DRO (WI Modified Method) GRO (WI Modified Method) (name) BETX (EPA Method 8020) Sampler: (Signature) TURNAROUND TIME REQUIRED Sampling Date(s): Reports to be Sent to: CCH Date Needed No. of Containers, Size & Type Description Soil Other Sample No. Preservative Date: Water Time 5014020 A 3-40 ml + 1 1- Lamber CQ MW Packed for Shipping by: Comments: Shipment Date: Date: Date: Relinquished By: Relinquished By: Relinquished By Time: Company: Company: Company: Received By: Date: Received By: Company: Time: Company:

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 Sample Date Water 11/30/2006

-	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/1	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

Invoice # E14566

Invoice # E14566

Project Name WAUKESHA Project # JSG 01-2200-2806

Lab Sample ID 5014566A MW1/EXT-1

Sample Sample Date

Water 11/30/2006

Sample Date	11/20/2000									
_		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-c	hloropropane	< 2.5	ug/l	2.5	8.1	1	8260B	12/7/2006	CJR	1
Dibromochlorom		< 0.65	ug/l	0.65	2.1	1	8260B	12/7/2006	CJR	1
1,4-Dichlorobenz		< 0.68	ug/l	0.68	2.2	1	8260B	12/7/2006	CJR	1
1,3-Dichlorobenz		< 0.72	ug/l	0.72	2.3	1	8260B	12/7/2006	CJR	1
1.2-Dichlorobenz		< 0.69	ug/l	0.69	2.2	1	8260B	12/7/2006	CJR	1
Dichlorodifluoro		< 0.5	ug/l	0.5	1.6	1	8260B	12/7/2006	CJR	3
1.2-Dichloroetha		< 0.72	ug/l	0.72	2.3	ı	8260B	12/7/2006	CJR	1
1,1-Dichloroetha		< 0.56	ug/l	0.56	1.8	1	8260B	12/7/2006	CJR	1
1,1-Dichloroethe		< 0.3	ug/l	0.3	0.97	1	8260B	12/7/2006	CJR	1
cis-1,2-Dichloroe		1.19 "J"	ug/l	0.68	2.2	1	8260B	12/7/2006	CJR	1
trans-1.2-Dichlor		< 0.95	ug/l	0.95	3	1	8260B	12/7/2006	CJR	1
1,2-Dichloroprop		< 0.47	ug/l	0.47	1.5	1	8260B	12/7/2006	CJR	1
2,2-Dichloroprop		< 1.2	ug/l	1.2	4	1	8260B	12/7/2006	CJR	1
1,3-Dichloroprop		< 0.67	ug/l	0.67	2.1	1	8260B	12/7/2006	CJR	1
Di-isopropyl ethe		25.4	ug/l	0.71	2.3	1	8260B	12/7/2006	CJR	1
EDB (1,2-Dibror		< 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
Hexachlorobutad	liene	< 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-Isopropyltoluer		< 0.81	ug/l	0.81	2.6	1	8260B	12/7/2006	CJR	1
Methylene chlori		< 0.69	ug/l	0.69	2.2	1	8260B	12/7/2006	CJR	1
Methyl tert-butyl		< 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-Tetrachlo	roethane	< 0.89	ug/l	0.89	2.8	1	8260B	12/7/2006	CJR	1
1,1,1,2-Tetrachlo	roethane	< 0.65	ug/l	0.65	2.1	1	8260B	12/7/2006	CJR	1
Tetrachloroethen		< 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-Trichlorobe	enzene	< 1.5	ug/l	1.5	4.8	1	8260B	12/7/2006	CJR	1
1,2,3-Trichlorobe		< 1.4	ug/l	1.4	4.4	1	8260B	12/7/2006	CJR	1
1.1.1-Trichloroet		< 0.5	ug/l	0.5	1.6	1	8260B	12/7/2006	CJR	1
1,1,2-Trichloroet		< 0.5	ug/l	0.5	1.6	1	8260B	12/7/2006	CJR	1
Trichloroethene		< 0.44	ug/l	0.44	1.4	1	8260B	12/7/2006	CJR	1
Trichlorofluorom		< 0.61	ug/l	0.61	1.9	1	8260B	12/7/2006	CJR	1
1.2.4-Trimethylb		< 0.39	ug/l	0.39	1.3	1	8260B	12/7/2006	CJR	1
1,3,5-Trimethylb		< 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
-	501.45CCD		-							
Lab	5014566B									

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

Sumpre 2 mil	Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	Code
Organic PAH SIM									
Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene	3.7 0.98 2.7 0.32	ug/l ug/l ug/l ug/l	0.08 0.06 0.065 0.06	0.25 0.195 0.2 0.185	5 5 5 5	M8270 M8270 M8270 M8270	12/7/2006 12/7/2006 12/7/2006 12/7/2006	MJR MJR MJR MJR	1 1 1

Project Name WAUKESHA Project # JSG 01-2200-2806

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

Sample Date 11/30/2000	3								
	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/I	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
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	< 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
1,2-Dichloropropane	< 0.47	ug/l	0.47	1.5	1	8260B	12/7/2006	CJR CJR	1
2,2-Dichloropropane	< 1.2	ug/l	1.2	4	1	8260B	12/7/2006		1
1,3-Dichloropropane	< 0.67	ug/l	0.67	2.1	1	8260B	12/7/2006	CJR 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 12/7/2006	CJR	i
Hexachlorobutadiene	< 2.1	ug/l	2.1	6.7 3.2	1 1	8260B	12/7/2006	CJR	i
Isopropylbenzene	< 0.99	ug/l	0.99			8260B 8260B	12/7/2006	CJR	1
p-Isopropyltoluene	< 0.81	ug/l	0.81	2.6	1				1
Methylene chloride	< 0.69	ug/l	0.69	2.2 1.6	1	8260B 8260B	12/7/2006 12/7/2006	CJR CJR	1
Methyl tert-butyl ether (MTBE)	< 0.52	ug/l	0.52		1		12/7/2006	CJR	1
Naphthalene	< 2.2	ug/l	2.2	6.8 2	1	8260B 8260B	12/7/2006	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61		_		12/7/2006	CJR	i
1,1,2,2-Tetrachloroethane	< 0.89	ug/l	0.89	2.8 2.1	1 1	8260B 8260B	12/7/2006	CJR	ì
1,1,1,2-Tetrachloroethane	< 0.65	ug/l	0.65		_	8260B	12/7/2006	CJR	1
Tetrachloroethene	< 0.52	ug/I	0.52	1.6	1	0200B	12/1/2000	CJK	

Project Name WAUKESHA Invoice # E14566

Project # JSG 01-2200-2806

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

	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

▲ Northern Environmental*

CHAIN OF CUSTODY L. CORD REQUEST FOR ANALYSIS

Hydrologists • Engineers • Surveyors • Scientists 3349 Southgate Court SW #102 Check office originating request 954 Circle Drive 330 South 4th Avenue 647 Academy Drive Green Bay, WI 54304 Park Falls, WI 54552 Northbrook, IL 60062 Cedar Rapids, IA 52404 920-592-8400 715-762-1544 319-365-0466 847-562-8577 FAX 920-592-8444 Fax 715-762-1844 FAX 847-562-8552 FAX 319-365-0464 1214 W. Venture Ct. 1203 Storbeck Drive 203 West Upham Street 15851 S. U.S. 27 - Blg. 30, Suite 318 Mequon, WI 53092 Waupun, WI 53963 Lansing, MI 48906 Marshfield, WI 54449 262-241-3133 920-324-8600 715-486-1300 517-702-0470 FAX 262-241-8222 FAX 920-324-3023 FAX 715-486-1313 FAX 517-702-0477 Sample Integrity - To be completed by receiving lab Laboratory: Seal intact upon receipt yes no Method of shipment Wisconsin DNR Contents Temperature On CR °C Refrigerator No. Certification #: Project Manager: Laboratory Contact: ANALYSES REQUESTED Price Quote: (WI Modified Method) GRO (WI Modified Method Sampler: (Signature) TURNAROUND TIME REQUIRED Sampling Date(s): Rush Reports to be Sent to: Date Needed DRO No. of Containers, Size & Type Collection Description Preservative Lab ID No. Sample No. Water Soil Time SO14566A MWILEXT. 3-47ml: 1-16am One of the VOC vials for MWITEXT-1 broke upon returning to the Office. The well is fairly dirty- Gast lab results attached)

MWITEXT-1, 2-40ml Vials Received

Date: Relinquished By: Date: Relinquished By: Time: Time: Company: Company: Date: Received By: Received By: Company: Time: 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 mw1/ext1 Sample Water Sample Date 2/23/2007

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

WI DNR Lab Certification # 445037560

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Invoice # E14958

Project Name WAUKESHA Project # JSG 01-2200-2806

Lab 5014958A
Sample ID mw1/ext1
Sample Water
Sample Date 2/23/2007

Sample Date	2/23/2007									
-		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 Tetrachlor	ide	< 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-chi	loropropane	< 1.4	ug/l	1.4	4.5	1	8260B	3/6/2007	CJR	1
Dibromochlorome		< 0.32	ug/l	0.32	1	1	8260B	3/6/2007	CJR	1
1,4-Dichlorobenze		< 0.33	ug/l	0.33	1.1	1	8260B	3/6/2007	CJR	1
1.3-Dichlorobenze		< 0.3	ug/l	0.3	0.95	1	8260B	3/6/2007	CJR	1
1,2-Dichlorobenze		< 0.35	ug/l	0.35	1.1	1	8260B	3/6/2007	CJR	1
Dichlorodifluorom		< 0.46	ug/l	0.46	1.5	1	8260B	3/6/2007	CJR	1
1.2-Dichloroethan		< 0.45	ug/l	0.45	1.4	1	8260B	3/6/2007	CJR	1
1.1-Dichloroethan		< 0.56	ug/l	0.56	1.8	1	8260B	3/6/2007	CJR	1
1.1-Dichloroethen		< 0.64	ug/l	0.64	2	1	8260B	3/6/2007	CJR	1
cis-1,2-Dichloroet		0.85 "J"	ug/l	0.68	2.2	1	8260B	3/6/2007	CJR	1
trans-1,2-Dichloro		< 0.95	ug/l	0.95	3	1	8260B	3/6/2007	CJR	1
1,2-Dichloropropa		< 0.47	ug/l	0.47	1.5	1	8260B	3/6/2007	CJR	1
2,2-Dichloropropa		< 0.98	ug/l	0.98	3.1	1	8260B	3/6/2007	CJR	1
1,3-Dichloropropa		< 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-Dibrom		< 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	I
Hexachlorobutadie	ene	< 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 chlorid		< 0.69	ug/l	0.69	2.2	1	8260B	3/6/2007	CJR	1
Methyl tert-butyl e		< 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-Tetrachlore	oethane	< 0.75	ug/l	0.75	2.4	1	8260B	3/6/2007	CJR	1
1,1,1,2-Tetrachlore		< 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-Trichloroben	zene	< 1.5	ug/l	1.5	4.6	1	8260B	3/6/2007	CJR	1
1,2,3-Trichlorober		< 1.6	ug/l	1.6	5	1	8260B	3/6/2007	CJR	1
1.1.1-Trichloroeth		< 0.5	ug/l	0.5	1.6	1	8260B	3/6/2007	CJR	1
1,1,2-Trichloroeth		< 0.5	ug/l	0.5	1.6	1	8260B	3/6/2007	CJR	1
Trichloroethene (T		< 0.44	ug/l	0.44	1.4	1	8260B	3/6/2007	CJR	1
Trichlorofluorome		< 0.61	ug/l	0.61	1.9	1	8260B	3/6/2007	CJR	1
1.2.4-Trimethylber		< 1.2	ug/l	1.2	3.8	1	8260B	3/6/2007	CJR	1
1,3,5-Trimethylber		< 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
,			_							

Invoice # E14958

Project Name WAUKESHA Project # JSG 01-2200-2806

Lab5014958BSample IDmw 3SampleWaterSample Date2/23/2007

		Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	Code
Organic										
PAH SIM										
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)anthracen	e	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)fluoranthe	ene	< 0.014	ug/l	0.014	0.044	1	M8270	3/2/2007	MJR	1
Benzo(g,h,i)peryle	ne	< 0.015	ug/l	0.015	0.046	1	M8270	3/2/2007	MJR	1
Benzo(k)fluoranthe		< 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)anthra	acene	< 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)py	rene	< 0.014	ug/l	0.014	0.046	1	M8270	3/2/2007	MJR	1
1-Methyl naphthal	ene	< 0.018	ug/l	0.013	0.04	1	M8270	3/2/2007	MJR	1
2-Methyl naphthal	ene	< 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
PVOC										
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 e	ther (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-Trimethylber	nzene	< 1.2	ug/l	1.2	3.8	1	8260B	3/7/2007	CJR	1
1,3,5-Trimethylber	nzene	< 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
Organic					(
Organic										
PAH SIM										

	Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	Code
Organic									
PAH SIM									
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

Flavorne Result Unit LOQ LOQ Dil Method Run Analyst Code Flavorne 7.3 Ug/l 0.095 0.3 5 M8270 3/22007 M/R 1	Sample Date 2/23/2007							_		- .
Indency(1,2,3-cd)pyrene		Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	Code
Indeno(1,2,3-cd)pyrene 0,14 " " ug/l 0,07 0,23 5 M8270 3/22007 MJR 1	Fluorene	7.3	ug/l	0.095	0.3	5	M8270	3/2/2007		1
Methyl naphthalene		0.14 "J"	ug/l	0.07	0.23	5	M8270	3/2/2007	MJR	1
2Methyl naphthalene				0.065	0.2	5	M8270	3/2/2007	MJR	1
Naphthalene				0.11	0.345	5	M8270	3/2/2007	MJR	1
Phenanthrene 3.8 ug/l 0.085 0.275 5 M8270 3/2/2007 MJR 1	, .				0.28	5	M8270	3/2/2007	MJR	1
Name					0.275	5	M8270	3/2/2007	MJR	1
VOC's Benzene								3/2/2007	MJR	1
Benzene	•		-9.			_				
Bernubenzene				0.45			03/00	2/6/2007	CID	1
Bromodichloromethane										
Bromoform										-
Stromoth Stromoth	Bromodichloromethane									
See-Butylbenzene Co.36 ug/l Co.36 L2 S260B 3/6/2007 CJR L3 CJR Bromoform					-				-	
Description	tert-Butylbenzene									
Carbon Tetrachloride	sec-Butylbenzene	< 0.36				-				-
Chlorobenzene	n-Butylbenzene					_	*			
Chlorotehane	Carbon Tetrachloride	< 0.46				_				
Chloroform	Chlorobenzene	< 0.31	ug/l							-
Chloromethane	Chloroethane	< 0.47	ug/l			_				
2-Chlorotoluene	Chloroform	< 0.48	ug/l	0.48		-				-
A-Chlorotoluene	Chloromethane	< 1	ug/l	1	3.3					
1,2-Dibromo-3-chloropropane	2-Chlorotoluene	< 0.49	ug/l	0.49	1.6	1	8260B			-
1,2-Dichloroethane <0.32 ug/l 0.32 1 1 8260B 3/6/2007 CJR 1 1,3-Dichlorobenzene <0.33 ug/l 0.33 1.1 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 1,2-Dichlorobenzene <0.35 ug/l 0.35 1.1 1 8260B 3/6/2007 CJR 1 1,2-Dichloroethane <0.46 ug/l 0.46 1.5 1 8260B 3/6/2007 CJR 1 1,2-Dichloroethane <0.45 ug/l 0.46 1.5 1 8260B 3/6/2007 CJR 1 1,1-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-Dichloroethane <0.64 ug/l 0.64 2 1 8260B 3/6/2007 CJR 1 1,1-Dichloroethane <0.68 ug/l 0.68 2.2 1 8260B 3/6/2007 CJR 1 1,1-Dichloroethene <0.68 ug/l 0.68 2.2 1 8260B 3/6/2007 CJR 1 1,2-Dichloroethene <0.68 ug/l 0.95 3 1 8260B 3/6/2007 CJR 1 1,2-Dichloroethene <0.69 ug/l 0.95 3 1 8260B 3/6/2007 CJR 1 1,2-Dichloroptopane <0.47 ug/l 0.47 1.5 1 8260B 3/6/2007 CJR 1 1,2-Dichloroptopane <0.98 ug/l 0.98 3.1 1 8260B 3/6/2007 CJR 1 1,3-Dichloroptopane <0.39 ug/l 0.39 1.3 1 8260B 3/6/2007 CJR 1 1,3-Dichloroptopane <0.39 ug/l 0.39 1.3 1 8260B 3/6/2007 CJR 1 1,3-Dichloroptopane <0.39 ug/l 0.39 1.3 1 8260B 3/6/2007 CJR 1 1,3-Dichloroptopane <0.38 ug/l 0.38 1.2 8260B 3/6/2007 CJR 1 1 1,3-Dichloroptopane <0.49 ug/l 0.49 1.5 1 8260B 3/6/2007 CJR 1 1 1 1 1 1 1 1 1	4-Chlorotoluene	< 0.38	ug/l	0.38	1.2	1	8260B			
Dibromochloromethane <0.32	1.2-Dibromo-3-chloropropane	< 1.4	ug/I	1.4	4.5	1	8260B	3/6/2007		-
1,4-Dichlorobenzene		< 0.32	ug/l	0.32	1	1	8260B	3/6/2007		
1,3-Dichlorobenzene		< 0.33	ug/l	0.33	1.1	1	8260B	3/6/2007		_
1,2-Dichlorobenzene	-,	< 0.3		0.3	0.95	1	8260B	3/6/2007	CJR	1
Dichlorodifluoromethane		< 0.35		0.35	1.1	1	8260B	3/6/2007	CJR	1
1,2-Dichloroethane		< 0.46		0.46	1.5	1	8260B	3/6/2007	CJR	1
1,1-Dichloroethane			_	0.45	1.4	1	8260B	3/6/2007	CJR	1
1,1-Dichloroethene	-,			0.56	1.8	1		3/6/2007	CJR	1
1.2-Dichloroethene				0.64	2	1	8260B	3/6/2007	CJR	1
trans-1,2-Dichloroethene				0.68		1	8260B	3/6/2007	CJR	1
1,2-Dichloropropane	•							3/6/2007	CJR	1
2,2-Dichloropropane			_			-	8260B	3/6/2007	CJR	1
1,3-Dichloropropane						-				1
Di-isopropyl ether						_		3/6/2007	CJR	1
Dissolving Color					-				1	
Ethylbenzene			-			_				-
Hexachlorobutadiene <1.5 ug/l 1.5 4.9 l 8260B 3/6/2007 CJR l Isopropylbenzene <0.48 ug/l 0.48 1.5 l 8260B 3/6/2007 CJR l p-Isopropyltoluene <0.35 ug/l 0.35 l.1 l 8260B 3/6/2007 CJR l Methylene chloride <0.69 ug/l 0.69 2.2 l 8260B 3/6/2007 CJR l Methylene chloride <0.69 ug/l 0.69 2.2 l 8260B 3/6/2007 CJR l Methylene theoride <0.52 ug/l 0.52 l.6 l 8260B 3/6/2007 CJR l Naphthalene <1.8 ug/l 1.8 5.6 l 8260B 3/6/2007 CJR l n-Propylbenzene <0.38 ug/l 0.38 l.2 l 8260B 3/6/2007 CJR l l l,1,2,2-Tetrachloroethane <0.75 ug/l 0.75 2.4 l 8260B 3/6/2007 CJR l l,1,1,2-Tetrachloroethane <0.65 ug/l 0.65 2.1 l 8260B 3/6/2007 CJR l l,1,1,2-Tetrachloroethane <0.65 ug/l 0.65 2.1 l 8260B 3/6/2007 CJR l						-				-
Isopropylbenzene						-				-
p-Isopropyltoluene						-				_
Methylene chloride < 0.69 ug/l 0.69 2.2 1 8260B 3/6/2007 CJR 1 Methyl tert-butyl ether (MTBE) < 0.52						_				•
Methyl tert-butyl ether (MTBE) < 0.52 ug/l 0.52 1.6 1 8260B 3/6/2007 CJR 1 Naphthalene < 1.8										_
Naphthalene < 1.8 ug/l 1.8 5.6 l 8260B 3/6/2007 CJR l n-Propylbenzene < 0.38 ug/l 0.38 1.2 l 8260B 3/6/2007 CJR l 1,1,2,2-Tetrachloroethane < 0.75 ug/l 0.75 2.4 l 8260B 3/6/2007 CJR l 1,1,1,2-Tetrachloroethane < 0.65 ug/l 0.65 2.1 l 8260B 3/6/2007 CJR l 1,1,1,2-Tetrachloroethane										
n-Propylbenzene	. ,					_				
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										_
1,1,1,2-Tetrachloroethane <0.65 ug/l 0.65 2.1 1 8260B 3/6/2007 CJR 1			_							_
1,1,1,2-Tetracinoroculaite						_				
Tetrachloroethene < 0.52 ug/l 0.52 l.6 l 8260B 3/6/2007 CJR l						_				-
	Tetrachloroethene	< 0.52	ug/l	0.52	1.6	1	8260B	3/6/2007	CJK	ı

Project Name WAUKESHA Invoice # E14958

Project # JSG 01-2200-2806

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

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Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	Code
< 0.46	ug/l	0.46	1.5	1	8260B	3/6/2007	CJR	1
< 1.5	ug/l	1.5	4.6	1	8260B	3/6/2007	CJR	1
< 1.6	ug/l	1.6	5	1	8260B	3/6/2007	CJR	1
< 0.5	ug/l	0.5	1.6	1	8260B	3/6/2007	CJR	1
< 0.5	ug/l	0.5	1.6	1	8260B	3/6/2007	CJR	1
< 0.44	ug/l	0.44	1.4	1	8260B	3/6/2007	CJR	1
< 0.61	ug/l	0.61	1.9	1	8260B	3/6/2007	CJR	1
< 1.2	ug/l	1.2	3.8	1	8260B	3/6/2007	CJR	1
< 0.37	ug/l	0.36	1.2	1	8260B	3/6/2007	CJR	1
< 0.2	ug/l	0.2	0.63	1	8260B	3/6/2007	CJR	1
< 0.67	ug/l	0.67	2.1	1	8260B	3/6/2007	CJR	1
< 0.32	ug/l	0.32	1	1	8260B	3/6/2007	CJR	1
	<0.46 <1.5 <1.6 <0.5 <0.5 <0.44 <0.61 <1.2 <0.37 <0.2 <0.67	< 0.46 ug/l < 1.5 ug/l < 1.6 ug/l < 0.5 ug/l < 0.5 ug/l < 0.61 ug/l < 0.61 ug/l < 1.2 ug/l < 0.37 ug/l < 0.2 ug/l < 0.67 ug/l	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46

"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

A	Northn	Environmental*

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Page -	of
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Hydrologists • Engineers • S	irveyors • Scientist	S																						
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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

Sample Date

Water 5/8/2007

Sample Date	5/8/2007									
		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	I
Anthracene		2.82	ug/l	0.13	0.43	10	M8270	5/14/2007	MJR	1
Benzo(a)anthracen	e	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)fluoranthe	ene	0.52	ug/l	0.14	0.44	10	M8270	5/14/2007	MJR	1
Benzo(g,h,i)peryler	ne	0.223 "J"	ug/l	0.15	0.46	10	M8270	5/14/2007	MJR	1
Benzo(k)fluoranthe	ene	< 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	I
Dibenzo(a,h)anthra	cene	< 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)py	Tene	0.241 "J"	ug/l	0.14	0.46	10	M8270	5/14/2007	MJR	1
1-Methyl naphthale	ene	30.8	ug/l	0.13	0.4	10	M8270	5/14/2007	MJR	1
2-Methyl naphthale	ene	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	MЛ	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
Bromodichloromet	hane	< 0.5	ug/I	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

Invoice # E15306

Project Name WAUKESHA Project # JSG 01-2201-2 JSG 01-2201-2806

Lab

5015306A

Sample ID

MW1 Sample Sample Date Water 5/8/2007

Sample Date 5/6/2		WT *4	TOD	100	T):I	Mathad	Run	Analyst	Code
	Result	Unit		LOQ	Dil	Method			1
n-Butylbenzene	1.29 "J"	ug/l	0.52	1.6	1	8260B	5/11/2007	CJR CJR	-
Carbon Tetrachloride	< 0.46	ug/l	0.46	1.5	1	8260B	5/11/2007		1
Chlorobenzene	< 0.31	ug/l	0.31	1	1	8260B	5/11/2007	CJR	-
Chloroethane	< 0.47	ug/I	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/I	0.38	1.2	1	8260B	5/11/2007	CJR	1
1,2-Dibromo-3-chloropropa	ne < 1.4	ug/I	1.4	4.5	1	8260B	5/11/2007	CJR	1
Dibromochloromethane	< 0.32	ug/I	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/I	0.3	0.95	1	8260B	5/11/2007	CJR	1
1,2-Dichlorobenzene	< 0.35	ug/I	0.35	1.1	1	8260B	5/11/2007	CJR	1
Dichlorodifluoromethane	< 0.46	ug/I	0.46	1.5	1	8260B	5/11/2007	CJR	1
1.2-Dichloroethane	< 0.45	ug/I	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/I	0.64	2	1	8260B	5/11/2007	CJR	1
cis-1,2-Dichloroethene	2.57	ug/I	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/I	0.47	1.5	1	8260B	5/11/2007	CJR	1
2,2-Dichloropropane	< 0.98	ug/I	0.98	3.1	1	8260B	5/11/2007	CJR	1
1.3-Dichloropropane	< 0.39	ug/I	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/I	0.49	1.5	1	8260B	5/11/2007	CJR	1
Ethylbenzene	1.27	ug/I	0.38	1.2	1	8260B	5/11/2007	CJR	1
Hexachlorobutadiene	< 1.5	ug/I	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/I	0.35	1.1	1	8260B	5/11/2007	CJR	1
Methylene chloride	< 0.69	ug/I	0.69	2.2	1	8260B	5/11/2007	CJR	1
Methyl tert-butyl ether (MT		ug/I	0.52	1.6	1	8260B	5/11/2007	CJR	1
Naphthalene	6.6	ug/I	1.8	5.6	1	8260B	5/11/2007	CJR	1
n-Propylbenzene	1.98	ug/I	0.38	1.2	1	8260B	5/11/2007	CJR	1
1,1,2,2-Tetrachloroethane	< 0.75	ug/I	0.75	2.4	1	8260B	5/11/2007	CJR	1
1.1.1.2-Tetrachloroethane	< 0.65	ug/I	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/I	0.46	1.5	1	8260B	5/11/2007	CJR	1
1,2,4-Trichlorobenzene	< 1.5	ug/I	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/I	0.5	1.6	1	8260B	5/11/2007	CJR	1
1,1,2-Trichloroethane	< 0.5	ug/I	0.5	1.6	ī	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	i	8260B	5/11/2007	CJR	1
1.2.4-Trimethylbenzene	< 1.2	ug/l	1.2	3.8	i	8260B	5/11/2007	CJR	1
1,3,5-Trimethylbenzene	< 0.37	ug/l	0.37	1.2	i	8260B	5/11/2007	CJR	1
Vinyl Chloride	0.24 "J"	ug/l	0.2	0.63	î	8260B	5/11/2007	CJR	1
m&p-Xylene	< 0.67	ug/l	0.67	2.1	î	8260B	5/11/2007	CJR	1
o-Xylene	< 0.32	ug/l	0.32	1	i	8260B	5/11/2007	CJR	1
0-Aylene	~ U.JL	-6·	0.52	•	•				

Invoice # E15306

Project Name WAUKESHA **Project** # JSG 01-2201-2806

Lab 5015306B Sample ID MW 7 Sample Water Sample Date 5/8/2007

Sample Date 3/6/2007	Result	Unit	LOD	LOQ	Dil	Method	Run	Analyst	Code
Omenia	Result	Omi	202	LOQ		1.101110		J	
Organic									
PAH SIM									
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
I-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
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	i	8260B	5/11/2007	CJR	1
Bromodichloromethane	< 0.5	ug/l	0.5	1.6	î	8260B	5/11/2007	CJR .	ī
Bromoform	< 0.38	ug/l	0.38	1.2	î	8260B	5/11/2007	CJR	1
tert-Butylbenzene	< 0.34	ug/l	0.34	1.1	i	8260B	5/11/2007	CJR	1
sec-Butylbenzene	< 0.36	ug/l	0.36	1.2	i	8260B	5/11/2007	CJR	1
n-Butylbenzene	< 0.52	ug/l	0.52	1.6	· î	8260B	5/11/2007	CJR	ı
Carbon Tetrachloride	< 0.46	ug/l	0.46	1.5	î	8260B	5/11/2007	CJR	i
Chlorobenzene	< 0.31	ug/l	0.31	1	i	8260B	5/11/2007	CJR	1
Chloroethane	< 0.47	ug/l	0.47	1.5	î	8260B	5/11/2007	CJR	1
Chloroform	< 0.48	ug/l	0.48	1.5	î	8260B	5/11/2007	CJR	1
Chloromethane	<1	ug/l	1	3.3	i	8260B	5/11/2007	CJR	1
2-Chlorotoluene	< 0.49	ug/l	0.49	1.6	i	8260B	5/11/2007	CJR	ī
4-Chlorotoluene	< 0.38	ug/l	0.38	1.2	i	8260B	5/11/2007	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	î	8260B	5/11/2007	CJR	1
Dibromochloromethane	< 0.32	ug/l	0.32	1	i	8260B	5/11/2007	CJR	i
1,4-Dichlorobenzene	< 0.33	ug/l	0.33	1.1	î	8260B	5/11/2007	CJR	1
1,3-Dichlorobenzene	< 0.3	ug/l	0.3	0.95	i	8260B	5/11/2007	CJR	ī
1.2-Dichlorobenzene	< 0.35	ug/l	0.35	1.1	i	8260B	5/11/2007	CJR	i
Dichlorodifluoromethane	< 0.46	ug/l	0.46	1.5	î	8260B	5/11/2007	CJR	i
	< 0.45	ug/l	0.45	1.4	î	8260B	5/11/2007	CJR	1
1,2-Dichloroethane 1.1-Dichloroethane	< 0.56	ug/l	0.45	1.8	î	8260B	5/11/2007	CJR	i
	< 0.64	ug/l	0.64	2	i	8260B	5/11/2007	CJR	ī
1,1-Dichloroethene	< 0.68	ug/l	0.68	2.2	1	8260B	5/11/2007	CJR	i
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	< 0.08	ug/l	0.08	3	1	8260B	5/11/2007	CJR	î
	< 0.47	ug/l	0.93	1.5	1	8260B	5/11/2007	CJR	î
1,2-Dichloropropane	< 0.47	ug/l	0.47	3.1	1	8260B	5/11/2007	CJR	î
2,2-Dichloropropane	< 0.39	ug/l	0.39	1.3	1	8260B	5/11/2007	CJR	i
1,3-Dichloropropane	~ 0.39	ugr	0.39	1.3		0200D	3/11/2007	0310	•

Invoice # E15306

Project Name WAUKESHA
Project # JSG 01-2201-2806
Lab 5015306B
Sample ID MW 7

Sample ID MW 7
Sample Water
Sample Date 5/8/2007

_	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/i	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/i	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

Laboratory QC within limits.

Authorized Signature Michael J. Ricker

CHAIN OF CUSTODY CORD REQUEST FOR ANALYSIS

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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 DNH supplied spreadsheet referenced in Appendices A of Comm 46 and NH 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 Gra	avel Site		BRRTS No. =	02-68-259665	Well Number =	MW1
	Compound ->	Benzo(a) pyrene	(b) fluoranthene	Chrysene			
		Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
Event	Sampling Date	(leave blank	(leave blank	(leave blank	(leave blank	(leave blank	(leave blank
Number	(most recent last)	if no data)	if no data)		if no data)	if no data)	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							
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10					Strandingstrate accounts to the engineering and the strandingstrate and the strandingstrate accounts to the str	445 VM (485 SS 359 F44 W SS 458 454 464 555 SS 45 SS 454 SS 455 SS 4	
	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			#DIV/0!	#DIV/0!
	Standard Deviation =	0.114	0.711		#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	DECREASING	n<4	n<4	n<4
Trend ≥ 90°	% Confidence Level	No Trend	No Trend	No Trend	n<4	n<4	n<4
Stability Tes	t, If No Trend Exists at	CV <= 1	CV <= 1		n<4	n<4	n<4
	dence Level	STABLE	STABLE	NA	n<4	n<4	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 NH 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 Gra	avel Site	and the second s	BRRTS No. =	02-68-259665	Well Number =	MW7
	Compound ->	Benzo(a) pyrene	(b) fluoranthene	Chrysene			
		Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
Event	Sampling Date	(leave blank	(leave blank		(leave blank		
Number	(most recent last)	if no data)	if no data)	if no data)	if no data)	if no data)	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							
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10				0.0			0.0
	Mann Kendall Statistic (S) =	2.0	2.0	2.0	0.0	0.0	0.0
	Number of Rounds (n) =	4	0.04	4 77	4DIV/0I	#DIV/OI	#DIV/OI
	Average = Standard Deviation =	0.24 0.119	0.34 0.153		#DIV/0! #DIV/0!	#DIV/0! #DIV/0!	#DIV/0! #DIV/0!
	Coefficient of Variation(CV)=	0.119	0.153		#DIV/0!	#DIV/0!	#DIV/0!
IE O		0.497	0.433	0.431	COLUMN COLUMN CONTRACTOR CONTRACT	CONTRACTOR OF THE STATE OF THE	
Samuel Committee of the	k, Blank if No Errors Detected				n<4	n<4	n<4
	% Confidence Level	No Trend	No Trend		n<4	n<4	n<4
	% Confidence Level	No Trend	No Trend	No Trend	n<4	n<4	n<4
	st, If No Trend Exists at	CV <= 1	CV <= 1	CV <= 1	n<4	n<4	n<4
80% Confi	dence Level	STABLE	STABLE	STABLE	n<4	n<4	n<4
	Data Entry By =		Date =		Checked By =		

Boyce, Brenda H - DNR

268438610

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? Remediation
2) Estimated amount required to closure: \$5,000.00

3) Have repeated tests shown contaminates in a potable well exceed a preventative action limit (PAL)? Unknown

4) Has free product been observed in any wells?

5) An enforcement standard (ES) is within 1000 feet of a municipal well(s)? Unknown

6) An ES is within 100 feet of a potable well(s)? Unknown

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

26843861D

From:

Boyce, Brenda H

Sent:

Thursday, February 09, 2006 10:52 AM

To:

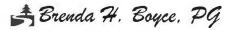
'mbiller@northernenvironmental.com'

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

(a) phone:

(262) 574-2140

(2) 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

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 initail denial and is approving the additional funding for this site.

Additional Costs Requested Additional Costs Approved

\$1,900.00 \$1,900.00

- 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



DEPARTMENT 12075 North Corporate Parkway, Suite 210
NTURAL RESCURCES
ESHA SERVICE CENTER
(262) 241-3133

(800) 776-7140 Fax (262) 241-8222

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-1using 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

15

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

Ψī

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 2nd 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



DEPARTMENT OF 12075 North Corporate Parkway, Suite 210
NATURAL RESOURCES
Mequon, WI 53092
MESHA SERVICE CENTER
(262) 241-3133
(200) 776-7140

(800) 776-7140 Fax (262) 241-8222

2005 MAY 13 PM 1: 25

www.northemenvironmental.com

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:

248438610

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-1will 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)

REQUESTED MODIFICATION TO EXISTING COST CAP

\$ 1,600.00

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

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:

PUBLIC BID END DATE: August 6, 2004

Vacuum Extraction, Groundwater Monitoring

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.

Mr. Robert Johnson
Commerce # 53186-1651-90
WDNR BRRTS # 03-68-004228
Robert Johnson Sand & Gravel, Inc., N8 W22590 Johnson Dr., Waukesha
August 31, 2004
Page 2

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 snall 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 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)

GC: 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

ID RESPONSE (1st Page)

RECEIVED

Department of Commerce PECFA Program

AUG 06

SITE NAME:

Robert Johnson Sand & Gravel, Inc

EKS DIVISION

COMMERCE NUMBER: BRRTS NUMBER:

53186-1661-90 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):

Professional Engineer

_ License #

X Professional Geologist

__26 __ License # License #

Hydrologist Soil Scientist

License #

AND THE PROPERTY OF THE PARTY O

Signature

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 (2nd 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.

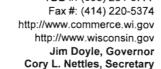
Groundwater monitoring will consist of the following:

Groundwater elevation data will be collected form 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.

BUREAU OF PECFA 101 West Pleasant Street, Suite 100A

Milwaukee, Wisconsin 53212-3963 TDD #: (608) 264-8777





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 or 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 From: Company Name To: Program Assistant Remediation & Redevelopment Program Address Wisconsin Dept. of Natural Resources 2300 N. Dr. Martin Luther King Jr., Dr. Milwaukee, WI 53212 Phone Date Please check the type(s) of documents you have enclosed. Submittals will be tracked and filed based on the information Site Name you provide. Include the FID and BRRTS numbers which Address 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. FID# Type of Submitted:

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

LUST ERP VPLE

√ HECK	TYPE OF DOCUMENT/REPORT FEE	ONR CODE (office use only
HECK	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 Please Provide the Following Information \$750 if review is requested~	37, 137~
	petroleum constituents detected	96~
	non-petroleum constituents detected	(if SI is
	groundwater impacts above PAL above ES	incomplete)
	free product	
	contamination in fractured bedrock or within 1 meter of fractured bedrock	
	pal exceedance in potable well	
	groundwater impacts>ES, within 100' of private Well or 1000' of public well	
	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
V	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:



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 or 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 From: Company Name To: Program Assistant Remediation & Redevelopment Program Address Wisconsin Dept. of Natural Resources 2300 N. Dr. Martin Luther King Jr., Dr. Milwaukee, WI 53212 Phone Date Please check the type(s) of documents you have enclosed. Submittals will be tracked and filed based on the information Site Name you provide. Include the FID and BRRTS numbers which Address 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. FID# Type of Submitted:

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

LUST ERP VPLE

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	groundwater impacts>ES, within 100' of private Well or 1000' of public well	
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	NR 718 Landspreading Request \$500 mandatory	61~
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	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~
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	Closure Review Request \$750 mandatory	79~
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	Lender Assessment \$500 mandatory	686~
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/	Lease Letter Request - Single Property \$500 mandatory	646
	Lease Letter Request -Multiple Properties \$1000 mandatory	646
V	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:



414/263-8680

WDNR SER Files

C:

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	1	
Thomas Dueppen, P.G. Moraine Envilonmental, Inc. 1834 19th Ave Grafton, WI 53024 Subject: Fee Notice/Invoice FID: 268438610; BRRTS: 63-68- Site Name: Former Johnson Sand & G. Dear Mr. Duepper:		7 2000 DEGETWEN JUL 1 1 2000 By
On 7-3-200 the Wisconsin Department of Natur for which you requested review, or which by code require	al Resources r s a review and	received the following submittal, fee:
Site Investigation Report Long Remedial Action Options Report Closu Remedial Design Report NR 7	'08 (c) No Furti r	ing Plan undards Report her Action Request
Please make the check payable to: State of Wisconsin, to the Program Assistant's attention at the address shown	Department of	f Natural Resources, and send it
We will hold your submittal until your check arrives or you Once we receive the check, we will enter the case on our the date we receive your request. If we don't hear from your reviewed, in our case file.	first-in-first-ou	t (FIFO) review list; effective on
Please return this letter with your submittal.		VE O B I III ===
Thank you,	D	
Sincerely,		JUL 1 1 2000
Lakhonda Chook	Ву	
Program Assistant Bureau of Remediation and Redevelopment		

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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 Dueppen, P.G. moraine Environmental, Inc. 1834 12TH ALE Grafton, WI 53024
Subject: Fee Notice/Invoice FID: <u>268438610</u> ; BRRTS: <u>63-68-04228</u> Site Name: Former Johnson Sand & Grave
Dear Mr. Dueppen:
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 Cong-Term Monitoring Plan Closure Request NR 720.19/ Soil Standards Report NR 708 (c) No Further Action Request Other Other
This submittal requires a \$\frac{150}{0.0000}\$ 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 Chook
Program Assistant Bureau of Remediation and Redevelopment 414/263-8680

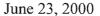


WDNR SER Files

C:



Environmental Management Services



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 / つまたとっています。

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

Enclosure

cc: Robert Johnson

PECFA Claim

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

Didn't see any check

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 Dovle, 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

X

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

Department of Natural Resources July 3, 2003 Page 2

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

Tank Capacity Tank Contents

10,000 gallons Diesel

10,000 gallons Unleaded Gasoline

Tank Type
Aboveground
Aboveground

Commerce I.D.# 672700126

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.

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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.

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- 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

-Klant Sout

President

cc:

Mr. Wayne Johnson

enclosures

TABLES

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

L												(Dete	CLEU VOCS	allu FAI 18)														
Analyte						/W-1 (EXT														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		1775
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
VOCs																												
Вепzепе	<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-Butvibenzene	<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	*	*	<0.15	<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
	8,5	7.8Q	*	1.6	-	+			-		<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
Tetrachloroethene Toluene	<5.0	<2.8	<0.42	0.40Q	<42	1.1Q <0.27	<0.27	-	<0.21	1.3 Q	<0.03	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
	<5.0	2.5Q	31	<0.37	2,350	<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
Trichloroethene 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
	8.7	10.7Q		0.72Q	77Q	0.360	3.53Q		<7.87	0.40 Q	<0.15	FP	FP FP	<1.0	<0.79	<1.34	<0.20	<1.34	<0.67		<1.34	<0.35	<0.35	<1.4	<1.4	<1.1	10000	1000
Xylenes (total) PAHs	0.7	10.70	1	0.72Q	110	0.77	3.5502		1 .01	0.40 Q	V0.55	I FF	FF	×1.0	VO.13	1.54	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1.54	10.07		11.54	10.55	1 70.55	1 -1.4	1 71.7		10000	1000
	 -	4 200	77	-47		000	T	-01	<2400	-42	200.0	FP	FP	-	*	*		*	*	<0.47	*	<0.027	<0.027	<0.018	<0.018	<0.018	NSE	NSE
Acenaphthene		4,300	77	<47		990	*	<94	<2400	<43	200 Q	FP	FP FP		*	*	*	 	*	<0.47		<0.027	<0.027	0.047 Q	<0.018	<0.019	NSE	NSE
Acenaphthylene	ļ	<830	17	<41		<120	+	<82	<2100	1.5 Q	<130	FP FP	FP -		*			 	+	<0.021	******	<0.032	<0.032	<0.020	<0.020	<0.020	3000	600
Anthracene	-	<410		<2.1	-	<420	*	<42	310	<43	<110	FP	FP		*	*		*	*	<0.021	+	<0.027	0.053Q	0.027 Q	<0.019	<0.012	NSE	NSE
Benzo(a)anthracene	-	2,900	72	38	*	670Q	-	81	1800	9.4	5.6	FP				*			*	<0.014	*	<0.026	0.0550	0.027 Q	<0.013	<0.014	0.20	0.02
Benzo(a)pyrene		21Q	2.2	<1.5		9.9Q		<3.0	<78	0.72 Q			FP		*				*		*	<0.030	0.066Q	0.025 Q	<0.012	<0.013	0.20	0.02
Benzo (b) fluoranthene		<110	19	6.8		140	-	13	540	<0.60	4.1 Q	FP FP	FP FP	-	*			*	*	<0.015 <0.021	*	<0.030	0.066Q 0.040Q	0.035 Q	<0.014	<0.013	NSE	NSE
Benzo (ghi) perylene	*	<20	<1.1	<2.1		<6.3		<4.2	<110	<0.30	<1.6			*	*	- 		*	*	<0.0090		<0.019	0.040Q 0.059Q	0.003 0.022 Q	<0.013	<0.019	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	*		0.039Q	0.022 Q	<0.013	<0.013	NSE	NSE
Indeno (123-cd) pyrene		<22	<1.2	<2.5		9.8Q		<5.0	<130	<0.44	<2.3	FP	FP		*			-	*		*	<0.022				<0.021	0.20	0.02
Chrysene		790	<64	60		1,100	*	98	3100	4.3	27	FP	FP -						-	<0.016		<0.017	0.062	0.021 Q	<0.018		NSE	NSE
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		80
Fluoranthene	*	310	150	5.8Q	*	83Q	*	<30	<1600	<34	<88	FP	FP	*		*				<0.015	<u> </u>	<0.021	0.12	<0.028	<0.028	<0.013	400	
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	<u> </u>	0.068 Q	0.046Q	<0.027	<0.027	<0.017	NSE	NSE
Naphthalene	* 1	7,600	220	<42	*	420	*	120	2600	85 Q	180 Q	FP	FP	*	*	*	*	*	*	<0.42	<u> </u>	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	*	*	*	7	*	*	<0.017	-	<0.024	0.083	<0.020	<0.020	<0.017	250	50

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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) Page 1 of 4

f:/excei/1400/1401GWdata

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

											(Detec	ted 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	1				<u> </u>							1					-							,		
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	7	€.	<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	*	17	<0.19	<0.43	<0.43	<0.66	NSE	NSE
p-Isopropy!toluene	<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	*	°E	<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	-	21	<0.27	<0.59	<0.59	<0.63	40	8.0
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	-	1/	<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
Tetrachlorcethene	<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	*	7/	<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	*	ν,	<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													1													
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	<0.020	<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	34:	<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	*	π	*	*	*	*	<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	*	*	*	*	*	т	< 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	8.0
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 Evoressed as		nantitar (/\\		-									1												

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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

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TABLE 1 GROUNDWATER ANALYTICAL RESULTS FORMER JOHNSON SAND AND GRAVEL SITE

(Detected VOCs and PAHs)

Analyte					MV	N-5				120100100						MW-6							1
	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	ES	PAL
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
VOCs																		4			<u></u>		-
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	<.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	ż	*	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
PAHs																							
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		*	*	*	*	*	<0.017	*	<0.024	0.034	<0.020	<0.020	250	50

* - Magagarana in 1800 - No paragraphi parag

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

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

	1											ı'	Detected		A(15)					EXT-2			·		EXT-3			T	
Analyte	0 - 07	1 20	. 0-1-00	1. 00	1 00	MW-7	0.700	1 14 24	1 1 04	1 14 00	D 00	A 20	0 + 00		le Well	June-01	Mar-02	Jan-00	Dec-00	Mar-01	June-01	Dec-02	Jan-00	Dec-00	Mar-01	Jun-01	Dec-02	ES	PAL
	Sep-97	Jun-98	Oct-98	Jan-99	Apr-99	Jul-99	Oct-99	Mar-01	June-01	Mar-02	Dec-02	Apr-99	Oct-99	Dec-00	Mar-01	30116-01	Wal-02	Jan-00	Dec-00	Wat-01	June-01	Dec-02.	Jai1-00	Dec-00	*	FP	FP	NSE	NSE
GRO	2,300	1,900		27,000	1,400	790				-		<50		<u> </u>					-			- d100			*	FP	FP	NSE	NSE
DRO	71,000	220,000	76,000	5,900,000	290,000	310,000	*		-													<100			*.	FP	FP		1.5
Lead, Soluble	*		*	*	*	<2.8	*	*			*	*	*										<u> </u>			FP	FP	15	1.5
VOCs																							1		2.27.0			50	
Benzene	<0.82	0.63	<0.27	<13	<0.27	<0.26	<0.27	<0.29	<0.48	<0.48	<0.50	<0.23	<1.0	<0.29	<0.29	<0.48	<0.48	<0.27	0.60 Q	<0.29	<1.2	<0.25	0.33	3.4	0.87 Q	FP	FP	5.0	0.5
s-Butylbenzene	27	*	19	*	3.5	*	2.5	<0.20	<0.49	<0.49	<1.2	*	<1.0	<0.20	<0.20	<0.49	<0.49	0.41	3.6	<0.20	<1.2	<0.62	8.8	27	14	FP	FP	NSE	NSE
t-Butylbenzene	<0.48	*	0.86Q	*	0.50Q	*	0.62	<0.23	<0.50	<0.50	<1.9	*	<1.0	<0.23	<0.23	<0.50	<0.50	<0.32	<0.46	<0.23	<1.2	<0.9€	<0.32	<0.58	0.45 Q	FP	FP	NSE	NSE
n-Butyibenzene	20	*	12	*	2.9	*	5.0	<0.28	<0.61	<0.61	<1.3	*	<1.0	<0.28	<0.28	<0.61	<0.61	<0.29	0.68 Q	<0.28	<1.5	<0.65	3.5	22	<0.28	FP	FP	NSE	NSE
Chloromethane	< 0.30	*	<0.61	*	< 0.61	*	<0.61	<0.42	<0.62	<0.62	<0.54	*	<2.0	<0.42	<0.42	<0.62	<0.62	<0.61	<0.84	<0.42	<1.6	<0.27	<0.61	<1.1	<0.42	FP	FP	3.0	0.3
cis-1,2-Dichloroethene	4.6	*	5		1.8	*	1.1	<0.27	<0.73	<0.73	<1.6	<0.21	<1.0	<0.27	<0.27	<0.73	<0.73	3.7	53	4.7	32	3.9	15	320	72	FP	FP	70	7.0
trans-1,2-Dichloroethene	<0.50	*	<0.79		< 0.79		<0.79	<0.35	<0.79	<0.79	<1.6	•	<1.0	<0.35	<0.35	<0.79	<0.79	<0.79	1.3 Q	<0.35	<2.0	<0.80	<0.79	1.7 Q	0.49 Q	FP	FP	100	20
Diisopropyl ether	<0.86	*	0.89Q	*	0.63Q	*	0.93	1.0	0.98 Q	3.7	<1.2	*	*	<0.23	<0.23	<0.60	<0.60	170	230	85	400	44	140	280	140	FP	FP	NSE	NSE
Ethylbenzene	80	28	3.5	19Q	0.71Q	9.2	4.5	<0.57	<0.43	<0.43	<1.1	<0.23	<1.0	<0.57	<0.57	<0.43	<0.43	< 0.32	<1.1	<0.57	<1.1	<0.53	0.54	69	22	FP	FP	700	140
Isopropyibenzene	39	•	12		0.85	*	1.6	<0.19	<0.43	<0.43	<1.3	<0.24	<1.0	<0.19	<0.19	<0.43	<0.43	<0.26	<0.38	<0.19	<1.1	<0.66	2.4	32	11	FP	FP	NSE	NSE
p-Isopropyltoluene	4	*	16	*	6.7	-	6.1	<0.25	< 0.57	<0.57	<1.2	<0.26	<1.0	<0.25	<0.25	<0.57	<0.57	<0.24	<0.50	<0.25	<1.4	<0.58	<0.24	16	24	FP	FP	NSE	NSE
Methylene chloride	<0.44	*	0.42Q	-	< 0.36	*	< 0.36	< 0.36	<0.85	< 0.85	<0.94	*	<1.0	<0.36	<0.36	<0.85	<0.85	<0.36	<0.72	<0.36	<2.1	<0.47	<0	<0.90	<0.36	FP	FP	5.0	0.5
Methyl tert butyl ether	<1.1	0.4	<0.32	<11	<0.32	0.48Q	<0.32	<0.20	<0.67	< 0.67	<1.7	•	•	<0.20	<0.20	<0.67	<0.67	0.35	0.80 Q	<0.20	<1.7	<0.87	0.36	1.1 Q	0.46 Q	FP	FP	60	12
Naphthalene	220	•	1.7	<44	< 0.35	*	56	<0.27	<0.59	<0.59	<1.3	<0.38	<1.0	<0.27	<0.27	<0.59	<0.59	0.68	<0.54	<0.27	<1.5	< 0.63	3.2	190	130	FP	FP	40	8.0
n-Propyibenzene	45		17	•	1.1Q	* .	1.3	<0.17	<0.64	< 0.64	<1.9	<0.26	<1.0	<0.17	<0.17	<0.64	<0.64	<0.76	<0.34	<0.17	<1.6	<0.95	4	36	12	FP	FP	NSE	NSE
Toluene	0.6Q	0.4	<0.27	<10	<0.27	<0.21	<0.27	<0.13	<0.47	<0.47	<1.7	<0.23	1.1	<1.1	<0.13	<0.47	<0.47	0.35	<2.2	<0.13	<1.2	<0.84	0.28	<2.8	0.18Q	FP	FP	1000	200
Tetrachioroethene	1.1Q		0.56Q	*	< 0.43	*	0.84	<0.85	<0.57	<0.57	<1.3	<0.25	<1.0	<0.85	<0.85	<0.57	<0.57	17.0	14	9.1	11	3.6	12	9.7	4.4	FP	FP	5.0	0.5
Trimethylbenzenes (total)	184	92	43.9	427Q	4.2Q	42	33	<0.34	<0.52	<0.52	<1.4	<0.50	<1.0	<0.34	<0.34	<0.52	<0:52	< 0.49	<0.68	< 0.34	<1.3	<0.69	<3.27	112	48	FP	FP	480	96
Trichloroethene	< 0.40	*	< 0.37	+	<0.37	*	< 0.37	< 0.32	<0.89	<0.89	<0.78	<0.23	<1.0	<-0.32	<0.32	<0.89	<0.89	2.9	6.0	1.4	2.6 Q	1.2	1.7	0.85 Q	0.89 Q	FP	FP	5.0	0.5
Vinyi Chloride	<0.46	*	<0.20	*	0.23Q	*	<0.20	<0.19	<0.18	<0.18	<0.22	•	<2.0	<0.19	<0.19	<0.18	<0.18	<0.20	2.0	<0.19	<0.45	<0.11	<0.20	2,5	0.64	FP	FP	0.2	0.02
Xyienes (total)	27.1	10	0.85Q	<66	< 0.67	7.58Q	5.04	< 0.35	<1.4	<1.4	<2.2	< 0.67	<1.0	< 0.35	< 0.35	<1.4	<1.4	<0.67	<0.70	<0.35	<3.5	<1.1	<0.67	11.6	3.8	FP	FP	10000	1000
PAHs						<u> </u>																							
Acenaphthene	27Q	42Q	<28	<2,800	<240	32	*	4.4	1.4	8.1	*		*	<0.029	<0.027	<0.018	<0.018	<9.4	0.20	<0.027	0.069	<0.018	<9.4	<43	150 Q	FP	FP	NSE	NSE
Acenaphthylene	<9.2	<20	<25	<2,500	<210	<8.2		2.7	<0.18	<0.92	*	*	*	< 1.034	<0.032	<0.023	<0.023	<8.2	0.072 Q	<0.032	0.023 Q	<0.019	<8.2	7.3	<160	FP	FP	NSE	NSE
Anthracene	2.3Q	13Q	<3.8	270Q	<10	<10	•	6.8	1.5	42	+	*	*	< 0.029	<0.027	<0.020	<0.020	<0.42	0.050 Q	<0.027	0.039 Q	<0.020	<0.42	10	<140	FP	FP	3000	600
Benzo(a)anthracene	10	32Q	19	2,400Q	10Q	32		1.5 Q	<0.35 Q	3.9	+	*	*	<0.028	<0.026	<0.019	<0.019	<0.28	<0.026	<0.026	0.051 Q	0.037C	3.1	5.6	18	FP	FP	NSE	NSE
Benzo(a)pyrene	<0.22	1.1Q	0.98Q	<90	<7.5	0.54Q		0.34 Q	<0.096	1.2 Q	-	*		<0.015	<0.014	<0.012	<0.012	<0.30	<0.014	< 0.014	0.059	0.058	<0.30	0.48 Q	6.0	FP	FP	0.20	0.02
Benzo (b) fluoranthene	<0.80	9.1	3.0Q	350	<7.5	<7.5		<0.60	< 0.11	1.1 Q	*		*	<0.020	<0.030	< 0.014	<0.014	<0.30	<0.030	<0.030	0.072	0.072	0.8	<0.60	4.0 Q	FP	FP	0.20	0.02
Benzo (ghi) perylene	<0.88	<1.1	<1.3	<130	<10	<0.42		<0.30	<0.12	<0.60	•	•	*	<0.016	<0.015	<0.015	<0.015	<0.42	<0.015	<0.015	0.046 Q	0.07.2	<0.42	<0.30	1.6 Q	FP	FP	NSE	NSE
Benzo(k)fluoranthene	0.50Q	<0.45	1,3Q	<54	<4.5	<0.90		<0.38	<0.10	0.85 Q	-	*		< 0.020	<0.019	<0.013	<0.013	<0.18	<0.019	<0.019	0.047	0.056Q	<0.18	0.49 Q	3.0 Q	FP	FP [NSE	NSE
Indeno (123-cd) pyrene	<0.96	<1.2	<1.5	<150	<12	<0.50	*	<0.44	<0.11	<0.56	-	-	*	< 0.032	<0.022	< 0.014	<0.014	<0.50	<0.022	<0.022	0.043 Q	0.058Q	<0.50	<0.44	<2.2	FP	FP	NSE	NSE
Chrysene	16	42Q	32	3,300	17Q	38		2.1	0.45	6.7	*	+	*	<0.018	< 0.017	<0.018	<0.018	<0.32	0.020 Q	<0.017	0.056 Q	0.064	1.9	2.5	17	FP	FP	0.20	0.02
Dibenzo (ah) anthracene	<0.96	4.6	2.3Q	150Q	<10	<2.0		<0.40	<0.14	<0.68	•		*	<0.018	<0.020	<0.017	<0.017	<0.40	<0.020	<0.020	<0.017	0.018Q	<0.40	<0.40	<2.0	FP	FP	NSE	NSE
Fluoranthene	1.9Q	1.4Q	3.5Q	260Q	9.3Q	<7.5		4.8	0.99	6.8		-	*	< 0.023	<0.021	<0.028	<0.028	<0.30	0.066 Q	<0.021	0.12	0.091	0.65	7.6	<110	FP	FP I	400	80
Fluorene	30Q	74	28Q	2,000	39Q	31	*	7.5	2.0	12	*	*	+	<0.031	<0.029	<0.021	<0.021	<1.2	0.26	<0.029	0.15	< 0.017	7.8	69 Q	330 Q	FP	FP	400	80
2-Methylnaphthalene	360	370	<22	7,800	<180	230		7.0	0.62 Q	5.7	•	+	-	<0.035	1.2	<0.028	<0.028	<7.2	0.56	0.34	0.37	0.022Q	<7.2	630	2100	FP	FP	NSE	NSE
1-Methylnaphthalene	380	450	150	12,000	<180	180		10.0	2.1	17		+	*	<0.032	0.63	<0.027	<0.027	<7.2	1.0	0.27	0.42	0.029Q	43	480	1600	FP	FP	NSE	NSE
Naphthalene	120	87	<25	<44	<210	44		3.7	0.55 Q	13	*		<1.0	<0.033	1.5	<0.027	<0.027	<8.4	0.14	0.097 Q	0.054 Q	<0.024	<8.4	160	310 Q	FP	FP	40	8.0
Phenanthrene	65	680	210	26,000	220	370	*	4.4	1.2	18	-	*	-	<0.030	<0.028	<0.019	<0.019	6.6	0.32	<0.028	0.16	0.037	60	110	470	FP	FP	NSE	NSE
Pyrene	11	20	7.8Q	<2.000	24	22Q		17	3.7	73	*	-	*	<0.026	<0.024	<0.020	<0.020	<0.34	0.084	<0.024	0.12	0.11	3.4	<38	<120	FP	FP	250	50
rylene	11	20	7.80	_ ^2,000		1 4414		1.	1 3.7	1 . (3			1	10.020	10.024	10.020	1.0.020	L	0.00	0.021			1		- T- 100				

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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 E

FP = Free Product (see Table 2, Groundwater Elevations/Free Product Actions)

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

MW - 1 / EXT - 1

99.69

Surface Elevation

Carrage Elevane		00:00	ı		
Top of Casing El	levation	99.12/99.17		Free Product Abateme	nt
Top of Screen E	levation	76.69/79.69		Tree Froduct Abateme	
Bottom of Scree	n 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 H20 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	3.50	
12/18/2002	not measured	70.00	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								
Top of Casing El	Top of Casing Elevation 99.30 Free Product Abatement							
Top of Screen Elevation 79.69								
Bottom of Screen	n 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.

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 Top of Casing Elevation 99.07 Free Product Abatement Top of Screen Elevation 79.69 Bottom of Screen Elevation 64.69 Product Cumulative DTW Product Removed Removal Measurement Groundwater Thickness (Gallons) (Casing) (Gallons) Date Elevation 10/21/1999 26.82 72.26 0.01 --1/18/2000 69.88 29.19 ----72.11 20 gals H2O purged 12/13/2000 27.10 0.18 Say 1 3/12/2001 24.31 74.76 3 gals H2O purged 6/26/2001 22.41 76.66 0.04 (after purging) 4.5 gals H2O purged 12/18/2002 not measured 0.21 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									
Top of Casing El		99.55		Free Product Abatement						
Top of Screen E		80.22		r roo r roadot / toatomont						
Bottom of Screei	Bottom of Screen Elevation 69.85									
				Product	Cumulative					
Measurement	DTW	Groundwater	Product	Removed	Removal					
Date	(Casing)	Elevation	Thickness	Thickness (Gallons) (
6/16/1998	24.85	75.09	0.02	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 H20 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

			TOWN O
MW - 1 / EXT -	1		
Surface Elevation	on		
Top of Casing E	levation		
Top of Screen E	levation		
Bottom of Scree	en Elevation		
Measurement	DTW	Gr	oundwater
Date	(Casing)	E	Elevation
SEE TABLE 2			
		_	

_					
	MW - 2				
	Surface Elevatio	n		99.77	
	Top of Casing E	99.34			
Ì	Top of Screen E	levation		76.77	
	Bottom of Scree	n Elevation		61.77	
	Measurement	DTW	G	roundwater	
	Date	(Casing)		Elevation	
	6/16/1998	21.48		77.86	
	10/14/1998	14/1998 22.78			
	1/21/1999	25.83	73.51		
	4/15/1999			76.89	
	7/19/1999			78.14	
	10/21/1999	24.82		74.52	
	1/18/2000	26.68		72.66	
1	12/13/2000	23.96		75.38	
	3/12/2001	22.98		76.33	
l	6/26/2001	20.75		78.59	
1	3/10/2002	24.73		74.61	
ļ	12/18/2002	25.41		73.93	
Ì					
1					

TABLE 3 GROUNDWATER ELEVATIONS

FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401
TOWN OF PEWAUKEE, WI

			1011110			
MW - 3						
Surface Elevation	99.27					
Top of Casing E	98.81					
Top of Screen E	levation		79.27			
Bottom of Scree	en Elevation		69.27			
Measurement	DTW	Gr	oundwater			
Date	(Casing)	E	Elevation			
6/16/1998	23.74		75.07			
10/14/1998	25.10		73.71			
1/21/1999	1/21/1999 28.22					
4/15/1999	4/15/1999 24.10					
7/19/1999	/19/1999 21.65		77.16			
10/21/1999	26.43		72.38			
1/18/2000	28.58		70.23			
12/13/2000	26.60		72.21			
3/12/2001	23.90		74.91			
6/26/2001	22.03		76.78			
3/10/2002	25.75		73.06			
12/18/2002	28.21		70.60			

IMVV - 4					
Surface Elevatio	99.20				
Top of Casing E	98.78				
Top of Screen E	levation		79.20		
Bottom of Scree	n Elevation		69.20		
Measurement	DTW	G	roundwater		
Date	(Casing)		Elevation		
6/16/1998	23.97		74.81		
10/14/1998	25.26		73.52		
1/21/1999	28.20		70.58		
4/15/1999	24.27		74.51		
7/19/1999	21.76		77.02		
10/21/1999	26.43		72.35		
1/18/2000	28.65		70.13		
12/13/2000	26.58		72.20		
3/12/2001	no access				
6/26/2001	22.12		76.66		
3/10/2002	25.86		72.92		
12/18/2002	28.14		70.64		

TABLE 3 GROUNDWATER ELEVATIONS

FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401

IAMOT	OF	DEMANDEE MAD	
LOVVIA	OF	PEWAUKEE, WI	

MW - 5				_
Surface Elevati	on		99.62	
Top of Casing I	Elevation		99.32	
Top of Screen	Elevation		79.62	
Bottom of Scre	en Elevatior	1	69.62	
Measurement	DTW	Gr	oundwate	r
Date	(Casing)	E	Elevation	
6/16/1998	24.91		74.41	
10/14/1998	26.25		73.07	
1/21/1999	29.04		70.28	
4/15/1999	25.24		74.08	
7/19/1999	22.69		76.63	
10/21/1999	27.41		71.91	
1/18/2000	no access			
12/13/2000	no access			
3/12/2001	no access			
6/26/2001	23.12		76.20	
3/10/2002	no access			
12/18/2002	29.03		70.29	

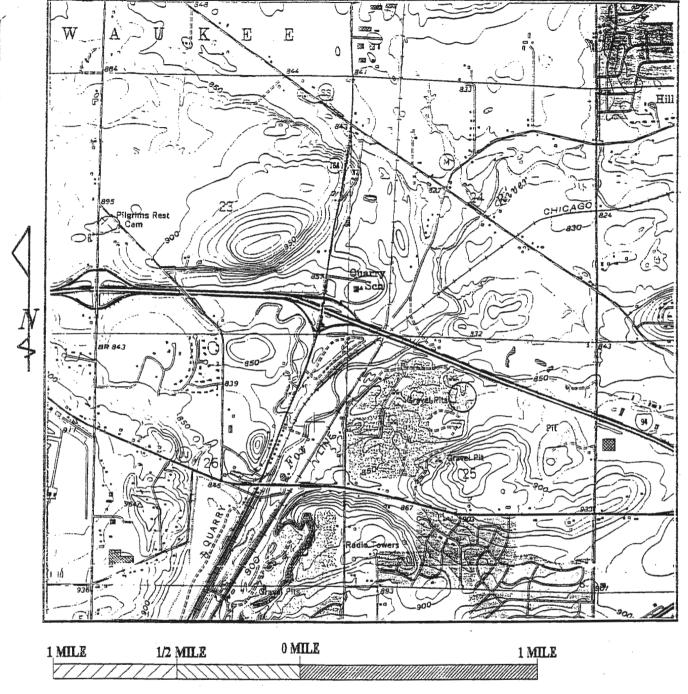
<u>'</u>	WAOREE, WI								
	MW - 6								
	Surface Elevati	99.88							
	Top of Casing I	99.53							
	Top of Screen	Elevation		80.58					
	Bottom of Scre	en Elevatior	1	70.58					
	Measurement	DTW	Gr	oundwater					
	Date	(Casing)	E	Elevation					
	6/16/1998	24.85		74.68					
	10/14/1998	26.14		73.39					
	1/21/1999	29.05		70.48					
	4/15/1999	25.13		74.40					
	7/19/1999	22.01		77.52					
	10/21/1999	27.35		72.18					
	1/18/2000	29.10		70.43					
	12/13/2000	27.49		72.04					
	3/12/2001	24.79		74.74					
	6/26/2001	23.06		76.47					
	3/10/2002	26.68		72.85					
	12/18/2002 29.05			70.48					

TABLE 3 GROUNDWATER ELEVATIONS

FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401 TOWN OF PEWAUKEE, WI

		104414 01		VVAOINEE, VVI			
MW - 7				EXT - 2			
Surface Elevati	on			Surface Elevati	on		
Top of Casing I	Elevation		Top of Casing Elevation				
Top of Screen I	Elevation			Top of Screen I	Elevation		
Bottom of Screen	en Elevation	1		Bottom of Screen	11		
Measurement	DTW	Groundwater		Measurement	DTW	Gr	oundwater
Date	(Casing)	Elevation		Date	(Casing)	f	Elevation
See Table 2				See Table 2			
			l				
			1				
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			!				
	_						

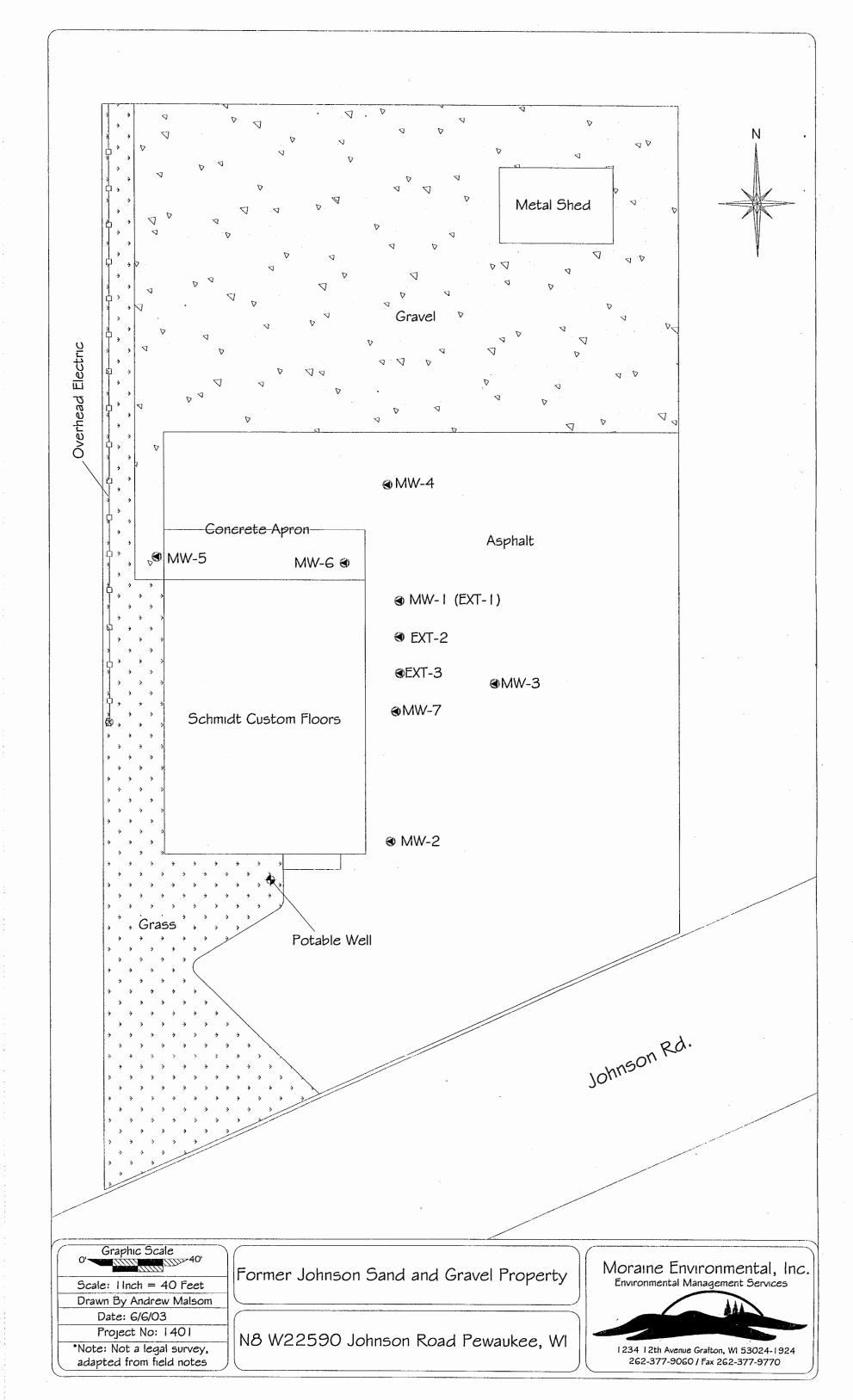
FIGURES

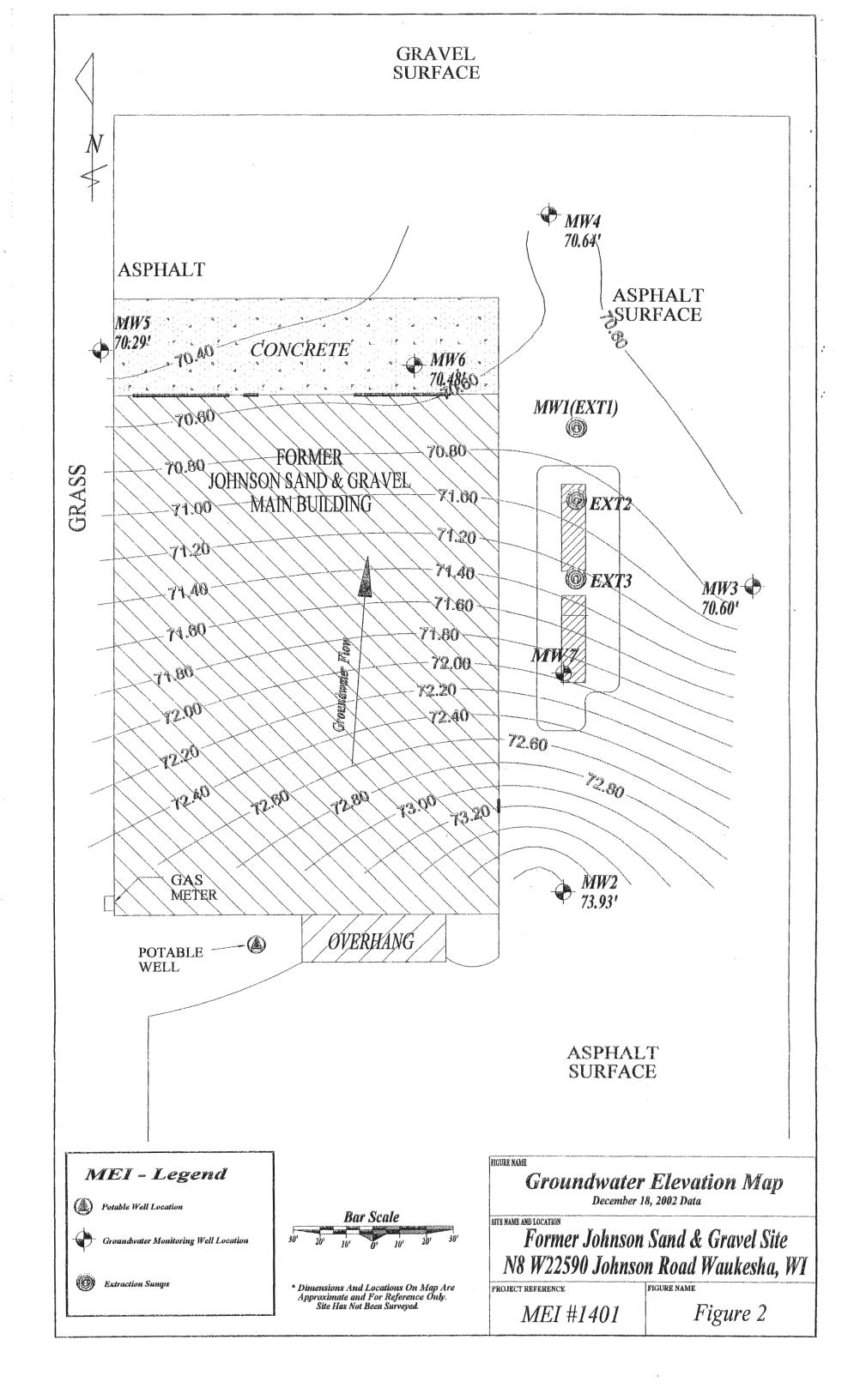


Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

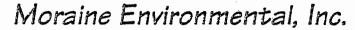
— SITE LOCATION

Former Johnson Sand and Gravel N8 W22590 Johnson Road Waukesha, Wisconsin Moraine Environmental, Inc. MEI #0305 Figure 1





SUPPLEMENTAL DATA FROM INVESTIGATION AND REMEDIATION WORK



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

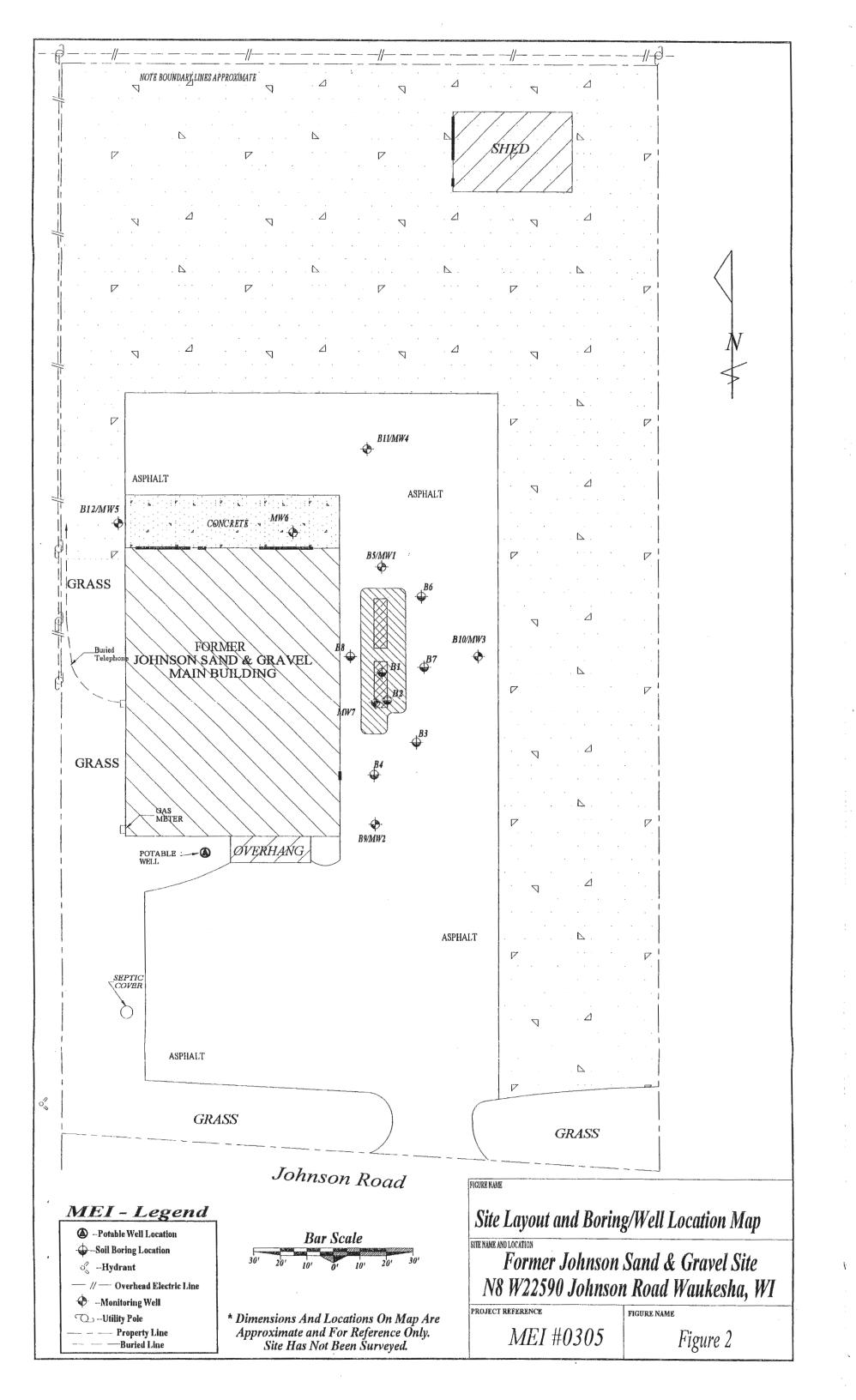
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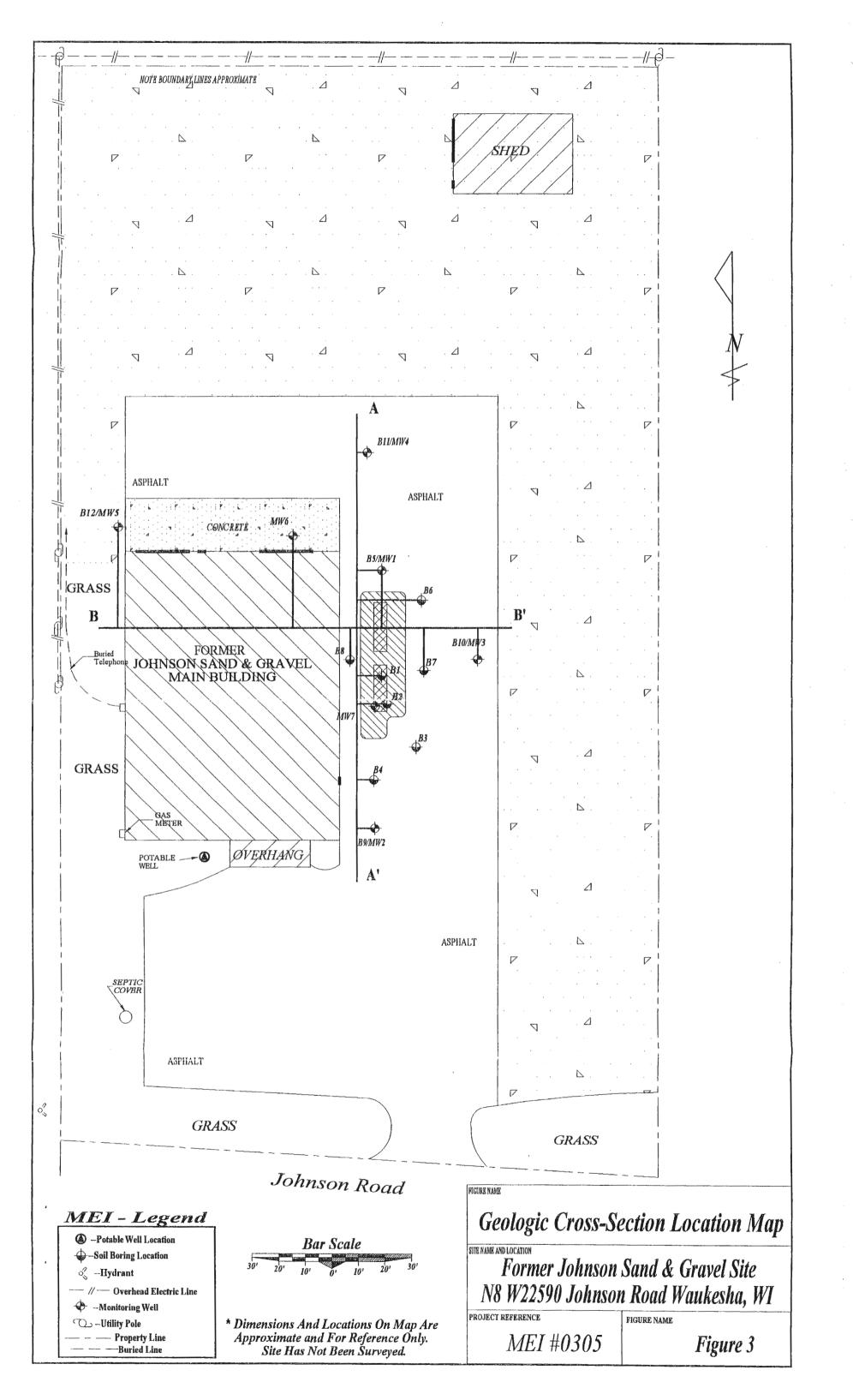
PREPARED FOR:
MR. ROBERT JOHNSON
JOHNSON SAND AND GRAVEL
20685 WEST NATIONAL AVENUE
NEW BERLIN, WISCONSIN 53186

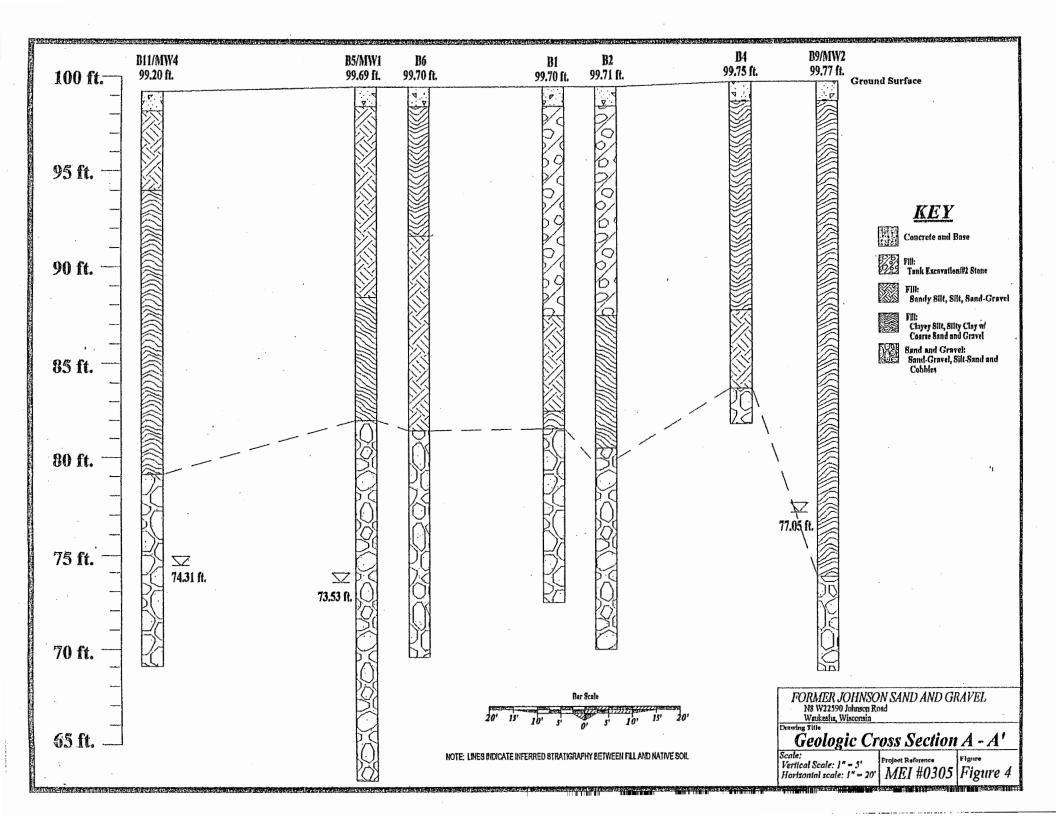
PREPARED BY:
MORAINE ENVIRONMENTAL, INC
1234 12TH AVENUE
GRAFTON, WISCONSIN 53024
(414) 377-9060

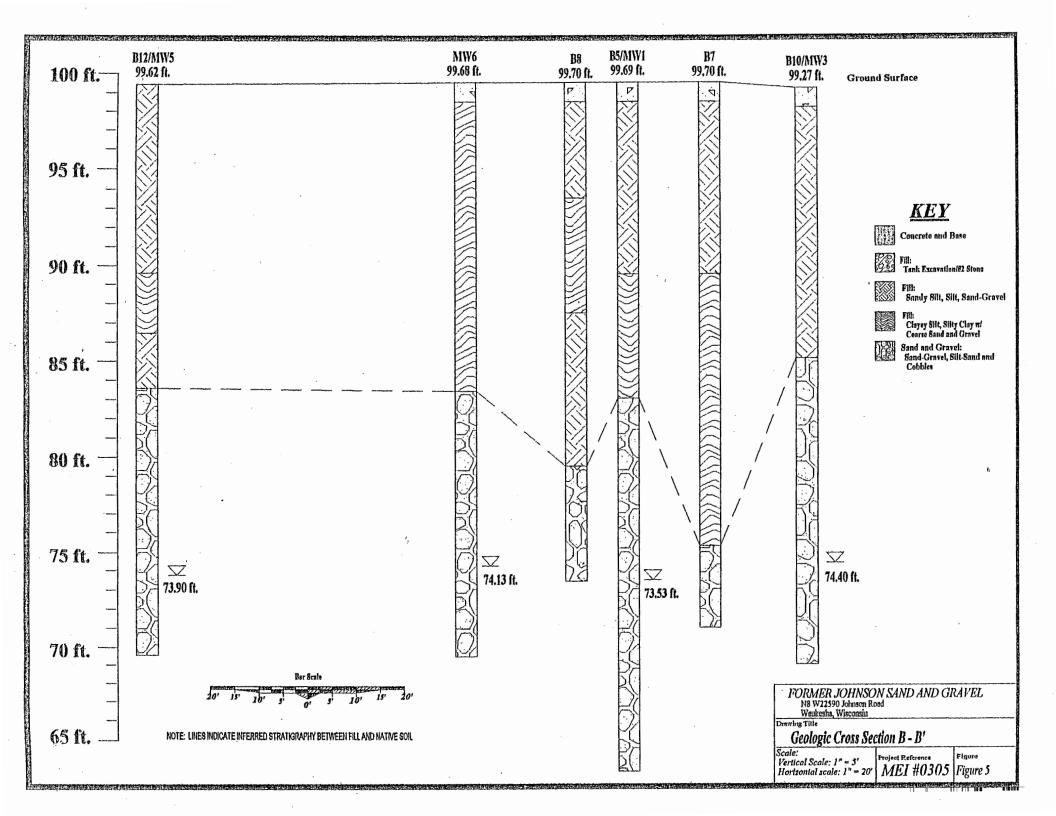
PROJECT REFERENCE #0305

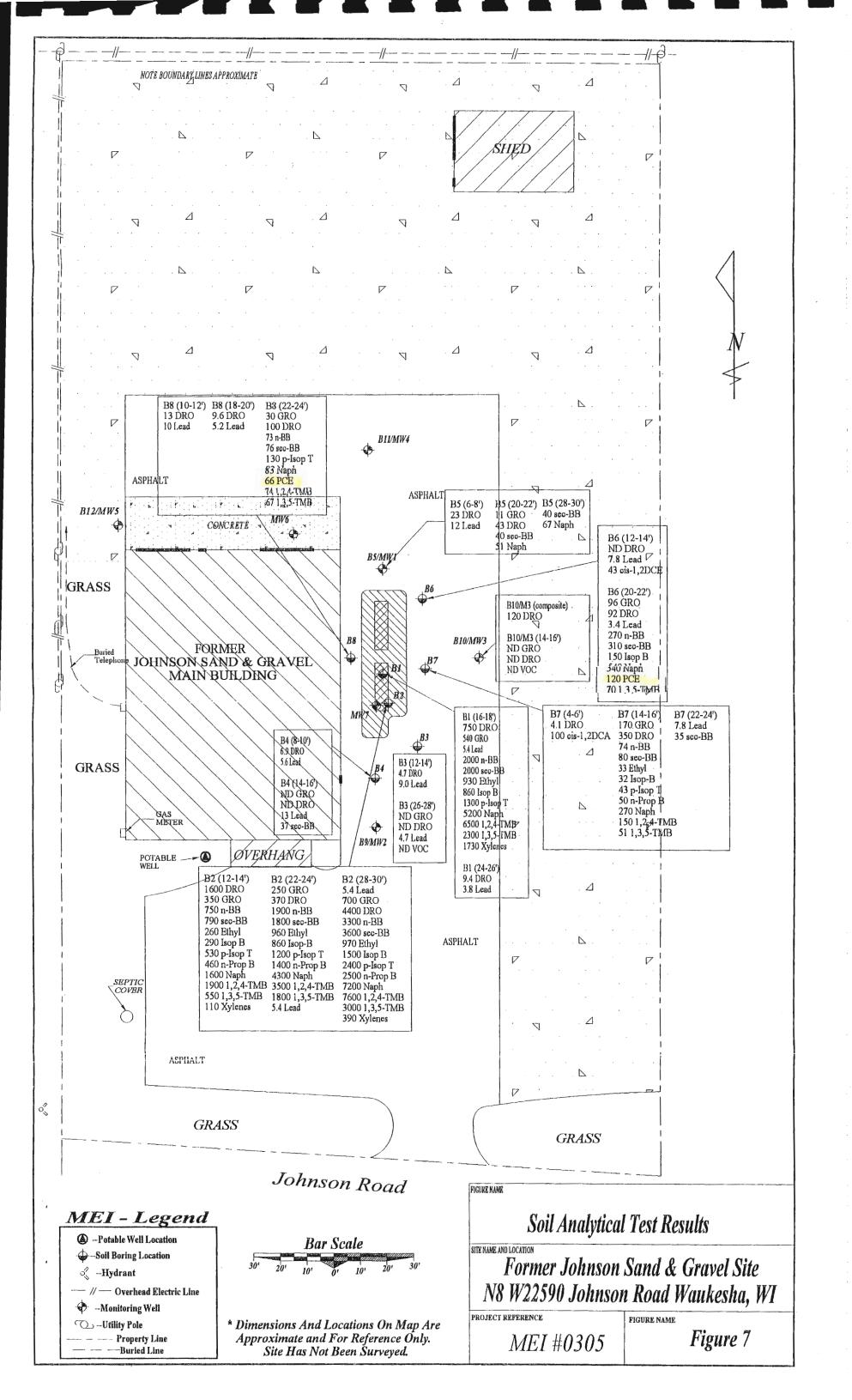
November 17, 1997











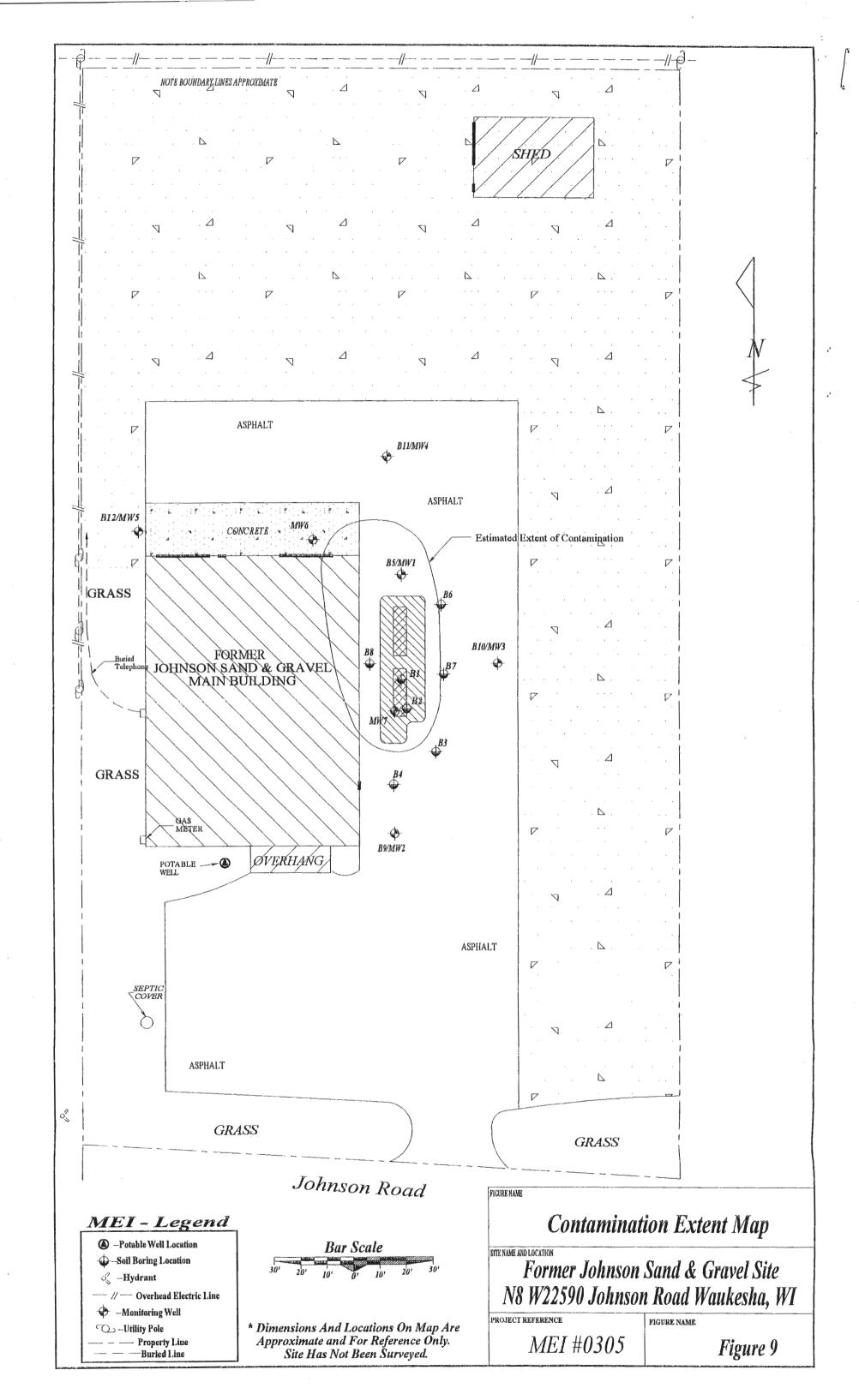


TABLE 3 SOIL QUALITY RESULTS

Former Johnson Sand and Gravel Site

	T	l		Ī		1			I		T	I	1			T -					T	I	T
	B1 (16-18')	B1 (24-26')	B2 (12-14')	B2 (22-24')	B2 (28-30')	B3 (12-14')	B3 (26-28')	B4 (8-10')	B4 (14-16')	B5 (6-8')	B5	B5 (28-30')	B6 (12-14')	B6 (20-22')	B7 (4-6')	B7 (14-16')	B7	B8 (10-12')	B8 (18 - 20')	B8 (22-24')	M3 composite	M3 (14-16')	Generic RCL's
	(10-18)	(24-20)	(12-14)	(22-24)	(28-30)	(12-14)	(20-28)	(8-10)	(14-10)	(0-8)	(20-22')	(28-30)	(12-14)	(20-22)	(4-0)	(14-16)	(22-24')	(10-12)	(18-20)	(22-24)	composite	(14-10)	KCL 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)								er e		all mark a time of	and the second s												
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

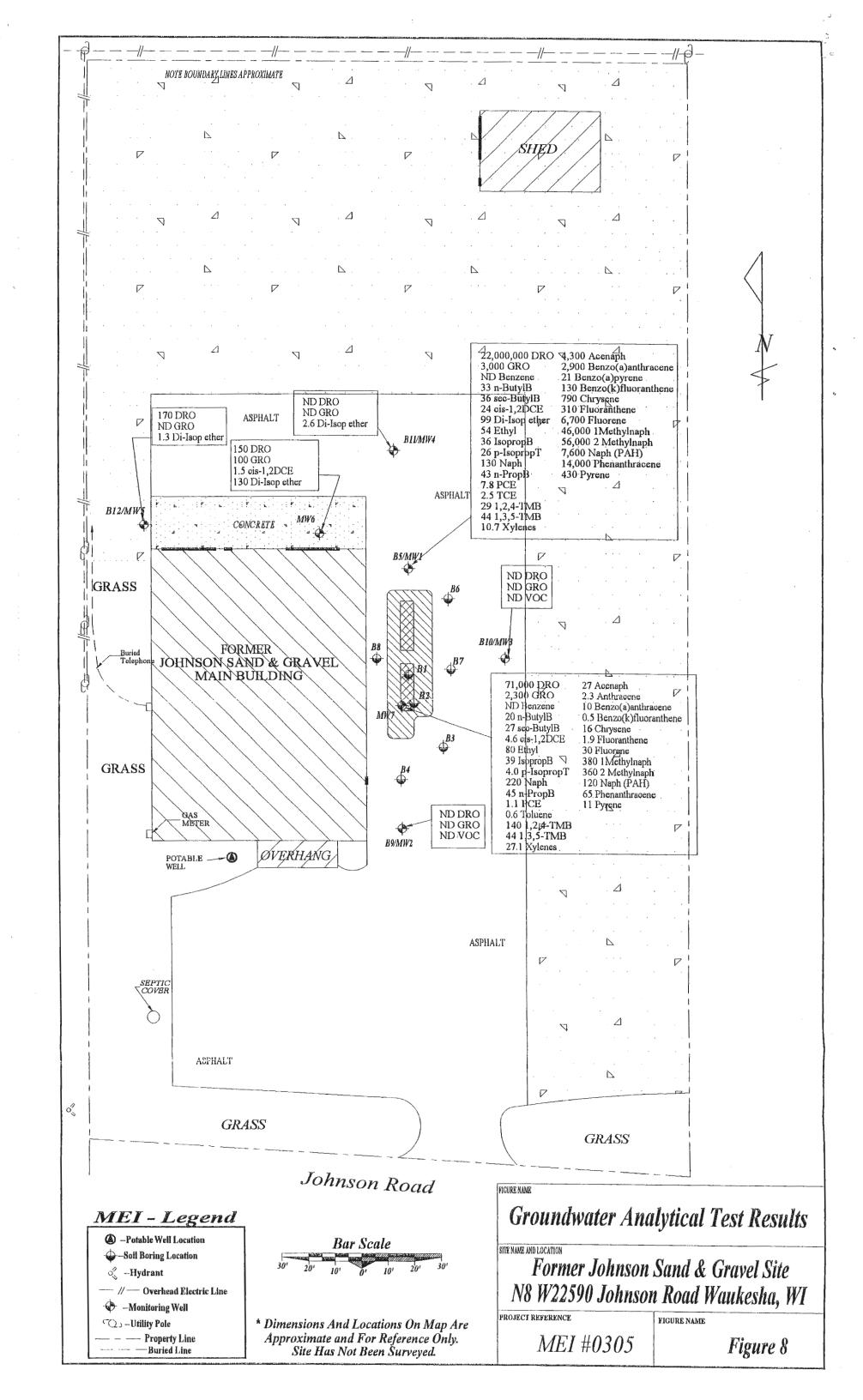


TABLE 4 GROUNDWATER QUALITY RESULTS Former Johnson Sand and Gravel Site

	N	11	M	12	M	[3	M	[4	M	15	M6	M7	Enforcement Standard	Preventive Action Limit
Chemical	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	(ES)	(PAL)
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											The State of the S			
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0	0.5
n-Butylbenzene	28	33	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	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	80	700	140								
Isopropylbenzene	29	36	ND	39	NSE	NSE								
p-Isopropyltoluene	85	26	ND	4.0	NSE	NSE								
Naphthalene	97	130	ND	220	40	8.0								
n-Propylbenzene	18	43	ND	45	NSE	NSE								
Tetrachloroethene	8.5	7.8	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	5.0	0.5								
1,2,4-Trimethylbenzene	27	29	ND	140	NSE	NSE								
1,3,5-Trimethylbenzene	43	44	ND	44	NSE	NSE								
Xylenes, Total	8.7	10.7	ND	27.1	620	124								

Kev:

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

	M	[1	N	12	N	[3	M	[4	N	15	M6	M7	Enforcement Standard	Preventive Action Limit
Chemical	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	(ES)	(PAL)
Acenaphthalene	530	4,300	NA 27	NSE	NSE									
Anthracene	ND	ND	NA 2.3	NSE	NSE									
Benzo (a) anthracene	ND	2,900	NA 10	NSE	NSE									
Benzo (a) pyrene	ND	21	NA ND	0.2	0.02									
Benzo (k) Fluoranthene	ND	130	NA 0.5	NSE	NSE									
Chrysene	ND	790	NA 16	NSE	NSE									
Fluoranthene	ND	310	NA 1.9	NSE	NSE									
Fluorene	1,000	6,700	NA	NA	NA	NA	NA	NA ·	NA	NA	NA	30	400	80
1 Methylnaphthalene	6,900	46,000	NA	NA.	NA	380	NSE	NSE						
2 Methylnaphthalene	7,500	56,000	NA 360	NSE	NSE									
Naphthalene as PAH	610	7,600	NA 120	40	8									
Phenanthracene	2,300	14,000	NA 65	NSE	NSE									
Pyrene	ND	430	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) 25.94 27.20 (fp) 27.32 24.77 (fp) 25.59	73.51 (fp) 73.18 71.92 (fp) 71.80 74.35 (fp) 73.53	8-13-96 9-13-96 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')

(TEF)

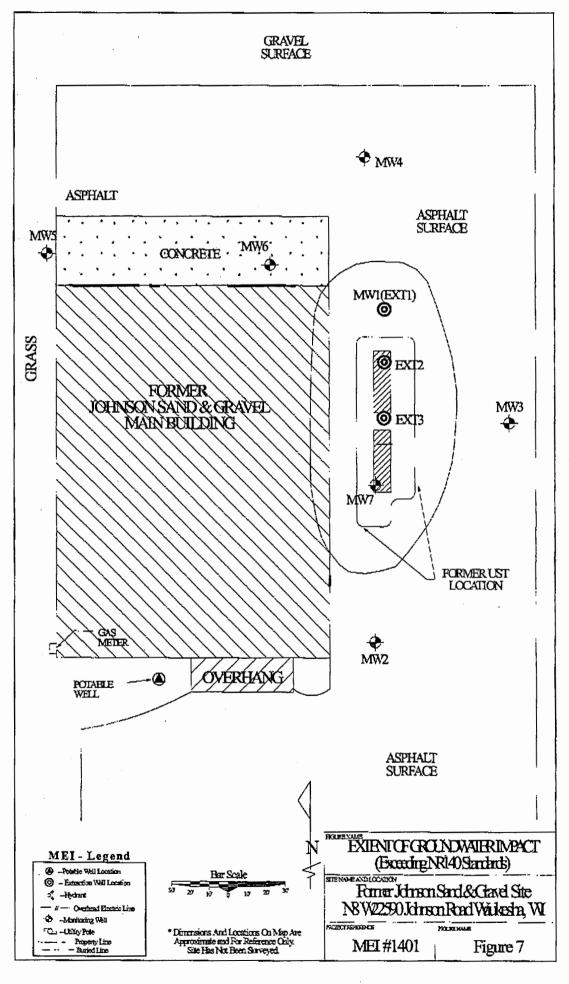
Moraine Environmental, Inc.

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 #:	262-5	74-2117
Company: WDNR - Wanker ha				574 - Z166
Daule,	Schred San BRRTS# (n) f Ga 1368001	avel 4228	
I am sending and a site map Site. We are curr of the items in letter (10/17/00 with Grey michae costs to date and	for the endry work work work work work with a we are all at corr	Sohnsu Cinc to NPS d up also um nes	r Sanel of address lenial of communi	closure carling
Please call me u			W15.	
		E:\WC	ORDWSW-FRMTV	FAXTRANS.BLK.doc



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PAGE: 003

97 Jun-88 0 1,600 .000 330,000 t <0.62 4 4 5 4	Oct-98	VV-1 (EXT- Jan-99 180,000	Apr-89 700 1,500,000 4 -(0,27 9,1 0,57Q 8,8	Out-99	<0.29 6.8 0.36 Q	Mar-01	Aug-98 <50 130 <2.0 <0.6 <1.0	Aug-97 <50 <100 *	Jun-98 <50 <100 *	<50 <100 ^	Jen-88 <50 <100	Apr-99 <50 <100	1/1/-80 1/1/-80	Oct-99	Dec-00	Mar-01	June-01	Mur-02	Dec-02.	NSE NSE 15.0	PA NE NE
0 1,600 .000 330,000 1 <0.62	48,000 <1.8 0.35Q 7.3 0.52Q 8.5 <0.81	160,000	700 1,500,000 40,27 9,1 0,57Q	<0.27 13 0.57Q	<0.29 6.8	<0.29	<50 130 <2.0 <0.5	<50 <100 **	<50 <100	<50 <100	<50 <100	<50 <100	*	*	•	Mar-01			Dec-022.	NSE	48
330,000 1 <0.62 4 4 0 7	<1.8 0.35Q 7.3 0.52Q 8.5 <0.81	- 462 - 1	<0.27 9.1 0.57Q	<0.27 13 0.57Q	<0.29 6.8	<0.29	130 <2.0 <0.6	<100 *	<100 *	<100	<100	<100	-	•		-:-			5	NSE	N
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	<1.8 0.35Q 7.3 0.52Q 8.5 <0.81	452	<0.27 9.1 0.57Q	<0.27 13 0.57Q	<0.29 6.8	<0.29	<2.0 <0.5	<0.41	*	•				*		_:_	-1-		-		
4	0.35Q 7.3 0.52Q 8.5	452	9.1 0.57Q	<0.27 13 0.57Q	<0.29 6.8	<0.29	⊲0.6		<0.26	A) 27	L	•	-		* 1	•	•	•	- 1	15.0	1
4	7.3 0.52Q 8.5 <0.61	4 1	9.1 0.57Q	13 0.57Q	8.6	2.8			<0.26	d) 27					 _						
4	7.3 0.52Q 8.5 <0.61	4 1	9.1 0.57Q	13 0.57Q	8.6	2.8			<0.26	<∩ 27											
4	0.52Q 8.5 <0.61	1	0.57Q	0.57Q			<1.0				<0.28	< 0.27	*	<0.26	<0.29	<0.29	<0.48	<0.48	<0.25	5.0	0
3 3	9.5 <0.61				0.350			₹0.23	^	<0.29		<0.29	•	*	<0.20	<0.20	<0.49	<0.49	<0.82	NSE	N
	<0.61		8.8			0.29 C	<1.0	<0.24		<0.32	•	<0.32	*	A	< 0.23	<0.23	₹0.50	<0.50	<0.98	NEE	N.
		*		14.0	9,0	<0.28	<1.0	<0.31	Α	<0.29		<0.29		•	<0.28	<0.28	<0.81	<0.61	<0.65	NSE	Ni Ni
	24		<0.61	<d.61< td=""><td>40.42</td><td><0.42</td><td><1.0</td><td><0.15</td><td>•</td><td><0.61</td><td>·</td><td><0.61</td><td>*</td><td></td><td><0.42</td><td><0.42</td><td><0.82</td><td><0.62</td><td><0.27</td><td>3.0</td><td>0</td></d.61<>	4 0.42	<0.42	<1.0	<0.15	•	<0.61	·	<0.61	*		<0.42	<0.42	<0.82	<0.62	<0.27	3.0	0
5 *	21	*	32	17	11	9.7	<1.0	<0.28		<0.28	•	<0.28		•	<0.27	<0.27	<0.73	<0.73	<0.81	70	7
	<0.79	^	<0.79	<0.78	<0.35	<0.35	<1.0	<0.25	*	<0.79	*	<0,43	*	*	<0.35	<0.35	<0.79	<0.79	<0.60	100	2
*	46	•	52	42	40	41	<1.0	<0.43	*	Ф.55	*	<0.56	R	A	<0.23	<0.23	<0.60	<0.80	<0.60	NSE	N
8.7	2.9	140Q	3.8	11	4.2	0.99 Q	<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	14
	3.8	•	4.8	8.9	3.5	0.79	<1.0		•		•		*	•	<0.19				****		N.
•	0.7	*	6.1	10			<1.0		•		A		•								N
2 *	<0.36	-	<0.36	<0.36	D.48 C	<0.36	<1.0	<0.22	*	0,58Q	•	0.39Q	•	*	<0.36	<0.36	<0.85	<0.85	<0.47	6,0	0
3 1.6	0.3	<44	0.43Q	< 0.32	<0.20	<0.20	<1.0	<0.53	<0.22	<0.32	<0,22		*	<0.22				<0.67			1
) ^	24	<180	32	149	ėt .	43	¢1.0		•		<0.89		*	*****							8
-	2.7	•	4.9	6,8	3.5	89.0	<1.0	<0.27	A	<0.7€	•	<0.76		•	<0.17						, No
2 *	1.6		1.1Q	2.1	1.8 Q	<0.85	<1.0	<0.27		40.43	4	<0.43		*	<0.85						0.
8 <0.42	0.40Q	<42	<0.27	<0.27	<1.f		<1.0	<0.28	<0.21	0.28C	0.460	0.46Q	•	0.23Q	<1.1	<0.13	<0.47	<0.47	<0.84	1000.0	21
37	11	2,590	18.3	34	15.3	7.6	<1.0	<.0.55	<1.40	<0.49	<1.4	<0.49	Α	<1.40	<0.34	₹0.34	<0.52	<0.62	<0.69		
2 *	< 0.37		<0.37	D.91Q	<0.92	<0.32	<1.0	<0.20	4	<0.37	A	<0.37	•	A	<0.32	<0.32	<0.89	<0.89	<0.39	6.0	0.
3 "	<0.20	•	0.88Q	40.20	<0.19	<0.18	<1.0	<0.23		<0.20	^	<0.20		78	<0.19	<0.19	<0.18	<0.18	<0.11	0.2	0.
Q T	0.72Q	77Q	0.77	3.53Q	0.40 Q	<0.35	<1.0	<0.79	<1,34	<0.67	<1.34	<0.67	#	বা.34	<0.35	<0.35	<1.4	<1.4	<1.1	10000	10
C 77	<47		990		<43	200 Q	7	•	•	•	•	*	<0.47		<0.027	<0.027	<0.018	<0.018	<0.018	NAE	Ni Ni
0 21	<41	•	<120		1.5 Q	<130				4		*	<0.41		40.032	<0.032	0.047 Q	<0.023	<0.019	MSE	N:
0 17	<2.1		<420	4	<43	<110	*			,			<0.021		<0.027	≪0.027	<0.020	<0.020	<0.020	3300	61
0 72	38		870Q		8.4	24		*	A		^	•	<0.014		<0.026	0.053Q	0.027 Q	<0.019	<0.012	NOE	. NS
2.2	<1.5	•	9.9Q	4	0.72 Q	5.6		7	•	*****	•	•	<0.015	A	<0.014	0.081	0.020 Q	<0.012	<0.014	0.20	0.0
0 19	6.8	•	140		<0.60	4.1 Q	•	1		•	*	*	40.015	•	<0.030	0.0000	0.095 Q	<0.014	<0.013	0.20	0,1
<1.1	<21	7	<8.3	*	<0.30	<1.6	*	*	*	•	+	•	<0.021		<0.015	0.040Q	0.0B3	<0.015	<0.016	NSE	NS
		*	<2.7		0.49 Q	270	*		*	•	*	•	<0.0090	2	<0.019	0.0580	0.022 C	<0.013	<0.019	Net	N:
			8.8Q		<0.44	<2.3	7	À		7	•		< 0.025	*	<0.022	0.0390	0.071	⊴0.014	<0.021	NOE	N.S
<84	60	*	1,100		4.8	27	*		•	,	4	•	<0.016		Ø.017	D:062	0.021 Q	<0.018	<0.014	0.20	0.0
0 <10	37Q	· · · · ·	<20	****	<0.40	₹2.1			^		*	1	<0.020	•	<0.020	<0.020	0.048 Q	<0.017	<0.016	NSE	N
160		2	890	*	<34	<88		*	- A	*		*	<0.015	•	<0.021	9.12	<0.028	<0.028	<0.013	400	1
0 <230	440		700Q		83 G	370 Q	·	*	•	-			<0.058	*	< 0.029	< 0.029	<0.021	<0.021	<0.017	400	
	110	*	8,800	#	430	1460	*			YA .	*		<0.36	•	<0.033	D.048Q	<0.028	<0.028	<0.017	MäE	N
OD 1 1.000	1 114				450	1500	*	-				4	<0.36	+	0.088 Q	0.046Q	<0.027	<0.027	<0.017	NSE	N
00 1,000 00 950		,	7.300										<0.42		0.055 Q	0.0330	<0.027				_
00 850	240		7,300 420	*			,		•	4								<0.027	<0.024	40	1 6
			7,300 420 14,000	-	85 Q 130 Q	180 Q 590	*			,	-		<0.046	A	<0.028 €	0.049Q	<0.019	<0.027	<0.024 <0.018	40 NSE	₩ W
	2	3.8 - 0.7 2 0.36 3 - 1.6 0.3 4 - 2.7 2 1.6 8 - 0.42 0.400 37 - 11 2 0.37 3 0.20 Q - 1 - 0.72Q 0 - 77 - 447 0 - 21 - 441 0 - 17 - 42,1 0 - 17 - 42,1 0 - 17 - 43,1 0 - 17 - 43,1 0 - 18 - 6,8 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,4 1 - 0.40,	3.8	* 3.8 * 4.8 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1 * 6.1	** 3.5	** 3.8 * 4.8 8.9 3.5 ** 6.7 * 6.1 10 7.4 ** 40.36 * 40.36 40.36 0.48 0 3 1.6 0.3 <44 0.430 <0.32 <0.20 1 * 24 <180 32 146 60 ** 2.7 * 4.9 8.8 3.5 ** 1.6 * 1.10 2.1 1.3 0 ** 1.6 * 1.10 2.1 1.3 0 ** 1.6 * 1.10 2.1 1.3 0 ** 1.6 * 1.10 2.1 1.3 0 ** 1.8 * 40.42 0.400 <42 <0.27 <0.27 <1.1 37 11 2,590 18.3 34 15.3 ** 40.20 * 0.390 40.20 <0.32 0 1 0.720 770 0.77 3.630 0.40 0 0 17 <2.1 * 47 * 860 * 43 0 21 <41 * <120 * 1.5 0 0 17 <2.1 * 420 * 1.5 0 0 17 <2.1 * 420 * 1.5 0 0 17 <2.1 * 420 * 1.5 0 0 17 <2.1 * 420 * 1.5 0 0 17 <2.1 * 420 * 1.5 0 0 17 <2.1 * 420 * 43 0 21 <41 * 410 * 420 * 43 0 22 <1.5 * 9.90 * 0.72 0 0 16 6.8 * 140 * 0.50 0 <0.45 <0.50 * 0.80 * 0.72 0 0 46 6.8 * 140 * 4.5 0 0 17 <2.1 * 4.3 0 0 40 40 40 40 40 40 40 40 40 40 40 40 40	** 3.8 * 4.8 8.9 3.5 0.79 ** 6.7 * 5.1 10 7.4 12 2 * <0.36 * 40.36 <0.38 0.48 0 <0.36 3 1.6 0.3 <44 0.430 <0.32 <0.32 <0.20 <0.20 1.6 0.3 <44 0.430 <0.32 <40.20 <0.20 1.6 0.3 <44 0.430 <0.32 <40.20 <0.20 1.6 0.3 <44 0.430 <0.32 <40.20 <0.20 1.6 0.3 <44 0.430 <0.32 <40.20 <0.20 1.6 0.48 0 48 ** 2.7 * 4.9 8.8 3.5 0.98 8 <0.42 0.400 <42 <0.27 <0.27 <1.1 1.9 0 <0.85 8 <0.42 0.400 <42 <0.27 <0.27 <1.1 1.5 0 <0.85 8 <0.42 0.400 <0.42 <0.27 <0.27 <1.1 0.90 37 11 2.590 18.3 34 15.3 7.8 2 * <0.37 * <0.37 0.910 <0.92 <0.32 <0.32 3 * <0.37 0.910 <0.92 <0.32 <0.32 <0.32 <0.32 <0.32 <0.32 <0.32 0 1 0.720 770 0.77 3.630 0.400 <0.32 <0.35 0 77 447 * 860 * <43 0.400 <0.35 <0.35 0 17 <2.7 * <420 * <43 <0.30 <0.35 <0.30 <0.30 <0.35 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 <0.30 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<1.0 <0.28 37 11 2,550 18.3 34 15.3 7.6 <1.0 <0.55 2 * 49.8 35 7.8 <1.0 <0.55 3 * 40.20 * 0.37 * 40.37 0.910 <0.32 <1.0 <0.55 2 * 1.6 * 0.37 * 40.37 0.910 <0.32 <0.32 <1.0 <0.22 1 0.720 770 0.77 3.630 0.400 <0.32 <1.0 <0.22 0 1 0.720 770 0.77 3.630 0.400 <0.35 <1.0 <0.23 0 21 <41 * <1.0 <0.23 <0.35 <1.0 <0.55 0 21 <47 * 860 * <43 2000 * <0.35 <1.0 <0.25 0 21 <41 * <1.0 <0.23 <0.35 <1.0 <0.55 0 21 <47 * &0.60 * <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 <0.37 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0.79 \$.10 \$\frac{0.27}{12} \cdot \frac{0.28}{0.28} \cdot	*** 3.8 * 4.8 **** 8.9 **** 6.10 ***** 0.27 ***** 0.28 ***** 0.19 ***** 0.43 ***** 0.48 ****** 0.49 ****** 0.43 ****** 0.48 ***** 0.48 ****** 0.49 ****** 0.48 ****** 0.49 ****** 0.48 ****** 0.49 ****** 0.49 ****** 0.49 ****** 0.49 ****** 0.49 ****** 0.49 ******* 0.49 ******* 0.49 ******* 0.49 ******** 0.49 ********* 0.49 ************************************	- 3.8

TABLE 2
GROUNDWATER MONITORING RESULTS
FORMER JOHNSON SAND AND GRAVEL SITE

Mar.28.

3003

.:E45M

Pyrane
Concentrations Expressed as Micrograms per Liter (ugil)
Bott Print indicates Concentration Above NR 140 Preventive Action Limit (PAL.)
Bott Print I Sheded Cell Indicates Concentration Above NR 140 Enforcement Standard (ES)
NSE - No Standard Established
NSE - No Standard Established
0.0 - Concentration Below Detection Limit
Q - Concentration Detected Between Detection Limit and Quantification Limit
Endicates Analysis For Perfoular Constituent Not Requested

										FORME	ROUNDWAT R JOHNSON Detected V	AN CINA	DRING RES D GRAVEL	SITE (con	t)	<u>.</u>								7.	-m Wiles	
Chemical		***************************************					E-MM-3												MW-4						EA	PAL
	Aug-96	Aug-97	Jun-96	Oct-98	Jan-99	Apr-00	701-66	Oct-89	Dec-00	Mar-01	June-01	Mar-02	Dec-02	Aug-96	Aug-97	Jun-98	Oct-68	Apr-99	Jul-99	Oct-99	Dec-00	June-01	Mar-02	Dec-02		4
GRO	<50	<50	<50	<50	<50	\$	•	*	,	. ,	<u> </u>	F		<50	<50	~50	<60	<50	<∞	<u></u>	<u> </u>	•	•		NBE	NSE
DRO	<100	<100	<100	<100	<100	<100	•		•	•	-	'		140	<100	<100	140	<100	•			1 .	•		NBE	NSE
Lead, Solubia	<2.0					-	*	*		*	1 *		· ·	3.9	-		-		3.00				•		16	1.5
VOCe																										
Benzone	40.8	<0.41	<0.26	40.27	<0.28	<0.27	A	<0.28	<0.29	<0.28	<0.48	<0.48	40.25	<0.6	<0,41	40.28	<0.27	<0.27	<0.26	<0.26	≠0.29	<0.48	< € 2.48	<0.28	6,0	0,5
s-Butylbenzene	<1.0	<0.23		<0.29		<0.29	*		<0,20	<0.20	40.49	<0.49	<0.62	<1.0	<0.23	1 *	≪0.29	<0.29	_ ,		<0.20	<0.49	<0.49	<0.62	NS	NSE
t-Butylbenzene	<1.0	<0.24		<0.32		<0.32			<0.23	<0.23	<0.50	<0.50	<0.98	<1.0	<0.24	*	<0.32	<0.32		•	<0.23	<0.50	<0.50	<0.96	NBE	神の間
n-Butythangene	<1.0	<0.31		<0.29	*	<0.29	-		<0.28	<0.28	<0.61	<0.81	<0.85	<1.0	<0.31	-	<0.29	<0.29	*		<0.28	<0.81	<0.61	<0,65	NAE	MSE
Chloromethene	≺1.0	₹0.16	Ř	<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-Dichloroethens	<1.0	<0.28	1	<0.28		≈ 0.28	*		<0.27	<0.27	<0.73	<0.73	<0.8 1	<1,0	<0.28		<0,28	40.28	•		<0.27	<0.73	<0.73	<0.81	70	7.0
trans-1,2-Dichloroethene	<1.0	<0.25	,	<0.78	•	<0.79	•	•	<0.35	<0.35	<0.79	<0.79	<0.80	<1.0	<0.25	*	<0.79	<0.78		•	40.3 5	<0.79	<0.79	<0.80	100	20
Oteopropyl ether	<1.0	c0.43	•	<0.56		<0.55	4	,	40.23	₹0.23	<0.80	<0.60	<0,64	41.0	2	*	2.2	2.2		*	0.0	0.73 Q	0.80 Q	0.730	HARE	科斯医
Ethylberizane	<1.0	≠0.23	<0.24	<0.32	< 0.24	<0.32	•	<0.24	<0.57	<0.57	<0.49	<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
eopropylbetizene	<1.0	<0.27	*	<0,26		<0.28	•	*	<0.19	<0.19	40.43	40.43	<0.66	<1.0	≺0.27	1	≺0.26	<0.26	*		<0.18	<0.43	<0.43	<0.66	Male	MSE
p-Isopropylitaluene	<1.0	40.22	g	<0.24	•	<0.24	le le	A	<0.25	<0.25	₹0.57	< 0.57	<0.58	<1.0	< 0.22	· ·	<0.24	<0.24		****	<0.25	<0.57	<0.57	<0.5B	MARK	MSE
Methylane chlorida	<1,D	40.22	*	0.590	-	<0.36		A	<0.36	<0.36	<0.85	<0.85	<0.47	<1.D	<0.22	1	0.54Q	<0.36			<0.36	<0.85	<0.85	40.47	6.0	0.6
Mathyl tert butyl ether	<1.0	<0.53	40.22	< 0.32	*	<0.32	,	<0.22	<0.20	<0.20	< 0.67	<0.67	<0.87	<1.0	<0.53	<0.22	-0.37	<0.32	<0.22	<0.22	<0.20	<0.67	<0.67	<0.87	40	12
Nachthalene	<1.0	<0.66		<0.38	40.89	48.0e	*	*	<0.27	<0.27	< 0.59	<0.59	<0.83	<1.0	<0.66		<0.35	<0.35	*		<0.27	<0.59	<0.59	< 0.63	40	8.0
n-Propylbanzene	<1.0	<0.27	-	<0.78	+	<0.76	-	R	40.17	<0.17	<0.64	<0.64	<0.95	<1.D	<0.27		<0.76	<0.78	•	•	<0.17	<0,64	≪0.64	<0.95	MBE	NSE
Toluene	<1.0	<0.28	€021	J.32Q	0.370	0.380	*	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
Tstraphloroethene	<1.0	<0.27		<0.43		40.43	. A	4	<0.65	<0.85	<0.57	<0.57	<0.63	<1.0	<0.27		<0.43	<0,43	-3-	•	<0.65	<0.57	40.57	<0.53	5.0	6,5
Trimethylloenzense (total)	<1.0	90.55	<1.40	40.49	<1.40	< 0.47	4	<1.40	<0.34	< 0.34	40.52	<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	490	96
Trichloroethene	<1.0	<0.20	A	<0.37		<0.37		-	<0.82	<0.32	<0.89	<0.89	<0,39	<1.0	<0.20		<0.37	<0.37	•	•	<0.32	40.89	<0.89	<0.39	8,0	0.6
Vinyl Chlorida	<f.d< td=""><td><0.23</td><td></td><td>40.2</td><td>-</td><td><0.20</td><td></td><td>,</td><td><0.18</td><td><0.19</td><td><0.18</td><td><0.18</td><td><0.11</td><td><1.0</td><td><0.23</td><td>,</td><td>₹0.20</td><td><0.20</td><td>^</td><td>*</td><td><0.19</td><td><0.1B</td><td><0.18</td><td><0.11</td><td>0.2</td><td>0.02</td></f.d<>	<0.23		40.2	-	<0.20		,	<0.18	<0.19	<0.18	<0.18	<0.11	<1.0	<0.23	,	₹0.20	<0.20	^	*	<0.19	<0.1B	<0.18	<0.11	0.2	0.02
Xylenes (total)	<1.0	<0.79	<1.34	<0.67	<1.34	< 0.67	7	<1.34	<0.35	<0.35	<1.4	<1.4	41.1	<1.0	<0.79	<1.34	<0.67	<0.67	≺1.34	<1.34	<0.35	<1.4	<1.4	<1.1	10000	1000
PAHe		7//-			1,774																					
Acenaphthena			,		*	•	<0.47	R	<0.027	<0.027	<0.018	<0.018	<0.018				•	*	<0.47	*	40.027	<0.018	<0.018	<0.018	NSE	NEE
Acenaphthylene	· ·	•	-		1	-	<0.41		≪0.032	<0.032	<0.023	<0.023	<0.019		•			*	<0.41		<0.032	<0.023	<0.023	<0.019	MSE	NSE
Anthrecane			-	*	1		<0.021		<0.027	40.027	<0.030	<0.020	<0.020	-	A	-		•	<0.021		<0.027	<0.020	< 0.020	<0.020	3000	800
Banzo(a)anthracene				*	1		<0.014	1	<0.028	40.028	D.023 Q	0.036 Q	40.012	•	A	1	•		<0.014	,	<0.028	0.20	0.072	0.0280	NSB	NBE
Banzo(a)evrone	•			,	 	-	<0.015	•	<0.014	<0.014	0.024 Q	0.096	<0.014	· · ·	A	1	•	•	≪0.015		<0.014	0.21	0.13	0.037Q	0.20	0.02
Berizo (b) Iluorenthane	7				-		<0.015	-	<0.030	<0.090	0.060	0.11	<0.013	-		1		•	<0.015	• *	<0.080	0.35	0.15	0.050	0.20	0.62
Benzo (phi) perviane				,			<0.021		<0.015	<0.015	0.030 Q	0.17	<0.016	*			1		40,021		<0.018	0.19	0.11	0.0440	NBE	MSE
Benzo(k)fluoranthene		-	A		 	-	<0.0090	-	40.019	<0.019	0.023 Q	0.13	<0.01P				-		<0.0090	1	<0.019	0.14	0.13	0.0420	NSE	NSE
Indiano (123-cd) pyrene		•		-	-		<0.025		40.022	<0.022	0.030 Q	0.17	<0.021	· ····	1	-	-	*	<0.025	•	40.022	0.21	0.11	0.0980	NSE	NSE
			-		+		<0.025		<0.017	<0.017	0.025 Q	0.049 Q	<0.014		•		-	A	<0.018		<0.017	0.18	0.13	0.048	0.20	0.02
Cinyeene Dibenzo (sh) enthracene							<0.020		10.020	≪0.020	<0.017	0.11	<0.016		4			- 4	<0.020	-	<0.020	0.086	0.035 Q	<0.016	MSE	NSE
Fluoranihene							40,016		<0.021	≪0.020	0.048 Q	<0.028	<0.013		-	 	-	*	40.016	*	<0.021	0.41	0.25	0.075	400	60
Perozene				-			<0.058		<0.029	<0.029	₹0.021	<0.021	≪9.017			 	+		<0.058	-	<0.028	<0.021	40.021	<0.017	400	80
		-		-			<0.36		0.080 Q	0.11	<0.021	<0.021 <0.028	49.017			4	- ,		<0.38		e0.033	<0.028	<0.028	<0.017	NSE	NSE
2-Methylnaphthalens							<0.36	-	<0.030	0.097	<0.027	<0.025	<0.017			A			<0.38	*	◆0,030	<0.027	40.027	<0.017	NSE	MRE
1-Methylnaphthalene					1	1	<0.30	-	40.031	0.034 C	<0.027	<0.027	<0.024						40.42		40,031	40.027	40.027	0.050	40	8.0
Naphthalana		-				 -	<0.048		<0.028	<0.028	<0.027	<0.027	<0.016					-	<0.048		<0.036	0.093	0.082	0.0330	NEE	NSE
Phanantivene #																										

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								FO	RHER JOH	DWATER I	ABLE 2 MONITORIN ID AND GR IND PAH 001	AVEL SITE											
Chemical	-		-		Mh	N-5			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							MW-6							- 044
CHEFFICE	Aug-96	Aug-97	Jun-98	Oct-98	Jan-89	Apr-98	Jul-99	Oct-89	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	ES	PAL
GRO	<50	<50	<50	<50	<50	<50	*	*		•	100	79	<50	120	60	<50		*	4	*		NSE	N8E
DRO	150	170	<100	150	110	<100	*		-	<100	150	42,000	110	•	<100	<100	-	*		Ħ	•	NSE	NSE
Lead, Soluble	<2.0	170	*			-	***	-	*	*	•	***	+	*	•		*		*	*	-	18.0	1.5
VOCs																							
Benzene	<0.8	<0.41	<0.26	< 0.27	<0.28	<0.27		<0.26	<0.48	<0.25	<0.41	0.27	≺0.27	<0.26	<0.27	<0.28	<0.26	<0.29	<0.29	<0.48	<0.48	5.6	0.5
s-Butylbenzene	<1.0	<0.23	•	<0.29		<0.29		*	<0.49	<0.62	<0.23	*	<0.28	•	<0.29	*		<0.20	<0.20	<0.49	<0.49	NSE	NSE
t-Butylbenzene	<1.0	<0.24		<0.32	*	<0.32	A	*	<0.50	<0.96	<0.24		<0.32	•	<0.32	•	•	<0.23	<0.23	<0.50	<.60	NSE	NGE
n-Butylbanzene	<1.0	<0.31		<0.29		<0.29	*	*	<0.61	<0.65	<q.31< td=""><td>- #</td><td><0.29</td><td>•</td><td><0.29</td><td>4</td><td></td><td><0.28</td><td><0.28</td><td><0.61</td><td>⇔0.81</td><td>NSE</td><td>NSE</td></q.31<>	- #	<0.29	•	<0.29	4		<0.28	<0.28	<0.61	⇔0.81	NSE	NSE
Chloromethana	<1.0	<0.15	*	<0.61	*	<0.61	•	•	<0.62	40.27	<0.15		<0.61		<0.81	*	•	23	<0.42	<0.62	<0.82	3,0	8.3
cis-1.2-Dichtorpethene	<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-Dichlorgethene	<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
Disopropyl ether	<1.0	1.30	4	5.2		1.9		•	<0.6₽	0.66Q	130	*	62		74	*	*	68	70	56	89	NSE	NSE
Ethylbenzane	<1.0	<0.23	< 0.24	<0.82	<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
Isopropyibenzene	<1.0	<0.27		<0.26	*	<0.26	À	•	<0.43	<0.86	<0.27	•	<0.28	•	<0.26	*	*	<0.19	<0.18	<0.43	<0.43	NSE	NSE
p-isopropyltoluene	<1.0	<0.22	•	<0.24	*	<0.24	•	*	<0.67	<0.58	<0.22	•	<0.24	*	<0.24	4	•	<0.25	<0.25	<0.57	<0.57	NSE	NSE
Methylene chloride	<1.0	<0.22	*	<0.36	A	<0.36	*	*	<0.85	1.6	<0.22	•	<0.36	•	<0.36	•		<0.38	<0.36	<0.85	<0.85	5.0	0.5
Methyl tart bulyl ether	<1.0	<0.53	40.22	< 0.32	< 0.22	<0.32		<0.22	<0.67	<0.87	< 0.63	0.36	<0.32	0.41Q	<0.32	<0.22	0.57Q	<0.20	<0.20	<0.67	<0.67	89	12
Naphibalene	<1.0	<0.66	*	<0.35	<0.89	<0,35	*		<0.59	<0.63	<0.88	•	<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	•	<0.78	*		<0.64	<0.95	<0.27		⊲0.78	•	<0.78	*		<0.17	<0.17	<0.84	<0.54	Mae	NSE
Totuene	<1.0	<0.28	<0.21	<0.27	<0.21	<0.27	•	<0.21	40.47	<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
Tetrachibroethene	<1.0	<0.27	•	<0.43	•	<0.43		R	<0.57	<0.63	<0.27		<0.43	•	<0.43	*		<0.85	<0.85	<0.57	<0.57	8.0	0.5
Trimethyloanzenes (total)	<1.0	<0.55	<1.40	f.09Q	<1.40	0.920		<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	<0.52	480	86
Trichlorosthene	<1.0	<0.20	•	< 0.97	*	<0.37	4		<0.89	<0.39	<0.20	*	≺0.37	•	<0.37	^	•	<0.32	<0.85	<0.72	<0.89	6.0	0.5
Viny! Chloride	<1.0	<0.23	•	<0.20		<0.20	7	•	<0.18	<0.11	<0.23		<0.20		<0.20	•	*	<0.19	<0.19	<0.18	<0.15	0.2	0.02
Xylenes (total)	<1.0	<0.79	<1.34	0.460	<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	<₹.4	10000	1000
PAHs																							
Acenaphthene	•	*	A	4	*	*	<0.47		<0.018	<0.018	•	*	<u> </u>	*		<0.47		<0.027	<0.027	<0.018	<0.018	NSE	N8E
Acensphthylene	•	*	^		•		<0.41	*	<0.023	<0.019	•	,		*		<0.41		<0.032	<0.032	<0.023	<0.023	NAE	NSE
Anthracene	*		•	•	ļ		<0.021		<0.020	<0.020	•	*	-	^	•	<0.021		<0.027	<0.027	<0.020	<0.020	3000	6 00
Banzo(a)anthracene	•	*	*	7	•	*	<0.014	*	₹0.019	0.013Q	*		*	*		<0.014	^	<0.028	<0.026	<0.019	<0.019	NSE	NSE
Benzo(a)pyrane	^	•	•	*	*		<0.015		<0.012	0.02Q		*	*	,	*	<0.016	•	<0,022	0.019Q	<0.012	<0.012	0.20	0.02
Benzo (b) fluorenthens			*	3		• :	<0.015		0.825 Q	0.031Q	A	*	•	*		<0.015	'	<0.030	<0.030	<0.014	<0.014	0.20	0.02
Benzo (ghi) perylene	^	•	. *	*		•	<0.021		0.018 Q	0,025Q	4		,	•	•	< 0.021	*	<0.015	<0.015	<0.016	<0.015	NSE	NSE
Benzo(k)fluoranthene	•	•	*	n			<0.0090	*	0.015 Q	9.024Q	•	•	4	*	•	<0.0090		<0.030	0.0220	<0.013	<0.013	NSE	NSE
Indene (123-cd) pyrene	,		•	•	• _	*	<0.025	*	0.017 Q	<0.021		,		•	•	<0.025	*	<0.022	<0.022	<0.014	<0.014	NSE	NSE
Cłaysene	•	*		•	•	*	<0.016		0.018 Q	0.032Q	,	*	<u> </u>	A	•	<0.016	•	<0.017	0.022Q	<0.018	<0.018	0.20	0.02
Dibenzo (ah) shihracene	· -	*	18	•	•	*	<0.020	A	<0.017	<0.016	*		•	•	•	<0.020	*	<0.020	<0.020	<0.017	<0.017	NSE	NSE
Fluoranthene	^			•	*	•	0.0210	4	0.034 Q	0.051	*	•	4	*	•	<0.015	•	<0.021	0.053Q	<0.028	<0.028	400	80
Fluorena	^	•	•	•	*	A	<0.058	٧	<0.021	<0.017		•	•	•	*	<0.058		<0.029	<0.029	<0.021	<0.021	400	BD
2-Methymaphthalane	*	•	1	*	^		<0.36	*	<0.028	<0.017	•	•	•	•		<0.36	*	0.040Q	<0.033	<0.026	<0.028	NSE	NSE
1-Methylnaphthaisna	•	*	*	•	•	*	<0.36	4	<0.027	<0.017	*	•	-	*	•	<0.38	*	<0.030	<0.030	<0.027	<0.027	MSE	NSE
Naphthalene		***	^	•			<0.42	*	⊲0.027	D.034Q	•	•		, n	*	<0.42	*	<0.031	< 0.031	0.034Q	<0.027	40	8.0
Phenanthrene			*	•	*		<0.046	P	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	*	4	Ħ	•		<0.017	•	<0.024	0.034	<0.020	< 0.020	250	85

TABLE 2

Phenanthrene
Pyrene
Concentrations Expressed as Micrograms per Liter (ugil)
Bold Print Indicates Concentration Above NR 140 Preventive Action Limit (PAL)
Bold Print / Shaded Cett Indicates Concentration Above NR 140 Enforcement Standard (ES)
NSE - No Standard Established

d.0. - Concentration Below Detection Limit
Q - Concentration Detected Between Detection Limit and Quantification Limit
Indicates Analysis For Particular Constituent Not Requested

Mar.28. 2003

PAGE:006 R=77%

TABLE 2
GROUNDWATER MONITORING RESULTS
FORMER JOHNSON BAND AND GRAVEL SITE (conf ill)
(Detected VOC and PAH consiltuants)

GRO 2,300 1,900 - 27,000 1,600 780	Mer-01	ES	PAL
CRO	: -	7777	
SPAC Property Pr	-	NSE	NSE
Lead, Schable		NSE	NSE
Paissenge Color		46	1.6
Brissers 40.82 0.65 40.27 413 40.27 40.26 40.26 40.26 40.46 40.50 40.20 40.20 40.26 40.46 40.50 40.20 40.20 40.26 40.20 40.26 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.20 40.2			
## Description	0.87 Q	6.0	3.0
Sulyberzene	14	MARK	NBE
n-Bulgibaspeine 20 * 12 * 29 * 5.0	0.45 0	NSC	NSE
Citionemistrate 40,55 * 40,61 * 40,61 * 40,61 * 40,61 * 40,61 * 40,61 * 40,61 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,62 * 40,63 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73 * 40,73	<0.28	HEE	NGE
Cit-1,2-Dichlorosethiere	<0.42	3.0	0.5
##### 40.60	72	78	7.8
Cilisporprigitative <0.85 * 0.85Q * 0.85Q * 0.85Q * 0.83Q * 0.83 1.0 0.88Q 3.7 <1.2 * * * * * 0.23 <0.25 <0.85 <0.80 280 85 600 44 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280 280	0.49 Q	160	20
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9-Propylbenzene 45 17 1.1Q 1.3 40.17 40.64 40.66 4.9 40.26 41.0 40.17 40.17 40.64 40.64 40.34 40.17 41.5 40.95 55 Toluene 0.6Q 0.4 40.27 410 40.27 40.21 40.27 40.13 40.47 40.47 41.7 40.23 1.5 41.1 40.13 40.47 40.47 42.2 40.13 41.2 40.64 42.8 Tetrachistroekiene 1.1,Q 1.0,B0 1	130	40	6.0
Toluena 0.6Q 0.4 <0.27 <10 <0.27 <0.21 <0.27 <0.13 <0.47 <0.47 <0.47 <0.23 1.5 <1.1 <0.13 <0.47 <0.47 <0.47 <0.23 <1.5 <1.1 <0.13 <0.47 <0.47 <0.47 <0.22 <0.13 <1.2 <0.84 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.85 <0.	12	NSE :	NSE
Tetranistrockene 1.1Q * 0.56Q * 40.43 * 0.84 <0.65 <0.67 <0.57 <0.57 <0.57 <1.3 <0.25 <1.0 <0.65 <0.65 <0.67 <0.65 <0.65 <0.67 <0.57 <1.8 <0.67 <0.57 <1.3 <0.25 <1.0 <0.65 <0.65 <0.67 <0.65 <0.65 <0.67 <0.65 <0.67 <0.65 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.65 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0.67 <0	0.160	1000	200
Tricitarcellene 40.40 * <0.37 * <0.37 * <0.37 < <0.82 <0.89 <0.89 <0.80 <0.78 <0.23 <1.0 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <0.18 <	4.4	8.8	0.5
Tricktoroethers 40,40 * <0.37 * <0.37 * <0.37 <0.32 <0.89 <0.69 <0.78 <0.23 <1.0 <0.32 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.89 <0.	48	486	96
Virgi Chloride 40.46 40.20 0.230 40.29 40.19 40.18 40.18 40.22 42.0 40.19 40.18 40.18 40.18 40.18 40.18 40.19 40.48 40.11 2.6	0.89 Q	5.6	0.5
	0.84	0,2	\$0.6
White Dotal Co. 27.1 10 0.850 <88 <0.87 7.580 5.04 <0.35 <1.4 <1.4 <2.2 <0.87 <1.0 <0.35 <0.36 <1.4 <1.4 <1.4 <0.70 <0.35 <0.35 <1.1 11.8	3.8 1	10080	106D
PANs			
Agarasphiliane 27Q 42Q <26 <2,600 <240 32 444 1.4 8.1 * * * * * * * * * * * * * * * * * * *		MSE	HSE
Accreptibilities 49.2 <20 <25 <2,500 <210 <8.2 ' 2.7 <0.18 <0.92 ' * * <0.034 <0.032 <0.032 <0.023 <0.023 <0.023 <0.072 Q <0.092 0.028 Q <0.019 7.3		NSE	NSE
Authragens 23Q 13Q <3.8 270Q <10 <10 * 5.8 1.5 42 * * <0.029 <0.027 <0.020 0.050 Q <0.027 0.050 Q <0.027 0.039 Q <0.020 10		3000	960
Energo(a)emfirmecane 10 S2Q 19 2,400Q 10Q 32 1.5 Q -0.35 Q 3.9 1 -0.028 -0.028 -0.019 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028 -0.028		MRE	NSE
Remoral pyreme <0.22 1.10 0.990 <00 <7.5 0.540 0.080 1.20 0.080 0.001 <0.014 <0.012 <0.014 <0.012 <0.014 <0.014 0.083 0.083 0.080		1.26	0.92
Genzo (b) illustranitisene <0.00 9.4 5.00 380 <7.5 <7.5 * <0.00 <0.11 1.1 Q * * * <0.000 <0.014 <0.014 <0.014 <0.014 <0.030 <0.030 <0.072 <0.070		0.20	0.42
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| Pyrate | 11 | 20 | 7.90, | <2,000 | 24 | Z20 |
| Concentrations Expressed as Micrograms per Lifer (ug/t) |
| Bold Print Indicates Concentration Above NR 140 Preventive Action Limit (PAL)
| Bold Print I Sheed Cell Indicates Concentration Above NR 140 Enforcement Standard (ES)
| NGE - No Standard Established |
| Concentration Below Detection Limit |
| Concentration Detected Between Detection Limit |
| Concentration Detection Detect



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.

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.



Mr. Robert Johnson 08/12/02

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.

2 glant

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 fpr



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 abovereferenced 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

nancy DReg

Thomas Dueppen, Moraine Environmental

Enclosure



414/263-8680

WDNR SER Files

C:

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	1	
Thomas Dueppen, P.G. Moraine Envilonmental, Inc. 1834 19th Ave Grafton, WI 53024 Subject: Fee Notice/Invoice FID: 268438610; BRRTS: 63-68- Site Name: Former Johnson Sand & G. Dear Mr. Duepper:		7 2000 DEGETWEN JUL 1 1 2000 By
On 7-3-200 the Wisconsin Department of Natur for which you requested review, or which by code require	al Resources r s a review and	received the following submittal, fee:
Site Investigation Report Long Remedial Action Options Report Closu Remedial Design Report NR 7	'08 (c) No Furti r	ing Plan undards Report her Action Request
Please make the check payable to: State of Wisconsin, to the Program Assistant's attention at the address shown	Department of	f Natural Resources, and send it
We will hold your submittal until your check arrives or you Once we receive the check, we will enter the case on our the date we receive your request. If we don't hear from your reviewed, in our case file.	first-in-first-ou	t (FIFO) review list; effective on
Please return this letter with your submittal.		VE O B I III ===
Thank you,	D	
Sincerely,		JUL 1 1 2000
Lakhonda Chook	Ву	
Program Assistant Bureau of Remediation and Redevelopment		

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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 Dueppen, P.G. moraine Environmental, Inc. 1834 12TH ALE Grafton, WI 53024
Subject: Fee Notice/Invoice FID: <u>268438610</u> ; BRRTS: <u>63-68-04228</u> Site Name: Former Johnson Sand & Grave
Dear Mr. Dueppen:
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 Cong-Term Monitoring Plan Closure Request NR 720.19/ Soil Standards Report NR 708 (c) No Further Action Request Other Other
This submittal requires a \$\frac{150}{0.0000}\$ 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 Chook
Program Assistant Bureau of Remediation and Redevelopment 414/263-8680

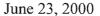


WDNR SER Files

C:



Environmental Management Services



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 / つまたとっていません。

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

Enclosure

cc: Robert Johnson

PECFA Claim

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

Didn't see any check

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 Dovle, 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

X

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

Department of Natural Resources July 3, 2003 Page 2

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

Tank Capacity Tank Contents

10,000 gallons Diesel

10,000 gallons Unleaded Gasoline

Tank Type
Aboveground
Aboveground

Commerce I.D.# 672700126

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.

Department of Natural Resources July 3, 2003 Page 3

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.

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- 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

-Klant Sout

President

cc:

Mr. Wayne Johnson

enclosures

TABLES

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

L												(Dete	CLEU VOCS	allu FAI 18)														
Analyte						/W-1 (EXT														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		1775
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
VOCs																												
Вепzепе	<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-Butvibenzene	<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	*	*	<0.15	<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
	8,5	7.8Q	*	1.6	-	+			-		<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
Tetrachloroethene Toluene	<5.0	<2.8	<0.42	0.40Q	<42	1.1Q <0.27	<0.27	-	<0.21	1.3 Q	<0.03	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
	<5.0	2.5Q	31	<0.37	2,350	<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
Trichloroethene 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
	8.7	10.7Q		0.72Q	77Q	0.360	3.53Q		<7.87	0.40 Q	<0.15	FP	FP FP	<1.0	<0.79	<1.34	<0.20	<1.34	<0.67		<1.34	<0.35	<0.35	<1.4	<1.4	<1.1	10000	1000
Xylenes (total) PAHs	0.7	10.70	1	0.72Q	110	0.77	3.5502		1 .01	0.40 Q	V0.55	I FF	FF	<u> </u>	VO.19	1.54	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1.54	10.07		11.54	10.55	1 70.55	-1.4	1 71.7		10000	1000
	 -	4 200	77	-47		000	T	-01	<2400	-42	200.0	FP	FP	-	*	*		*	*	<0.47	T *	<0.027	<0.027	<0.018	<0.018	<0.018	NSE	NSE
Acenaphthene		4,300	77	<47		990	*	<94	<2400	<43	200 Q	FP	FP FP		*	*	*	 	*	<0.47		<0.027	<0.027	0.047 Q	<0.018	<0.019	NSE	NSE
Acenaphthylene	ļ	<830	17	<41		<120	+	<82	<2100	1.5 Q	<130	FP FP	FP -		*			 	+	<0.021	******	<0.032	<0.032	<0.020	<0.020	<0.020	3000	600
Anthracene	-	<410		<2.1	-	<420	*	<42	310	<43	<110	FP	FP		*	*		*	*	<0.021	+	<0.027	0.053Q	0.027 Q	<0.019	<0.012	NSE	NSE
Benzo(a)anthracene	-	2,900	72	38	*	670Q	-	81	1800	9.4	5.6	FP				*			*	<0.014	*	<0.026	0.0550	0.027 Q	<0.013	<0.014	0.20	0.02
Benzo(a)pyrene		21Q	2.2	<1.5		9.9Q		<3.0	<78	0.72 Q			FP		*				*		*	<0.030	0.066Q	0.025 Q	<0.012	<0.013	0.20	0.02
Benzo (b) fluoranthene		<110	19	6.8		140	-	13	540	<0.60	4.1 Q	FP FP	FP FP	-	*			*	*	<0.015 <0.021	*	<0.030	0.066Q 0.040Q	0.035 Q	<0.014	<0.013	NSE	NSE
Benzo (ghi) perylene	*	<20	<1.1	<2.1		<6.3		<4.2	<110	<0.30	<1.6			*	*	- 		*	*	<0.0090		<0.019	0.040Q 0.059Q	0.003 0.022 Q	<0.013	<0.019	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	*		0.039Q	0.022 Q	<0.013	<0.013	NSE	NSE
Indeno (123-cd) pyrene		<22	<1.2	<2.5		9.8Q		<5.0	<130	<0.44	<2.3	FP	FP		*			-	*		*	<0.022				<0.021	0.20	0.02
Chrysene		790	<64	60		1,100	*	98	3100	4.3	27	FP	FP -						-	<0.016		<0.017	0.062	0.021 Q	<0.018		NSE	NSE
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		80
Fluoranthene	*	310	150	5.8Q	*	83Q	*	<30	<1600	<34	<88	FP	FP	*		*				<0.015	<u> </u>	<0.021	0.12	<0.028	<0.028	<0.013	400	
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	<u> </u>	0.068 Q	0.046Q	<0.027	<0.027	<0.017	NSE	NSE
Naphthalene	* 1	7,600	220	<42	*	420	*	120	2600	85 Q	180 Q	FP	FP	*	*	*	*	*	*	<0.42	<u> </u>	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	*	*	*	7	*	*	<0.017	-	<0.024	0.083	<0.020	<0.020	<0.017	250	50

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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) Page 1 of 4

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

											(Detec	ted 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	1				<u> </u>							1					-							,		
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	7	€.	<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	*	17	<0.19	<0.43	<0.43	<0.66	NSE	NSE
p-Isopropy!toluene	<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	*	°E	<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	-	21	<0.27	<0.59	<0.59	<0.63	40	8.0
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	-	1/	<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
Tetrachlorcethene	<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	*	7/	<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	*	ν,	<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	<0.020	<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	34:	<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	*	π	*	*	*	*	<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	*	*	*	*	*	т	< 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	8.0
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 Evoressed as		nantitar (/\\		-									1												

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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

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TABLE 1 GROUNDWATER ANALYTICAL RESULTS FORMER JOHNSON SAND AND GRAVEL SITE

(Detected VOCs and PAHs)

Analyte					MV	N-5				120100100						MW-6							1
	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	ES	PAL
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
VOCs																		4			<u></u>		-
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	<.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	ż	*	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
PAHs																							
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		*	*	*	*	*	<0.017	*	<0.024	0.034	<0.020	<0.020	250	50

* - Magagarana in 1800 - No paragraphi parag

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

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

	1											ı'	Detected		A(15)					EXT-2			·		EXT-3			T	
Analyte	0 - 07	1 20	0-1-00	1. 00	1 00	MW-7	0.700	1 14 24	1 1 04	1 14 00	D 00	A 20	0 + 00		le Well	June-01	Mar-02	Jan-00	Dec-00	Mar-01	June-01	Dec-02	Jan-00	Dec-00	Mar-01	Jun-01	Dec-02	ES	PAL
	Sep-97	Jun-98	Oct-98	Jan-99	Apr-99	Jul-99	Oct-99	Mar-01	June-01	Mar-02	Dec-02	Apr-99	Oct-99	Dec-00	Mar-01	30116-01	Wal-02	Jan-00	Dec-00	Wat-01	June-01	Dec-02.	Jai1-00	Dec-00	*	FP	FP	NSE	NSE
GRO	2,300	1,900		27,000	1,400	790				-		<50		<u> </u>					-			- d100			*	FP	FP	NSE	NSE
DRO	71,000	220,000	76,000	5,900,000	290,000	310,000	*		-													<100			*.	FP	FP		1.5
Lead, Soluble	*		*	*	*	<2.8	*	*			*	*	*										<u> </u>			FP	FP	15	1.5
VOCs																							1		2.27.0			50	
Benzene	<0.82	0.63	<0.27	<13	<0.27	<0.26	<0.27	<0.29	<0.48	<0.48	<0.50	<0.23	<1.0	<0.29	<0.29	<0.48	<0.48	<0.27	0.60 Q	<0.29	<1.2	<0.25	0.33	3.4	0.87 Q	FP	FP	5.0	0.5
s-Butylbenzene	27	*	19	*	3.5	*	2.5	<0.20	<0.49	<0.49	<1.2	*	<1.0	<0.20	<0.20	<0.49	<0.49	0.41	3.6	<0.20	<1.2	<0.62	8.8	27	14	FP	FP	NSE	NSE
t-Butylbenzene	<0.48	*	0.86Q	*	0.50Q	*	0.62	<0.23	<0.50	<0.50	<1.9	*	<1.0	<0.23	<0.23	<0.50	<0.50	<0.32	<0.46	<0.23	<1.2	<0.9€	<0.32	<0.58	0.45 Q	FP	FP	NSE	NSE
n-Butyibenzene	20	*	12	*	2.9	*	5.0	<0.28	<0.61	<0.61	<1.3	*	<1.0	<0.28	<0.28	<0.61	<0.61	<0.29	0.68 Q	<0.28	<1.5	<0.65	3.5	22	<0.28	FP	FP	NSE	NSE
Chloromethane	< 0.30	*	<0.61	*	< 0.61	*	<0.61	<0.42	<0.62	<0.62	<0.54	*	<2.0	<0.42	<0.42	<0.62	<0.62	<0.61	<0.84	<0.42	<1.6	<0.27	<0.61	<1.1	<0.42	FP	FP	3.0	0.3
cis-1,2-Dichloroethene	4.6	*	5		1.8	*	1.1	<0.27	<0.73	<0.73	<1.6	<0.21	<1.0	<0.27	<0.27	<0.73	<0.73	3.7	53	4.7	32	3.9	15	320	72	FP	FP	70	7.0
trans-1,2-Dichloroethene	<0.50	*	<0.79		< 0.79		<0.79	<0.35	<0.79	<0.79	<1.6	•	<1.0	<0.35	<0.35	<0.79	<0.79	<0.79	1.3 Q	<0.35	<2.0	<0.80	<0.79	1.7 Q	0.49 Q	FP	FP	100	20
Diisopropyl ether	<0.86	*	0.89Q	*	0.63Q	*	0.93	1.0	0.98 Q	3.7	<1.2	*	*	<0.23	<0.23	<0.60	<0.60	170	230	85	400	44	140	280	140	FP	FP	NSE	NSE
Ethylbenzene	80	28	3.5	19Q	0.71Q	9.2	4.5	<0.57	<0.43	<0.43	<1.1	<0.23	<1.0	<0.57	<0.57	<0.43	<0.43	< 0.32	<1.1	<0.57	<1.1	<0.53	0.54	69	22	FP	FP	700	140
Isopropyibenzene	39	•	12		0.85	*	1.6	<0.19	<0.43	<0.43	<1.3	<0.24	<1.0	<0.19	<0.19	<0.43	<0.43	<0.26	<0.38	<0.19	<1.1	<0.66	2.4	32	11	FP	FP	NSE	NSE
p-Isopropyltoluene	4	*	16	*	6.7	-	6.1	<0.25	<0.57	<0.57	<1.2	<0.26	<1.0	<0.25	<0.25	<0.57	<0.57	<0.24	<0.50	<0.25	<1.4	<0.58	<0.24	16	24	FP	FP	NSE	NSE
Methylene chloride	<0.44	*	0.42Q	-	< 0.36	*	< 0.36	< 0.36	<0.85	< 0.85	<0.94	*	<1.0	<0.36	<0.36	<0.85	<0.85	<0.36	<0.72	<0.36	<2.1	<0.47	<0	<0.90	<0.36	FP	FP	5.0	0.5
Methyl tert butyl ether	<1.1	0.4	<0.32	<11	<0.32	0.48Q	<0.32	<0.20	<0.67	< 0.67	<1.7	•	•	<0.20	<0.20	<0.67	<0.67	0.35	0.80 Q	<0.20	<1.7	<0.87	0.36	1.1 Q	0.46 Q	FP	FP	60	12
Naphthalene	220	•	1.7	<44	< 0.35	*	56	<0.27	<0.59	<0.59	<1.3	<0.38	<1.0	<0.27	<0.27	<0.59	<0.59	0.68	<0.54	<0.27	<1.5	< 0.63	3.2	190	130	FP	FP	40	8.0
n-Propyibenzene	45		17	•	1.1Q	* .	1.3	<0.17	<0.64	< 0.64	<1.9	<0.26	<1.0	<0.17	<0.17	<0.64	<0.64	<0.76	<0.34	<0.17	<1.6	<0.95	4	36	12	FP	FP	NSE	NSE
Toluene	0.6Q	0.4	<0.27	<10	<0.27	<0.21	<0.27	<0.13	<0.47	<0.47	<1.7	<0.23	1.1	<1.1	<0.13	<0.47	<0.47	0.35	<2.2	<0.13	<1.2	<0.84	0.28	<2.8	0.18Q	FP	FP	1000	200
Tetrachioroethene	1.1Q		0.56Q	*	< 0.43	*	0.84	<0.85	<0.57	<0.57	<1.3	<0.25	<1.0	<0.85	<0.85	<0.57	<0.57	17.0	14	9.1	11	3.6	12	9.7	4.4	FP	FP	5.0	0.5
Trimethylbenzenes (total)	184	92	43.9	427Q	4.2Q	42	33	<0.34	<0.52	<0.52	<1.4	<0.50	<1.0	<0.34	<0.34	<0.52	<0:52	< 0.49	<0.68	< 0.34	<1.3	<0.69	<3.27	112	48	FP	FP	480	96
Trichloroethene	< 0.40	*	< 0.37	+	<0.37	*	< 0.37	<0.32	<0.89	<0.89	<0.78	<0.23	<1.0	<-0.32	<0.32	<0.89	<0.89	2.9	6.0	1.4	2.6 Q	1.2	1.7	0.85 Q	0.89 Q	FP	FP	5.0	0.5
Vinyi Chloride	<0.46	*	<0.20	*	0.23Q	*	<0.20	<0.19	<0.18	<0.18	<0.22	•	<2.0	<0.19	<0.19	<0.18	<0.18	<0.20	2.0	<0.19	<0.45	<0.11	<0.20	2,5	0.64	FP	FP	0.2	0.02
Xyienes (total)	27.1	10	0.85Q	<66	< 0.67	7.58Q	5.04	< 0.35	<1.4	<1.4	<2.2	< 0.67	<1.0	< 0.35	< 0.35	<1.4	<1.4	<0.67	<0.70	<0.35	<3.5	<1.1	<0.67	11.6	3.8	FP	FP	10000	1000
PAHs						<u> </u>																							
Acenaphthene	27Q	42Q	<28	<2,800	<240	32	*	4.4	1.4	8.1	*		*	<0.029	<0.027	<0.018	<0.018	<9.4	0.20	<0.027	0.069	<0.018	<9.4	<43	150 Q	FP	FP	NSE	NSE
Acenaphthylene	<9.2	<20	<25	<2,500	<210	<8.2		2.7	<0.18	<0.92	*	*	*	< 1.034	<0.032	<0.023	<0.023	<8.2	0.072 Q	<0.032	0.023 Q	<0.019	<8.2	7.3	<160	FP	FP	NSE	NSE
Anthracene	2.3Q	13Q	<3.8	270Q	<10	<10	•	6.8	1.5	42	+	*	*	< 0.029	<0.027	<0.020	<0.020	<0.42	0.050 Q	<0.027	0.039 Q	<0.020	<0.42	10	<140	FP	FP	3000	600
Benzo(a)anthracene	10	32Q	19	2,400Q	10Q	32		1.5 Q	<0.35 Q	3.9	+	*	*	<0.028	<0.026	<0.019	<0.019	<0.28	<0.026	<0.026	0.051 Q	0.037C	3.1	5.6	18	FP	FP	NSE	NSE
Benzo(a)pyrene	<0.22	1.1Q	0.98Q	<90	<7.5	0.54Q		0.34 Q	<0.096	1.2 Q	-	*		<0.015	<0.014	<0.012	<0.012	<0.30	<0.014	< 0.014	0.059	0.058	<0.30	0.48 Q	6.0	FP	FP	0.20	0.02
Benzo (b) fluoranthene	<0.80	9.1	3.0Q	350	<7.5	<7.5		<0.60	< 0.11	1.1 Q	*		*	<0.020	<0.030	< 0.014	<0.014	<0.30	<0.030	<0.030	0.072	0.072	0.8	<0.60	4.0 Q	FP	FP	0.20	0.02
Benzo (ghi) perylene	<0.88	<1.1	<1.3	<130	<10	<0.42		<0.30	<0.12	<0.60	•	•	*	<0.016	<0.015	<0.015	<0.015	<0.42	<0.015	<0.015	0.046 Q	0.07.2	<0.42	<0.30	1.6 Q	FP	FP	NSE	NSE
Benzo(k)fluoranthene	0.50Q	<0.45	1,3Q	<54	<4.5	<0.90		<0.38	<0.10	0.85 Q	-	*		< 0.020	<0.019	<0.013	<0.013	<0.18	<0.019	<0.019	0.047	0.056Q	<0.18	0.49 Q	3.0 Q	FP	FP [NSE	NSE
Indeno (123-cd) pyrene	<0.96	<1.2	<1.5	<150	<12	<0.50	*	<0.44	<0.11	<0.56	-		*	< 0.032	<0.022	< 0.014	<0.014	<0.50	<0.022	<0.022	0.043 Q	0.058Q	<0.50	<0.44	<2.2	FP	FP	NSE	NSE
Chrysene	16	42Q	32	3,300	17Q	38		2.1	0.45	6.7	*	+	*	<0.018	< 0.017	<0.018	<0.018	< 0.32	0.020 Q	<0.017	0.056 Q	0.064	1.9	2.5	17	FP	FP	0.20	0.02
Dibenzo (ah) anthracene	<0.96	4.6	2.3Q	150Q	<10	<2.0		<0.40	<0.14	<0.68	•		*	<0.018	<0.020	<0.017	<0.017	<0.40	<0.020	<0.020	<0.017	0.018Q	<0.40	<0.40	<2.0	FP	FP	NSE	NSE
Fluoranthene	1.9Q	1.4Q	3.5Q	260Q	9.3Q	<7.5		4.8	0.99	6.8		-	*	< 0.023	<0.021	<0.028	<0.028	<0.30	0.066 Q	<0.021	0.12	0.091	0.65	7.6	<110	FP	FP I	400	80
Fluorene	30Q	74	28Q	2,000	39Q	31	*	7.5	2.0	12	*	*	+	<0.031	<0.029	<0.021	<0.021	<1.2	0.26	<0.029	0.15	< 0.017	7.8	69 Q	330 Q	FP	FP	400	80
2-Methylnaphthalene	360	370	<22	7,800	<180	230		7.0	0.62 Q	5.7	•	+	-	<0.035	1.2	<0.028	<0.028	<7.2	0.56	0.34	0.37	0.022Q	<7.2	630	2100	FP	FP	NSE	NSE
1-Methylnaphthalene	380	450	150	12,000	<180	180		10.0	2.1	17		+	*	<0.032	0.63	<0.027	<0.027	<7.2	1.0	0.27	0.42	0.029Q	43	480	1600	FP	FP	NSE	NSE
Naphthalene	120	87	<25	<44	<210	44		3.7	0.55 Q	13	*		<1.0	<0.033	1.5	<0.027	<0.027	<8.4	0.14	0.097 Q	0.054 Q	<0.024	<8.4	160	310 Q	FP	FP	40	8.0
Phenanthrene	65	680	210	26,000	220	370	*	4.4	1.2	18	-	*	-	<0.030	<0.028	<0.019	<0.019	6.6	0.32	<0.028	0.16	0.037	60	110	470	FP	FP	NSE	NSE
Pyrene	11	20	7.8Q	<2.000	24	22Q		17	3.7	73	*	-	*	<0.026	<0.024	<0.020	<0.020	<0.34	0.084	<0.024	0.12	0.11	3.4	<38	<120	FP	FP	250	50
rylene	11	20	7.80	_ ^2,000		1 4414		1.	1 3.7	1 . (3			1	10.020	10.024	10.020	1.0.020	L	0.00	0.021			1		- T- 100				

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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 E

FP = Free Product (see Table 2, Groundwater Elevations/Free Product Actions)

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

MW - 1 / EXT - 1

99.69

Surface Elevation

Carrage Elevane		00:00	ı		
Top of Casing El	levation	99.12/99.17		Free Product Abateme	nt
Top of Screen E	levation	76.69/79.69		Tree Froduct Abateme	
Bottom of Scree	n 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 H20 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	70.00	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											
Top of Casing Elevation 99.30 Free Product Abatement 79.69											
										Bottom of Screen Elevation 64.69	
Product Cumula											
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.

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

		-	TABLE 2										
	GROUNDWATER ELEVATIONS / FREE PRODUCT ACTIONS												
	FORM		SAND AND GRAVE	•									
	TOWN OF PEWAUKEE, WI												
	MW - 7												
Surface Elevatio													
	Top of Casing Elevation 99.55 Free Product Abatement												
	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 H20 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

			TOWN O					
MW - 1 / EXT -	1							
Surface Elevation	on							
Top of Casing E	levation							
Top of Screen E	Top of Screen Elevation							
Bottom of Scree	en Elevation							
Measurement	DTW	Gr	oundwater					
Date	(Casing)	E	Elevation					
SEE TABLE 2								
		_						

_				
	MW - 2			
	Surface Elevatio	n		99.77
	Top of Casing E	levation		99.34
Ì	Top of Screen E	levation		76.77
	Bottom of Scree	n Elevation		61.77
	Measurement	DTW	G	roundwater
	Date	(Casing)		Elevation
	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
1	12/13/2000	23.96		75.38
	3/12/2001	22.98		76.33
l	6/26/2001	20.75		78.59
1	3/10/2002	24.73		74.61
ļ	12/18/2002	25.41		73.93
Ì				
1				

TABLE 3 GROUNDWATER ELEVATIONS

FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401
TOWN OF PEWAUKEE, WI

			1011110
MW - 3			
Surface Elevation	on		99.27
Top of Casing E	levation		98.81
Top of Screen E	levation		79.27
Bottom of Scree	en Elevation		69.27
Measurement	DTW	Gr	oundwater
Date	(Casing)	E	Elevation
6/16/1998	23.74		75.07
10/14/1998	25.10		73.71
1/21/1999	28.22		70.59
4/15/1999	24.10		74.71
7/19/1999	21.65		77.16
10/21/1999	26.43		72.38
1/18/2000	28.58		70.23
12/13/2000	26.60		72.21
3/12/2001	23.90		74.91
6/26/2001	22.03		76.78
3/10/2002	25.75		73.06
12/18/2002	28.21		70.60

IMVV - 4										
Surface Elevatio	urface Elevation									
Top of Casing E	levation		98.78							
Top of Screen E	levation		79.20							
Bottom of Scree	n Elevation		69.20							
Measurement	DTW	G	roundwater							
Date	(Casing)		Elevation							
6/16/1998	23.97		74.81							
10/14/1998	25.26		73.52							
1/21/1999	28.20		70.58							
4/15/1999	24.27		74.51							
7/19/1999	21.76		77.02							
10/21/1999	26.43		72.35							
1/18/2000	28.65		70.13							
12/13/2000	26.58		72.20							
3/12/2001	no access									
6/26/2001	22.12		76.66							
3/10/2002	25.86		72.92							
12/18/2002	28.14		70.64							

TABLE 3 GROUNDWATER ELEVATIONS

FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401

IAMOT	OF	DEMANDEE MAD	
LOVVIA	OF	PEWAUKEE, WI	

MW - 5				_
Surface Elevati	on		99.62	
Top of Casing I	Elevation		99.32	
Top of Screen	Elevation		79.62	
Bottom of Scre	en Elevatior	1	69.62	
Measurement	DTW	Gr	oundwate	r
Date	(Casing)	E	Elevation	
6/16/1998	24.91		74.41	
10/14/1998	26.25		73.07	
1/21/1999	29.04		70.28	
4/15/1999	25.24		74.08	
7/19/1999	22.69		76.63	
10/21/1999	27.41		71.91	
1/18/2000	no access			
12/13/2000	no access			
3/12/2001	no access			
6/26/2001	23.12		76.20	
3/10/2002	no access			
12/18/2002	29.03		70.29	

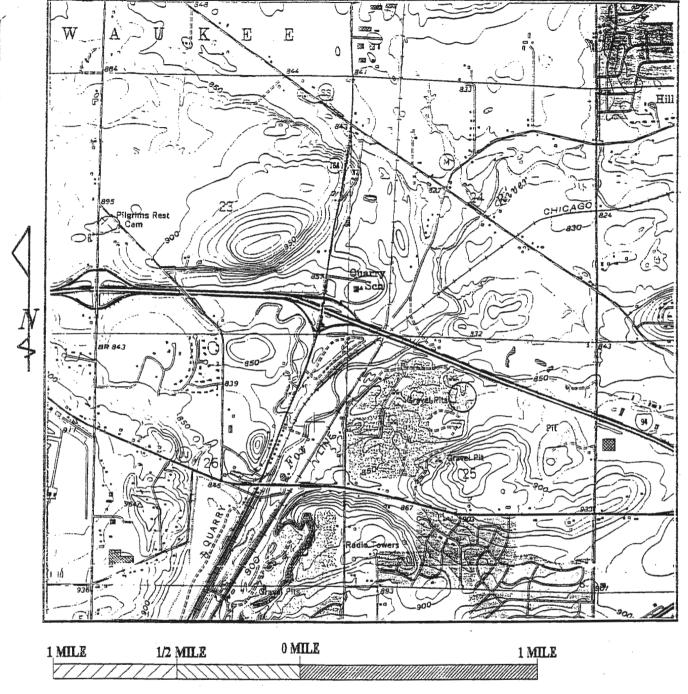
<u>'</u>	VACINEE, VVI			
	MW - 6			
	Surface Elevation		99.88	
	Top of Casing Elevation		99.53	
	Top of Screen	Elevation		80.58
	Bottom of Scre	en Elevatior	1	70.58
	Measurement	DTW	Gr	oundwater
	Date	(Casing)	E	Elevation
	6/16/1998	24.85		74.68
	10/14/1998	26.14		73.39
	1/21/1999	29.05		70.48
	4/15/1999	25.13		74.40
	7/19/1999	22.01		77.52
	10/21/1999	27.35		72.18
	1/18/2000	29.10		70.43
	12/13/2000	27.49		72.04
	3/12/2001	24.79		74.74
	6/26/2001	23.06		76.47
	3/10/2002	26.68		72.85
	12/18/2002	29.05		70.48

TABLE 3 GROUNDWATER ELEVATIONS

FORMER JOHNSON SAND AND GRAVEL SITE, MEI #1401 TOWN OF PEWAUKEE, WI

		104414 01		VVAOINEE, VVI			
MW - 7				EXT - 2			
Surface Elevati	on			Surface Elevati	on		
Top of Casing I	Elevation			Top of Casing I	Elevation		
Top of Screen I	Elevation			Top of Screen I	Elevation		
Bottom of Screen	en Elevation	1		Bottom of Screen	en Elevatior	11	
Measurement	DTW	Groundwater		Measurement	DTW	Gr	oundwater
Date	(Casing)	Elevation		Date	(Casing)	f	Elevation
See Table 2				See Table 2			
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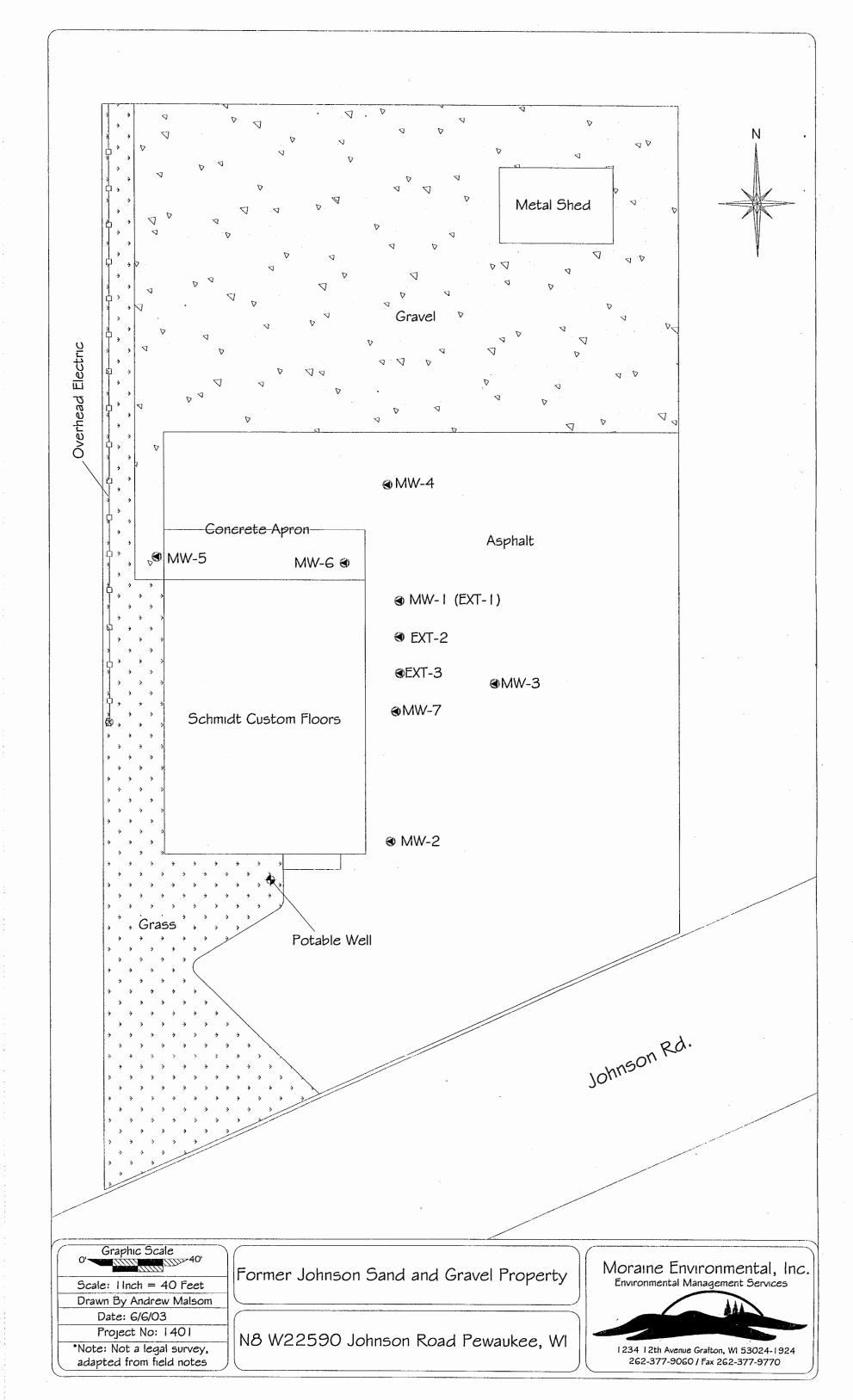
FIGURES

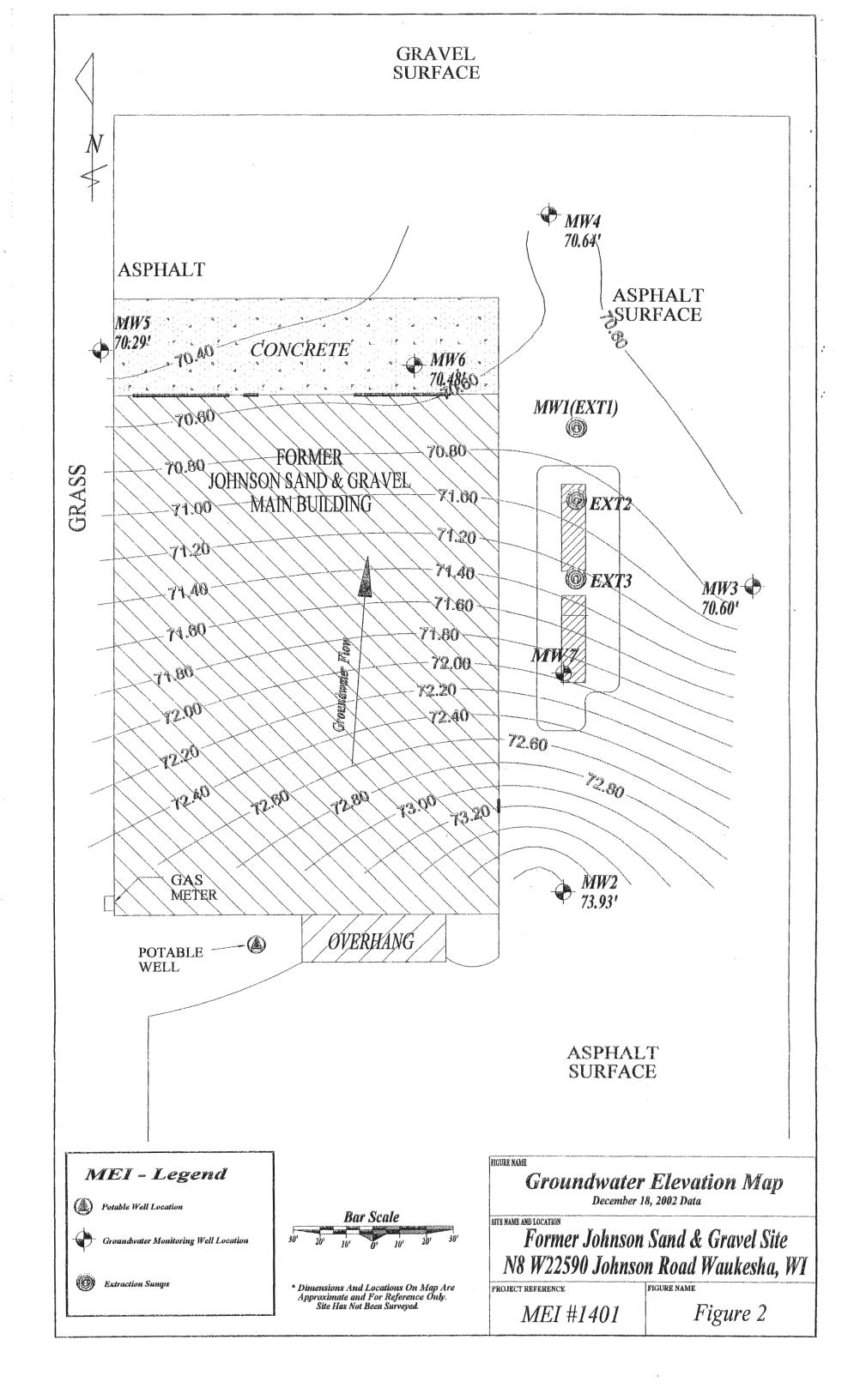


Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

— SITE LOCATION

Former Johnson Sand and Gravel N8 W22590 Johnson Road Waukesha, Wisconsin Moraine Environmental, Inc. MEI #0305 Figure 1





SUPPLEMENTAL DATA FROM INVESTIGATION AND REMEDIATION WORK



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

DOCUMENT CERTIFICATION

"I, <u>Thomas Dueppen, P.G.</u> , hereby certify that I am a Professional hydrogeologist as that term is defined in s. NR 712.03 (1), 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 Vuespen, P.6. 6/26/00 Signature and title Date
"I, Kenneth G. Fries, P.E., hereby certify that I am a Professional engineer 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."
Neurth Y. Fine Technical Operations Mgr. 6/29/00_ Signature and title Date

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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.

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

REMEDIATION CONTRACTORS:

[Sump Installation]

Midwest Engineering, Inc.

205 Wilmont Drive

Waukesha, Wisconsin

Phone: (262) 521-2125

1

[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:

Tank Capacity 10,000 gallons 10,000 gallons

<u>Tank Contents</u>
Diesel
Unleaded Gasoline

Tank Type
Aboveground
Aboveground

Commerce I.D.# 672700126 672700127

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:

- 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 <u>Environmental Factors</u> (EF) as listed in Comm 47.337(3) are present at the site. These EF are:
 - a) documented expansion of a plume margin;
 - 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. \triangle W.t. A300 22-24' 7200 28-30'

COMM 46 / NR 746 Table 1 Indicators of Residual Petroleum Product in Soil Pores		
Substance	Soil Screening Levels (µg/kg)	
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	

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.

Substance	Direct-Contact Contaminant Concentrations (µg/kg)	Basis
Benzene	1,100	Cancer Risk
1,2-DCA	540	Cancer Risk

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.
- 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 x 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 : <u>97031</u>

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

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: <u>Johnson Sand & Gravel, 20685 W. National Avenue, New Berlin, Wisconsin</u> 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 NR 720.09/720.11 Generic RCLs NR 720.19(2) Soil Performance Stds. XNR 720.19(3) Site Specific Stds. Groundwater NR 140.10 Table 1 & Table 2 Values NR 140.28(2) PAL Exemption XNR 726.05(2)(b) Natural Attenuation
Contaminant Type(s): <u>Diesel / Unleaded Gasoline</u> Quantity Released: <u>unknown</u>
Date of Incident/Discovery: March 30, 1994 Zoning of Property: Commercial
Enforcement Actions Closed Out?Yes NoX_NA Permits Closed Out?Yes NoXNA
Form 4 Pending?YesX NoNA 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: <u>Thomas Dueppen</u> Company Name: <u>Moraine Environmental, Inc.</u>
If not site owner, relationship to site owner:N/AEnvironmental ConsultantMoraine Environmental, Inc
Address: 1234 12th Avenue, Grafton, Wisconsin 53024
Telephone Number: (<u>262</u>) <u>377-9060</u> FAX Number: (<u>262</u>) <u>377-9770</u>
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? X Yes No 2. SOIL PRE-REMEDIATION OR INVESTIGATION ANALYTICAL RESULTS Extent Defined? X 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 X No Maps of Pre-remedial Sample Locations Attached? Yes X_No 3. SOIL POST REMEDIATION ANALYTICAL RESULTS Remedial Action Completed? X Yes No 720.19 Analysis? X Yes No (If yes, attach supporting documentation) Were Soils Excavated? __Yes _X No Quantity:__ Disposal Method:__ Final Confirmation Sampling Methods: Hollow Stem Auger borings Soil Disposal Form Attached? __Yes __X No Final Disposal Location: Drill cuttings disposed at Metro Landfill, Franklin Estimated volume of insitu soils exceeding NR 720 RCLs: 1,466 cu. vd. Tables for Post Remedial Analytical Results Attached? Yes X No Maps of Post Remedial Sample Locations Attached? Yes X 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? X Yes No NA Remedial Action Completed? Yes X No NA
of Sample Rounds: 7 Depth(s) to Groundwater/Flow Direction(s): 25+/- 3 feet / northwest
Field Analyses? X Yes No Lab Analyses? X 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? YesXNo
Any Potable Wells Within 1200 Feet of Site? X Yes No If Yes, How Many? Several, one well within 100 feet
Have They Been Sampled? X Yes No Have Well Owners/Occupants Been Notified of Results? X Yes No
Preventive Action Limit Exceeded? X Yes No (If Yes, identify location(s) MW-1(EXT-1), EXT-2, EXT-3, MW-7
Enforcement Standard Exceeded? X Yes No (If Yes, identify location(s) MW-1(EXT-1), EXT-2, EXT-3, MW-7
Tables of Analytical Results Attached? X Yes No Map of Groundwater Sample Locations Attached? X 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 DAT	TE:	[] Approved [] Denied	
(Signature)	(Signature)	(Signature)	(Signature)
SECOND REVIEW D	PATE:	_ [] Approved [] Denied	
(Signature)	(Signature)	(Signature)	(Signature)
COMMITTEE RECO	MMENDATION:		
	e Approved Per:		
	Restrictions Groundwater Use Restrict	dam.	
	_ Croundwater Use Restrict _ Zoning Verification	non	
	Deed Restriction		
	Deed Affidavit		
	Site Specific Close Out Le Well Abandonment Docur	etter Necessary	
	Well Abandonment Docur	mentation	
	Soil Disposal Documentat Public Notice Needed	non	
	_ THE 140 Exemption For		
	Specific Comments:		
Closure	e Denied, Needs More:		
	_ Investigation Groundwater Monitoring		
	Soil Remediation		
	Groundwater Remediation	n	
		andspreading Or Biopile Destiny	

WISCONSIN DEPARTMENT OF NATURAL RESOURCES Case Summary and Close Out Form Instructions

Form 4400 -202 5/98

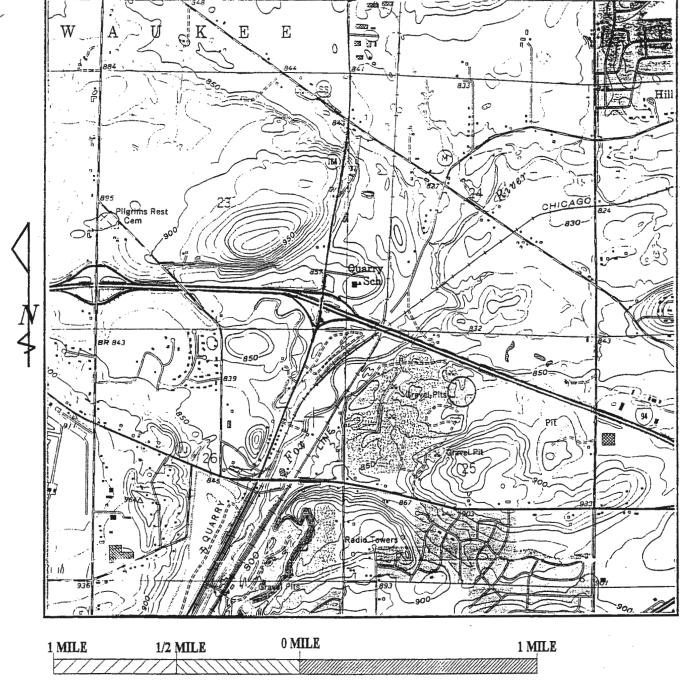
The Case Summary and Close Out Form and attached instructions have been designed by staff in the Bureau for Remediation and Redevelopment to provide responsible parties, environmental consultants, Department staff, and other interested parties with a checklist of information that must be evaluated prior 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:

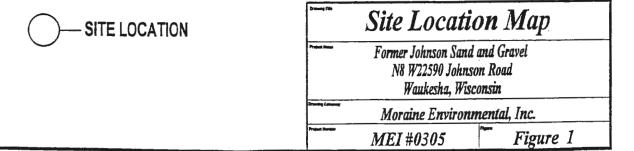
	(A) Case Summary and Close Out Formmust be complete. A brief, written case history, justification for case closure and description of the
	remedial action taken must be included. The type of closure requested for both the soil and groundwater must be indicated.
	(B) Site Map, per NR 716.15(2)(d)5-6, 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 ESexceedances). 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 ESexceedances (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.

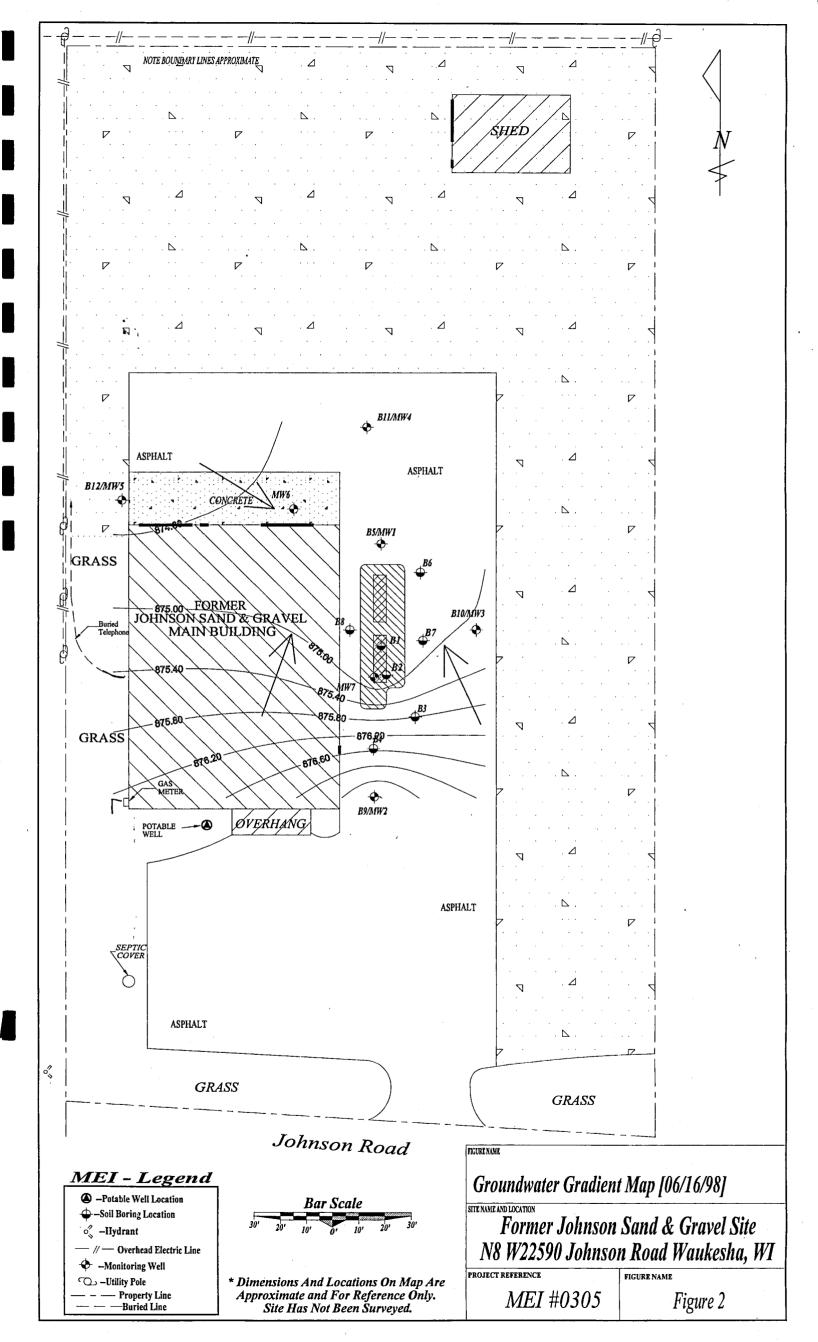
APPENDIX B

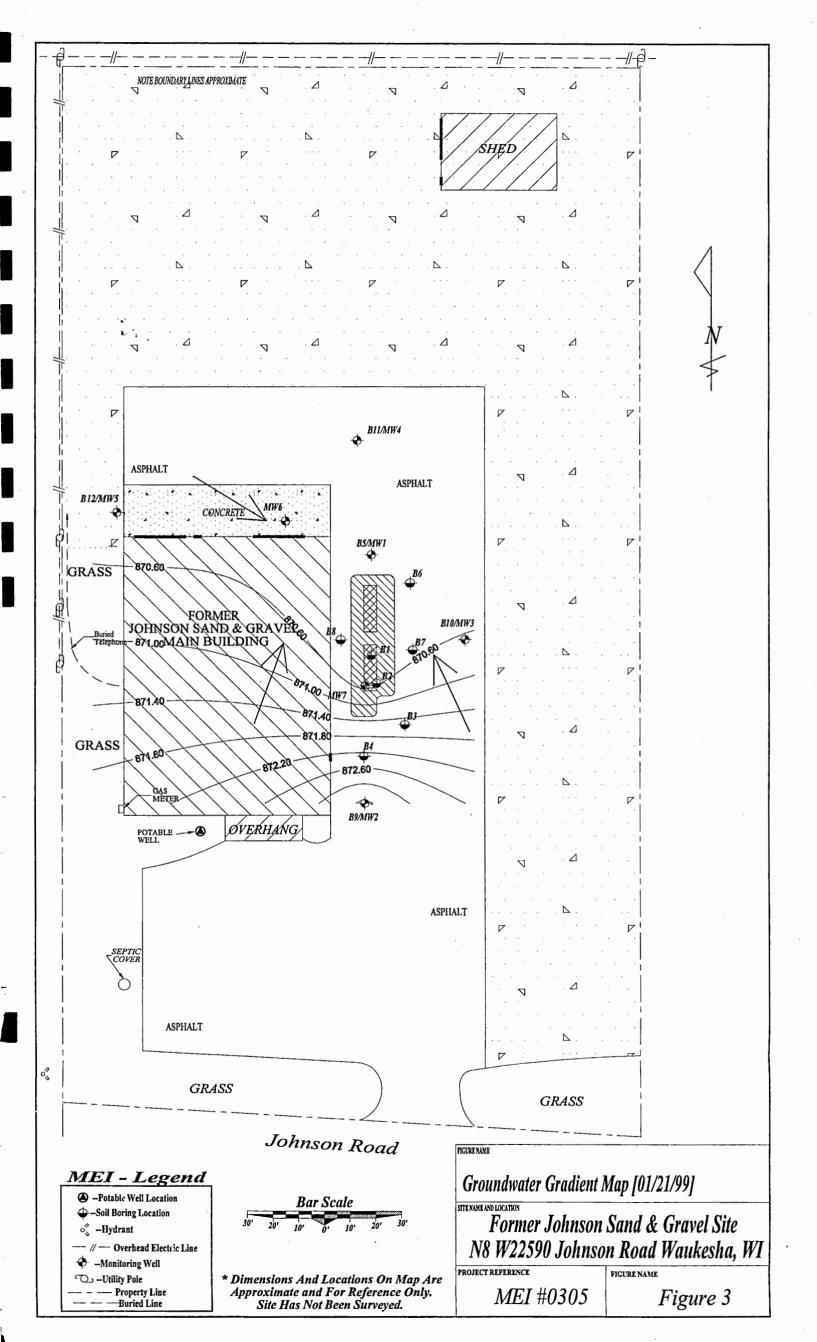
FIGURES AND TABLES

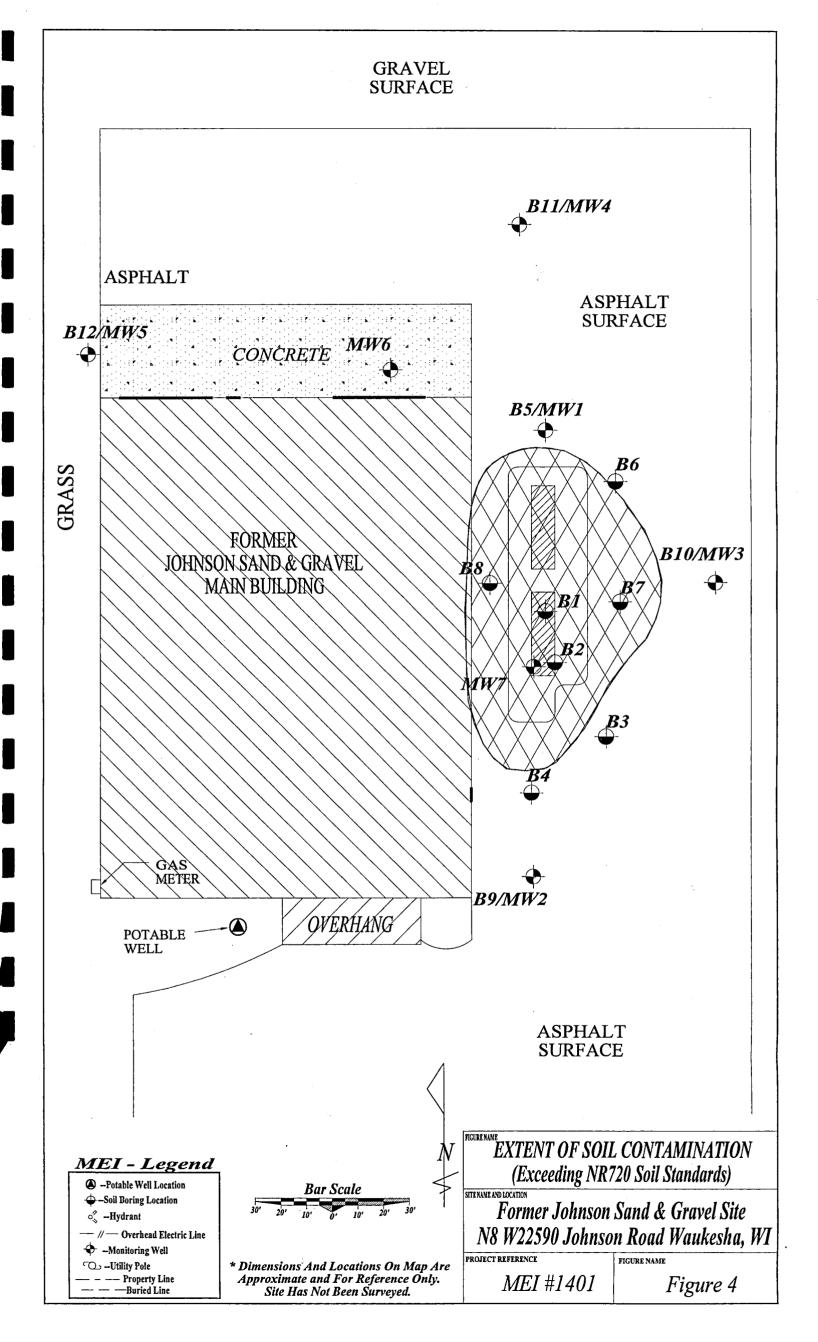


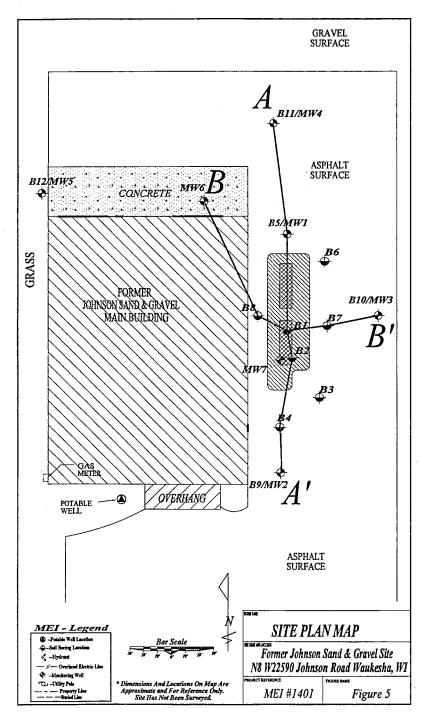
Source: 1976 USGS 7.5 Minute Waukesha Quadrangle

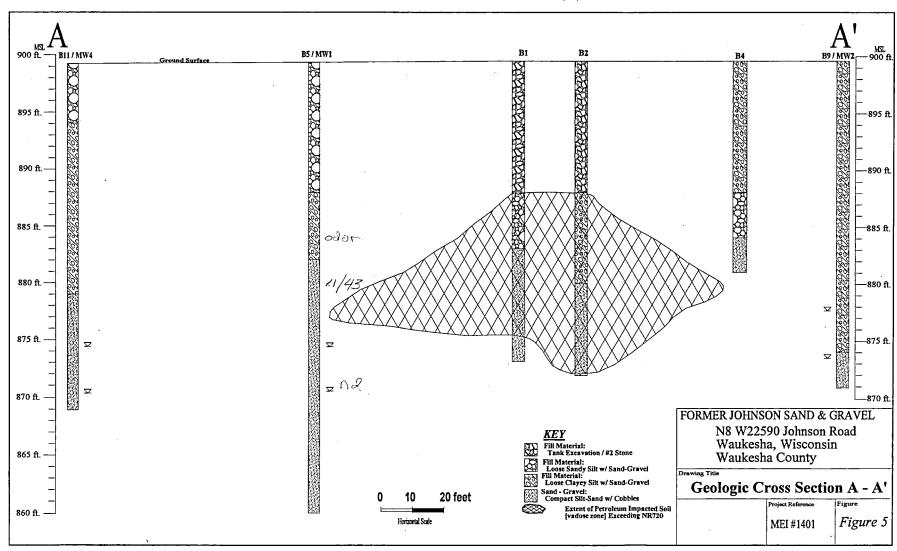






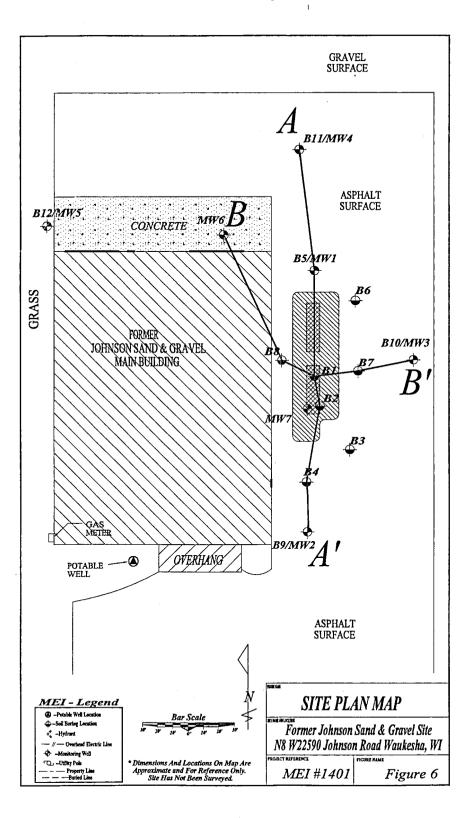


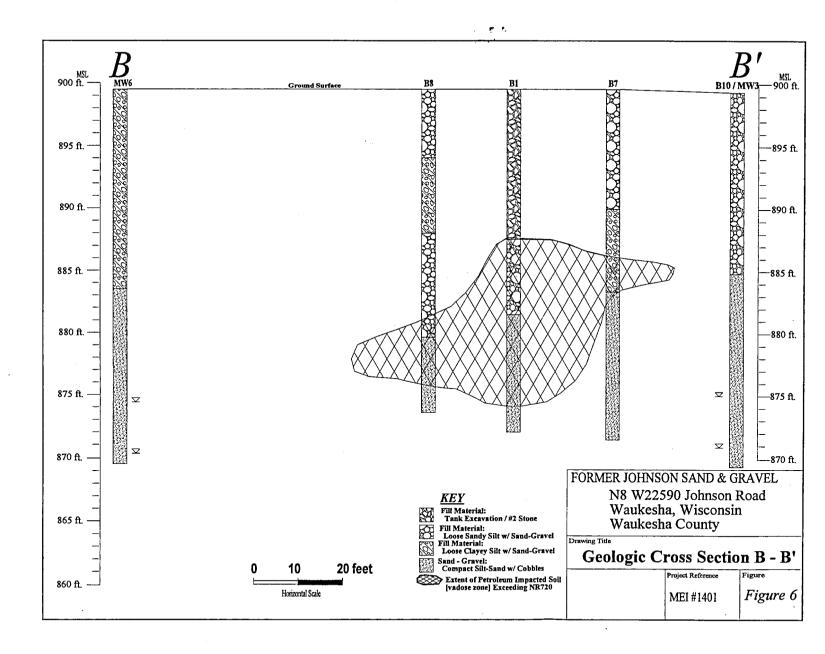


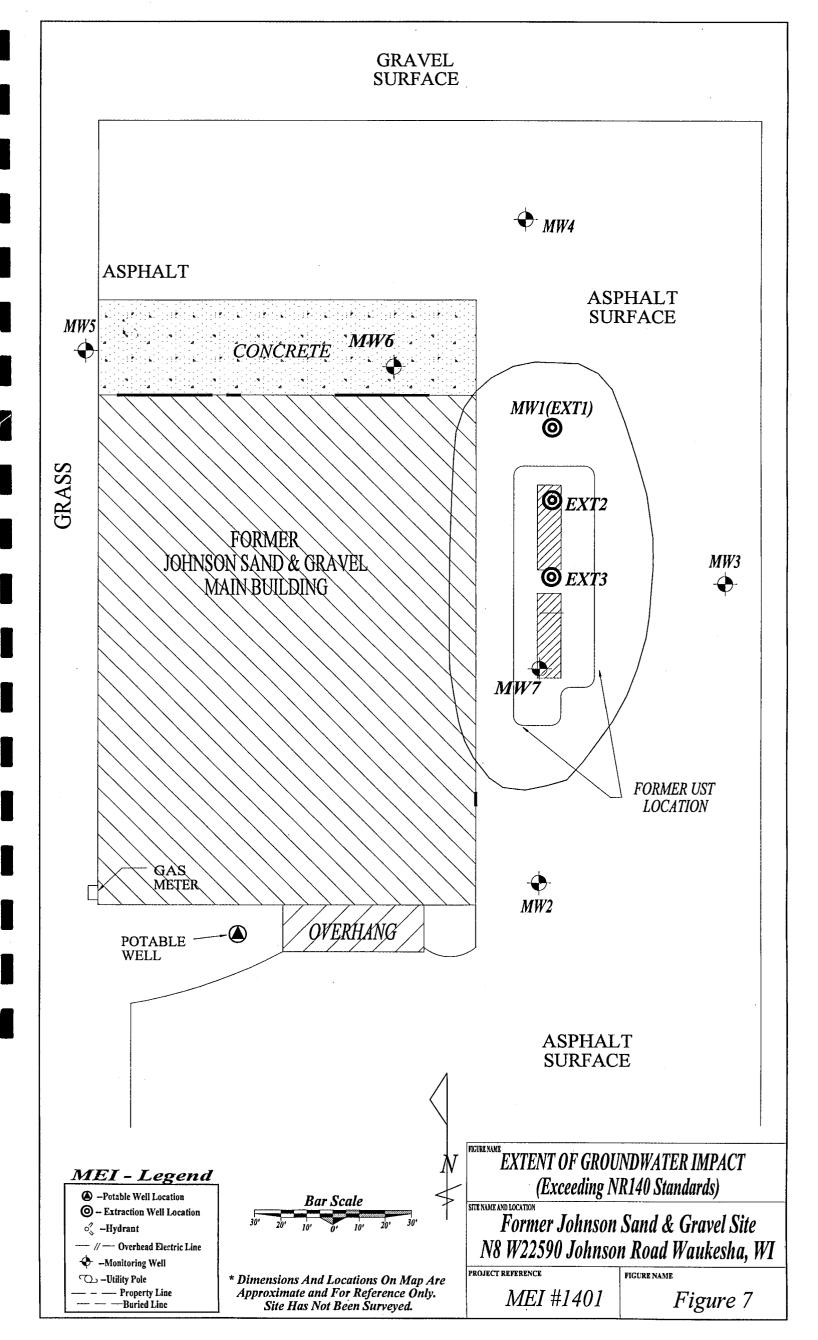


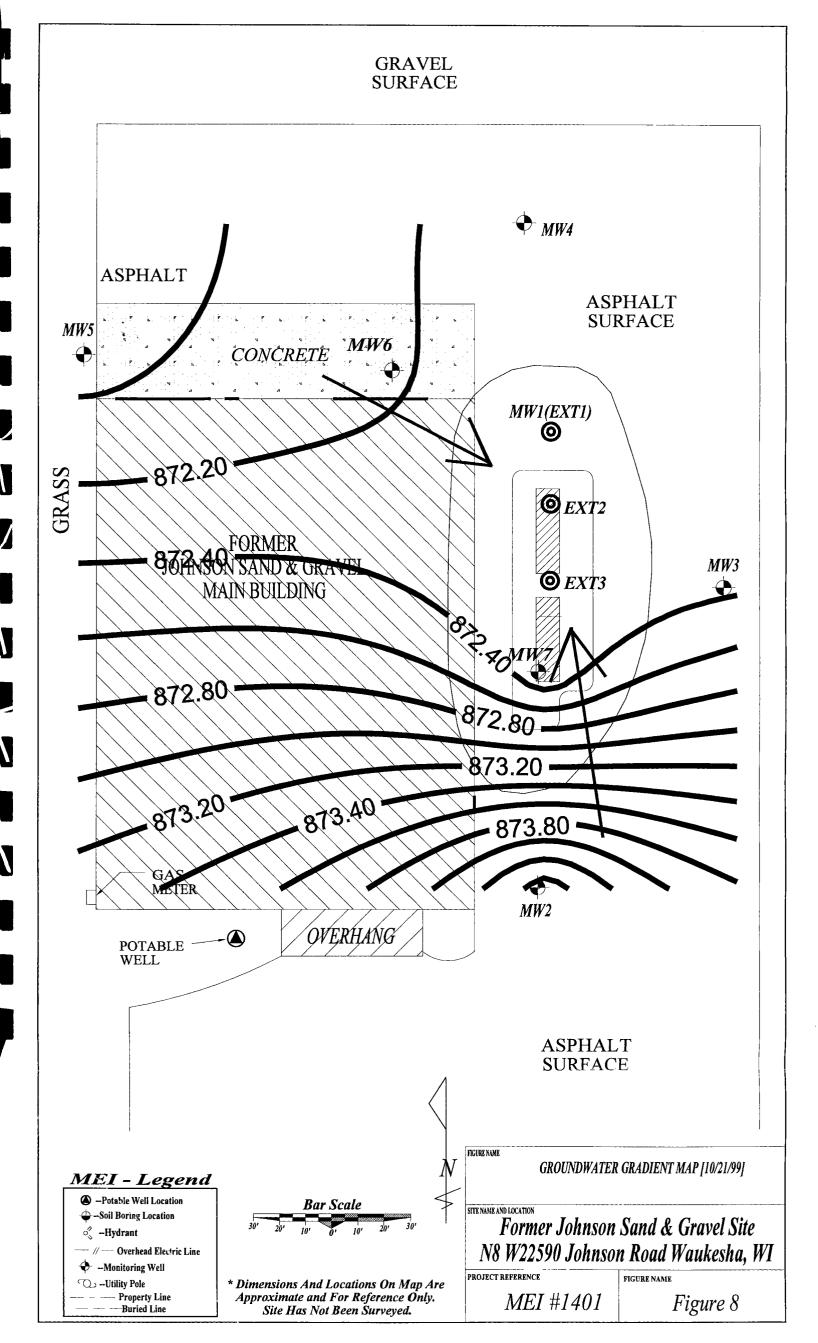
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GRO/DRO









Sample I.D.			MV	<i>I</i> -1					M'	W-7			NR140	NR140
Collection Date	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	ES	PAL
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
						Dete	cted 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 WATER QUALITY RESU B & DAMS MORNOUS	LTS, POST-REA			- 11			
Sample (,C)	J	W/A JEX	7-11		EXT-2		EXT-S	MWR			NR140	NR 140
Colection Dan	10/21/98	1/18/00		1/11/00		1315/000		10041/98			E.S	PML
						-		Délected VOCV pro	4.8			
Benzene	-0.27	<0.25		<0,27		0.880		<0.21		4 10	5	0.5
n Bulyttenzana	34 J	NA.		<0.29		3.5		S.			NGE	NSE
sea-Bulylaenzens	13	712		0.410		6.8		25			NSE	NSE
cis-1,2-Bichlargethene	17.	NA.		5.7		15		1.1			70	1
Di-Isopropyl etner	42	NA:		170		140		0.98Q			NSE	NSE
Etnylbenzene	-11	6.6		<0.32		0.540		4.5			700	740
(sopropylbanzene	9	NA .		≠6.26		24		1.6			NSE	NSE
p-lagpropyHptuene	10	NA:		<0.24		<0.24		8.1			NSE	NSE
Manyl-ten-buty etne	<0.32	0.400		0.350		0.380		<0.82			80	12
Naphtraiene	140	NA.		0.680		3,2					40	В
n-Prapyllienzeno	10	NA.		<0.75		4.0		1.30			NSE	MSE
Tetrachioroettiene	21	NA.		12 0		(2		0.640			5	0.5
Toluene	<0.27	<0.21		0,850		0.280		45.27			343	68.6
Trichlo/oethene	0.910	N/A		2.8		1.7		42.27		-	5	0.5
Formathybussens (12+125)	34	90.		<0.4B		3.0	_	33			480	90
Total Kywnes (m.p.o.)	3,53	0.9		<0,67	1 11 11 11	<0.67		5.04			020	124

THE HOLDER SET IN PROCESS OF THE PRO

ES = ((4) (4) (0) (0000000 p) (5) (00000)

Fig. 5(EVE) ID PROCEDURED IN MILE STORM TO SERVE AND A
A Carlotte Company		TABL	E1		
	GROUND	NATER Q	JALITY RE	SULTS	
FORMER	JOHNSON	SANDA	GRAVEI S	ITE PEW	AUKEE

Sample I.D.	MW-2								MW-3									
Site Status			PRE-REM	EDIATION				POST-REMEDIATION			PRE-REM	EDIATION				POST-REMEDIATION	NR140	NR140
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		ES	PAL
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

mg/L = milligrams per liter = parts per million (ppm)

ug/L = micrograms per liter = parté per billion (ppb)
NA - Not Analyzed : Q - paramèter 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.

									GROUNDY FORMER JOHNSON	TABLE 1 NATER QUAL I SAND & GR/	Control of the Contro	The second second second	EE	2000 2000 2000 2000 2000 2000 2000 200						
Sample I.D.						MW-4			The second secon					MV	V-5					
Site Status			PRE	REMEDIAT	ION				OST-REMEDIATION			PRE-REM	EDIATION			F	OST-REMEDIA	ATION	NR140	NR140
Collection Date	8/23/96	8/28/97	6/18/98	10/14/98	1/21/99	4/15/00	7/10/99	10/21/99		8/23/96	8/29/97	6/16/98	10/14/98	1/21/99	4/15/99	10/21/99			ES	PAL
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	150	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	C'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-Butvibenzene	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
Frimethylbenzenes (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

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

	ar H					F	Comment of the Same and the second state of th	NDWATER QUALITY RESULT SON SAND & GRAVEL SITE, P	MONTH OF THE PROPERTY OF THE P			
Sample I.D.	Sample I.D. MW-6									DRINK		
Site Status			PRE-REMI	EDIATION			POS	POST-REMEDIATION			NR140	NR140
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	ES	PAL
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
								Detect	ted 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 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

< 0.25

< 0.23

< 0.23

<0.50

< 0.67

<1.0

1.1

<1.0

<2.0

<2.0

5

343

5

480

620

0.5

68.6

0.5

96

124

TABLE 1

Notes:

ND

ND

ND

ND

ND

Tetrachloroethene

Trichloroethene

Trimethylbenzenes (1,2,4-1,3,5-)

Total Xylenes (m,p,o)

Toluene

mg/L = milligrams per liter = parts per million (ppm)

ug/L = micrograms per liter = parts per billion (ppb)

NA

0.40

NA

<1.40

<1.34

NA - Not Analyzed ; Q - parameter detected below quantitative limit (qualified results)

NA

0.32Q

NA

<1.40

<1.34

< 0.43

0.29Q

< 0.37

< 0.49

< 0.67

NA

<0.21

NA

<1.40

<1.34

NA

< 0.21

NA

<1.40

<1.34

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

< 0.43

0.30Q

< 0.37

< 0.49

< 0.67

TABLE 2 GROUNDWATER QUALITY RESULTS FORMER JOHNSON SAND & GRAVEL SITE, PEWAUKEE

Sample I.D.				1	/W-1 [EXT-	1]					M\	N-7				
Site Status		PRE	-REMEDIA	TION			POST-REMEDIATION			PRE-REM	IEDIATION			POST-REMEDIATION		
Sample Collection Date	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		NR140	NR140
PAH (ug/L)															ES	PAL
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	22	<1.5	9.90	<3.0	<78	ND			,<80	<7.5	0.540		0.2	0.02
Benzo (b) fluoranthene	ND	ND	19	6.8	140	3 113	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	7/90	R84	60	1,100	980	3.100Q	16	42	32	Sikin x	7/01/	389		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	260	9.3Q	<7.5		400	80
Flourene	1,000	8,700	<230	44	700	130Q	<6,000	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	120(2)	2.600C)	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	410	82Q	2,1000	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

Votes:

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	Ελ	⟨T-2	EXT-	-3		
Sample Collection Date	7/19/99	7/19/99	7/19/99	7/19/99	7/19/99	1/18/00		1/18/00		NR140	NR140
PAH (ug/L)					-		· · · · · · · · · · · · · · · · · · ·			ES	PAL
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		- 0.80Q		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		1.9		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)
To the second	Compound	Benzo(a)pyrene	o(b)fluoranthene	Chrysene	Flourene	Naphthalene	Pyrene
	recommendation of the second	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
Event	Sampling Date	(leave blank	(leave blank	(leave blank	(leave blank	(leave blank	(leave blank
Number	(most recent last)	if no data)	if no data)	if no data)	if no data)	if no data)	if no data)
1	23-Aug-96	1.45	12.00	63.00	1,000.00		12,00
2	29-Aug-97	21.00	12.00	790.00	6,700.00	Hermitian in the first interpretation of the problem of the control of the contro	200
3	16-Jun-98	2.20	19.00	63.00	229.00		31.00
4	16-Oct-98	1.45	6.80		44.00	is an extrementary minute dimensional contraction of	13.00
5	15-Apr-99	THE REPORT OF THE PARTY OF THE	140.00	1,100.00	700.00	Section 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	410.00
6	19-Nov-99	1.45	13.00	n in the first the state of the	130,00		
7	18-Jan-00	1.45	540.00	3,100.00	5,900,00	2,600.00	2,100.00
8							
9							
10							
S	3=,		10	8	-3	-3	9
n		7	7	7	7	7	7
P	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
C	DV =	1.346786526	1.858037217	1.483102991	1.379557578	1.666995531	1.716373142
Increasing Trer	nd (80% Confidence)	NO	YES	YES	NO	NO	YES
Decreasing Tre	end (80% Confidence)	NO	NO	NO	NO	NO	NO
Undetermined:	Stable Trend, CV<=1	NO	NO	NO	NO	NO	NO
Undetermined I	Non-Stable Trend, CV>1	YES	NO	NO	YES	YES	NO
Error Check, O	K if Blank						
Stable or Decre							
at 80% Confide	ence 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 ½ to ¾ 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.

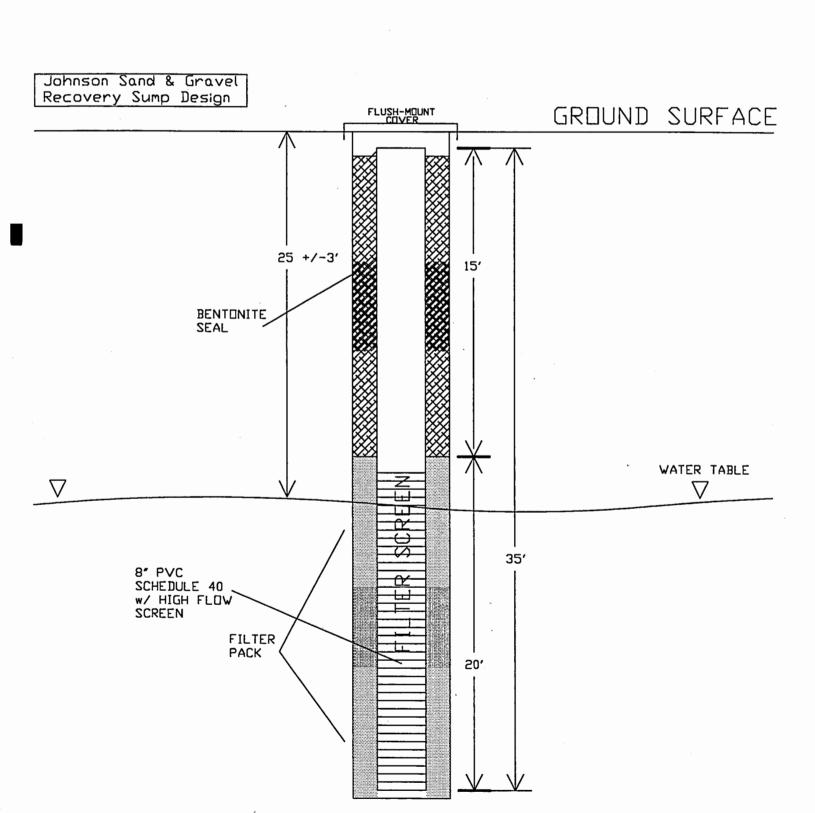
Field Screening Procedures

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:

Ambient Outside Air Temperature	Minimum Time Sample Equilibrated
At time of Sample Collection	at 70°F or Greater Temperature
<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.





ORCHARD RIDGE RECYCLING & DISPOSAL FACILITY

W124 N9355 Boundary Road Menomonee Falls, WI 53051 (414) 253-8620 (414) 253-1322 Fax

0290

May 12, 2000



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

BioSiteSM

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

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 1/28/00

Date

En Chem Inc.

1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM Fax: 920-469-8827

Lab#: TestGroupID: Comment: 800260 All Samples For water PAH, low recoveries for 1-methylnapthalene, 2-methylnapthalene, phenanthrene, and flourene in the MS/MSD. Resullts are based on satisfactory recoveries of the BS/BSD. 800260-001 PAHLC-W Surrogate recovery data unavailable due to high dilution required for sample analysis. EXT-1 800260-003 PAHLC-W Surrogate recovery data unavailable due to high dilution required for sample analysis. EXT-3

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

Report Date: 1/28/00

Lab Sample Number: 800260-001

Collection Date: 1/18/00

WI DNR LAB ID: 405132750

Field ID: EXT-1

Matrix Type: WATER

Organic Results

PAH (HPLC) LIST - SEMIVOLATILES				Prep Meth	od: SW8	346 3510	Prep Date:	1/25/00	Analyst: ARO
Analyte	Я	lesult	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 Meti	nod: SW8	346 5030B	Prep Date:	1/24/00	Analyst: PMS
Analyte	R	esult	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

Client: MORAINE ENVIRONMENTAL INC

Field ID: EXT-1

Report Date: 1/28/00

Lab Sample Number: 800260-001

Collection Date: 1/18/00

WI DNR LAB ID: 405132750

Matrix Type: WATER

Xylene, -o

1.2

0.37

ug/I

1/26/00

MOD 8021B

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

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- W	ATER	Prep Method	: SW846 5030B	SW846 5030B		nalyst: JJB
Analyte	Result LOD	LOQ I	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	3 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	5 1.1	ug/L		1/24/00	SW846 8260B
1,1-Dichloroethane	< 0.35 0.35	5 1.1	ug/L		1/24/00	SW846 8260B
1,3-Dichloropropane	< 0.42 0.42	2 1.3	ug/L		1/24/00	SW846 8260B
2,2-Dichloropropane	< 0.36 0.36	5 1.1	ug/L		1/24/00	SW846 8260B

En Chem Inc.

- Analytical Report -

Project Name: JOHNSON SAND & 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

WI DIKK LAB IL	, 40	3132730						
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-lsopropyltoluene	<	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 - SE	MIVOLATILES		Prep Met	hod: SW8	346 3510	Prep Date:	1/25/00	Analyst: ARO	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method	
Acenaphthene	< 94	9.4	30		ug/l		1/25/00	SW846 8310	

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- Analytical Report -

Project Name: JOHNSON SAND & 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

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/Ľ	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
ndeno(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

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- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Report Date: 1/28/00

Lab Sample Number: 800260-003

Collection Date: 1/18/00

WI DNR LAB ID: 405132750

Field ID: EXT-3

Matrix Type: WATER

Organic Results

EPA 8260 VOLATILE LIST- W	/ATER		Prep Method: SW846 5030B		Prep Date:		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-Chiorotoluene	< 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

En Chem Inc.

- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: EXT-3

Client: MORAINE ENVIRONMENTAL INC

Report Date: 1/28/00

Lab Sample Number: 800260-003 Collection Date: 1/18/00

WI DNR LAB ID: 405132750 Matrix Type: WATER

WI DINN LAB IL). 40	3132750						
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

Client: MORAINE ENVIRONMENTAL INC

Field ID: EXT-3

Report Date: 1/28/00

Lab Sample Number: 800260-003

Collection Date: 1/18/00

WI DNR LAB ID: 405132750

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: Branch or Location:	•		_	E	3	ĊF	HE]	M 92	Green B 0-469-2436	llevue St., Suit ay, WI 54302 s • 1-800-736-2 0-469-8827		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 • 1600-837-8238 FAX 715-392-5843
Project Contact: 10M Dv Telephone: 414 377- 9060	eppen		_	CH	AII	N C)F (CUST	ODY	7	ŧ		Pageof
Project Number:	H		_			A=None	B=HC	L C=H2SO4	*Preserva D=HN03	tion Codes E=EnCore		thanol G=NaOH	P.O. # Quote #
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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

897165-001

MW1(EXT1)

11/19/99

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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

Lab#:

TestGroupID:

897165-001 P

PAHLC-W

MW1(EXT1)

Comment:

Surrogate recovery data unavailable due to high dilution required for sample

analysis.

- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW1(EXT1)

Report Date: 11/30/99

Lab Sample Number: 897165-001

Collection Date: 11/19/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PAH (HPLC) LIST - SEMIV	AH (HPLC) LIST - SEMIVOLATILES			Prep Method: SW846 3510			Prep Date: 11/24/99 Analyst: ARO		
Analyte	R	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

Company Name: // / / / / / / / / / / / / / / / / /	afton		E	HE	EM 92	1241 Bellevue S Green Bay, WI 5- 0-469-2436 • 1-800 FAX 920-469-8	4302 -736-2436	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
Telephone: (262) 3 Project Number: //10	reppen 77-9060 01 n Sand 4-6	ravel	FIL	A=None Ba		*Preservation Code			Pageof
Project State: MR W22590 Sampled By (Print):	Overpen		PRESER	ATION (COD				Address Invoice To: Company:	1234 12th Ave. rafton, WI 53024
EnChem Level II Std. Deliver EnChem Level III 10% (min. \$50) EnChem Level IV 25% (min. \$100) LABORATORY ID (Lab Use Only)	y Yes No (If yes, indicate QC san triplicate volume.)						MATRIX	Address: Mail Invoice To: COMMENTS	TOTAL BOTTLES (Lab Use Only)
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(circle): Std (10 Bus. Days) R (Rush TAT subject to approval/surcha Quick Turn Number: Date Needed: Transmit Rush Results by (circle): Phone Fax Phone #: Fax #:	arge) 1 day 3.0x 2 day 2.0x 3 day 1.5x 4 day 1.4x 5 day 1.3x	Relinquished By:	feel sen	11/22	Date/Time: Date/Time: Date/Time:	Received By:	Juen July	Date/Time: Date/Time:	Sample Receipt Temp. Sample Receipt pH (Wet/Metala) 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

		0-114			Collection
Sample No.	Field ID	Collection Date	Sample No.	Field ID	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			

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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. Duranceau	11/11/99
Approva Signature	Date

Fax: 920-469-8827

- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Client: MORAINE ENVIRONMENTAL INC Project Number: #1401

Report Date: 10/27/99 Field ID: MW-1

Collection Date: 10/21/99 Lab Sample Number: 896385-001

Matrix Type: WATER WI DNR LAB ID: 405132750

EPA 8260 VOLATILE LIST- WATER			Prep Meth	od: 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 Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1 Report Date: 10/27/99

Lab Sample Number: 896385-001 Collection Date: 10/21/99

WI DNR LAB ID: 405132750 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-isopropyitoluene		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-Propyibenzene		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-Trichloroetharre	<	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

En Chem Inc.

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

Field ID: MW-2

Report Date: 10/29/99

Lab Sample Number: 896385-002

Collection Date: 10/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PVOC - WATER			Prep Met	Prep Method: SW846 5030B				Analyst: MSB
Analyte	Resu	ilt LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene	10:	3			%Recov		10/28/99	MOD 8021B
Benzene	< 0.2	6 0.26	0.83		ug/l		10/28/99	MOD 8021B
Ethylbenzene	< 0.2	4 0.24	0.76		ug/l		10/28/99	MOD 8021B
Methyl-tert-butyl-ether	< 0.2	2 0.22	0.70		ug/l		10/28/99	MOD 8021B
Toluene	0.2	3 0.21	0.67		ug/l	Q	10/28/99	MOD 8021B
1,3,5-Trimethylberizene	< 0.5	0.54	1.7		ug/l		10/28/99	MOD 8021B
1,2,4-Trimethylbenzene	< 0.8	0.86	2.7		ug/l		10/28/99	MOD 8021B
Xylenes, -m, -p	< 0.9	0.97	3.1		ug/l		10/28/99	MOD 8021B
Xylene, -o	< 0.3	0.37	1.2		ug/l		10/28/99	MOD 8021B

En Chem Inc.

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

Field ID: MW-3

Report Date: 10/29/99

Lab Sample Number: 896385-003

Collection Date: 10/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PVOC - WATER				Prep Met	hod: SW	Prep Date:		Analyst: 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 -

Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 10/29/99

Lab Sample Number: 896385-004

Collection Date: 10/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

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

Project Number: #1401

Field ID: MW-5

Report Date: 10/29/99

Client: MORAINE ENVIRONMENTAL INC

Lab Sample Number: 896385-005

Collection Date: 10/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PVOC - WATER			Prep Met	nod: SW846 5030B	Prep Date:	10/25/99 An	alyst: MSB
Analyte	Result	LOD	LOQ	EQL Units	Code	Analysis Date	Analysis M ethod
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

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 10/29/99

Lab Sample Number: 896385-006

Collection Date: 10/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PVOC - WATER			Prep Met	nod: SW84	46 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: MORAINE ENVIRONMENTAL INC

Report Date: 10/27/99

Collection Date: 10/21/99

Matrix Type: WATER

EPA 8260 VOLATILE LIST- W	ATER		Prep Meth	od: SW846 5030B	Prep Date:	10/26/99 An	alyst: 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

Report Date: 10/27/99

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-7

Collection Date: 10/21/99

Lab Sample Number: 896385-007

Matrix Type: WATER

WI DNR LAB ID: 405132750

W DAK DAD II	J . 40.	0.02700						
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

Client: MORAINE ENVIRONMENTAL INC

Field ID: TRIP BLANK

Report Date: 11/10/99

Lab Sample Number: 896385-008

Collection Date: 10/21/99

Wisconsin Cert #: 405132750

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 8021E
Toluene	< 1.0	1.0	ug/l		10/28/99	MOD 8021E
1,3,5-Trimethylbenzene	< 2.0	2.0	ug/l		10/28/99	MOD 8021E
1,2,4-Trimethylbenzene	< 1.0	1.0	ug/l		10/28/99	MOD 8021E
Xylenes, -m, -p	< 2.0	2.0	ug/l		10/28/99	MOD 8021E
Xylene, -o	< 1.0	1.0	ug/l		10/28/99	MOD 8021E

Organic Results

COMMA		014/1		1/01	ATU	E 1	OT
SDWA	- L	L VVU.	_EVEL	VOL	АП	ᆫ	151

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 Client: MORAINE ENVIRONMENTAL INC

Field ID: TRIP BLANK Report Date: 11/10/99

Lab Sample Number: 896385-008 Collection Date: 10/21/99

Wisconsin Cert #: 405132750 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	E P A 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-lso p ropyltoluene	< 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 Client: MORAINE ENVIRONMENTAL INC

Field ID: TRIP BLANK Report Date: 11/10/99

Lab Sample Number: 896385-008 Collection Date: 10/21/99

Wisconsin Cert #: 405132750 Matrix Type: WATER

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

Client: MORAINE ENVIRONMENTAL INC

Report Date: 11/10/99

- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: PRIVATE WELL

Lab Sample Number: 896385-009 Collection Date: 10/21/99

Wisconsin Cert #: 405132750 Matrix Type: WATER

Organic Results

SDWA - LOW LEVEL VOLATILE LIST Prep Method: EPA 524.2 Prep Date: Analyst: *MD Analysis **Analysis** Result **EQL** Units Analyte Code Date Method 1.2-Dibromoethane < 1.0 1.0 ug/L 11/2/99 EPA 524.2 Methyl-tert-butyl-ether < 1.0 1.0 uq/L 11/2/99 EPA 524.2 11/2/99 1,2-Dibromo-3-chloropropane 20 2.0 ug/L EPA 524.2 ug/L Benzene < 1.0 1.0 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 11/2/99 EPA 524.2 ug/L Bromomethane < 2.0 2.0 11/2/99 EPA 524.2 ug/L n-Butylbenzene 1.0 1.0 ug/L 11/2/99 EPA 524.2 s-Butylbenzene < 1.0 11/2/99 EPA 524.2 1.0 ug/L t-Butylbenzene < 1.0 11/2/99 EPA 524.2 1.0 ug/L Carbon tetrachloride < 1.0 1.0 11/2/99 EPA 524.2 ug/L Chlorobenzene < 1.0 11/2/99 EPA 524.2 1.0 ug/L Chlorodibromomethane < 1.0 11/2/99 1.0 ug/L EPA 524.2 Chloroethane < 2.0 11/2/99 EPA 524.2 2.0 ug/L Chloroform 1.0 11/2/99 1.0 ug/L EPA 524.2 < 2.0 ug/L Chloromethane 2.0 11/2/99 **EPA 524.2** 11/2/99 2-Chiorotoluene < 1.0 EPA 524.2 1.0 ug/L 4-Chlorotoluene < 1.0 11/2/99 1.0 EPA 524.2 ug/L Dibromomethane < 1.0 11/2/99 EPA 524.2 1.0 ug/L 11/2/99 1,2-Dichlorobenzene < 1.0 1.0 ug/L EPA 524.2 < 1.0 11/2/99 1,3-Dichlorobenzene 1.0 EPA 524.2 ug/L 11/2/99 1,4-Dichlorobenzene 2.8 1.0 ug/L EPA 524.2 Dichlorodifluoromethane < 2.0 11/2/99 EPA 524.2 2.0 ug/L 11/2/99 1,1-Dichloroethane < 1.0 1.0 ug/L EPA 524.2 < 1.0 11/2/99 1,2-Dichloroethane 1.0 EPA 524.2 ug/L < 1.0 1.1-Dichloroethene 11/2/99 EPA 524.2 1.0 ug/L

- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401 Client: MORAINE ENVIRONMENTAL INC

Field ID: PRIVATE WELL Report Date: 11/10/99

Lab Sample Number: 896385-009 Collection Date: 10/21/99

Wisconsin Cert #: 405132750 Matrix Type: WATER

771000110111 0011 11 11 11 11 11 11					
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

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**If not using	En Chem's methanol;	Relinquished		Sin A	מלוני	19 M	Date/Tin	ne:	Received By		dest place	of first	- Dr. ary	1 1	Date/Time:	Samp (Wet/M	ble Receipt pH	
	me of methanol added and ropriate samples.	Relinquished				111	Date/Tin	ne:	Received By	2-24	the first	2-7	my m	γ' υ	Date/Time:		ody Seal	



- 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	ТВ	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.

ApprovalSignature Taglaq

Date



Lab#:

TestGroupID:

Comment:

894041-006

PAHLC-W

Surrogate recoveries not available due to high dilution of sample.

MW-7

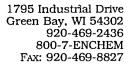
GRO-W

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	Quanterrra - North Canton, OH	999518190
*QP	Quanterra - Pittsburgh, PA	998027800
*KM	Kemron - Merietta, OH	998202040
*SUB	Indicates analysis that requires no	certification





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Report Date: 7/22/99

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2

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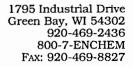
Lab Sample Number: 894041-001

Collection Date: 7/19/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PAH (HPLC) LIST - SEMIVOLATILES			Prep Method: SW846 3510			Prep Date:		Analyst: ARO	
Analyte	F	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-3

Report Date: 7/22/99

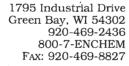
Lab Sample Number: 894041-002

Collection Date: 7/19/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

PAH (HPLC) LIST - SEMIVOLATILES				Prep Metho	od: SW8	346 3510	Prep Date:	7/21/99	Analyst: ARO
Analyte	F	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4 Report Date: 7/29/99

Lab Sample Number: 894041-003 Collection Date: 7/19/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

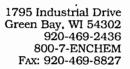
Inorganic Results

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 Meth	od: Wi N	MOD GRO	Prep Date:	7/20/99	Analyst: MWM
Analyte	F	lesult	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

PAH (HPLC) LIST - SEMIV	Prep Method: SW846 3				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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 7/29/99

Lab Sample Number: 894041-003

Collection Date: 7/19/99

WI DNR LAB ID: 405132750

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	

P٧	OC.	- V	VA.	ΓER

PVOC - WATER			Prep Met	noa: 500846 5030	B Prep Date:	7/20/99	analyst: MWM	
Analyte	Result	LOD	LOQ	EQL Units	Code	Analysis Date	Analysis Method	
a,a,a-Trifluorotoluene	100			%Reco	v	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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: MW-5

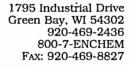
Client: MORAINE ENVIRONMENTAL INC

Report Date: 7/22/99

Lab Sample Number: 894041-004 Collection Date: 7/19/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

PAH (HPLC) LIST - SEMIVOLATILES				Prep Method: SW846 3510 Prep			Prep Date:	7/21/99	Analyst: ARO
Analyte	F	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: MW-6

Client: MORAINE ENVIRONMENTAL INC

Report Date: 7/22/99

Lab Sample Number: 894041-005 Collection Date: 7/19/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

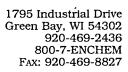
Organic Results

DIESEL RANGE ORGANICS -	WA	TER		Prep Meti	hod: Wil	MOD DRO	Prep Date:	7/21/99	Analyst: DJB
Analyte	F	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 ORGAN	NICS - WATER		Prep Met	hod: Wil	MOD GRO	Prep Date:	7/20/99	Analyst: MWM
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGAN	IICS < 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

PAH (HPLC) LIST - SEMIVOLATILES				Prep Meth	od: SW	346 3510	Prep Date: 7/21/99 Analyst: ARO			
Analyte	Res	sult	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	0.021	0.021	0.067		ug/L		7/22/99	SW846 8310	
Benzo(a)anthracene	< 0	0.014	0.014	0.045		ug/L		7/22/99	SW846 8310	
Benzo(a)pyrene	< 0	0.015	0.015	0.048		ug/L		7/22/99	SW846 8310	
Benzo(b)fluoranthene	< 0	0.015	0.015	0.048		ug/L		7/22/99	SW846 8310	
Benzo(g,h,i)perylene	< 0	0.021	0.021	0.067		ug/L		7/22/99	SW846 8310	
Benzo(k)fluoranthene	< 0	0.0090	0.0090	0.029		ug/L.		7/22/99	SW846 8310	
Chrysene	< 0	0.016	0.016	0.051		ug/L		7/22/99	SW846 8310	
Dibenzo(a,h)anthracene	< 0	0.020	0.020	0.064		ug/L		7/22/99	SW846 8310	
Fluoranthene	< 0	0.015	0.015	0.048		ug/L		7/22/99	SW846 8310	





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 7/22/99

Lab Sample Number: 894041-005

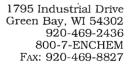
Collection Date: 7/19/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

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

Analyte	Result	LOD	LOQ	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Report Date: 7/29/99

Lab Sample Number: 894041-006

Collection Date: 7/19/99

WI DNR LAB ID: 405132750

Field ID: MW-7

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 Met	hod: Wil	MOD DRO	Prep Date:	7/21/99	Analyst: DJB
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	3100	00		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

Analyte Result GASOLINE RANGE ORGANICS - WATER Result GASOLINE RANGE ORGANICS 790 Blank Spike 101		Prep Met	hod: Wil	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

PAH (HPLC) LIST - SEM!	/OLATIL	OLATILES		Prep Met	hod: SW8	346 3510	Prep Date:	7/21/99	Analyst: ARO
Analyte	F	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-7

Report Date: 7/29/99

Lab Sample Number: 894041-006

Collection Date: 7/19/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

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 503

ep Method: SW846 5030B Prep Date: 7/20/99 Analyst: MWM

Analyte	R	lesult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a,a,a-Trifluorotoluene		103				%Re c ov		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/i	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		ua/l	O	7/22/99	MOD 8021B



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: TB

Report Date: 7/22/99

Lab Sample Number: 894041-007

Collection Date: 7/19/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

GASOLINE RANGE ORGANI	ER	Prep Me	thod: Wil	MOD GRO	Prep Date:	7/20/99	Analyst: MWM	
Analyte	Resu	lt LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANIC	CS < 50			50	ug/l		7/21/99	Wi MOD GRO
Blank Spike	10	1		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

PVOC - WATER		Prep Met	hod: SW8	46 5030B	Prep Date:		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/i		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

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*Preservation Code Relinquished By: Date/Time: A=None B=HCL C=H2SO4								3. 41	1 5 1	Received By:					Date/Time: En Chem Project No.						
D=HN03 E=EnCore F=Methanol** Relinquished By:				3. S.	Date/Time:						Received By:				Date/Time:		Sample Receip	Temp.			
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**If not using En Chem's methanol, indicate volume of methanol added and								, }	(Mod/Metala)							3					
mark the appropriate samples. Relinquished By:					Date/Time:						Received By:				Date/Time:			Custody Seal	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

Report Date: 5/7/99

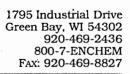
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891836-001	MW-1	4/15/99			
891836-002	MW-2	4/15/99			
891836-003	MW-3	4/15/99			
891836-004	MW-4	4/15/99			
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891836-006	MW-6	4/15/99			
891836-007	MW-7	4/15/99			
891836-008	PRIVATE WELL	4/15/99			
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.

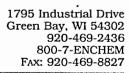
I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

O. Duranceau	5/9/99
Approval Signature	Date



EN CHEM

Lab#:	TestGroupID:	Comment:
891836-	8260+-W	Methylene chloride is present in the laboratory environment. Detects should be considered suspect.
891836-001 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 MW-6	GRO-W	Reported concentration due to early unidentified peaks in window.
891836-007 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.





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

Organic Results

DIESEL RANGE ORGANICS -		Prep Met	hod: Wil	MOD DRO	Prep Date:	4/19/99	Analyst: DJB	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	1500	000		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

EPA 8260 VOLATILE LIST- W	Prep Method: SW846 5030B			Prep Date:	4/20/99	Analyst: HW			
Analyte	F	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-Chiorotoluene	<	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



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

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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Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Lab Sample Number: 891836-001

Client: MORAINE ENVIRONMENTAL INC

Collection Date: 4/15/99

Field ID: MW-1 Report Date: 5/7/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

1,3,5-Trimethylbenzene 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 Metho	od: Wi N	10D GRO	Prep Date:	4/19/99	Analyst: EGS
Analyte		tesult	LOD LOQ EQL		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

PAH (HPLC) LIST - SEMIV		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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

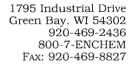
Report Date: 5/7/99

Lab Sample Number: 891836-001

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2 Report Date: 4/21/99

Lab Sample Number: 891836-002 Collection Date: 4/15/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

Organic Results

Analyte Result DIESEL RANGE ORGANICS - WATER Analyte Result DIESEL RANGE ORGANICS < 100 Blank spike 88 Blank spike duplicate 95		Prep Met	hod: Wil	MOD DRO	Prep Date:	4/19/99 Analyst: DJB		JB		
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Anal Met	,
DIESEL RANGE ORGANICS	<	100			100	ug/l		4/19/99	Wi M	OD DRO
Blank spike		88			25	%Recov		4/19/99	Wi M	OD DRO
Blank spike duplicate		95			25	%Recov		4/19/99	Wi M	OD DRO
Blank	<	50			50	ug/l		4/ 19/99	Wi M	OD DRO

EPA 8260 VOLATILE LIST- W	ATER		Prep Method	d: SW846 5030B	Prep Date:	4/20/99	Analyst: HW
Analyte	Result	LOD	LOQ	Q EQL Units		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

Client: MORAINE ENVIRONMENTAL INC

Collection Date: 4/15/99



- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

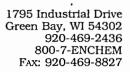
Project Number: 1401

Field ID: MW-2 Report Date: 4/21/99

Lab Sample Number: 891836-002

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	<	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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Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2 Report Date: 4/21/99

Lab Sample Number: 891836-002 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	101			%Recov	4/20/99	SW846 8260B
Dibromofluoromethane	109			%Recov	4/20/99	SW846 8260B
Toluene-d8	109			%Recov	4/20/99	SW846 8260B

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 ORGA	ANICS < 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Field ID: MW-3

Client: MORAINE ENVIRONMENTAL INC

Report Date: 4/21/99

Lab Sample Number: 891836-003 Collection Date: 4/15/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER		R	Prep Method: Wi MOD DRO Prep Da					4/19/99	Analyst: DJB
Analyte	Res	sult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 1	00			100	ug/l		4/19/99	Wi MOD DRO
Blank spike	8	8			25	%Recov		4/19/99	Wi MOD DRO
Blank spike duplicate	9	5			25	%Recov		4/19/99	Wi MOD DRO
Blank	< 5	0			50	ug/l		4/19/99	Wi MOD DRO

EPA 8260 VOLATILE LIST- W	/ATER		Prep Metho	d: 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Field ID: MW-3

Lab Sample Number: 891836-003

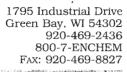
WI DNR LAB ID: 405132750

Client: MORAINE ENVIRONMENTAL INC

Report Date: 4/21/99

Collection Date: 4/15/99

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





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

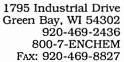
Collection Date: 4/15/99

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

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: Wil	MOD GRO	Prep Date:	4/19/99	Analyst: MSB	
Analyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod
GASOLINE RANGE ORGA	NICS <	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	ua/I		4/19/99	Wi MOD GRO



920-46 800-7-EN FAX: 920-46

- 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

Organic Results

DIESEL RANGE ORGANICS - W		TER		Prep Met	hod: Wil	MOD DRO	Prep Date:	4/19/99	Analyst: DJB
Analyte	F	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

EPA 8260 VOLATILE LIST- W	VATER	Prep Method: St	N846 5030B Prep D		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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

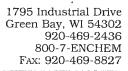
Report Date: 4/20/99

Lab Sample Number: 891836-004

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

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
sopropylbenzene	< 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





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

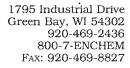
Collection Date: 4/15/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

1,3,5-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

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: Wi	MOD GRO	Prep Date:	4/19/99	Analyst: MSB	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method	
GASOLINE RANGE ORGA	ANICS < 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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Report Date: 4/21/99

Lab Sample Number: 891836-005

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

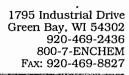
Field ID: MW-5

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER			hod: Wil	MOD DRO	Prep Date:	4/19/99	Analyst: DJB		
Analyte	F	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

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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Report Date: 4/21/99

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-5

Collection Date: 4/15/99

Lab Sample Number: 891836-005

Matrix Type: WATER

WI DNR LAB ID: 405132750

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
					-		



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-5

Report Date: 4/21/99

Lab Sample Number: 891836-005

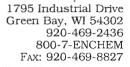
Collection Date: 4/15/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

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

GASOLINE RANGE ORGA		Prep Met	hod: Wil	Prep Date:	4/19/99	Analyst: MSB		
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	ANICS < 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 4/21/99

Lab Sample Number: 891836-006

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER			Prep Met	hod: Wil	MOD DRO	Prep Date:	4/19/99	Analyst: DJB	
Analyte	F	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

EPA 8260 VOLATILE LIST- W	PA 8260 VOLATILE LIST- WATER			od: SW846 5030B	Prep Date: 4	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

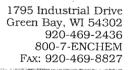
Report Date: 4/21/99

Lab Sample Number: 891836-006

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 4/21/99

Lab Sample Number: 891836-006

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	101			%Recov	4/20/99	SW846 8260B
Dibromofluoromethane	109			%Recov	4/20/99	SW846 8260B
Toluene-d8	110			%Recov	4/20/99	SW846 8260B

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: Wil	MOD GRO	Prep Date:	4/19/99	Analyst: MSB	
Analyte	F	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	ua/l		4/19/99	Wi MOD GRO





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Report Date: 5/5/99

Lab Sample Number: 891836-007

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

Field ID: MW-7

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER			Prep Met	hod: Wi	MOD DRO	Prep Date:	4/19/99	Analyst: DJB	
Analyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod
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

EPA 8260 VOLATILE LIST- W	EPA 8260 VOLATILE LIST- WATER			Prep Method: SW846 5030B			Prep Date:	4/20/99	Analyst: HW
Analyte	F	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

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	- W/	ATER	l	Prep Metho	d: Wi M	OD G RO	Prep Date:	4/19/99	Analyst: MSB
Analyte	Res	sult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	1	400			50	ug/l		4/20/99	Wi MOD GRO
Blank Spike	1	109			1.00	%Recov		4/20/99	Wi MOD GRO
Blank Spike Duplicate	1	111			1.00	%Recov		4/20/99	Wi MOD GRO
Blank	< 5	50			50	ug/i		4/20/99	Wi MOD GRO

PAH (HPLC) LIST - SEMIVE		Prep Method: SW846 3510			Prep Date:	4/19/99	Analyst: ARO		
Analyte	nalyte Result		LOD	LOQ EQ		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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

SDWA - LOW LEVEL VOLATILE LIST			Prep Meth	od: 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	



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

WI DIRK LAB IL	7: 405132	.750			,	
1,2-Dichloropropane	< 0.2	3 0.23	0.73	ug/L	4/22/99	EPA 524.2
1,3-Dichloropropane	< 0.1	9 0.19	0.61	ug/L	4/22/99	EPA 524.2
2,2-Dichloropropane	< 0.2	7 0.27	0.86	ug/L	4/22/99	EPA 524.2
1,1-Dichloropropene	< 0.2	3 0.23	0.73	ug/L	4/22/99	EPA 524.2
cis-1,3-Dichloropropene	< 0.2	1 0.21	0.67	ug/L	4/22/99	EPA 524.2
trans-1,3-Dichloropropene	< 0.2	2 0.22	0.70	ug/L	4/22/99	EPA 524.2
Ethylbenzene	< 0.2	3 0.23	0.73	ug/L	4/22/99	EPA 524.2
Fluorotrichloromethane	< 0.2	4 0.24	0.76	ug/L	4/22/99	EPA 524.2
Hexachlorobutadiene	< 0.2	9 0.29	0.92	ug/L	4/22/99	EPA 524.2
Isopropylbenzene	< 0.2	4 0.24	0.76	ug/L	4/22/99	EPA 524.2
p-Isopropyltoluene	< 0.2	6 0.26	0.83	ug/L	4/22/99	EPA 524.2
Methylene chloride	< 0.1	5 0.15	0.48	ug/L	4/22/99	EPA 524.2
Naphthalene	< 0.3	8 0.38	1.2	ug/L	4/22/99	EPA 524.2
n-Propylbenzene	< 0.2	0.26	0.83	ug/L	4/22/99	EPA 524.2
Styrene	< 0.2	.1 0.21	0.67	ug/L	4/22/99	EPA 524.2
1,1,2,2-Tetrachloroethane	< 0.3	0.37	1.2	ug/L	4/22/99	EPA 524.2
1,1,1,2-Tetrachloroethane	< 0.2	0.20	0.64	ug/L	4/22/99	EPA 524.2
Tetrachloroethene	< 0.2	.5 0.25	0.80	ug/L	4/22/99	EPA 524.2
Toluene	< 0.2	3 0.23	0.73	ug/L	4/22/99	EPA 524.2
1,2,4-Trichlorobenzene	< 0.3	0.32	1.0	ug/L	4/22/99	EPA 524.2
1,2,3-Trichlorobenzene	< 0.3	0.34	1.1	ug/L	4/22/99	EPA 524.2
1,1,1-Trichloroethane	< 0.2	24 0.24	0.76	ug/L	4/22/99	EPA 524.2
1,1,2-Trichloroethane	< 0.2	3 0.23	0.73	ug/L	4/22/99	EPA 524.2
Trichloroethene	< 0.2	3 0.23	0.73	ug/L	4/22/99	EPA 524.2
1,2,3-Trichloropropane	< 0.3	0.36	1.1	ug/L	4/22/99	EPA 524.2
1,2,4-Trimethylbenzene	< 0.2	26 0.26	0.83	ug/L	4/22/99	EPA 524.2
1,3,5-Trimethylbenzene	< 0.2	24 0.24	0.76	ug/L	4/22/99	EPA 524.2
Vinyl chloride	< 0.2	26 0.26	0.83	ug/L	4/22/99	EPA 524.2
Xylenes, -m, -p	< 0.4	14 0.44	1.4	ug/L	4/22/99	EPA 524.2
Xylene, -o	< 0.2	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	10	0		%Recov	4/22/99	EPA 524.2



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

EPA 8260 VOLATILE LIST- W	/ATER		Prep Metho	d: SW8	46 5030B	Prep Date:		Analyst: HW
Analyte	Result L	OD	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	.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).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).32	1.0		ug/L		4/19/99	SW846 8260B
n-Butylbenzene	< 0.29	.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	.35	1.1		ug/L		4/19/99	SW846 8260B
Chlorobenzene	< 0.23).23	0.73		ug/L		4/19/99	SW846 8260B
Chlorodibromomethane	< 0.42	.42	1.3		ug/L		4/19/99	SW846 8260B
Chloroethane	< 0.54).54	1.7		ug/L		4/19/99	SW846 8260B
Chloromethane	< 0.61).61	1.9		ug/L		4/19/99	SW846 8260B
2-Chlorotolu∈ne	< 0.31).31	0.99		ug/L		4/19/99	SW846 8260B
4-Chlorotoluene	< 0.32).32	1.0		ug/L		4/19/99	SW846 8260B
1,2-Dibrome-3-chloropropane	< 0.41 0).41	1.3		ug/L		4/19/99	SW846 8260B
1,2-Dibromoethane	< 0.39	.39	1.2		ug/L		4/19/99	SW846 8260B
Dibromomethane	< 0.53).53	1.7		ug/L		4/19/99	SW846 8260B
1,3-Dichlorobenzene	< 0.34).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).37	1.2		ug/L		4/19/99	SW846 8260B
1,2-Dichlorobenzene	< 0.25).25	0.80		ug/L		4/19/99	SW846 8260B
1,1-Dichloroethene	< 0.43).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).47	1.5		ug/L		4/19/99	SW846 8260B
trans-1,2-Dichloroethene	< 0.79).79	2.5		ug/L		4/19/99	SW846 8260B
1,2-Dichloropropane	< 0.35).35	1.1		ug/L		4/19/99	SW846 8260B
1,1-Dichloroethane	< 0.35).35	1.1		ug/L		4/19/99	SW846 8260B



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: TRIP BLANK

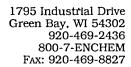
Report Date: 4/20/99

Lab Sample Number: 891836-009

Collection Date: 4/15/99

WI DNR LAB ID: 405132750

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
Xyienes, -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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE 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

GASOLINE RANGE ORGA		Prep Met	hod: Wil	MOD GRO	Prep Date:	4/19/99	Analyst: MSB	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGAI	NICS < 50		٠	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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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

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.

Approve Signature Date



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Lab#:	TestGroupID:	Comment:
890268-001	GRO-W	Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely
MW-1	£	weathered gasoline.
890268-004	DRO-W	Early peaks present outside of window of analysis.
MW-4		
890268-005	DRO-W	Hump was present late in chromatogram.
MW-5		
890268-006	GRO-W	Results from sample vial used for prior analysis. Insufficient sample submitted
MW-6		for analysis on unpunctured vial. Reported GRO value is due to a single early unidentified peak.
890268-007	PAHLC-W	Surrogate recovery data unavailable due to high dilution required for sample
MW-7		analysis.
	GRO-W	Sample exhibits hydrocarbon pattern resembling diesel fuel or extremely weathered gasoline.



Project Name: JOHN SON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

Report Date: 2/3/99

Lab Sample Number: 890268-001

Collection Date: 1/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

GASOLINE RANGE ORGANICS	Prep Me	thod: Wil	MOD GRO	Prep Date:	1/26/99	Analyst: PMS		
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	1600	00		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

PVOC + NAPHT - WATER		Prep Method: SW846 5030B						1/26/99	Analyst: PMS
Analyte	F	Result LOI		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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401 Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2 Report Date: 2/3/99

Lab Sample Number: 890268-002 Collection Date: 1/21/99

WI DNR LAB ID: 405132750 Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -	**	Prep Met	hod: Wil	MOD DRO	Prep Date:	1/26/99	Analyst: D.	JB		
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analy Meth	
DIESEL RANGE ORGANICS	<	100			100	ug/l		1/26/99	Wi MC	DD DRO
Blank spike		82			25	%Recov		1/26/99	Wi MC	DD DRO
Blank spike duplicate		88			25	%Recov		1/26/99	Wi MC	DD DRO
Blank	<	50			50	ug/l		1/26/99	Wi MC	DD DRO

Organic Results

GASOLINE RANGE ORGANICS		Prep Met	hod: Wil	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

PVOC + NAPHT - WATER				Prep Met	hod: SW	846 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	



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-3

Report Date: 2/3/99

Lab Sample Number: 890268-003

Collection Date: 1/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -		Prep Method: Wi MOD DRO			Prep Date:	1/26/99	Analyst:	DJB		
Analyte		Result	LOD	LOQ	EQL	Units	Code	Analysis Date		nalysis /lethod
DIESEL RANGE ORGANICS	<	100			100	ug/l		1/26/99	W	MOD DRO
Blank spike		82			25	%Recov		1/26/99	W	MOD DRO
Blank spike duplicate		88			25	%Recov		1/26/99	W	MOD DRO
Blank	<	50			50	ug/l	*	1/26/99	W	MOD DRO

Organic Results

GASOLINE RANGE ORGANICS - WATER				Prep Method: Wi MOD GRO			Prep Date:	1/26/99	Analyst: PMS
Analyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGANI	CS <	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

PVOC + NAPHT - WATER				Prep Meti	nod: SW	846 5030B	Prep Date:	1/26/99	Analyst: PMS	
Analyte Result		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	



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Report Date: 2/3/99

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Lab Sample Number: 890268-004

Collection Date: 1/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Me	thod: Wi	MOD DRO	Prep Date:	1/26/99 Analyst: DJB		
Analyte	F	lesult	ι	OD	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 Met	hod: Wil	MOD GRO	Prep Date:	1/26/99	Analyst: PMS
Analyte	F	lesuit	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGAN	ICS <	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

PVOC + NAPHT - WATER				Prep Met	hod: SW	846 5030B	Prep Date:	1/26/99	Analyst: PMS
Analyte	F	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401 Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-5

Collection Date: 1/21/99

Lab Sample Number: 890268-005

WI DNR LAB ID: 405132750

Matrix Type: WATER

Report Date: 2/3/99

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Method: Wi MOD DRO Prep Date					1/26/99	Analyst: DJB
Analyte	F	Result	ι	.OD	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 ORGANIC	S - 1	NATER		Prep Metho	od: Wi M	OD GRO	Prep Date:	1/26/99	Analyst: PMS
Analyte	F	esult	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

PVOC + NAPHT - WATER			Prep Meti	od: 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 2/3/99

Lab Sample Number: 890268-006

Collection Date: 1/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

GASOLINE RANGE ORGANICS - WATER				Prep Met	hod: Wil	MOD GRO	Prep Date:	1/26/99	Analyst: PMS
Analyte	R	esult	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

		Prep Meth	nod: SW	846 5030B	Prep Date:	1/26/99	Analyst: PMS
Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
102				%Recov		1/27/99	MOD 8021B
< 0.26	0.26	0.83		ug/l		1/27/99	MOD 8021B
< 0.24	0.24	0.76		ug/l		1/27/99	MOD 8021B
0.41	0.22	0.70		ug/l	Q	1/27/99	MOD 8021B
< 0.89	0.89	2.8		ug/l		1/27/99	MOD 8021B
0.32	0.21	0.67		ug/i	Q	1/27/99	MOD 8021B
< 0.54	0.54	1.7		ug/l		1/27/99	MOD 8021B
< 0.86	0.86	2.7		ug/l		1/27/99	MOD 8021B
< 0.97	0.97	3.1		ug/l		1/27/99	MOD 8021B
< 0.37	0.37	1.2		ug/l		1/27/99	MOD 8021B
	102 < 0.26 < 0.24	102 < 0.26 < 0.24	Result LOD LOQ 102 0.26 0.83 < 0.24	Result LOD LOQ EQL 102 0.26 0.83 0.24 0.76 0.24 0.24 0.76 0.70 0.89 0.89 2.8 0.32 0.21 0.67 0.67 0.54 1.7 0.86 0.86 2.7 0.97 0.97 3.1	102 %Recov < 0.26 0.26 0.83 ug/l < 0.24 0.76 ug/l 0.41 0.22 0.70 ug/l < 0.89 0.89 2.8 ug/l 0.32 0.21 0.67 ug/l < 0.54 0.54 1.7 ug/l < 0.86 0.86 2.7 ug/l < 0.97 0.97 3.1 ug/l	Result LOD LOQ EQL Units Code 102 %Recov < 0.26	Result LOD LOQ EQL Units Code Analysis Date 102 %Recov 1/27/99 < 0.26



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-7

Report Date: 2/3/99

Lab Sample Number: 890268-007

Collection Date: 1/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -		Prep Met	thod: Wi N	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/I		1/26/99	Wi MOD DRO

Organic Results

GASOLINE RANGE ORGANICS		Prep Met	hod: Wil	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

PAH (HPLC) LIST - SEMIVOLATILES			Prep Method: SW846 3510			Prep Date:	1/27/99	Analyst: ARO	
Analyte	F	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

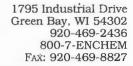
Field ID: MW-7 Report Date: 2/3/99

Lab Sample Number: 890268-007 Collection Date: 1/21/99

WI DNR LAB ID: 405132750 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

PVOC + NAPHT - WATER		Prep Met	hod: SW	846 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		ua/l		1/27/99	MOD 8021B





Project Name: JOHNSON SAND & GRAVEL

Field ID: TRIP BLANK

Project Number: 1401

Client: MORAINE ENVIRONMENTAL INC

Report Date: 2/3/99

Lab Sample Number: 890268-008

Collection Date: 1/21/99

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: Wil	MOD GRO	Prep Date:	1/26/99	Analyst: PMS	
Analyte	Resu	ılt	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	NICS < 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	10	1			1.00	%Recov		1/27/99	Wi MOD GRO
Blank	< 50				50	ug/i		1/27/99	Wi MOD GRO

PVOC + NAPHT - WATER			Prep Meti	1/26/99	Analyst: PMS			
Result		LOD	LOQ	EQL	EQL Units		Analysis Date	Analysis Method
	104				%Recov		1/27/99	MOD 8021B
<	0.26	0.26	0.83		ug/l		1/27/99	MOD 8021B
<	0.24	0.24	0.76		ug/l		1/27/99	MOD 8021B
<	0.22	0.22	0.70		ug/l		1/27/99	MOD 8021B
<	0.89	0.89	2.8		ug/l		1/27/99	MOD 8021B
	0.33	0.21	0.67		ug/l	Q	1/27/99	MOD 8021B
<	0.54	0.54	1.7		ug/l		1/27/99	MOD 8021B
<	0.86	0.86	2.7		ug/l		1/27/99	MOD 8021B
<	0.97	0.97	3.1		ug/l		1/27/99	MOD 8021B
<	0.37	0.37	1.2		ug/l		1/27/99	MOD 8021B
	< < < < < < < < < < < < < < < < < < <	104 < 0.26 < 0.24 < 0.22 < 0.89	104 < 0.26	104 < 0.26	104 < 0.26	104 %Recov < 0.26 0.26 0.83 ug/l < 0.24 0.24 0.76 ug/l < 0.22 0.22 0.70 ug/l < 0.89 0.89 2.8 ug/l 0.33 0.21 0.67 ug/l < 0.54 0.54 1.7 ug/l < 0.86 0.86 2.7 ug/l < 0.97 0.97 3.1 ug/l	104 %Recov < 0.26	Result LOD LOQ EQL Units Code Date 104 %Recov 1/27/99 < 0.26

Company Nam Branch or Local Project Contact Telephone: Project Numbe Project Name: Project Location Sampled By (P	ation: (OKATO) t: (YAY) D-DA or: (A) (A) (A) (A) (A) (A) (A) (A) (A) (A)	1060 14 GB1	NIK NIK				N C	(YES/CODE	(NO) /		Green 0-469-24 FAX	Bay, W 136 • 1- 920-46	ne St., Suit 71 54302 800-736-2- 19-8827	436		Madise 827-550 Fax: 6	P.O. # Mail Repor Company: Address:	Superior 715-392-5844 FAX 711	h Street., Suite 122 ; WI 54880 • 1-800-837-8238 5-392-5843 of
	DES CAA NR					S				/	/		//	/	Addre		- 14/1/11/2	14. 1	4.111
Other NR720 Confirm	nation Analysis Required? (circle)): Y	N			25/	3/	/	1	10/	1	/			•			sf .	
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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

Report Date: 1/31/99

Sample No.

Field ID

Collection

Date Sample No.

Field ID

Collection

Date

890304-001 MW-4

1/21/99

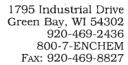
The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

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.

Approval Signature

Date





Project Name: JOHNSON SAND & GRAVEL

Project Number: 1401

Pana

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 1/29/99

Lab Sample Number: 890304-001

Collection Date: 1/21/99

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WI DNR LAB ID: 405132750

Matrix Type: WATER

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
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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

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.

Q. Duranceau	<u> </u>
Approva Signature	Date



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM FAX: 920-469-8827

Cabit	restGroupiD:	Continent.
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	Methylene chloride is present in the laboratory environment. Detects should be considered suspect.
886252-001 MW-1	PAHLC-W	Surrogate recovery data unavailable due to high dilution required for sample analysis.
886252-002 MW-7	PAHLC-W	Surrogate recovery data unavailable due to high dilution required for sample analysis.





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Report Date: 11/2/98

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

Lab Sample Number: 886252-001

Collection Date: 10/16/98

WI DNR LAB ID: 405132750

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 -		Prep Metl	nod: Wil	10/21/98 Analyst: DJB					
Analyte	R	tesult	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

EPA 8260 VOLATILE LIST- WATER			Prep Method: SW846 5030			Prep Date:	10/23/98 A	nalyst: 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: MW-1

Lab Sample Number: 886252-001

WI DNR LAB ID: 405132750

Client: MORAINE 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-Tetrachioroethane	<	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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Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

Report Date: 11/2/98

Lab Sample Number: 886252-001

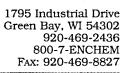
Collection Date: 10/16/98

WI DNR LAB ID: 405132750

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-Trichloroethane	<	0.30	0.30	0.96	ug/L		10/23/98	SW846 8260B
,1,2-Trichloroethane	<	0.61	0.61	1.9	ug/L		10/23/98	SW846 8260B
,2,4-Trimethylbanzene		5.3	0.22	0.70	ug/L		10/23/98	SW846 3260B
richloroethene	<	0.37	0.37	1.2	ug/L		10/23/98	SW846 8260B
,2,3-Trichloropropane	<	0.75	0.75	2.4	ug/L		10/23/98	SW846 8260B
,3,5-Trimethylbenzene		11	0.27	0.86	ug/L		10/23/98	SW846 8260B
/inyl chloride	<	0.20	0.20	0.64	ug/L		10/23/98	SW846 8260B
(ylenes, -m, -p	<	0.43	0.43	1.4	ug/L		10/23/98	SW846 8260B
(ylene, -o		0.72	0.24	0.76	ug/L	Q	10/23/98	SW846 8260B
1-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

PAH (HPLC) LIST - SEMIVOLATILES Analyte Result			Prep Met	hod: SW	Prep Date:	10/22/98 An	alyst: ARO		
		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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: MW-1

Lab Sample Number: 886252-001

WI DNR LAB ID: 405132750

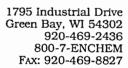
Client: MORAINE ENVIRONMENTAL INC

Report Date: 11/2/98

Collection Date: 10/16/98

Matrix Type: WATER

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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-7

Report Date: 11/2/98

Lab Sample Number: 886252-002

Collection Date: 10/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Met	nod: Will	10/21/98	Analyst: DJB		
Analyte ·	F	lesult	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

EPA 8260 VOLATILE LIST- W	VATER	Prep Metho	od: SW846 5030	Prep Date:	10/23/98 Ana	alyst: 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





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

1,2-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		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	<	0.79	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Lab Sample Number: 886252-002

Report Date: 11/2/98

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-7

Collection Date: 10/16/98

WI DNR LAB ID: 405132750

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

PAH (HPLC) LIST - SEMIVO	DLATILES	5		Prep Meth	od: SW8	46 3510	Prep Date:	10/22/98	Analyst: ARO
Analyte	Res	sult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Acenaphthene	< 2	28	28	89		ug/L		10/30/98	SW846 8310
Acenaphthylene	< 2	25	25	80		ug/L		10/30/98	SW846 8310
Anthracene	< 3	3.8	3.8	12		ug/L		10/30/98	SW846 8310
Benzo(a)anthracene	1	19	2.5	8.0		ug/L		10/30/98	SW846 8310
Benzo(a)pyrene	c).98	0.90	2.9		ug/L	Q	10/30/98	SW846 8310
Benzo(b)fluoranthene	3	3.0	2.7	8.6		ug/L	Q	10/30/98	SW846 8310
Benzo(g,h,i)perylene	< 1	1.3	1.3	4.1		ug/L		10/30/98	SW846 8310
Benzo(k)fluoranthene	1	1.3	0.54	1.7		ug/L	Q	10/30/98	SW846 8310
Chrysene	3	32	2.9	9.2		ug/L		10/30/98	SW846 8310
Dibenzo(a,h)anthracene	2	2.3	1.2	3.8		ug/L	Q	10/30/98	SW846 8310
Fluoranthene	3	3.5	2.7	8.6		ug/L	Q	10/30/98	SW846 8310
Fluorene	2	28	10	32		ug/L	Q	10/30/98	SW846 8310
Indeno(1,2,3-cd)pyrene	< 1	1.5	1.5	4.8		ug/L		10/30/98	SW846 8310
1-Methylnaphthalene	1	150	22	70		ug/L		10/30/98	SW846 8310
2-Methylnaphthalene	< 2	22	22	70		ug/L		10/30/98	SW846 8310
Naphthalene	< 2	25	25	80		ug/L		10/30/98	SW846 8310
Phenanthrene	2	210	33	110		ug/L		10/30/98	SW846 8310
Pyrene	7	7.8	3.1	9.9		ug/L	Q	10/30/98	SW846 8310



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 Report Date: 11/2/98

Field ID: MW-7

Lab Sample Number: 886252-002

Collection Date: 10/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

9,10-Diphenylanthracene

NA

%Recov

10/28/98

SW846 8310

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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

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 BI ANK	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.

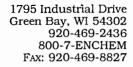
I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

Approval Signature Date



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM Fax: 920-469-8827

Lab#:	TestGroupID:	Comment:
886175-	8260+-W	Methylene chloride is present in the laboratory environment. Detects should be considered suspect.
886175-003 MW-4	DRO-W	Hump was present late in chromatogram.
886175-004 MW-5	DRO-W	Hump was present late in chromatogram.
886175-005 MW-6	GRO-W	One large early unidentified peak present.
	DRO-W	Hump was present late in chromatogram.





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2

Report Date: 10/21/98

Lab Sample Number: 886175-001

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -	MA.	TER		Prep Met	hod: Wil	MOD DRO	Prep Date:	10/19/98 Analyst: DJB		
Analyte	F	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	

EPA 8260 VOLATILE LIST- WA	ATER	Prep Methe	od: SW84	6 5030	Prep Date:	10/20/98 An	alyst: 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401 Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2 Report Date: 10/21/98

Lab Sample Number: 886175-001 Collection Date: 10/14/98

WI DNR LAB ID: 405132750 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-Dichloroethene	<	0.43	0.43	1.4	ug/L		10/20/98	SW846 8260B
cis-1,2-Dichloroethene	<	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-Dichloroethene	<	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
Tetrachloroethene	<	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2

Report Date: 10/21/98

Lab Sample Number: 886175-001

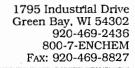
Collection Date: 10/14/98

WI DNR LAB ID: 405132750

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

GASOLINE RANGE ORGA	NICS - WATER		Prep Met	hod: WI	MOD.GRO	Prep Date:	10/19/98 A	nalyst: EGS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGAI	NICS < 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-3

Report Date: 10/21/98

Lab Sample Number: 886175-002

Collection Date: 10/14/98

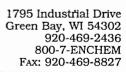
WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -	ΓER		Prep Method: Wi MOD DRO Pre					Analyst: DJB	
Analyte	R	lesult	LOD	LCQ	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

EPA 8260 VOLATILE LIST- W	VATER		Prep Meti	nod: SW846 5030	Prep Date: 10/19/98	Analyst: HW
Analyte	Result	LOD	LOQ	EQL Units	Analysis Code 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-Butyibenzene	< 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





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-Dichloroethene	<	0.43	0.43	1.4	ug/L		10/19/98	SW846 3260B
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
					-			



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-3

Report Date: 10/21/98

Lab Sample Number: 886175-002

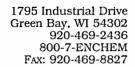
Collection Date: 10/14/98

WI DNR LAB ID: 405132750

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	< 0.22	0.22	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
Virıyl 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
Kylene, -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
Foluene-d8	118			%Recov	10/19/98	SW846 8260E

GASOLINE RANGE ORGA	NICS - WATER		Prep Met	hod: Wil	MOD.GRO	Prep Date:	10/19/98	Analyst: EGS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	NICS < 50			50	ug/l	****	10/20/98	Wi MOD GRO
Blank Spike	96			1.0	%Recov		i0/20/98	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 10/21/98

Lab Sample Number: 886175-003

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Meth	od: Wi N	IOD DRO	Prep Date:	10/19/98 A	nalyst: DJB
Analyte	F	lesult	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

EPA 8260 VOLATILE LIST- WA	ATER	Prep Method:	SW846 5030 Prep Date:	10/19/98 Analyst:	HW
Analyte	Result LO	LOQ E	QL Units Code	•	nalysis Method
Benzene	< 0.27 0.2	7 0.86	ug/L	10/19/98 SI	V846 8260B
Bromobenzene	< 0.83 0.8	3 2.6	ug/L	10/19/98 S\	V846 8260B
Bromochloromethane	< 0.42 0.4	2 1.3	ug/L	10/19/98 S\	N846 8260B
Bromodichloromethane	< 0.30 0.3	0 0.96	ug/L	10/19/98 SI	N846 8260B
Bromoform	< 0.44 0.4	4 1.4	ug/L	10/19/98 SI	N846 8260B
Bromomethane	< 0.70 0.7	0 2.2	ug/L	10/19/98 S\	N846 8260B
s-Butylbenzene	< 0.29 0.2	9 0.92	ug/L	10/19/98 S\	V846 8260B
t-Butylbenzene	< 0.32 0.3	2 1.0	ug/L	10/19/98 SI	V846 8260B
n-Butylbenzene	< 0.29 0.2	9 0.92	ug/L	10/19/98 SI	N846 8260B
Carbon tetrachloride	< 0.34 0.3	4 1.1	ug/L	10/19/98 SI	N846 8260B
Chloroform	< 0.35 0.3	5 1.1	ug/L	10/19/98 SI	N846 8260B
Chlorobenzene	< 0.23 0.2	3 0.73	ug/L	10/19/98 SI	N846 8260B
Chlorodibromomethane	< 0.42 0.4	2 1.3	ug/L	10/19/98 SI	N846 8260B
Chloroethane	< 0.54 0.5	4 1.7	ug/L.	10/19/98 S\	N846 8260B
Chloromethane	< 0.61 0.6	1 1.9	ug/ L	10/19/98 SI	N846 8260B
2-Chlorotoluene	< 0.31 0.3	1 0.99	ug/L	10/19/98 SI	N846 8260B
4-Chlorotoluene	< 0.32 0.3	2 1.0	ug/L	10/19/98 SI	N846 8260B
1,2-Dibromo-3-chloropropane	< 0.41 0.4	1 1.3	ug/L	10/19/98 SI	N846 8260B



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 10/21/98

Lab Sample Number: 886175-003

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

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		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
					-			



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 10/21/98

Lab Sample Number: 886175-003

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

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
/inyl chloride	<	0.20	0.20	0.64	ug/L	10/19/98	SW846 8260B
Kylenes, -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

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: Wil	MOD.GRO	Prep Date:	10/19/98 Analyst: EGS	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORG	ANICS < 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-5 Report Date: 10/21/98

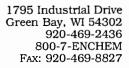
Lab Sample Number: 886175-004 Collection Date: 10/14/98

WI DNR LAB ID: 405132750 Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Method: Wi MOD DRO P					10/19/98	Analyst: DJB
Analyte	F	Result	LC	D	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

EPA 8260 VOLATILE LIST- WA	ATER		Prep Meti	nod: SW8	46 5030	Prep Date:	10/19/98 A	nalyst: 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Field ID: MW-5

Lab Sample Number: 886175-004

WI DNR LAB ID: 405132750

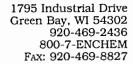
Client: MORAINE ENVIRONMENTAL INC

Report Date: 10/21/98

Collection Date: 10/14/98

Matrix Type: WATER

1,2-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-Isopropyitoluene	< 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-5

Report Date: 10/21/98

Lab Sample Number: 886175-004

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

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
/inyl chloride	<	0.20	0.20	0.64	ug/L		10/19/98	SW846 8260B
Kylenes, -m, -p		0.46	0.43	1.4	ug/L	Q	10/19/98	SW846 8260B
Kylene, -o	<	0.24	0.24	0.76	ug/L		10/19/98	SW846 8260B
1-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

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: WI	MOD.GRO	Prep Date:	10/19/98	Analyst: EGS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORG	ANICS < 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 10/21/98

Lab Sample Number: 886175-005

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Metho	od: Wi N	MOD DRO	Prep Date:	10/19/98	Analyst: DJB
Analyte	F	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

EPA 8260 VOLATILE LIST- WATER			Prep Meth	od: SW846 5030	•	nalyst: HW
Analyte	Result	LOD	LOQ	EQL Units	Analysis Code 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



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

1,2-Dibromoethane	< 0	0.39 0.39	1.2	ug/L		10/19/98	SW846 8260B
Dibromomethane	< 0	0.53 0.53	1.7	ug/L		10/19/98	SW846 8260B
1,3-Dichlorobenzene	< 0	0.34 0.34	1.1	ug/L		10/19/98	SW846 8260B
1,4-Dichlorobenzene	< 0	0.30	0.96	ug/L		10/19/98	SW846 8260B
1,2-Dichloroethane	< 0	0.37 0.37	1.2	ug/L		10/19/98	SW846 8260B
1,2-Dichlorobenzene	< 0	0.25	0.80	ug/L		10/19/98	SW846 8260B
1,1-Dichloroethene	< 0	0.43	1.4	ug/L		10/19/98	SW846 8260B
cis-1,2-Dichloroethene	C	0.72 0.28	0.89	ug/L	Q	10/19/98	SW846 8260B
Dichlorodifluoromethane	< 0	0.47 0.47	1.5	ug/L		10/19/98	SW846 8260B
trans-1,2-Dichloroethene	< 0	0.79 0.79	2.5	ug/L		10/19/98	SW846 8260B
1,2-Dichloropropane	< 0	0.35	1.1	ug/L		10/19/98	SW846 8260B
1,1-Dichloroethane	< 0	0.35	1.1	ug/L		10/19/98	SW846 8260B
1,3-Dichloropropane	< 0	0.42 0.42	1.3	ug/L		10/19/98	SW846 8260B
2,2-Dichloropropane	< 0	0.36	1.1	ug/L		10/19/98	SW846 8260B
1,1-Dichloropropene	< 0	0.81 0.81	2.6	ug/L		10/19/98	SW846 8260B
cis-1,3-Dichloropropene	< 0	0.32 0.32	1.0	ug/L		10/19/98	SW846 8260B
trans-1,3-Dichloropropene	< 0	0.43 0.43	1.4	ug/L		10/19/98	SW846 8260B
Diisopropyl ether	6	52 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	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	0.86	ug/L		10/19/98	SW846 8260B
1,1,1-Trichloroethane	< (0.30 0.30	0.96	ug/L		10/19/98	SW846 8260B
				-			



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-6

Report Date: 10/21/98

Lab Sample Number: 886175-005

Collection Date: 10/14/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

1,1,2-Trichloroethane	< (D.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	1	115			%Recov	10/19/98	SW846 8260B
Dibromofluoromethane	1	116			%Recov	10/19/98	SW846 8260B
Toluene-d8	1	115			%Recov	10/19/98	SW846 8260B

GASOLINE RANGE ORG	Prep Met	hod: Wi	MOD.GRO	Prep Date:	10/19/98	Analyst: EGS		
Analyte	Result	LOD	LOD LOQ EQL Units				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



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE 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

EPA 8260 VOLATILE LIST- W		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-Dichlorcethane	< 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
					-			



Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE ENVIRONMENTAL INC

Field ID: TRIP BLANK

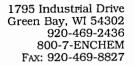
Report Date: 10/21/98 Collection Date: 10/14/98

Lab Sample Number: 886175-006

ATER

WI DNR LAB ID:	405132750	Matrix Type :	WA.
WI DNR LAB ID:	405132750	matrix Type:	**/

						_
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-Trichforobenzene	< 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: #1401

Client: MORAINE 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

Toluene-d8

114

%Recov

10/19/98

SW846 8260B

GASOLINE RANGE ORGANIC		Prep Meth	od: WI N	IOD.GRO	Prep Date:	10/19/98	Analyst: EGS		
Analyte	R	esult	LOD LOQ EQL Units					Analysis Date	Analysis Method
GASOLINE RANGE ORGANICS	S <	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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(En Chem will i	not confirm unless otherwise in	structed.)		Allense Andrews		1	10	//	//	//	//	/	Mail II	nvoice T	SI	HADED AREA F	OR LAB	ORATORY US	
FIELD ID	SAMPLE DESCRIPTION) NC	DATE	ECTION	17						_	FIELD	MATRIX	GOOD.	BOTTLE		COMMENTS		LABORATORY NUMBER
or alley	Min. 2	11	1-14-9	PM			•					g. rydan	11/	X	3.	et on c			0621
÷ ,/	MW.			DH								- Marketin	11/			- 100	11(2.2)		002
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	eservation Code HCL C=H2SO4	Relinquished I	3y:	120		Da 10.15-6	te/Time:	5:00	Receive	1	1/2		101	1610	14	Date/Time:		S861	No. 75
D=HN03 E	EnCore F=Methanol** =Other (Indicate)	Relinquished I		Men		Da	te/Time:	600	Receive							Date/Time:		ample Receipt	remp.
**If not using	En Chem's methanol,	Relinquished E		nging 100 stope 5	2007		te/Time:	604	Receive	ed By:						Date/Time:		iample Receipt Wet/Metals)	Н
	ne of methanol added and opriate samples.	Relinquished E	Ву:		A	Da	te/Time:		Receive	ed By:	04	ister and the second	andra a	10-	16-8	Date/Time:	ن در	ustody Seal	

+



1795 Indústrial 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

WI DNR LAB ID: 405132750

Client: MORAINE ENVIRONMENTAL INC

Report Date: 6/24/98

Collection	

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.

D. Duranceau	6	124/98
Approval Signature	Date	



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM FAX: 920-469-8827

		·
Lab#:	TestGroupID:	Comment:
883569-001 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 MW6	GRO-W	Reported concentration due to single peak in window.
883569-007 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.





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW1

Report Date: 6/23/98

Lab Sample Number: 883569-001

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS - WATER				Prep Met	hod: Wi N	MOD DRO	Prep Date:	6/19/98	Analyst: DJB
Anaiyte	R	esult	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 Pre					6/18/98	Analyst: EGS
Analyte	Re	esult	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

PAH (HPLC) LIST - SEN	PAH (HPLC) LIST - SEMIVOLATILES		Prep Met	hod: SW8	346 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Field ID: MW1

Lab Sample Number: 883569-001

Report Date: 6/23/98

Client: MORAINE ENVIRONMENTAL INC

umber: 883569-001 Collection Date: 6/16/98

WI DNR LAB ID: 405132750 Matrix Type: WATER

				·			
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

PVOC - WATER				Prep Met	hod: SW	846 5030	Prep Date:	_	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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW2

Report Date: 6/22/98

Lab Sample Number: 883569-002

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

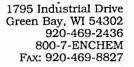
Organic Results

DIESEL RANGE ORGANICS - WATER			Prep Method: Wi MOD DRO					6/18/98	Analyst: DJB
Analyte	F	lesult	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 Met	hod: WII	MOD.GRO	Prep Date:	6/18/98	Analyst: EGS
Analyte	F	lesult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod
GASOLINE RANGE ORGA	NICS <	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/i		6/19/98	Wi MOD GRO

PVOC - WATER			Prep Met	hod: SW	846 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW2

Report Date: 6/22/98

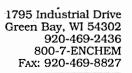
Lab Sample Number: 883569-002

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW3

Report Date: 6/22/98

Lab Sample Number: 883569-003

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

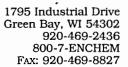
Organic Results

DIESEL RANGE ORGANICS - WATER			Prep Method: Wi MOD DRO P					6/18/98	Analyst: DJB
Analyte	F	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		R	Prep Met	hod: Wil	MOD.GRO	Prep Date:	6/18/98	Analyst: EGS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	NICS < 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

PVOC - WATER				Prep Met	hod: SW	846 5030	Prep Date:	6/18/98	Analyst: EGS
Analyte	R	esult	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW3

Report Date: 6/22/98

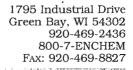
Lab Sample Number: 883569-003

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

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



Client: MORAINE ENVIRONMENTAL INC



- Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Field ID: MW4 Report Date: 6/22/98

Lab Sample Number: 883569-004 Collection Date: 6/16/98

WI DNR LAB ID: 405132750 Matrix Type: WATER

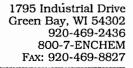
Organic Results

DIESEL RANGE ORGANICS - WATER			Prep Method: Wi MOD DRO Prep Date					: 6/18/98 Analyst: DJB		
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod	
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 ORG	SANICS - WATER		Prep Met	hod: WI	MCD.GRO	Prep Date:	6/18/98	Analyst: EGS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod
GASOLINE RANGE ORG	ANICS < 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

PVOC - WATER			Prep Meti	nod: 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	0.83	ug/l		6/19/98	MOD 8021B	
Ethylbenzene	< 0.24	0.24	0.76	ug/i		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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW4

Report Date: 6/22/98

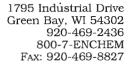
Lab Sample Number: 883569-004

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

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/i	6/19/98	MOD 8021B





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW5

Report Date: 6/22/98

Lab Sample Number: 883569-005

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -	WA.	TER		Prep Met	hod: Wil	MOD DRO	Prep Date:	6/18/98	Analyst: DJB	
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod	
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 ORGA	GASOLINE RANGE ORGANICS - WATER		Prep Method: WI MOD.GRO				6/18/98	Analyst: EGS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	NICS < 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

PVOC - WATER			Prep Met	nod: 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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW5

Report Date: 6/22/98

Lab Sample Number: 883569-005

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Field ID: MW6

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Lab Sample Number: 883569-006

Matrix Type: WATER

Report Date: 6/22/98

Client: MORAINE ENVIRONMENTAL INC

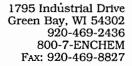
Organic Results

DIESEL RANGE ORGANICS - WATER		Prep Method: Wi MOD DRO				Prep Date:	6/18/98 Analyst: DJB		
Analyte	Re	esult	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	F	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/i		6/19/98	Wi MOD GRO

PVOC - WATER			Prep Me	thod: SW846 50	30 Prep Date:	6/18/98	Analyst: EGS	
Analyte	Resu	lt LOD	LOQ	EQL Ur	its Code	Analysis Date	Analysis Method	
a,a,a-Trifluorotoluene	10	1		%R	ecov	6/19/98	MOD 8021B	
Benzene	0.2	7 0.26	0.83	u	g/I Q	6/19/98	MOD 8021B	
Ethylbenzene	< 0.2	0.24	0.76	u	g/l	6/19/98	MOD 8021B	
Methyl-tert-butyl-ether	0.3	0.22	0.70	u	g/I Q	6/19/98	MOD 8021B	
Toluene	0.4	0.21	0.67	u	g/l Q	6/19/98	MOD 8021B	
1,3,5-Trimethylbenzene	< 0.5	0.54	1.7	u	g/I	6/19/98	MOD 8021B	
1,2,4-Trimethylbenzene	< 0.8	0.86	2.7	u	g/l	6/19/98	MOD 8021B	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW6

Report Date: 6/22/98

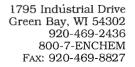
Lab Sample Number: 883569-006

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

Matrix Type: WATER

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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW7 Report Date: 6/23/98

Lab Sample Number: 883569-007 Collection Date: 6/16/98

WI DNR LAB ID: 405132750 Matrix Type: WATER

Organic Results

DIESEL RANGE ORGANICS -		Prep Method: Wi MOD DRO			Prep Date:	6/18/96	Analyst: DJB		
Ànalyte	F	lesult	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				6/18/98	EGS	
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date		nalysis /lethod
GASOLINE RANGE ORGANICS		1900			50	ug/l		6/19/98	W	MOD GRO
Blank Spike		107			1.00	%Recov		6/19/98	· w	NOD GRO
Blank Spike Duplicate		101			1.00	%Recov		6/19/98	W	i MOD GRO
Blank	<	50			50	ug/l		6/19/98	W	i MOD GRO

PAH (HPLC) LIST - SEMIVOLATILES				Prep Met	hod: SW8	346 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW7

Report Date: 6/23/98

Lab Sample Number: 883569-007

Collection Date: 6/16/98

WI DNR LAB ID: 405132750

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	Q	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
ndeno(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

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		





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 Pr					6/18/98	Analyst: EGS
Analyte	Rest	ilt L	OD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	NICS < 50				50	ug/l	`	6/19/98	Wi MOD GRO
Blank Spike	10	7			1.00	%Recov		6/19/98	Wi MOD GRO
Blank Spike Duplicate	10	1			1.00	%Recov		6/19/98	Wi MOD GRO
Blank	< 50				50	ug/l		6/19/98	Wi MOD GRO

PVOC - WATER				Prep Method: SW846 5030			Prep Date:		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/i		6/19/98	MOD 8021B	
Methyl-tert-butyl-ether	<	0.22	0.22	0.70		ug/i		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	

Received By (En Chem):



- 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: W			MOD.GRO	Prep Date:	6/18/98	Analyst:	EGS	
malyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date		nalysis /iethod
GASOLINE RANGE ORGANICS	<	50			50	ug/l		6/19/98	W	MOD GRO
ank Spike		107			1.00	%Recov		6/19/98	v v	MOD GRO
nk Spike Duplicate		101			1.00	%Recov		6/19/98	W	MOD GRO
3lank	<	50			50	ug/l		6/19/98	s w	I MOD GRO

OC - WATER				Prep Meth	od: SW	846 5030	Prep Date:	6/18/98	Analyst: EGS
Analyte	R	lesuit	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
a-Trifluorotoluene		101				%Recov		6/19/98	MOD 8021B
enzene	. <	0.26	0.26	0.83		ug/l		6/19/98	MOD 8021B
thylbenzene	<	0.24	0.24	0.76		ug/l		6/19/98	MOD 8021B
hyl-tert-butyl-ether	<	0.22	0.22	0.70		ug/l		6/19/98	MOD 8021B
folluene	<	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
4-Trimethylbenzene	<	0.86	0.86	2.7		ug/l		6/19/98	MOD 8021B
tylenes, -m, -p	<	0.97	0.97	3.1		ug/l		6/19/98	MOD 8021B
Viene, -o	<	0.37	0.37	1.2		ug/l		6/19/98	MOD 8021B



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

Client: MORAINE ENVIRONMENTAL INC

WI DNR LAB ID: 405132750

Report Date: 1/15/98

Sample No. Field ID Collection

B80138-001 PW 1/9/98

Collection

Date Sample No. Field ID Date

Collection

Date

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 1/15/98

Date



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Report Date: 1/14/98

Field ID: PW

Collection Date: 1/9/98

Lab Sample Number: 880138-001

Matrix Type: WATER

Client: MORAINE ENVIRONMENTAL INC

WI DNR LAB ID: 405132750

EPA 8260 VOLATILE LIST- WATER			Prep Method: SW846 5030 Prep Date: 1/13/98 Analyst:				alyst: JJB
Analyte	Result L	.OD	LOQ	EGL Units	Codo	Analysis Date	Analysis Method
Benzene	< 0.41	0.41	1.3	ug/L	i	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
Bromoferm	< 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-Dichloreethane	< 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	٠,	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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: PW

Report Date: 1/14/98

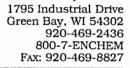
Lab Sample Number: 880138-001

· 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-Dich!oroethane	< 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		SW846 8250
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
				,		





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

Toluene-d8

108

%Recov

1/13/98

SW846 8260

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Environmental Management Services



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.

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WASTE DISPOSAL DOCUMENTATION

WSK SERVICE COMPANY, INC.

Septic System & Well Evaluations • Soil Testing

Steve Jentges President

CSTM POWTS Inspector #227036 PI 6122

P.O. Box 437 Port Washington WI 53074

262-284-5822 FAX 262-284-5890 Invoice # 10699

October 06, 1999

OCT - 8 1999

INVOICE

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 PREFORMED:

Provide storage tanker, transport and dispose of contaminated ground water from the recovery wells at the above stated site.

Itemized services preformed:

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

H Tom D.

LENDER

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TAYLOR INDUSTRIAL VAC P.O. Box 16579 MILWAUKEE, WI 53216

invoice

(414) 447-4700

OCT - 6 1999

Moraine Environmental Accounts Payable Department 1234 12th Avenue Grafton WI 53024 USA

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GREAT LAKES RECOVERY SYSTEMS P.O. BOX 16579 MILWAUKEE, WI 53216 (414) 447-4700 FAX (414) 447-4990

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TAYLOR INDUSTRIAL VAC

P.O. Box 16579 MILWAUKEE, WI 53216



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(414) 447-4700

Moraine Environmental Accounts Payable Department 1234 12th Avenue Grafton WI 53024 USA

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GREAT LAKES RECOVERY SYSTEMS P.O. BOX - 16579 MILWAUKEE, WI 53216 (414) 447-4700 FAX (414) 447-4990

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Checklist for "Non-Responders" Audit

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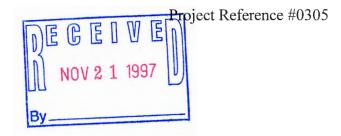
^{*} Letter must be reviewed and approved by supervisor.



Environmental Management Services

November 17, 1997

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.

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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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 サ 53186-1661-90

PREPARED FOR:
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PROJECT REFERENCE #0305

November 17, 1997

DOCUMENT CERTIFICATION

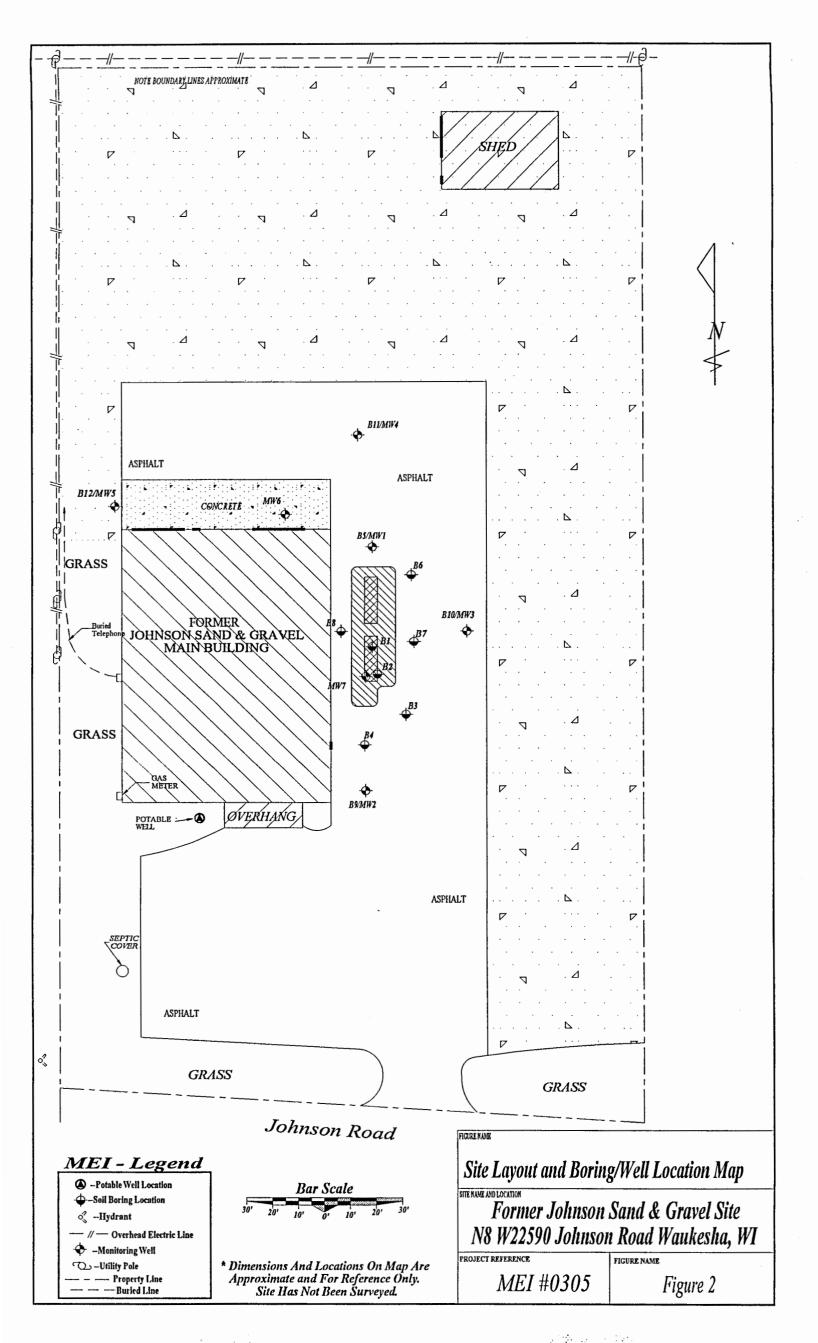
"I, Patrick J. Patterson, hereby certify that I am a hydrogeologist as to in s. NR 712.03 (1), Wis. Adm. Code, and a registered professional enging Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wist document has been prepared in accordance with the Rules of Professional A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all informathis document is correct and the document was prepared in compliance requirements in chs. NR 700 to 726, Wis. Adm. Code."	neer in the State of is. Adm. Code; that onal Conduct in ch. nation contained in
Signature and title	<u>//~/7-97</u> Date
"I,Thomas C. Sweet, hereby certify that I am a scientist as that term 712.03 (3) Wis. Adm. Code, and that, to the best of my knowledge, all contained in this document is correct and the document was prepared in capplicable requirements in chs. NR 700 to 726, Wis. Adm. Code."	of the information
Signature and title	11/17/27 Date

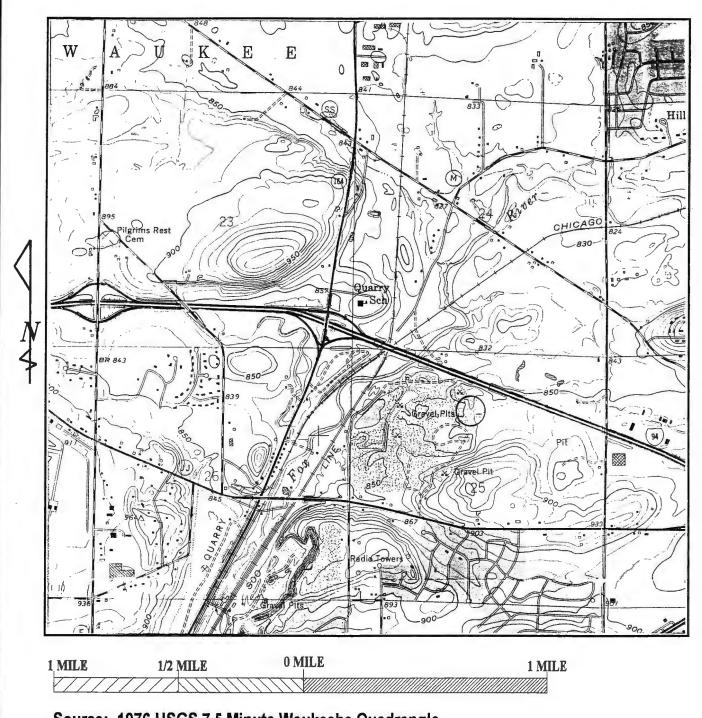
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Source: 1976 USGS 7.5 Minute Waukesha Quadrangle





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

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.

1

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

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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.

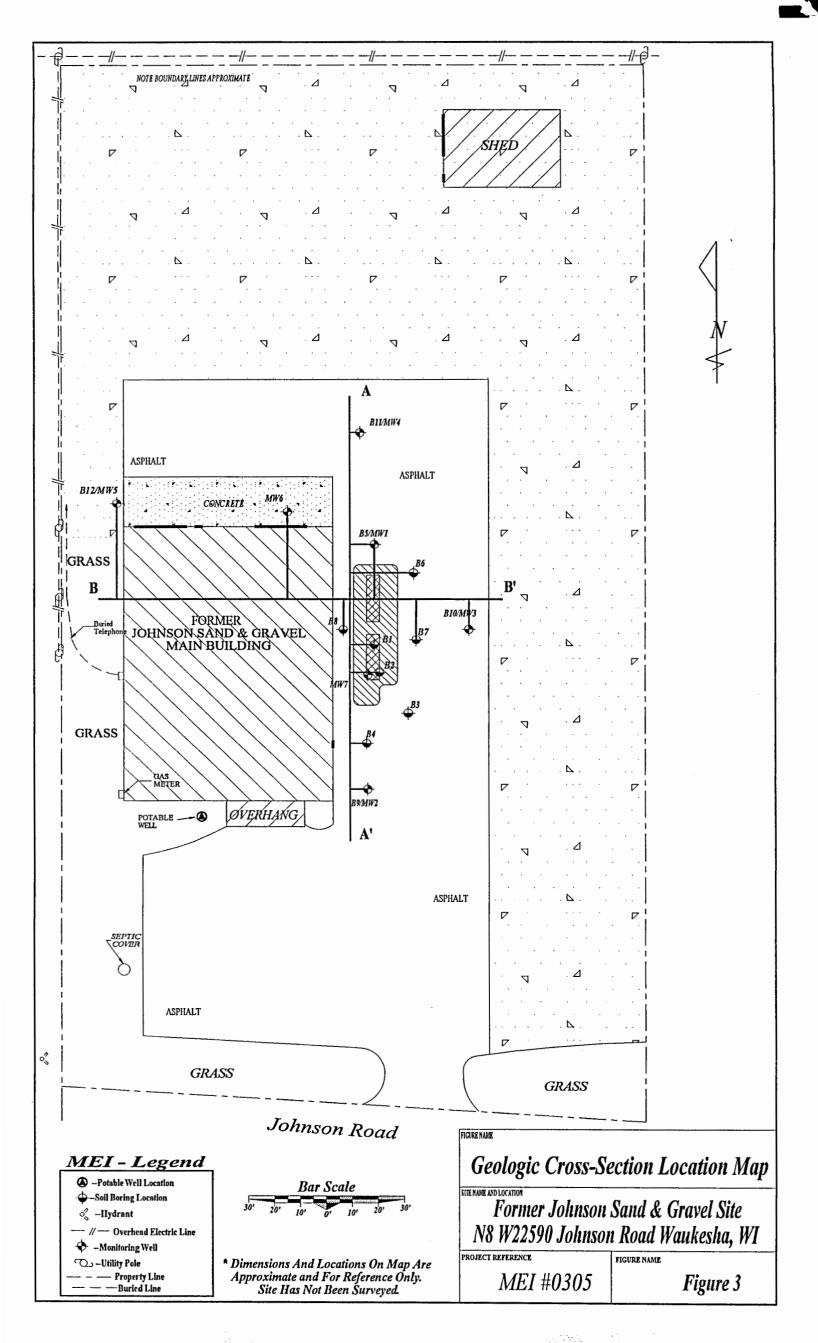
5.0 Local Soils and Hydrogeologic Conditions

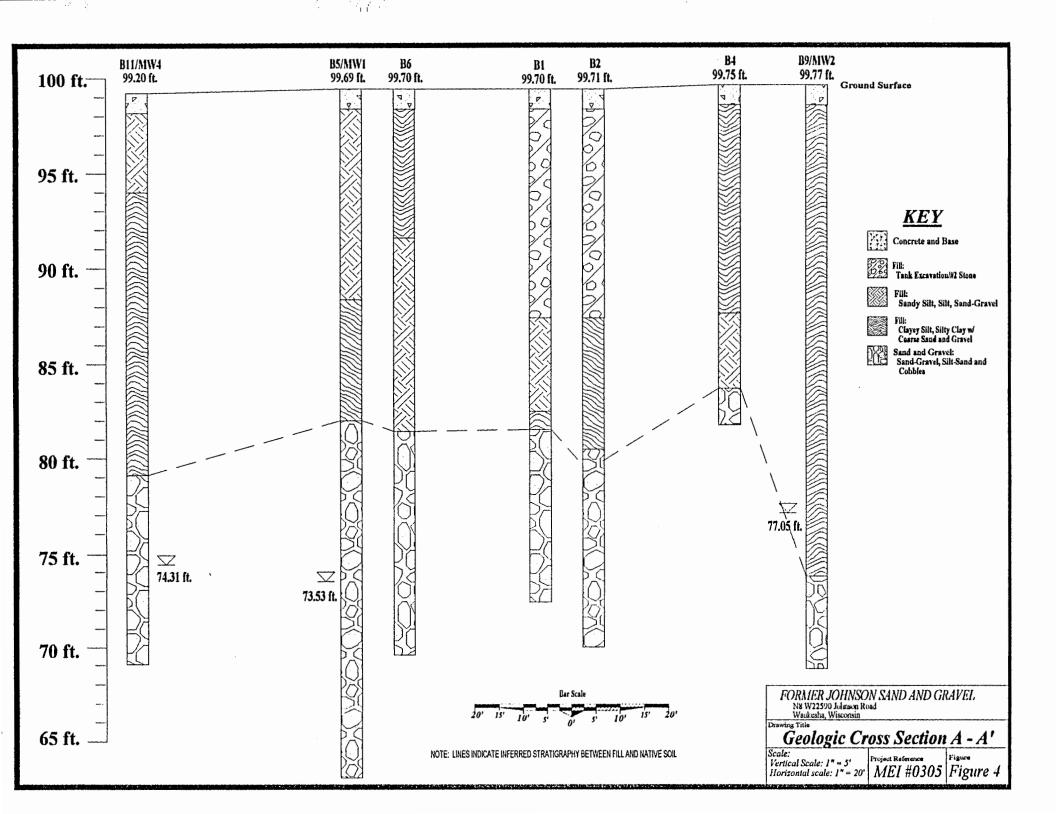
Local Geologic Characteristics

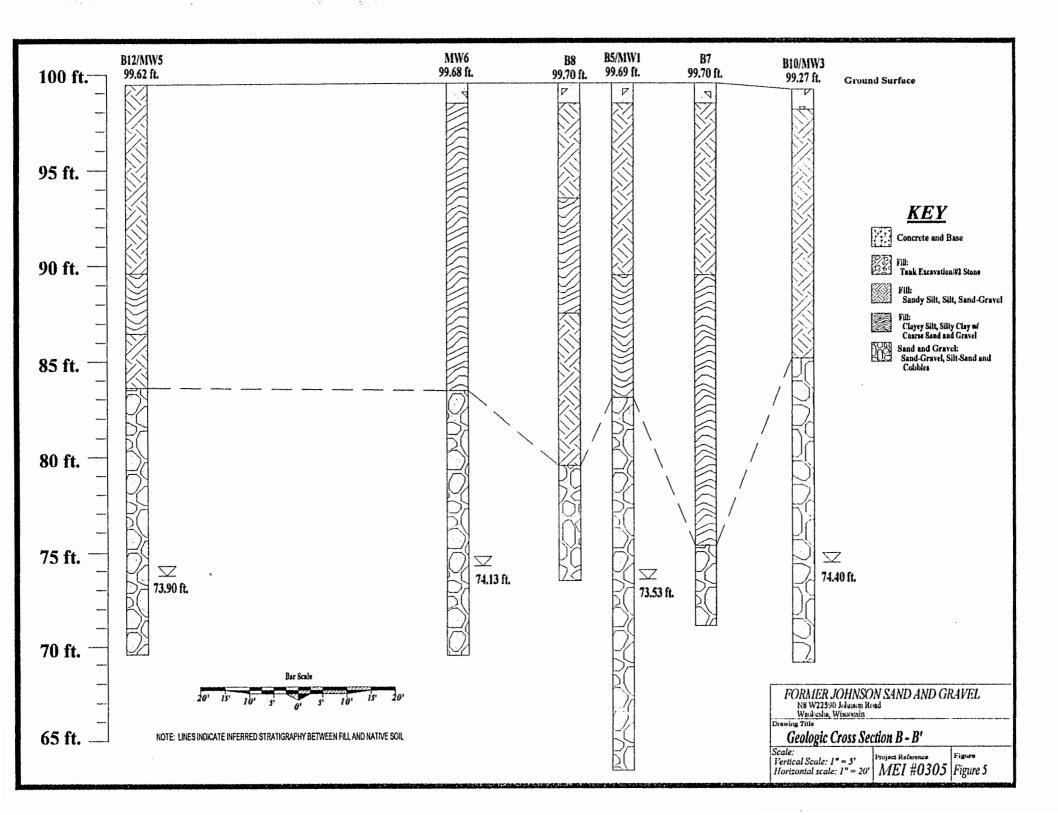
On February 19 and 20, 1996, eight soil borings were drilled on the site, of which one boring (B5) was converted to a monitoring well. On August 7, 1996, four additional monitoring wells were installed on the site to further define the extent of groundwater contamination. On August 29, 1997, two monitoring 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







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.

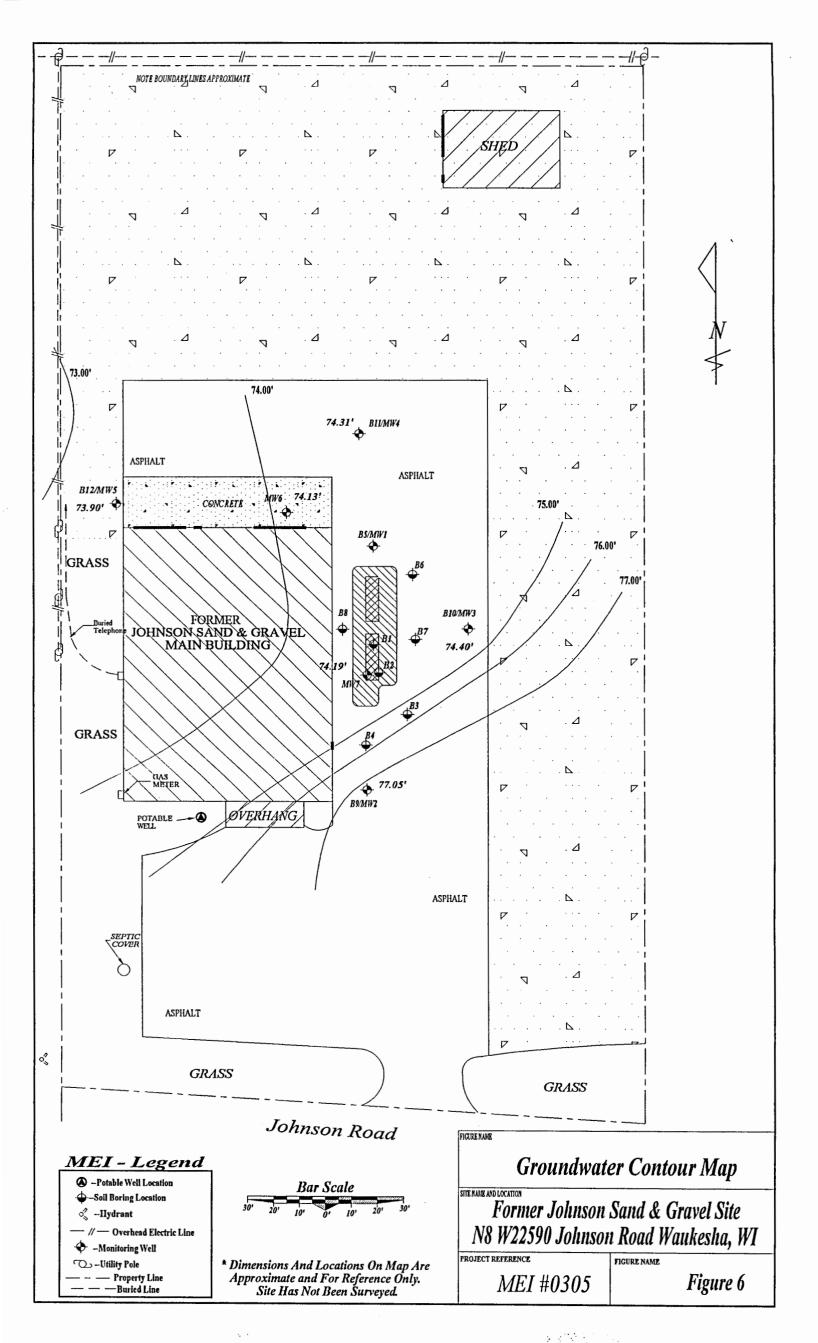


TABLE 1 STATIC WATER LEVEL MEASUREMENTS Former Johnson Sand and Gravel Site

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) 25.94 27.20 (fp) 27.32 24.77 (fp) 25.59	73.51 (fp) 73.18 71.92 (fp) 71.80 74.35 (fp) 73.53	8-13-96 9-13-96 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	В3	B4	B5	B6	В7	В8
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			- 100		
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.

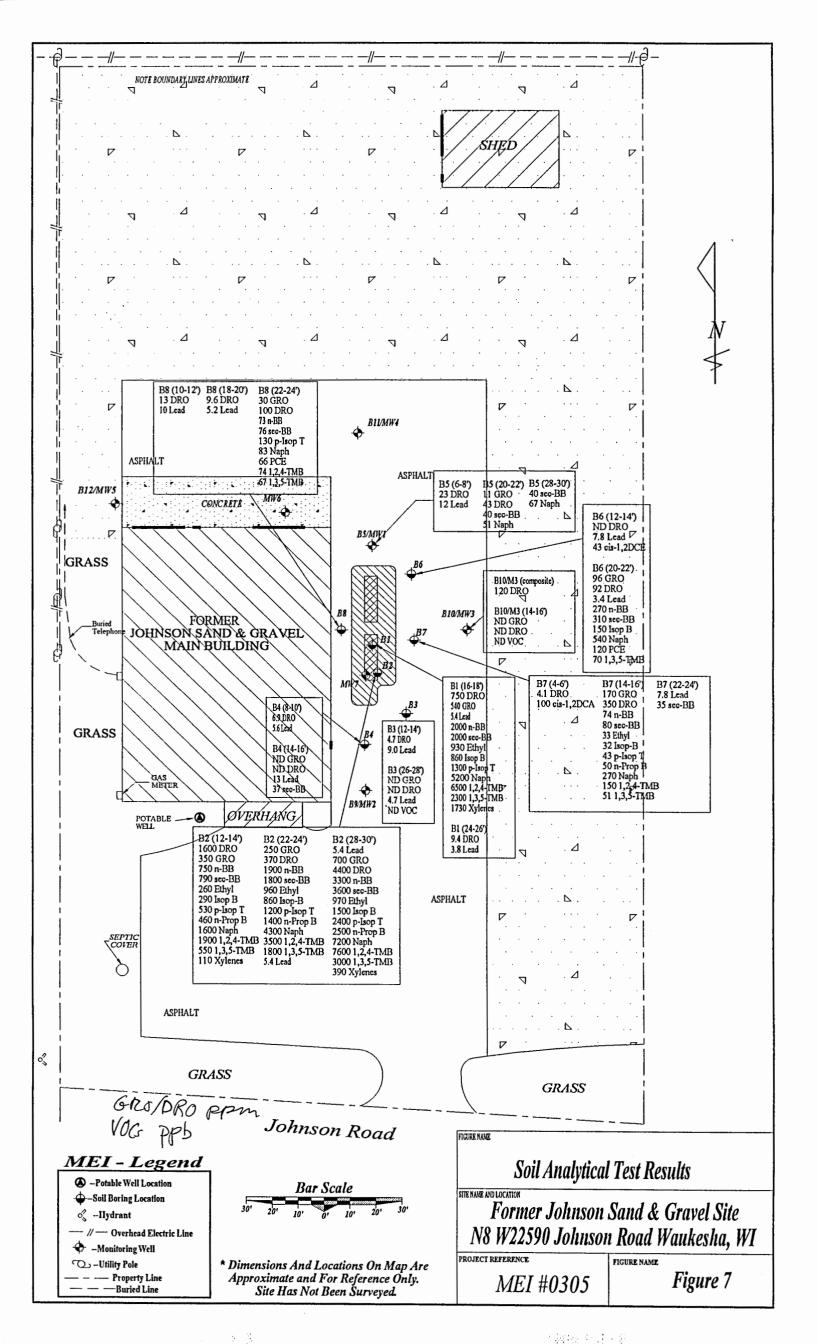


TABLE 3
SOIL QUALITY RESULTS
Former Johnson Sand and Gravel Site

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	B1 (16-18')	B1 (24-26')	B2 (12-14')	B2 (22-24')	B2 (28-30')	B3 (12-14')	B3 (26-28')	B4 (8-10')	B4 (14-16')	B5 (6-8')	B5 (20-22')	B5 (28-30')	B6 (12-14')	B6 (20-22')	B7 (4-6')	B7 (14-16')	B7 (22-24')	B8 (10-12')	B8 (18-20')	B8 (22-24')	M3 composite	M3 (14-16')	Generic RCL's
GRO (mg/kg)	540	ND	350	250	70 0	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

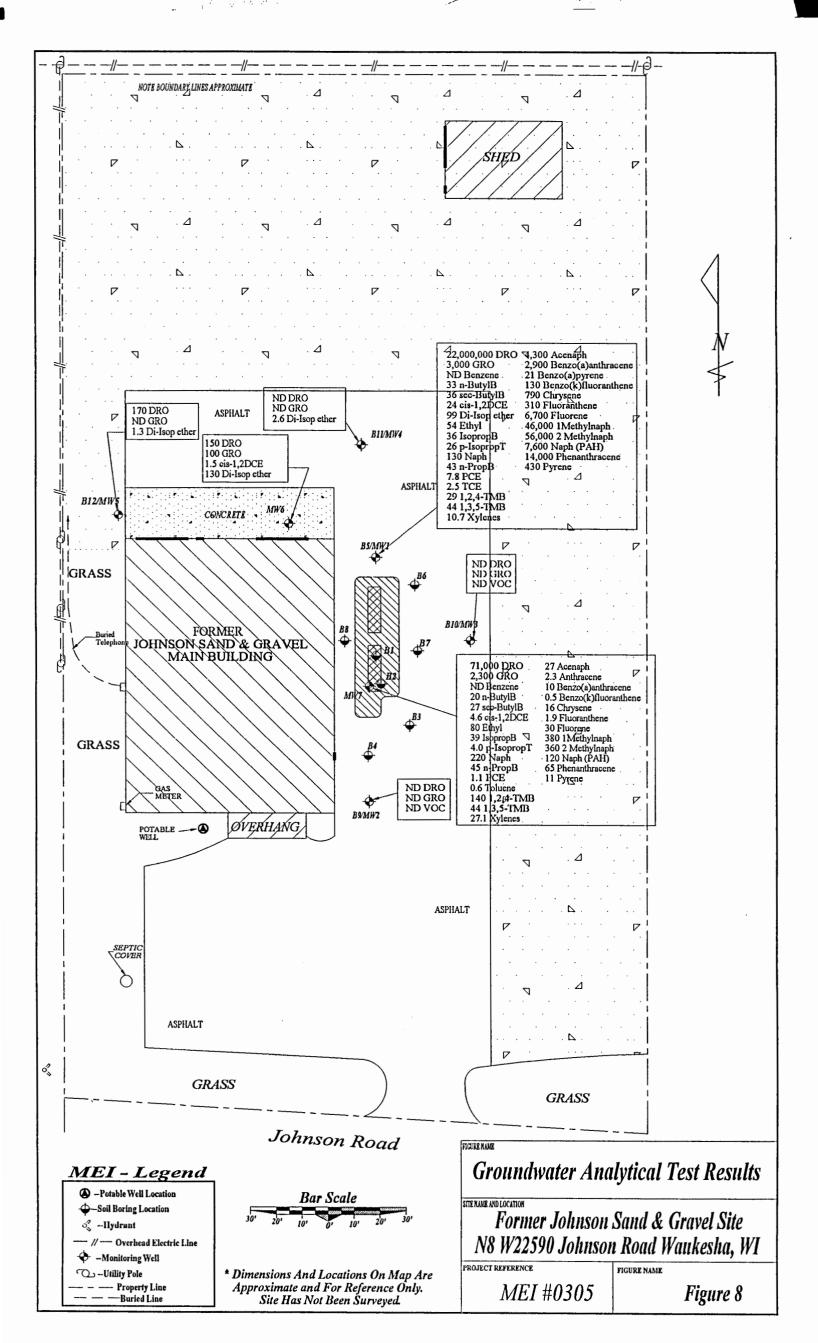
NSE - No Standard Established

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

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.



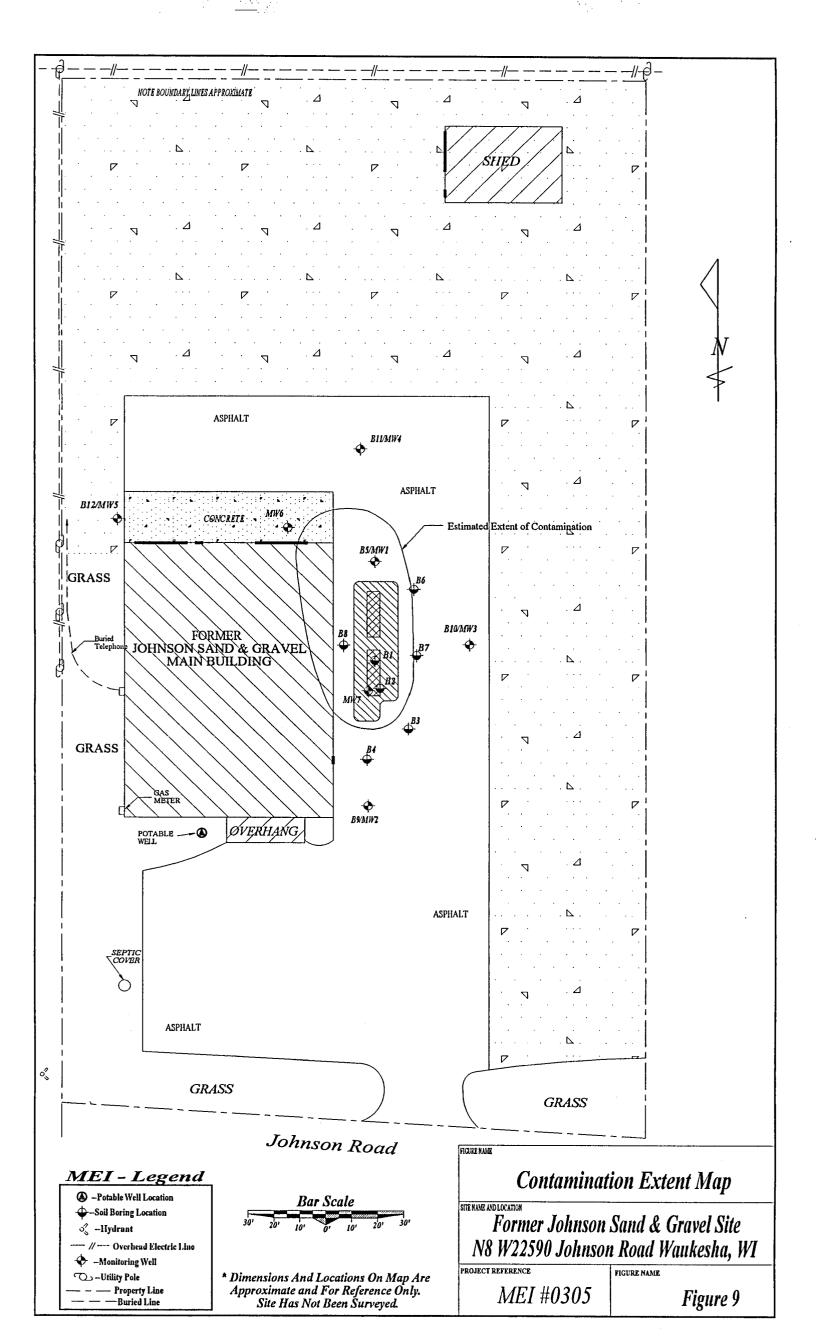


TABLE 4 GROUNDWATER QUALITY RESULTS Former Johnson Sand and Gravel Site

	N	M1		M2		13	N	[4	N	15	M6	M7	Enforcement	Preventive
Chemical	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	Standard (ES)	Action Limit (PAL)
Gasoline Range Organics (GRO)	2,300	3,000	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 20	NSE	NSE									
sec-Butylbenzene	37	36	ND	ND .	ND 27	NSE	NSE							
cis-1,2 Dichloroethene	11	24	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 80	700	140									
Isopropylbenzene	29	36	ND 39	NSE	NSE									
p-Isopropyltoluene	85	26	ND 4.0	NSE	NSE									
Naphthalene	97	130	ND 220	40	8.0									
n-Propylbenzene	18	43	ND 45	NSE	NSE									
Tetrachloroethene	8.5	7.8	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	5.0	0.5									
1,2,4-Trimethylbenzene	27	29	ND 140	NSE	NSE									
1,3,5-Trimethylbenzene	43	44	ND 44	NSE	NSE									
Xylenes, Total	8.7	10.7	ND 27.1	620	124									

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

	N	M1		M2		13	M4		M5		M6	M7	Enforcement Standard	Preventive Action Limit
Chemical	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	(ES)	(PAL)
Acenaphthalene	530	4,300	NA 27	NSE	NSE									
Anthracene	ND	ND	NA 2.3	NSE	NSE									
Benzo (a) anthracene	ND	2,900	NA 10	NSE	NSE									
Benzo (a) pyrene	ND	21	NA ND	0.2	0.02									
Benzo (k) Fluoranthene	ND	130	NA 0.5	NSE	NSE									
Chrysene	ND	790	NA 16	NSE	NSE									
Fluoranthene	ND	310	NA 1.9	NSE	NSE									
Fluorene	1,000	6,700	NA 30	400	80									
1 Methylnaphthalene	6,900	46,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	380	NSE	NSE
2 Methylnaphthalene	7,500	56,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	360	NSE	NSE
Naphthalene as PAH	610	7,600	NA 120	40	8									
Phenanthracene	2,300	14,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	65	NSE	NSE
Pyrene	ND	430	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 <u>Selected Remedial Alternative - Removal of Free Product Non-Aqueous Phase Liquid</u> (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.

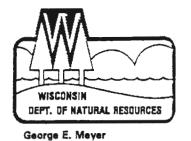
9.0 Project Goals and Schedule

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



Secretary

May 20, 1994

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District
Post Office Box 12436
4041 N. Richards Street
Milwaukse, Wisconsin 53212
TELEPHONE: 414-961-2727
TELEFAX #: 414-961-2770

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 <u>Low Priority Rank</u> 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:

 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

Ma. Miselle that

c: Ms. Amy Bucher -- Moraine Environmental, P. O. Box 488, Mequon, WI 53092 -- SED Case File

Wisconsin Department of Industry, Labor and Human Relations

Complete one form for each site closure.

SBD-8951 (R. 12/91)

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

	DENTIFICATION: (P!	ease Print)	Indicate whet	ther closur	e is for: 2. Owner N	_	Tar	ık Oni	iy [Pipin	g Only				
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see ced on level	emoved, AND es capped. nd capped, OR and pumps. and other fixtures re BE PURGED THRO e Section F. ground and blocke	ed		re Note of a series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the series of the ser	Inspect Verifie	TOTAL STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE				
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NK IS TO E	emoved, AND nes capped. nd capped, OR and pumps. and other fixtures re BE PURGED THRO e Section F. ground and blocke	ed		re y reign z zzzzzzzz zzzz zz	Inspect Verifie	TOTAL STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF 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_	. CLOSURE BY REMOVAL (continued)	Remover Verified	Inspector Verified	NA
C.	11. Tank labeled in 2" high letters after removal but before being moved from site NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE;		Vermed	
	FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE. 12. Tank vent hole (1/8 th " in uppermost part of tank) installed prior to moving the tank from site	\boxtimes Y \square N		
	CLOSURE IN PLACE	24		
υ.	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).			
	2. Piping disconnected from tank and removed. 3. All liquid and residue removed from tank using explosion proof pumps or hand pumps	OY ON		X X
	 All pump motors and suction hoses bonded to tank or otherwise grounded. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. 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. 	□ Y □ N	, T. T. T.	XXXXX
	Vent lines left connected until tanks purged. Tank openings temporarily plugged so vapors exit through vent.	OY ON		X
	8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F. 9. Tank properly cleaned to remove all studge and residue.	□ Y □ N		NENNENNE
	10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled.	□ Y □ N		
	11. Vent line disconnected or removed.12. Inventory form filed by owner with Safety and Buildings Division indicating closure in place.	Y N	<u> </u>	X
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.	\square Y \square N		
	2. Do points of obvious contamination exist?	\square		
	3. Are there strong odors in the soils?	N N		닏
	4. Was a field screening instrument used to pre-screen soil sample locations?5. Was a closure assessment omitted because of obvious contamination?		H	片
	6. Was the DNR notified of suspected or obvious contamination?		Ħ	Ħ
	Agency, office and person contacted: TIVIE FROST			_
	7. Contamination suspected because of: Odor Soil Staining Free Product Sheen On Groundwa	ater Field	Instrument 1	est
F.	METHOD OF ACHIEVING 10% LEVEL DESCRIPTION			
	Educator Or Diffused Air Blower	-£ 40 £1 -b-		
	Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.		ove ground.	
	Dry Ice			
	Dry ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed	over the grea	test possible	tank
	area. Dry ice evaporated before proceeding.			
	Inert Gas (CO/2 or N/2) NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHER ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT		e e ye	T BE
	Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing			
	☐ Tank atmosphere monitored for flammable or combustible vapor levels. Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space	e monitored a	at bottom, m	iddle
	and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained be ground.			
_	NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW			
G.	NOTE SPECIFIC PROBLEMS OF NONCOMPLIANCE ISSUES BELOW			
H.	REMOVER/CLEANER INFORMATION	<u></u>		
	Steve Kallman Stare Kallman 398		3-31-9	4
	Remover Name (print) Steve Kollmann Remover Signature Remover Certification Remover Certification Remover Certification Remover Signature	fication No.	Date Signed	
l.	INSPECTOR INFORMATION			
	Inspector Name (print) Inspector Signature	Inspector Ce	rtification No) <u>.</u>
	FDID # For Location Where Inspection Performed Inspector Telephone Number	Date Signed		



Moraine Environmental, Inc.

Environmental Management Services

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.hr

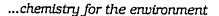
State of Wisconsin Department of Natural Resources



CHAIN OF CUSTODY RECORD LUST PROGRAM Based on Form 4400-151 Rev. 4-93

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 Collect AMY BUCUE,							tle/Work Stati CAINE ENVIL	on/Company ON/TENTAL/INC	,		Telephone A (414)242			rea code	e)
Property Owner	NAUDGKAV	EL 7	+ C29	50		Pro	operty Address	INSON DEVE, WA	HUKESUA, W	/	Telephone N	lumber (i	nclude a	rea code	e)
					ed and disp		ese samples as				LABORA	ATORY USE	ONLY)
Relinquished B	y (Signature)			/Time	10:35 a.	77	Received By (Signature)		If sample	perature of S were rece , you may re	ved on i	ce and t	here wa	s ice
Relinguished B	y (Signature) れんり		bate	/Time	41):3	,	Received By (Signature)		'received	on icel. I'	f all of	the fce	was mel	ted, the
Relinquished B	y (Signature)			/Time 3/ 41	/2	30	Received for Muhw	EN CHEM by (Signa	ture)	temperatu		le Condit	ion		
Field ID Number	Date Collected	Time Collected		mple Device	Preserv. Type	Field Screenin		n/Description footnote 2)	Analysis Type	Lab ID Number	no/Type of Containers	Cracked /broken	Improp. Sealed	Good Cond.	Other Comments
1	3-30-94	2:00pm	501	GRAS		11.0	DIESELT	TANK-50.	5	112591	1-202			X	
2	33094	Z:15P17	501	GKAB	MEOU	6.0	TANKSCE	NER BASE	1	112592	1 1			1	
3	3-30-94	2:30PM	SOL	GRAB	MEDY	ND	GASTA	NK-NO,	1	112593					
4	3-30-94	3:00 PM	SAL	GNAB	NEUT	26.0	145PENS	EK-8'	/	112594				J	
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							·								
	roundwater, s scription mus location.							2. PVOC 3. Lead	ANALY 5. DRO 6. PAH 7. Flashpoint 8. Percent Sol	10. pH 11. TC	LP-Benzene	14. 15.	BETX Protoco Protoco 8260		
BILLING A	DDRESS:								DEI	PARTMENT US	E ONLY				
orezino A								Split samples:	Offero Accep	ed?	yes yes		(Check or (Check or		
								Accepted By: _							
										bros	r 94	03211			





Lab Certification No. 405132750

Green Bay, WI 54302 4 1 4 - 4 6 9 - 2 4 3 6

Location : JOHNSON SAND & GRAVEL, WAUKESHA

800-7-ENCHEM

En Chem Proj#: 9403211

FAX: 414-469-8827

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.



Green Bay, WI 54302

414-469-2436

800-7-ENCHEM

FAX: 414-469-8827

...chemistry for the environment

Lab Certification No. 405132750

Location : JOHNSON SAND & GRAVEL, WAUKESHA

Your Sample ID: 4

Sample Desc. : DISPENSER-81

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	Analyzed By
GRO-S	Gasoline Range Organics(GRO)-Soil	300 mg/kg	14		04/04/1994	WONR MOD GR	0 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:



Green Bay, WI 54302

414-469-2436

800-7-ENCHEM

FAX: 414-469-8827

...chemistry for the environment

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

			Detection	Prep	Prep	Analysis	Analysis	Analyzed	
Analysis	Parameter	Result Units	Limit	Method	Date	Method	Date	Ву	
DRO-S	Diesel Range Organics(DRO)-Soil	4000 mg/kg	200				04/11/1994	4 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:

Printed on Recycled Paper



Green Bay, WI 54302

414-469-2436

800-7-ENCHEM

FAX: 414-469-8827

...chemistry for the environment

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	Analyzed By
GRO-S	Gasoline Range Organics(GRO)-Soil	ND mg/kg	2.7		04/04/1994	WONR MOD GR	04/04/1994	4 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:

A



Green Bay, WI 54302

414-469-2436

800-7-ENCHEM

FAX: 414-469-8827

...chemistry for the environment

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 Ur	Detection nits Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
GRO-S	Gasoline Range Organics(GRO)-Soil	ND mg	g/kg 2.9		04/04/1994	WONR MOD GR	0 04/04/199	4 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:

Continued From Page ___

MARCHED 1904 OU SITE 1:15	197 SEVEAL	DUCAY ON SITE U	WETHERU
1484301904 CU SITE 1:15	DEUNIS TETZLAFF	CAUSITE 45	10404
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CHASON SAND AND GRAVEZ			
N8 WIZZSOO TOUNSON DRIVE		CUMUES PARE FILE	INSPECE
WAUKEMA WI 52180		QU318	
TANK 10 67270 0/27 (NOT)	AUFO 1101/8Z	UNIFADED IC	MO GAL
TIGHTNESS TESTING, COATE	D.57=7 7+N/	PIPING & COMES	7771
TANK 10 67270 0126 INST.	41/EX 1/01/87	DIPSET 10000	621
TIGUTNESS TESTING, COAT	FA STEET TANK	DIPLAGE CONTEN	VF=7
WEEGROUND RETRIC-WETSIN	FRING		
WOTELOUND GAS- FROM JOHN		PRIACE)	
MUNICIPAL SENER, WELL- PENA	1 1 1 1 1		
CATED WILLISTELAN PARK	ie soughe are		
TOTAL MINISTER PINE			
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CENTEL TANKS BASE	14,0		ZD X
	14,5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0 ×
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	000 F-94		
		E TRUESMEN CHE	7 LAWN
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		Cont	maga on ago
	Read and U	Inderstood By	
1. Bulha 3/2/19	71/		
Signed	Date	Signed	Date

Date

Signed

APPENDIX B

SITE PHOTOGRAPHS



UST removal activities in 1994.



Cleaning of one 10,000 gallon tank by Northern Petro Services, Inc.



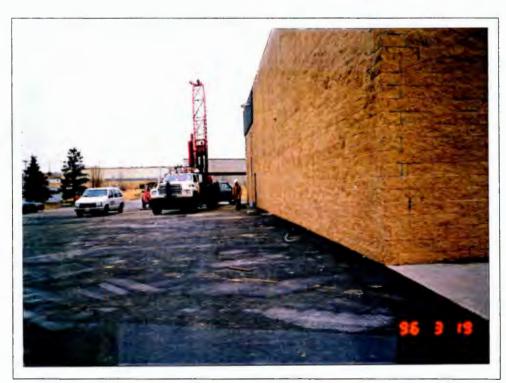
Photo shows venting of northern tank prior to removal.



Photo shows perched water at bottom of northern tank.



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

Route To:
☐ Soil Waste
☐ Emergency Response
☐ Wastewater
☐ Superfund
- Duporand

☐ Haz. Waste

☐ Underground Tanks
☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By MEI

Page 1 Of

Facility/	Project N n Sand &	ame Gravel	Prop	erty		License/Permit/Monitoring Number					Boring	Numb	er	В !			
				nd name of crew chief) 1-2125) ROLAN	un		Date Dr	illing Sta 13 - 19 -9	rted 6		Date	Drilli 03	ng Con	pleted		Drilling Hollow	Method Stew Aug
				Unique Well No.	Common Well Name		Final Static Water Level Surface Elect MSL				vation	Feet M		Borehol Diamete	e r 3.25"		
Boring I State Pla	ocation			N,	E S	S/C/N	Lat		•	"	Loc	al Grid	Location	on (if ap	-	le)	
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Sar	nple		Π	•									Soil	Рторе	rties		
Number and Type	Length Att. & Recovered	Blow Counts	Depth In Feet	And	l/Rock Description Geologic Origin For Each Major Unit	00A)		USCS	Grafic Log	Well Diagram	CH3/CH3	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD / Comments
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							.ø)										
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This for	m is auth	CUA	by Ch	papters 144,147 and 16	2, Wis. Stats. Completic	on of th	is report			ne En					10 nc	or more	than
\$5,000	for each	violatio	n. Fir	ned not less than \$10 or	r more than \$100 or imp	risoned	i not less	than 30) days	or both	for eac	h viol	ation.	Each d	lav of	contine	d

violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

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Sample	:								Soil	Proper	ties				
Number and Type	Length Au. & Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Grafic Log	Well Diagram	PID/FID	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD / Comments	
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Route To:

Soil Waste
Emergency Response
Wastewater
Superfund

☐ Haz. Waste

☐ Underground Tanks
☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By ME.

Page 1 Of

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Facility/I Johnson	Sand &	Gravel					l —-	Permit/N			_			g Numb		вэ	•
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DNR Fa	cility We	l No.		Unique Well No.		ell Name	Final Static Water Level Surfa				rface El		Feet M	ISL	Borehol Diamet	e er 3.25"	
Boring L	ocation	agenrasijs Se	1=		**		<u> </u>			,,	ما	cal Gric		ation (if applicable)			
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County			the iv	.E. 1/4 Section 25, 1		ounty Code	Long_	wn/Cit	v / or V	illage					<u> </u>		reet 🗆 w
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		that t	he in	formation on this fo	rm is true an			ny knov	vledge	<u>.</u>							
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This for	m is aut	ofized			. Completion of t	Moraine Environmental, Inc. ion of this report is mandatory. Penaltiess: Forfeit not less than \$10 nor more					than						

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penaltiess: 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 contined violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

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Sample					l	Ī.	Ī		Soil	Proper	Page ties		OI	
Number and Type	Length Att. & Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Grafic Log	Well Diagram	PID/FID	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD / Comments
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Route To:	
☐ Soil Waste	
☐ Emergency Response	e
☐ Wastewater	
☐ Superfund	

☐ Haz. Waste

☐ Underground Tanks
☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By ME:

Page 1 Of 2

Facility.	Project N	ame Gravel	Prope	erty		License	e/Permit/	Monitor	ing Nu	nber		Borin	g Numi	er	В '	3
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				Unique Well No.	Common Well Name	Final S	Final Static Water Level Surface Elevation							Borehole Diameter 3.25"		
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Number and Type	Length Att. & Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Grafic Log	Well Diagram	PID/FID	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD/ Conuncuts
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Route To:
☐ Soil Waste
☐ Emergency Response
□ Wastewater
☐ Superfund

☐ Haz. Waste Underground Tanks	
☐ Water Resources	

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By ME.

Page 1 Of 2

Facility/	Project N n Sand &	ame Gravel	Prop	erty		License	Permit!	lonitor	ing Nun	iber		Boring	Numb	er	В	
Boring		(Firm n	ame a	nd name of crew chief)	A10	Date D	illing St.	arted 96		Da	te Drill 03	ing Con	npleted		Drilling	Method Stew Aug
•	_			Unique Well No.	Common Well Name	Final St	atic Wat	er Leve Feet M	i ISL	Su	rtace El	evation	Feet M		Borehol	
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		y that t	he in	formation on this for	m is true and correct to	the best of r	ny kno	wledg	e.							
Signatu	110					rum	M	lorai	ne Er	ıviro	nme	ntal,	Inc.			

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penaltiess: 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 contined violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

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Sample									<u> </u>	Proper		I _		
Number and Type	Length Att. & Recovered	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Grafic Log	Well Diagram	PID/FID	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD / Comments
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				(20.0)										

☐ Haz. Waste ☐ Underground Tanks
□ Water Resources
☐ Other

State of V Deptartm	Visconsin ent of nat	u ral Re s	cource	Route To: s ☐ Soil Wast ☐ Emergence	e v Resnonse	☐ Haz. Wast		ı				SC		RING form 44			MATION ev. By MEI
				☐ Wastewat	er	☐ Water Res	ources								Pa	ge 1 Of	ત્
Facility/	Project Na	ame Gravel	Prone	ortv			License/	Permit/A	ionitor	ing Nur	nber		Boring	Numb	er .	В.5	~
				nd name of crew chief)			Date Drilling Started Date D						ing Con	pleted	I	Drilling	Method Stew Aug
	cility Wel			Unique Well No.	Common Well Na	me		atic Wate			· Sı		evation	Feet M	I	Borehol	
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County					DNR County	Code	Civil To	wn / Cit	y/or V	illage	WA	UKESH	[A				
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Number and Type	Length Att. & Recovered	Blow Counts	Depth In Feet	And	il/Rock Descript Geologic Origin Each Major Unit	1 Гог	•	USCS	Grafic Log	Well Diagram	CIF1/CIF	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD / Comments
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This for	m is auth	пописа	by Cl	napters 144.147 and 10	62, Wis. Stats. Co	mpletion of the	his report	t is man	datory.	Pena	ltiess:		not less				

\$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 contined violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

17,7 Dak . Br. C'UNYEYELT NID DEVI	w ¹									
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Route To:
☐ Soil Waste
☐ Emergency Response
☐ Wastewater
☐ Superfund

☐ Haz. Waste ☐ Underground Tanks ☐ Water Resources ☐ Other

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By MEI

Page 1 Of 1

Facility/	Project Na 1 Sand &	ame Gravel	Prope	erty			License	Permit/	Monitor	ing Nur	nber	· ·	Borin	g Numb	ær	В (<u> </u>
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Route To:

Soil Waste
Emergency Response
Wastewater
Superfund

☐ Haz. Waste

☐ Underground Tanks
☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By MEI

Page 1 Of 1

Facility/ Johnson	Project N		Prop	erty						License	Permit/!	Monitor	ing Nu	mb er		Borin	g Numb	er	В	7
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	Blow Counts Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Grafic Log	Well Diagram	PID/FID	Comp. Strength	Moisture Cont.	Liquid Limit	Plasticity Limit	P 200	RQD /. Comments
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Route To:	
☐ Soil Waste	
☐ Emergency Response	•
☐ Wastewater	
☐ Superfund	

☐ Haz. Waste

Underground Tanks
☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION Form 4400-122 Rev. By ME.

Page 1 Of 2

Facility/ Johnson	Project N	ame Gravel	Prope	rty		License/Permit/Monitoring Number Boring Number Date Drilling Started Date Drilling Completed Drilling								3			
Boring I Midwes	Orilled By t Engine	(Firm n	ame ar 14-521	nd name of crew chief)			Date Dr	illing St	erted 96		Da	te Drill 03	ing Con	npleted		Drilling Hollow	Method Stew Aug
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State of Wisconsin Department of Natural Resources Route To: Solid Waste Emergency Response Wastewater									-	i Tanks				Soil Bo Form 44			aforn	nation 7-91
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				ne and name of cre	w chief)	-	-	Dat	e Drill	ing Star	ted	Date	Drillir	g Com		Drillir	ng Me	thod
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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.

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State of Wisconsin Department of Natural Resources Route To: Solid Waste Emergency Response										Waste	i Ta-lea				Soil Be Form 44			ıform	ation 7-91	
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This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 not 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.

Borin	g Numb	er	MW	. V-3 Use only as an attachment to Form 44	100-122	. .					Page	e 2	of :	2
	nple									Soil	Proper			
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	c Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
2	6	10 12 16 4 8 9	-13 -14 -15 -16 -17 -18 -19 -20 -21 -22 -23 -24 -25 -25 -26 -27 -28 -29 -30	CLAY and CEMENT Chips (Fill) Br C. SAND w/C. Gravel EOB 31.0 Well Set 30.0					17	D				

State of Wisconsin Route To: Department of Natural Resources Solid Waste Emergency Response								Waste rground	d Tanks				Soil Be Form 44	_	_	nforr	nation 7-91
				☐ Wast		□ v	Vater	Resou						D-	1	_e	2
	y/Proje mer J			ıd & Gravel					ermit/M	lonitorin	g Nun	nber	Boring MV			of	2
				ne and name of crew cl	nief)		Dat	te Drill	ing Star	ted	Date	Drillin	ig Com		Drilli	ng Me	thod
Boa	rt Loi	ngyea	r-Pau	l Dickinson					8/8/96	5		8	/8/96		HSA	¥	
DNR	Facility	Well N	lo. W	I Unique Well No.	Common Wel	1 Name	Fin	al Stati	c Water		Surf	ace Ele		1	Boreho		
	Locati	on			MW-4		1	•	0 1 11	t MSL	Loca		Feet M Location		pplicab		Inches
State	Plane 1/4	of	1/4	4 of Section	N, E T N,R		ļ	Lat Long	0 1 11			Fe	et 🗌			Feet	□ E □ W
Count				, or oddien	1 1,1	DNR Cot				own/Ci kesha	ty/ or					1001	<u> </u>
	nple	<u>-</u>			<u></u>	100			,,,,,,,				Soi	Prope	rties		1
H	(in) red	Counts	In Feet	And Geole	k Descriptiogic Origin	For		S	a	п	Q	dion	5 t				ents
Number	Length (in) Recovered	Blow C	Depth In Feet	Each	Major Unit			USC	Graphi Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
Thorse	v conti		-1 -2 -3 -4 -5 -7 -8 -10	EARTH DRILL		ant to the h		f my kr									
I hereb	ire			rmation on this form is			est o Firm			e. RT LO	NGV	FAD					
•		72	***************************************	Tull-					101 Ald	ierson (15) 359-	Schofi	eld, WI					

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.

-13 -14 -15 -16 -17 -18 -19 -20 -21 -22 -23 -24 -25 -26 -27 -28 -29 -30 -30 -31 -50B 31.0	Borin	g Numb	er	MV	V-4 Use only as an attachment to Form 44	00-122							e 2	of	2
S S S S S S S S S S	Sar	nple									Soil	Prope	rties		
-13 -14 -15 -16 -17 -18 -19 -20 -21 -22 -23 -24 -25 -26 -27 -28 -29 -30 -30 -31 -50B 31.0	Number	Length (in) Recovered	Blow Counts	Depth In Feet	And Geologic Origin For	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				-14 15 16 17 18 20 21 22 23 24 25 26 27 28 29 29	EOB 31.0 Well Set 30.0										

State of Wisconsin Route To: Department of Natural Resources Solid Waste Emergency Response Wastewater								Waste rground r Resou	d Tanks				SOIL BO			nform	nation 7-91
				17 d 5 (CWatci		Other		iiccs .					Pag	e 1	of	2
	ty/Proje mer J			ıd & Gravel			Lic	ense/P	ermit/M	onitorin	g Nun	nber	Boring MV		er		
				ne and name of crew cl	hief)		Dat	e Drill	ing Star	ted	Date	Drillin	g Com	pleted	Drill	ing Me	thod
В08	irt Loi	ngyea	r-Pau	l Dickinson					8/8/96	;		8	/8/96		HS	4	
DNR	Facility	Well N	lo. W	I Unique Well No.	Common Wel	l Name	Fin	al Stati	c Water	Level	Surf	ace Ele	vation	I	Boreho	le Diar	
Boring	z Locati	on.			MW-5				Fee	t MSL	Loca	al Grid	Feet M		mlicat		Inches
-	Plane	011			N, E			Lat	0 1 11	!	1200	ii Oilu			pricac	10)	□Е
	1/4	of	1/4	4 of Section	T N,R	DNR Co		ong	0111		<u> </u>		et 🗆			Feet	
	Waukesha 68									'own/Cir kesha	ty/ or	Village					
Sai	nple												Soi	Prope	rties		
	<u></u>	nts	Feet	ł .	k Descripti							_				}	
er	ı (ir ered	Counts	li Ii		ogic Origin			S	ic	E	Ð	atio	r re	_			ents
Number	Length (in) Recovered	Blow	Depth In Feet	Each	Major Unit			SC	raph og	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic I imit	P 200	RQD/ Comments
<u>z</u>	기씸	B	Ω	EARTH DRILL				n	G	≱ O	<u>a</u>	N. Y.	≥ <u>∪</u>		<u>a</u> _	<u> </u>	Z O
			-1 -2 -3 -4 -5 -7 -8 -9 -10	EARTH DRILL													
I hereb	y certif	y that t	—12 he info	mation on this form is	true and corre	ect to the b	est o	f my kr	nowledg	e.						<u> </u>	
Signat	ure		erren e	Tall-			Firm		101 Ald	RT LO lerson (15) 359-	Schofi	eld, WI	54476 (15) 35:	5-0109 5-5715			

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.

MW-5 2 2 of Boring Number Use only as an attachment to Form 4400-122. Page Soil Properties Sample Soil/Rock Description Depth In Feet Blow Counts Standard Penetration And Geologic Origin For Moisture Content Well Diagram PID/FID Graphic Log S Liquid Limit Plastic Limit Each Major Unit USC P 200 13 -14 -15 -16 -17 -18 -19 -20 -21 -22 23 -24 -25 -26 (Auger Plug) 7 D 6 7 3 4 7 -27 W Br SAND 8 2 8 3 4 4 -28 -29 -30 -31 EOB 31.0 Well Set 30.0

APPENDIX D

BOREHOLE ABANDONMENT FORMS

State of Wisconsin
Department of Natural Resources

WELL DRILLHOLE BOREHOLE ABANDONMENT Form 3500-53 Rev. 7-39

(I) GENERAL INFORMATION		(2) FACILITY NAME								
Weil/Drillhole/Borehole Location	County		Johns	ner (II Known) son Sand	and Gravel					
NW 1/4 of NE 1/4 of Sec.	25: T. 7 N.R. 19	i Preso	nt Well Own							
(if applicable) Gov't Let	Grid Number	Sca	or Route	ruson Ro	ad					
Grid Location ft. N. S.	fiЛ E. П w	1	Sizie, Zip C							
Civil Town Name		Facus	ry well No. 3	ind/or Name (II	Applicable) WI Umique Well No.					
Street Accords of Weil	70 Johnson Rd	Reaso	n for Acano	sil bar	ina					
Ciry, Village Wantersha	7-08	Date of Abandonment 03 - 19 - 96								
	INFORMATION			- 3- 11	7.4					
WELL DRILLHOLE BOREHOLE		H. 5	1- War- /5-	-1\						
(Date) OB -/9		Pump Liner(to Water (Fe & Piping Re s) Removed?	moved?	Yes No Not Applicable					
☐ Monitoring Well☐ Water Weil☐ Drillhole	Construction Report Available?	Casing	i Removed? g Left in Plac Explain		Yes No Not Applicable Yes No					
Borehole			-	Balow Surface?						
Construction Type: Drilled Driven Other (Specify) Construction Type:	(Sandpoint) Dug	Did Sealing Material Rise to Surface?								
Formation Type: Unconsolidated Formation	□ 3eć=oċz	Car	ed Meihod of iductor Pipe- np Baller		Maismai Conductor Pipe-Pumped Other (Explain)					
Total Mark Depth (ft.) 271. (From groundsturface)	Casing Diamour (ins.)	(6) Sealing	Materials at Cement Gra		For monitoring wells and monitoring well boreholes only					
Casing Depth (fL)	· .		icress y-Sand Slurr,	, ·	Grander Benonite					
Was Well Annular Space Grouted? If Yes, To What Depth?	Yes No Unknown	. —	tonite-Sand :							
7) Sealing Mater	izi Used	From (Ft)	To (FL)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight					
Chryped Bentonite	2_	Surface	27							
77 ·	• ·									
			-							
5) Commenu:										
Name of Person or Firm Doing Seal	ing Work - I	(10)	FOR	DNRTORECOL	NTY USE ONLY					
Midwest Engineer			Received/Ins		District/County					
Signature of Person Doing Work	18 die Signet									
Street or Route	Telephone Numoe	Follo	≥-op Necessa	ר יי						
City, State, Zip Code	•			95 a 1777.						

(1) GENERAL INFORMATION	(C) FACILITY NAME							
Weil/Drillhole/Borehole County Lecadon B2 Walleshe	Original Well Owner (Il Known) Johnson Sand and Gravel							
NW 1/4 of NE 1/4 of Sec. 25 : T. 7 N: R. 19								
(if applicable) Gev't Let Grid Numb	Screet or Route							
Grid Location	City, State, Aip Code							
Civil Town Name	W. Nouleak WI racury well No. 2700 Name (Il Applicable) WI Unique well No.							
Street Accords of Well	Aceson For Agenconment							
NE W22570 Johnson Rd	soil borna							
Cicy, Village Wantersla	Date of Adamsonment 03 - 19 - 96							
WELL DRILLHOLE/BOREHOLE INFORMATION								
(3) Criginal Weil/Drillhole Boranole Construction Completed On	(4) Depth to Water (Feat) NA							
(Date) 03-19-96	Pump & Piping Removed? Yes No Not Applicable Liner(s) Removed? Yes No Not Applicable Screen Removed? Yes No Not Applicable							
☐ Monitoring Well Construction Report Available? ☐ Water Well ☐ Yes ☑ No ☐ Drillhole	Screen Removed? Yes No Not Applicable Casing Left in Place? Yes No If No. Explain							
Borshole	Was Casing Cat Off Balow Surface? Yes No							
Construction Type:	Did Sealing Material Rise to Surface: Yes No							
Drilled Driven (Sandpoint) Dag	Did Maurial Secte After 24 Hours? Yes No							
Donal (Specify) Boral	If Yes, Was Hole Recopped? Yes No							
A Other (Special)								
Formation Type:	(5) Required Method of Placing Seating Material							
Unconsolidated Formation	☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped							
	Dump Bailer Cther (Explain)							
Total Way Depth (ft.) 29.5 (Casing Diameter (ins.)	(5) Sealing Mauricis For monitoring wells and							
(From groundsurface)	☐ Neat Cement Grout monitoring well bereinles only ☐ Sand-Cement (Concrete) Grout							
Casing Depth (fit)	Concrete							
	Clay-Sand Siumy Granular Bentonits							
Was Weil Annular Space Grouted? ☐ Yes ☐ No ☐ Unkno	Bentonite-Sand Sittery							
If Yes, To What Depth? Feet	Chipped Bentanita							
Seziing Material Used	From (Fc) To (Fc) Sacks Sealant Mix Ratio or Mud Weight or Volume							
Chrosed Bentonite	Surface 29.5'							
77								
• • •								
·	• • • • • • • • • • • • • • • • • • •							
Comments:								
Name of Person or Firm Doing Sealing Work	(10) FOR DIR OR COUNTY USE ONEY							
	Due Received Anguered Discried County							
Signature of Person Doing Work But Signed								
Significant of Person Doing Work 03 - 19 - 96	Reviewer/Inspectate							
Street or Route Telephone Number	Keylewell/Induction							
Scar of Kome Leichnous Jampa								
City, State, Zip Coce	Follow-to Mecessary							

Form 3300-53 Rev. 7-5

(1) GENERAL INFORMATION	<u> </u>		コンススントリ		
Weil/Drillhole/Borehole	Wardesha-		John	ner (II Known) Son Sono	I and Grovel
NW 1/4 of NE 1/4 of Sec.	25 : 7. 7 N: R. 19	2 Press	mt Well Own		
(if applicable) Gov't Lot	Grid Number	35==	c or Route	huson Ro	ad
Grid Location ft. N S.		{	Scale, Zip C		
Civi Town Name Personless		710111	sy men No.	FUGACE V WING (II	Application WI Chique Hell No.
Street Address of West		Reass	n for Asia	, ,	
WE Wass	70 Johnson Rd	- Daia	المعاددة الم	oil ban	ing
Wantesba				03-19	-96
WELL DRILLHOLE/BOREHOLE					
(2) Onguas Well/Dnilhoie Borenoie (Date) 03 - 19			i io Waier (Fi & Piping Re	======================================	Yz No Not Applicable
(Date)		- Liner	s) Removed?		Yes No Not Amiliable
☐ Monitoring Well ☐ Water Well	Construction Report Available?		: Removed? g Left in Plac	:=?	Yas No Not Applicable Yas No
Drillhole	☐ Yes X No	1	Explain		
Borehole	1	W25 C	Lasing Cut Cit	Edow Surface	0K.] 22 []
Construction Type:	: — -	Did Se	aling Marmi	عا: Rise to Surfix	e?
Drilled Driven Other (Specify) Bare	(Sandpoint) Dug		auriai Secie z. Was Hoie	After 24 Hours? Recopped?	☐ Y≃
((5) Requir	ed Method of	Placing Scaling	
Formation Type: Unconsolidated Formation	🔲 3 مختصحته	, —	-		Conductor Pipe-Pumped
Total ## Depth (ft.) 29.5 '. (त्राप्त विश्वादा अथनायोऽ	<u>L</u> _	Cther (Explain) For monitoring wells and
(From groundsurface)		_	it Cement Gr	out oncrete) Grout	monitoring well bereinles only
Casing Depth (ft.)	ς	Con	ictere		Bezwiite Peller
Was Weil Annular Space Grouze?	Yes No Unbown		y-Sand Slum, tonite-Sand !		ि Gत्याधीय डेन्स्स्यांक
If Yes, To What Depth?	Feet	, —	pped Benion	-	
) Sealing Mater	izi Used	From (FL)	To (FL)	No. 1 arcs. Sacks Sealant or Volume	Mix Ratio or Mud Weight
Chrosed Bentonite		Surface	29.5'		
1/1-					-
			•		
Comments:					
Name of Person or Firm Doing Seali					INTERUSE ONEY
Midwest Figure Signary of Person Doing Work	Base Signed	0225	and the second	***	District/County
	03-19-96	Revie	adipasen	C	
Street or Route	Telephone Number	Follo	ч-гэ Месета	n.	
City, Suie, Zip Coce					

Form 3300-53 Rev. 7-89

(1) GENERAL INFORMATION	(2) FACILITY NAME
Weil/Drillhole/Borehole County Walledeshee	Original Well Owner (Il Known) Johnson Sand and Gravel
NW 1/4 of NE 1/4 of Sec. 25 : 7. 7 N: R. 19	E Present Weil Owner
(if applicable) Gov't Lot Grid Number	Johnson Road
Grid Location fig. N. T S., fig. E. T %	City, Sale Zip Code V. Woulder N. W
Civil Town Name Perackee	racing well No. and/or Name (if Applicable) WI Unique well No.
Sizer Acares of West NB W22570 Johnson Rd	Reason For Adamsonment
Clay, Village Wantergla	Date of Abandonment 03 - 19 - 96
WELL DRILLHOLE/BOREHOLE INFORMATION	
(3) Criginal Well/Drillhole:Borenole Construction Completed On	(4) Depth to Water (Free) WA
(Date) 03-19-96	Pump & Piping Removed? Yss No Not Applicable Liner(s) Removed? Yss No Not Applicable
Monitoring Well Construction Report Available?	Screen Removed? Yss No Not Applicable Casing Left in Place? Yss No If No. Explain
3 orangia Tima	Was Casing Cut Off Below Surface? Yes No Did Sealing Material Rice to Surface? Yes No
Construction Type: Drilled Driven (Sandpoint) Dug Other (Specify) Cored	Did Material Secie After 24 Hours? Yes No If Yes, Was Hole Recopped? Yes No
Formation Type: Vinconsolidated Formation Beitoix	(5) Required Method of Placing Scaling Marmal Conductor Pipe-Gravity Conductor Pipe-Pumped Dump Bailer Ctm (Explain)
Total And Depth (ft.) 18" Casing Diameter (ins.) (From groundsturface)	(6) Sealing Materials For monitoring wells and Neat Cement Grous monitoring well boreholes only
Casing Depth (fil)	Sand-Gement (Concrete) Grout Concrete Clay-Sand Siumy Granular Bentonite
Was Well Annular Space Grouted? Yes No Unknown If Yes, To What Depth? Feet	☐ Bentonite-Sand Slurry ☐ Chipped Bentonite
) Seziing Material Used	From (FL) To (FL) Sacks Sealant Mix Ratio or Mud Weight or Volume
Chryped Bentonite	Surface 18'
• • •	
·	
Comments:	
Name of Person or Firm Doing Sealing Work	(10) FOR DAR OR COUNTY USE ONEY
Signars of Person Doing Work Bile Signal	Date Received/fispected District/County
Scret or Route Telephone Number	Zeviewer/Inspecial:
City, State, Zip Code	Follow-up Necessary

Actimit Good, introductor is appreciate 1989, see Additional	on 545.7
(1) GENERAL INFORMATION	I(2) FACILITY NAME
Weil/Drillhole/Borehole County	Criginal Well Owner (If Known)
Licenson 36 Wanteshe	Johnson Sandand Grovel
NW 1/4 of NE 1/4 of Sec. 25 : T. 7 N: R. 19	E Present Well Owner
(T ippucable)	Screet or Route D 1
Gov't Let Grid Number	Johnson Road
Grid Location	المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المراب
ft_	/ Wouleako WI Factury wett No. and/or Name (il Application) WI Unique well No.
Civil Town Maine	trained wen yor suchor yame (it whitespie) Al curding wen yo
Penancee	
NE W22570 Johnson Rd	Reason For Addresonment Daving
Ciay, Yillaga	Date of Abanconment
Wantesha	03-20 - 96
WELL DRILLHOLE/BOREHOLE INFORMATION	
(3) Ongues Weil/Dullhole Borenole Construction Completes On	(4) Deput to Water (Free) NA
(Care) 03 -20'-96	Pump & Piping Removed? Yus No Not Applicab
	Liner(s) Removed? Yes No Not Applicab
Monitoring Well Construction Report Available?	Screen Removed? Yas 7 No Not Applicate
☐ Water Weil ☐ Yes ☒ No	Curing Left in Place? Tym 75 50
Drillhole	If No. Explain
☐ Statistic	
12 zorenote	Was Casing Cut Off Below Surface? Yes No
· · · · · · · · · · · · · · · · · · ·	Did Sealing Material Rise to Surisce? Yes No
Construction Type:	Did Material Seals After 24 Hours? The Yes Tho
	If Yes, Was Hole Recopped? Yes No
Citier (Specify) Bored	
`	(5) Required Method of Placing Scaling Mutmal
Formation Type:	Conductor Pipe-Gravity Conductor Pipe-Pumped
Unconsolidated Formation	Dump Beller Ctr (Explain)
Total Well Depth (ft.) 28.5. Casing Diameter (ins.)	(6) Sealing Materials For monitoring wells and
(From groundsurface)	Neat Cement Grout monitoring well boreinies o
(a a usa ja u uu suud uu a aanu)	Sand-Cement (Concrete) Grout
Coin Dort (6)	Concrete Semonite Pellets
Casing Depth (ft.)	Clay-Sand Silvery
Was Weil Annular Space Grouted? Yes No Unknown	
If Yes, To What Depth? Feet	Chipped Bentonite
)	No. Iarta
Sealing Material Used	From (FL) To (FL) Sacks Sealant Mix Ratio or Mud Weight or Volume
Carreed Bentonite	Series 88.5'
-1/1	
•	
•	
Comments:	
W44444 514 22 5	
None of Bonne on Sim Dairy Scaling Wart	(10) FOR DNR OR COUNTY USE ONEY
Name of Person or Firm Doing Sealing Work	
Midwest Figurery Services Signature of Person Doing Work Bile Signed	Data Received/Inspected District/County
Signature of Person Doing Work Date Signed	
03-20-96	Reviewer/Inspecial
Street or Route Telephone Number	
()	Follow-op Necessary
City, Suite, Zip Code	Follow-up Necessary

, , , , , , , , , , , , , , , , , , , ,	
(1) GENERAL INFORMATION	(C) FACILITY NAME
Weil/Drillhoie/Borehoie Location Weil/Drillhoie/Borehoie Location Weil/Drillhoie/Borehoie Wasslesshe	Tohuson Sand and Ground
NW 1/4 of NE 1/4 of Sec. 25 : T. 7 N. R. 19	
(E applicable)	1 Secret on Joseph
Gov't Lot Grid Number	Johnson Road
Grid Location	City, State, Lip Code Noulegla WI
Civi Town Name Personkee	ractury wett No. and/or Name (the Applicable) Wil Unique wett No.
Screet year at weir	Reason For Assaconment
NE W22570 Johnson Rd	soil borna
City, Village Wantergla	23-20-96
WELL DRILLHOLE BOREHOLE INFORMATION	
(3) Onguzi weil/Dnillhold-Sorenoie-Construction Completed On	(4) Deput to Water (Frest) WA
(Date) 03-20-96	Pump & Piping Removed? ☐ Yas ☐ No ☐ Not Applicable Liner(s) Removed? ☐ Yas ☐ No ☐ Not Applicable
Monitoring Well Construction Report Available?	Screen Removed? Yu No Not Amiliable
☐ Water Weil ☐ Yes 🕅 No	Cusing Left in Place? Yu 750
Drillhole	If No, Explain
☑ ∃orehole	
7.2	Was Casing Cut Off Below Surface? ☐ Yes ☐ No
Construction Type:	Did Sealing Material Rise to Sturface? Yes No
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug	Did Material Seeds After 24 Hours? Yes No
Dotter (Specify) Bored	If Yer' Mrs Hoje yeabbee;
	(5) Required Method of Placing Seating Material
Formation Type:	Conductor Pipe-Gravity Conductor Pipe-Pumped
Unconsolidated Formation	Dumo Bailer Other (Explain)
Total Way Depth (ft.) 28 . Casing Diaman (ins.)	(5) Sealing Materials For monitoring wells and
(Lion Eornquisco)	Neat Cement Grout monitoring well boreinies only
(معدد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد المعادد	Sand-Cement (Concrete) Grout
Casing Depth (fil)	Concrete ! [] Beatamite Fellets
Castill Depart (IE)	Clay-Sand Slurry Granular Benunita
Was Weil Annular Space Ground?	1 = -
If Yes, To What Depth? Feet	Chipped Bentonite
ii is, io marbepaii	
) Sealing Material Used	From (FL) To (FL) Sacks Sealant Mix Rutio or Mud Weight or Volume
Charles L. La	Surface 28'
configer Danie	
Comments:	
Name of Person or Firm Doing Sealing Work	(10) FOR DIR OR COUNTY USE ONEY
	Data Received/inspected District/County
Midwest Figurery Services Signature of Person Doing Work But Signat	
03-20-96	Reviewer/Inspectate
Street or Route Telephone Number	
()	Follow-go Necessary
City, State, Zip Coce	Follow-up Necessary

The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
(1) GENERAL INFORMATION	(2) FACILITY NAME
Weil/Drillhole/Borchole County Walesche	Original Well Owner (If Known)
Location 38 Walleshe	Johnson Sand and Gravel
NW 1/4 of NE 1/4 of Sec. 25 : T. 7 N: R. 19	; 1
(if applicable)	Screet or Route D'
Gov't Let Grid Number	Johnson Road
Grid Location	رايې, غرهند, کنه کمد مالي کام
fd	Partie No. andror Name (L' Applicable) (Wil Unique Tell No.
Civil Town Marie	Lacines, went wor sugget watte (in Mattiesage) Al curdes Aeri Wor
Yewanieee	
Street Actures of Men	Reason for Adamsonment
NE Warson Johnson Ld	soil barma
City, Yillage	Date of Abandonment
Wantesla	03-20-96
WELL DRILLHOLE/BOREHOLE INFORMATION	
(3) Crigurat Well/Drillhold Gorangie Construction Completed Cn	(4) Depth to Water (Feet) NA
(Date) 03-20-96	Pump & Piping Removed? ☐ Yes ☐ No ☐ Not Applicable
	Liner(s) Removed? Yes No Not Applicable Screen Removed? Yes No Not Applicable
Monitoring Well Construction Report Available?	Screen Removed? Yss No Not Applicable
☐ Water Weil ☐ Yes ☒ No	Cusing Left in Place? Yes No
☐ Drillhole	If No. Explain
∑ Borehole	
<i>/</i>	Was Casing Cut Off Below Surface? Yes No
Construction Type:	Did Sealing Material Rise to Surface? Yes No
Drilled Driven (Sandpoint) Dug	Did Material Seale After 24 Hours? Yes Yes No
Dotter (Specify) Bored	If Yes, Was Hole Recopped? Yes No
	(5) Required Method of Placing Seating Material
Formation Type:	Conductor Pipe-Gravity Conductor Pipe-Pumped
Unconsolidated Formation	الله الله الله الله الله الله الله الله
Total Med Depth (ft.) 26 Casing Diameter (ins.)	(6) Sealing Materials For monitoring wells and
(From groundsurface)	Next Coment Grout monitoring well boreinles only
,	Sand-Cement (Concrete) Grout
Casing Depth (ft.)	Concrete Gentonite Pellets
	Clay-Sand Slurry Granular Bentomite
Was Weil Ammular Space Grouted? Yes No Unknown	☐ Bentonite-Sand Slurry
If Yes, To What Depth? Feet	Chipped Bentonite
	No. Yarea
Sealing Material Used	France (Fa) To (Fa) Sacks Sealand Mix Radio or Mud Weight
	or Volume
Chourt Bo to to	Surface (\$6')
on the contract	
	,
Commenu:	
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONEY
Midwest Engineering Services	Date Received/Impecial District/County
Signature of Person Doing Work Date Signed	
03-20-96	yearementurbecone
Street or Route Telephone Number	
City, Suite, Zip Code	Follow-up Necessary
· · · · · · · · · · · · · · · · · · ·	

APPENDIX E

WELL CONSTRUCTION AND DEVELOPMENT FORMS

State of Wisconsin Department of Natural Resources		<u>}</u> F	IONTTORING WELL CO	ENSTRUCTION 3-39
Facility/Project Name Fomer Tolinger Sa la Bour	Gnd Location	ſĿ□N□S.	Weil Name	
Faculty License, Permit or Monitoring Number		î	Are nurdine weil vino	be DAK weil Aumo
/ (Section Location		Date Weil Installed	031 76
Piccometer	NW 1/4 of NE 1 T 7 N. R 19		Weil जिल्लांक अंप्रः (Pe	mm d d v v
ft. Li weil A Point of Entorcement Sic. Application?	Location of Well Kelative		Midwa	
□ Ys Da No	☐ Downgratient			
	MSL	1. Cap and k		Z Ya [] No
5. 102 0-ang ap an and	MSL	a. Instice di	anele:	8.0 in
	MSL	b. Length:		
D. Surface seal bottom ft. MSL or 12 USCS classification of soil near screen:	- "			Ch= 🗓
GR GM GC GM ESW GSP		II year d		□ Y¤ □ No
☐ Bectock 13. Sieve analysis actoched? ☐ Yes ☐ No	THE THE PROPERTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY O	3. Surface see	<u>.</u>	Benerite 🔲 30 Concre 🔀 01
14. Drilling method used: Rotary 🗆 50	, \	4. Marriai be	rween well casing and pro	Cther []
Hollow Stem Auger 804 I				Berwnie 🛘 30
				main space seri 🛮 🔤
15. Drilling fluid used: Water 02 Air 01 Drilling Mud 03 None 2599	;	5. Amnim spa	ce seel:	
16. Drilling additives used? Yes No			/gał mud weight	Benonite sinny 🗆 3 1
Describe		%	Bentonite Benton F: ³ volume added for :	-
17. Source of water (attach analysis):	_	How installe		Tremie □ 01 Tremie prempei □ 02
				Gravity 🗷 08
E Bentonite seal, top ft. MSL or		(P		namice granules 33 Semonice pellers 32
Fine sand, topfr. MSL orfr.	T F F F F	7. Fine send ms	umiali Manufactures, pr	Other [] [][][] poises name and mesh size
f. Files pack top fr. MSL or 2(0 1	Voizme aixie	Ked + Gut - 3	<u> </u>
Weil screen, top ft_MSL or		8. Film pack m		oduct name and mesh size
		Volume adde	±£	
Weil screen, bottom ft. MSL or _ 33 (9. Weil exing:		C schedule 40 2 23 C schedule 30 🔲 24
Filter pack bottom ft. MSL or 370	2 ft	10 5		0= [
Borenole, bottom fr. MSL or _37.0	· ·	Screen types		Factory cat 2 11
Borerole diameter 80 in.				Ctier [] [][]
O.D. well casing _225 in.		Manufacturer Slot size: Sloted length:		010 in. 10.0 ft
LD. well casing 2.00 in	· · · · · · · · · · · · · · · · · · ·	\	al (below filter pack);	None Set
nerecy cartify that the information on this form	101	t to the best of my k	nowledge.	
Sal Hale	MCI			

ense complete and remin both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code, in accordance win ... 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.

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

Facility/Project Name Former Duesa Sal al Grand	Weil Name
License, Permut or Monutoring Number	Wis Unique Weil Number DNR Weil Number
1. Can this well be purged try?	II. Depth to Water
2. Weil development method surged with bailer and bailed	(from top of well casing) Date 1.5 th 25.12 25.96
3. Time spent developing weil	13. Water clarity Cer 10 Cer 20 Turid 2015 Turid 1225 Describe) Strang deeped 5trang die Solado
4. Depth of well (from top of well casising) _33.0 ft	show Then the
5. Inside diameter of well 200 in.	
6. Volume of water in filter pack and well casing 7. Volume of water removed from well 8. Volume of water added (if any) 9. Source of water added 10. Analysis performed on water added 11. It was a mach results	Fill in if drilling fluids were used and well is at solid waste facility: 14. Total suspended mg/l mg/l 15. COD mg/l mg/l
Additional comments on development	•
•	
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Weil developed by: Person's Name and Firm	I hereby certify that the above information is true and correct to the best of my knowledge.
Name: Chris Haase	Signature Distriction
me MEZ	Firm

tobecau Kammini Le

arua.

A 10 1 10 1

D	e 🗌 Haz. Waste 🗆 Wastewater 🗆		MONITORING WELL CONS		
- Eliv. Response & Repa	ir Underground Tanks O		Form 4400-113A	Rev. 4-	.90
	In Location of Wen Nft. □ S	ft. E. W.			
Former Johnson Sand & Gravel Facility License, Permit or Monitoring Number Grid On	—π. □ S. —————————————————————————————————	π. □ W. • W:	MW-2 is::Unique:Well:Number:::DNR:	Well Numb	16.E
	0 ' " Long				2000
Type of Well Water Table Observation Well XIII		Da	te Weil Installed	<u> </u>	
St. Plan Piezometer □12 Section	te ft. N, Location of Waste/Source	ft. E.	08/07/96		
Distance Well Is From Waste/Source Boundary		□ E. We	ell Installed By: (Person's Name	and Firm)	
II. Locatio	of 1/4 of Sec, TN, n of Well Relative to Waste/Source		Paul Dickinson		
	Upgradient s Sidegradi		D . T		
	Downgradient n Not Know		Boart Longyear		
A. Protective pipe, top elevation ft. MSL		Cap and lock?	-	Yes □ No	0
B. Well casing, top elevation $-$ Flush ft. MSL		Protective cover a. Inside diamete		8.0	in.
C. Land surface elevation ft. MSL		b. Length:		1.0_	ft.
D. Surface seal, bottom ft. MSL or ft.		c. Material:	_	teel ⊠ 04 her □ 🚉	
12. USC classification of soil near screen:	35 37 35 3 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	d. Additional pro		Yes ⊠ No	
GP GM GC GW SW SP			e:		•
SM SC ML MH CL CH C				nite 🗆 3 (0
Bedrock □]	Surface seal:	Concr	rete 🛛 0	1
13. Sieve analysis attached? ☐ Yes ☐ No				her 🗆 🗵	$\stackrel{\cdot}{=}$
14. Drilling method used: Rotary □ 5 0	4.	Material between	well casing and protective pipe:		
Hollow Stem Auger □ 4 1	I 🛭 🖺			nite 🗆 3 (• • • •
Other			Annular space s	seal □ 🔛	• • • •
15. Drilling fluid used: Water □ 0 2 Air □ 0 1		. ,			
Drilling Mud 03 None \(\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\ti}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texitin}}\\ \text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tetx{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tetx}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\texi}\text{\text{\text{\texi}\text{\texitin}\text{\text{\texitil}}\text{\texitin}\text{\texitil{\texitil{\texit{\texitil{\texitil{\texit{\texi{\t	N N N N N N N N N N N N N N N N N N N	Annular space se	al: a. Granular Bentor nud weight Bentonite-sand slu		
	E EXI EXI	_	nud weight Bentonite slu		
16. Drilling additives used? ☐ Yes ☐ No			nite Bentonite-cement gr		
			volume added for any of the ab		
Describe	f.	How installed	l: Tren	mie 🗆 0	1
17. Source of water (attach analysis):	I 🛭 🖺		Tremie pump		
] 🔘 🕷			vity ⊠ 08	
1.0	XXI XXI	Bentonite seal:	a. Bentonite granu		
E. Bentonite seal, top ft. MSL or10			3/8 in. □1/2 in. Bentonite pell		
F. Fine sand, top ft. MSL or	N N N N N	C	al: Manufacturer, product name	her □ 🚉 and mesh s	
F. Fine sand, top ft. MSL or Z1.0	п. 🗎 📓 📗 / / п	a me sand matern	#7 Badger		
G. Filter pack, top ft. MSL or 23.0		b. Volume added	ft ³	<u></u> -	
23.0			ial: Manufacturer, product name	and mesh	size
H. Screen joint, top ft. MSL orft.	ft.	a#3	0 American Material		<u>::</u>
		b. Volume added	ft ³		
I. Well bottom ft. MSL or38.0	ft. 9.	Well casing:	Flush threaded PVC schedule		3
41.0			Flush threaded PVC schedule		area.
J. Filter pack, bottom ft. MSL orft.			DIAC	her 🗆 🚉	
		Screen material:			<u>::</u>
K. Borehole, bottom ft. MSL or41.0	π.	a. Screen Type:	Factory Continuous	cut 🛛 1	
L. Borehole, diameter10.0 in.				her 🗆 🗓	
L. Botenoie, diameter in.		b. Manufacturer	Daniel I american		
M. O.D. well casing 2.37 in.	`	c. Slot size:		0.010	in.
	`	d. Slotted length		15.0	
N. I.D. well casing 2.06 in.	`11.	Backfill material		one 🛛 1	
	·			her 🗆 🗵	<u>∴</u>
I hereby certify that the information on this form	N	st of my know	ledge.		
Signature 1	Firm Boart Longyear		Tel: (7	715) 359-70)90

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.

MONITORING WELL DEVELOPMENT Form 4400-113B 8-89

onedZ <u>⊥</u>

Facility/Project Name Former Johnson Sen Jen D Gravel		Weil Name - M2			
License, Permit or Monitoring Number		Wis Unique Well Nu	•	ell Number	
1. Can this well be purged dry?	X No	11. Depth to Water		After Development	
surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed and pumped compressed air bailed only pumped only	4 1 5 1 4 2 5 2 7 0 2 0 1 0 5 1	(from top of well casing) Date Time 12. Sediment in well bottom	08,07,96 mm d d y y	25.6/ft. 08,07.96 mm d d y y 1:45.5mm	
- · · · · ·		13. Water clarity	Turbid 20 15	Cear ⊠⊂10 Turbid [] 2.5 (Describe)	
4. Depth of well (from top of well casising)3B.					
5. Inside diameter of well	O in				
6. Volume of water in filter pack and well casing 7. Volume of water removed from well 8. Volume of water added (if any) 9. Source of water added	_Gal	Fill in if drilling fluids 14. Total suspended solids 15. COD	were used and well is a mg/l		
10. Analysis performed on water added? (If yes, attach results)	□ N ₀				
Additional comments on development				· ·	
Veil developed by: Person's Name and Firm Vame: Brian Durkee		I hereby certify that the of my knowledge.	above information is true	e and correct to the best	
morane Environmental	Inc.	Firm: Mit	7		

	☐ Haz. Waste ☐ Wastewater		MONITORING WELL CONSTR Form 4400-113A	RUCTION Rev. 4-90
Eliv. Response & Repair	rid Location of Well	Oulei 🗆	Well Name	
	ft. □ N.	ft. 🗆 E.	MW-3	
Facility License, Permit or Monitoring Number Grid Ori	gin Location		Wis: Unique Well-Number: :DNR: Wo	l:Number
Lat	o ' " Long	or		
True of Well Water Toble Observation Well Will	e ft. N,		Date Weil Installed	
Piezometer 12 Section	Location of Waste/Source	п. Б.	08/07/96	
Distance Well Is From Waste/Source Boundary		L D E.	Well Installed By: (Person's Name and	d Firm)
II. II continu	of 1/4 of Sec, T1	rce U W.	Paul Dickinson	
	Upgradient s ☐ Sidegr		D	
□ Yes □ No d □ I	Downgradient n 🗆 Not Ki		Boart Longyear	
A. Protective pipe, top elevation ft. MSL		1. Cap and lock?		s 🗆 No
B. Well casing, top elevation Flush ft. MSL		2. Protective cov	- ·	8.0 in.
		a. Inside diam	eter:	1 0
C. Land surface elevation ft. MSL ·		b. Length: c. Material:	- Staal	1.0 ft.
D. Surface seal, bottom ft. MSL or 1.0 ft.		i c. Materiai:		
12. USC classification of soil near screen:		d Additional		s 🖾 No
GP GM GC GW SW SP G			ribe:	_
SM SC ML MH CL CH CH		•	Bentonite	 3 0
Bedrock □		3. Surface seal:	Concrete	
13. Sieve analysis attached? ☐ Yes ☐ No			Other	
14. Drilling method used: Rotary □ 5 0	₩ ₩ \	4. Material between	een well casing and protective pipe:	
Hollow Stem Auger			Bentonite	□ 30
Other 🗆 🔯			Annular space seal	
			Other	
15. Drilling fluid used: Water □02 Air □01		5. Annular space	seal: a. Granular Bentonite	⊠ 33
Drilling Mud □03 None ⊠99		-	al mud weight Bentonite-sand slurry	□ 35
14. T. W. 19. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. T. W. W		cLbs/ga	al mud weight Bentonite slurry	□ 31
16. Drilling additives used? ☐ Yes ☐ No			ntonite Bentonite-cement grout	
Describe			Ft^3 volume added for any of the above	
Describe		f. How instal		□ 01
17. Source of water (attach analysis).			Tremie pumped	
			•	⊠ 08
1.0	DX4 DX4 A	6. Bentonite seal		
E. Bentonite seal, top ft. MSL or ft.	t		\square 3/8 in. \square 1/2 in. Bentonite pellets	
16.0	t		Other erial: Manufacturer, product name and	mach size
F. Fine sand, top ft. MSL or ft.	t. 🔪 🔪 📓 / /		#7 Badger	mesh size
18 O		a	ledft ³	
G. Filter pack, top ft. MSL or18.0 ft	t. \		iterial: Manufacturer, product name an	d mech ciza
H. Screen joint, top ft. MSL or ft.	1000 1000		#30 American Material	u mesii size
H. Screen joint, top ft. MSL or ft.	·		led ft ³	
I. Well bottom ft. MSL or 30.0 ft		9. Well casing:	Flush threaded PVC schedule 40	⊠ 23
I. Well bottom ft. MSL or 30.0 ft		9. Well cashig.	Flush threaded PVC schedule 80	□ 24
J. Filter pack, bottom ft. MSL or31.0 ft			Other	
J. Piner pack, bottom it. Mide of		0. Screen materia	DVC	28
K. Borehole, bottom ft. MSL or31.0 ft		a. Screen Typ		■ 11
II. Bolonoie, bottom	\ //////		Continuous slot	
L. Borehole, diameter10.0 in.			Other	
		b. Manufactu	rer Boart Longyear	
M. O.D. well casing 2.37 in.		c. Slot size:		0.010 in.
	\	d. Slotted leng	-	10.0 ft.
N. I.D. well casing 2.06 in.	`1	 Backfill mater 	•	⊠ 14
I hereby certify that the information on this form i		est of my kno	owledge.	
Signature Fi	rm Boart Longyear		Tel: (715)	
The Contract was a second	101 Alderson Street		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.

MONITORING WELL DEVELOPMENT Form 4400-112B 8-89

Facility/Project Name Former Johnson Sandan	26m. 0	Weil Name	13	
License, Permit or Monitoring Number	raver	Wis Unique Weil Nu	mbe DNR.W	l Number
1. Can this well be purged dry?	□ Y≃) M No	II. Depth to Water	Before Development	After Development
Well development method surged with bailer and bailed		(from top of well casing)	_27.04=	_27.73ft
surged with bailer and pumped surged with block and bailed	■ 61■ 42	Date	08,07,96	08,07,96
surged with block and pumped surged with block, bailed and pumped compressed air	□ 62 □ 70 □ 20	Time	1	2:45
bailed only pumped only	10 51	12. Sediment in well	inches	inches
pumped slowly Other	_ 0 50	bottom 13. Water clarity		Cer ≥C20 Turbid □ 25
3. Time spent developing well	30 min.		1 / 1	Decabe)
4. Depth of well (from top of well casising)	300 ft			
5. Inside diameter of well	_ <u>2.00 in</u>			
6. Volume of water in filter pack and well casing	gal.	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	were used and well is at	entid warm facilities
7. Volume of water removed from well	30. Qal	14. Total suspended		
8. Volume of water added (if any)	gal.	solids		
9. Source of water added		15. COD .		
10. Analysis performed on water added? . (If yes, attach results)	□ Yes □ No		i	
Additional comments on development				
• • • • • • • • • • • • • • • • • • • •	 .	• • •		· .
Weil developed by: Person's Name and Firm		I hereby certify that the of my knowledge.	above information is true	and correct to the best
Name: Brian Durke		Signature	Soft all	
Morane Environ	mental, Inc.	Firm: Mit	7	· · · · · · · · · · · · · · · · · · ·

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

State of Wisconsin Department of Natural Resources Route to: Solid Waste Haz. Wast Env. Response & Repair Under	
Facility/Project Name Env. Response & Repair Undergo	
	N.
Facility License, Permit or Monitoring Number Grid Origin Location	Wis: Unique Well Number: :DNR: Well: Number:
	Long. O ' " or Date Well Installed
Type of Well Water Table Observation Well 🗵 11 St. Plane	п. N, п. Е.
Piezometer □12 Section Location of W Distance Well Is From Waste/Source Boundary	aste/Source 08/08/96 □ E. Well Installed By: (Person's Name and Firm)
1/4 of 1/4 of	Sec, TN, R \Bullet W. \Bullet \tex
Is Well A Point of Enforcement Std. Application? Is Well A Point of Enforcement Std. Application? Upgradient	s Sidegradient
	n 🗆 Not Known Boart Longyear
A. Protective pipe, top elevation ft. MSL	1. Cap and lock? ⊠ Yes □ No
B. Well casing, top elevation Flush ft. MSL	2. Protective cover pipe: a. Inside diameter: 8.0 in.
C. Land surface elevation ft. MSL _	b. Length: 1.0 ft.
	c. Material: Steel ⊠ 0.4
D. Surface seal, bottom ft. MSL or ft.	Other 🗆 🚟
12. USC classification of soil near screen:	d. Additional protection? ☐ Yes ☒ No If yes, describe:
GP	
Bedrock □	3. Surface seal: Concrete 0 1 Other
13. Sieve analysis attached? ☐ Yes ☐ No	Other 🗆 🚟
14. Drilling method used: Rotary □ 5 0	4. Material between well casing and protective pipe:
Hollow Stem Auger ⊠ 4 1	Bentonite 🗆 3 0 Annular space seal 🗆 🚟
Oulei U.S.	Other 🗆 🚟
15. Drilling fluid used: Water 02 Air 01	5. Annular space seal: a. Granular Bentonite 🛛 3 3
Drilling Mud □ 0 3 None ⊠ 9 9	bLbs/gal mud weight Bentonite-sand slurry \(\text{\sqrt{2}} \) 3 5
16. Drilling additives used? ☐ Yes ☐ No	cLbs/gal mud weight Bentonite slurry 🗆 3 1
	d% Bentonite Bentonite-cement grout
Describe	f. How installed: Tremie 0 1
17. Source of water (attach analysis):	Tremie pumped 🔲 0 2
	Gravity ⊠ 0 8
1.0	6. Bentonite seal: a. Bentonite granules 3 3
E. Bentonite seal, top ft. MSL or ft.	b. □1/4 in. □3/8 in. □1/2 in. Bentonite pellets □ 3 2 c. Other □ ₩
F. Fine sand, top ft. MSL or ft.	cOther
r. The sand, top	a#7 Badger
G. Filter pack, top ft. MSL or ft.	b. Volume added n
20.0	8. Filter pack material: Manufacturer, product name and mesh size
H. Screen joint, top ft. MSL or ft.	a. #30 American Material
I. Well bottom ft. MSL or ft. _	b. Volume added
1. Well bottom	Flush threaded PVC schedule 80 \(\sigma 24
J. Filter pack, bottom ft. MSL or ft.	Other 🗆 💥
21.0	10. Screen material: PVC
K. Borehole, bottom ft. MSL or31.0 ft.	a. Screen Type: Factory cut ⊠ 1.1
I. Borehole diameter 10.0 in.	Continuous slot
L. Borehole, diameterin.	b. Manufacturer Boart Longyear
M. O.D. well casing 2.37 in.	c. Slot size: $\frac{0.010}{10.0}$ in.
2.06	d. Slotted length: 10.0 ft.
N. I.D. well casing 2.06 in.	11. Backfill material (below filter pack): None ⊠ 1.4 ———————————————————————————————————
I hereby certify that the information on this form is true and	
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Longyear Tei: (715) 359-7090
101 Alde	erson Street Fax: (715) 355-5715

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MONITORING WELL DEVELOPMENT Form 4400-113B 8-89

and a summarial supplier of the

Faculty/Project Name	Ω	Weil Name	/	
Former Johnson Sandan	Coravel	· · · · · · · · · · · · · · · · · · ·	14	
License, Permit or Monitoring Number		Wis Unique Well No	moe DNRW	al Number
<u></u>				
	_			
1. Can this well be purged dry?	□Yes Xar No		Before Development	After Development
	,	11. Depth to Water (from top of	2694.	27.5/ 1
2. Well development method		well casing)	-27.22	f_
surged with bailer and bailed	<u> </u>	wencesing)		
surged with bailer and pumped	ASC 6 1		10 10 91	68 1806
surged with block and bailed	□ 42	Date	0010016	08, 08, 96 mm d d y y
surged with block and pumped	6 2		mm dd y y	mm ddy
surged with block, bailed and pumped	_	Time	2. /5	2.45
compressed air bailed only		11000		::
pumped only		12. Sediment in well	inches	menes
pumped only	□ 51 □ 50	bottom		
Other		13. Water clarity	C= 10	Cear <u>19</u> 1⊒0
		13. Water Clarity	Turbid 20 15	Turbid 25
3. Time spent developing well	30 min.	1	/	(Describe)
J. I had speak developing water	2ºmm.		,	
4. Depth of well (from top of well casisng)	30.0 ft.			
4. Departor were (mont up or were causing)				
5. Inside diameter of well	_200 in			
6. Volume of water in filter pack and well	21 -	-		
casing	gal			
•	,	Fill in if drilling fluids	were used and well is a	solid waste facility:
7. Volume of water removed from well	30. Qai	: /		
		14. Total suspended	n	пуЛ
8. Volume of water added (if any)	gal.	solids		
9. Source of water added		15. COD .	mg/l	
		1	1	
10. Analysis performed on water added?	□Y≃ □ No			
(If yes, attach results)	and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th	•		
	·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Additional comments on development				
	•	•		•
		_		
				÷ .
•				
Veil developed by: Person's Name and Firm		I hereby certify that the	acove information is tru	and correct to the best
		of my knowledge.	7- 150	
vame: Brian Durke	· • •	Simon (CHI TO	7
		Signature Control	a far	
Morane Environ	you tel Inc	Firm Mit		•
im: / top out C / follow	Y Maria	7		

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

Denotes of Manual Decourses	ste 🗌 Haz. Waste 🗎 Wastewater 🗎	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 4-90
Env. Response & Re	pair Underground Tanks Oth	Well Name
Former Johnson Sand & Gravel	ft. □ N.	_ft. □ E. MW-5
Facility License, Permit or Monitoring Number Grid	Origin Location	Wis: Unique Well Number: : DNR: Well Number:
	o ' " Long	
Type of Well Water Table Observation Well ⊠11 St. Pl	ane ft. N,	ft. E. Date Well Installed
Piezometer □12 Section	on Location of Waste/Source	08/08/96
Distance Well Is From Waste/Source Boundary	/4 of 1/4 of Sec, TN, R.	☐ E. Well Installed By: (Person's Name and Firm)
Locat	ion of Well Relative to Waste/Source	Paul Dickinson
"	☐ Upgradient☐ Sidegradier☐ Downgradient☐ Not Known	D T
A. Protective pipe, top elevation ft. MS		ap and lock? ⊠ Yes □ No
B. Well casing, top elevation Flush ft. MS		rotective cover pipe: Inside diameter:8.0in.
C. Land surface elevation ft. MS	· · · · · · · · · · · · · · · ·	Inside diameter: $\frac{8.0}{1.0}$ in. Length: $\frac{1.0}{1.0}$ ft.
		Material: Steel ⊠ 0 4
D. Surface seal, bottom ft. MSL or		Other 🗆 💥
12. USC classification of soil near screen:		Additional protection? ☐ Yes ☒ No
GP □ GM □ GC □ GW □ SW □ SP □ SM □ SC □ ML □ MH □ CL □ CH □		If yes, describe:
Bedrock □	3. St	orface seal: Bentonite □ 3 0 Concrete ⊠ 0 1
13. Sieve analysis attached? ☐ Yes ☐ No		Other 🗆 🚟
14. Drilling method used: Rotary ☐ 5 0	1 600 600	aterial between well casing and protective pipe:
Hollow Stem Auger ⊠ 4 1	I 🐰 🕷	Bentonite 30
Other 🗆 🚉		Annular space seal 🔲 🚉
	- I I I I I I I I I I I I I I I I I I I	Other 🗆 🖄
15. Drilling fluid used: Water $\Box 0.2$ Air $\Box 0.1$	I 9001 0001	nnular space seal: a. Granular Bentonite 🗵 3 3
Drilling Mud □03 None ⊠99	1 824 824	Lbs/gal mud weight Bentonite-sand slurry 3 5
16. Drilling additives used? ☐ Yes ☐ No		Lbs/gal mud weight Bentonite slurry % Bentonite Bentonite-cement grout 5 0
		Ft ³ volume added for any of the above
Describe	- S S F	·
17. Source of water (attach analysis):		Tremie pumped 0 2
	. 🔘 🗎	Gravity ⊠ 08
	6X4 6X4	entonite seal: a. Bentonite granules 🛛 3 3
E. Bentonite seal, top ft. MSL or1.0		\square 1/4 in. \square 3/8 in. \square 1/2 in. Bentonite pellets \square 3.2
16 O	7. Fi	Other
F. Fine sand, top ft. MSL or ft.	п. 🗎 📗 / / /	#7 Badger
G. Filter pack, top ft. MSL or		Volume addedft ³
o. The park, top		Iter pack material: Manufacturer, product name and mesh size
H. Screen joint, top ft. MSL or	ft. a.	#30 American Material
	b.	Volume addedft ³
I. Well bottom ft. MSL or30.0	ft. 9. W	ell casing: Flush threaded PVC schedule 40 🖾 23
31.0		Flush threaded PVC schedule 80
J. Filter pack, bottom ft. MSL or		reen material: PVC Other Disc
K. Borehole, bottom ft. MSL or31.0		Screen Type: Factory cut 🗵 1 1
ix. Boteliole, Journal II. Mol of		Continuous slot 0 1
L. Borehole, diameter10.0 in.	_	Other 🗆 🚟
	b.	Manufacturer Boart Longyear
M. O.D. well casing $\frac{2.37}{}$ in.	``	Slot size: $\frac{0.010}{10.0}$ in.
2.06		Slotted length: 10.0 ft.
N. I.D. well casing 2.06 in.	11. Ba	ckfill material (below filter pack): None 1 4 Other □ 22
I hereby certify that the information on this form	n is true and correct to the best	
Signature	Firm Boart Longyear	Tel: (715) 359-7090
1 Lake Sur	101 Alderson Street	Fax: (715) 355-7050

101 Alderson Street
Fax: (715) 355-57

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MONITORING WELL DEVELOPMENT Form 4400-113B 8-89

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Facility/Project Name Former Johnson Sender	Gravel	Weil Name	15	
License, Permit or Monitoring Number		Wis: Unique:Weil:Nu	moe DNR.W	eil Number
1. Can this well be purged dry?	□ Y≃)	11. Depth to Water		After Development
2. Well development method surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed and pumped compressed air bailed only	0 4 1 8 6 1 0 4 2 0 6 2 0 7 0 0 2 0 0 1 0	(from top of well casing) Date Time	08,08,96 mm d d y y	29.03 ft 08,08,96 mm d d y y 2:95,000
pumped only pumped slowly Other	S 1 S 0	12. Sediment in well bottom 13. Water clarity	Cer 10 Turbid 2015	inches Cer 20 Turbid 25
3. Time spent developing well	<u>30</u> min.		(Describe)	(Decabe)
4. Depth of well (from top of well casisng) 5. Inside diameter of well 4. The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the st	_2.00 in			
Volume of water in filter pack and well casing Volume of water removed from well		Fill in if drilling fluids	were used and well is at	solid waste facility:
8. Volume of water added (if any) 9. Source of water added	gal.	solids 15. COD	mg/l	mg/l
10. Analysis performed on water added? (If yes, attach results)	□Yes □ No	1		·
Additional comments on development		•		
- · · · · · · · · · · · · · · · · · · ·	····	• •		£ .
Veil developed by: Person's Name and Firm	-	I hereby certify that the of my knowledge.	acove information is true	and correct to the best
Morane Environ	neutol Inc.	Signature ()	7	

1 4 24 ...

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

Department of Natural Resources		Fo	orm 4400-113A 8-39	
Faculty/Project Name	Grid Location		Weil Name	_
Faculty License, Permit or Monitoring Number		_ ft □ Nt □ S.	Wis Unique Weil Number DNR Weil Number	
	l ————		WIE OUIGE WEN NUMBER DINK WEN NIE	mo
Type of Weil Water Table Observation Weil 2011	Section Location		Date Weil installed 08.29.97	Serve s
Piezometer 🗆 12	NW 1/4 of NE 1/4	of Section 25	08/29/97 mm d d d v v	
Distance Well Is From Waste/Source Boundary	T 7 N. R 19	(= IT W	Weil Installed By: (Person's Name and Firm)	<u> </u>
ft. Is Weil A Point of Enforcement Std. Application?	Location of Weil Relative to	Waste/Source	Brish a Environmental	
□ Yes ⊠%		☐ Sidegradient ☑ Not Known		
A. Protective pipe, top elevation f	L MSL	1, Cap and lo	xxx? Se Ye []	No
B. Weil casing, top elevation	L MSL	2. Protective	cover pipe:	
•		a Inside di b. Length:	·	_
C. Land surface elevation f		c Marrial	· -	
D. Surface seal, bottom ft. MSL or _/	.0 f			
12 USCS classification of soil near screen:		d. Addition	ual protection?	
DCS DCW DCC DCM MCSW DSS	/ /	/ If yes, do	scribe	
Betock		3. Surface sea	<u>r</u>	3 (
13. Sieve analysis attached? Yes N			Concrete 💆	
14. Drilling method used: Rotary 5	o \	4. Materiai bei	tween well casing and protective pipes	
Hollow Stem Auger X 4	1 \			3 0
Ober 🗆			Armular space seal	
15. Drilling fluid used: Water □ 02 Air □ 0				
Drilling Mud □ 03 None ☑ 9	9	5. Annular spa	7	3 3
,			- d	3 1
16. Drilling additives used?	· 🚟 🚟		,	50
Describe			Ft ³ volume added for any of the above	
17. Source of water (attach analysis):		How installed		1
		, N		2
		6. Bentonite se	_	8
E Benomite seal, top ft. MSL or		/	L 🗆 3/8 in. 🗆 1/2 in. Benonite pellets 🗀 3	
		/	Other 🛚 🖟	
F. Fine sand, topft_MSL or	7.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.3 ft 3.	7. Fine send ma	aterial: Manufacturer, product name and mesh siz	22
G. Filter pack, topft_MSL or	73 4	/	Ked Flint #93	
		Volume adde	usterial: Manufacturer, product name and mesh si	
H. Well screen, top ft_ MSL or _ / 7	1.3 =		Rel Flort #30	سنه
		Volume side	dft ³	
L Weil screen, bottom ft. MSL or 29	.3 5	9. Weil casing:	<i>~</i> ~~	
I. Filter pack, bottom ft. MSL or _ 30			Flush threaded PVC schedule 80 24	4
i. Filler pack, solloin ii inibi di	.2	10. Screen materi	ial: PVC	<u> </u>
C. Borenole, bottom ft. MSL or _ 30	, O ft.	Screen type:	Factory cut 🖎 11	=
			Continuous slot 🔲 0 1	
Borehole, diameter 80 in.			Cther 🛚 💆	Š
1. O.D. well casing 225 in.	\	Manufacturer Slot size		,
IL OLD. WELL CESTING IN.		Slotted length		
I. LD. well casing 2.00 in.		\	ial (below filter pack): None	
	·		Other 🗆	_
hereby certify that the information on this fo		to the best of my k		_
ignant Park	MET			
Janes parvion	/) Wie Cross and an M	P. 141 Wie Jam Code le secontane math	•

Please complete and return both sides of this form as required by cns. 144, 147 and 160, Wis, Stats., and cn. 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.

Faculty/Project Name		Weil Name	16	
Former Johnson Senden Gr	avel	- W		
License, Permit or Monitoring Number		Wis Unique Well No	DNR.W	eil Number
Can this well be purged dry?	Yes X No		Refore Development	After Development
i. car un ver or parger a.y.	المر المر	11. Depth to Water		
2. Well development method		(from top of	24 09 .	_E4.41 fz
surged with bailer and bailed	1 4 1	well casing)		
_	5 6 1			
	4 2	Date	08.29.97	19.29.97
surged with block and pumped	_		m m d d v v	08,29,97
	70			
compressed air		Time	1.00 Pm	1:30 Em
bailed only	_			
pumped only	'	12. Sediment in well		inches
pumped slowiy		bottom		
Other		13. Water clarity	C= 10	Cer 20
			Turbid on 15	Turbid [7] 2.5
3. Time spent developing well	30 min.	1	(Describe)	(Describe)
4. Depth of well (from top of well casising)	29.3n	}		
•	_			
5. Inside diameter of well	200 in			
]		
6. Volume of water in filter pack and well				
casing <u> </u>	gal.			
	2-	Fill in if drilling fluids	were used and well is a	solid waste facility:
7. Volume of water removed from well	30. Qui			
		14. Total suspended		mg/l
8. Volume of water added (if any)	· gal.	solids		
	;		I	7. 6. 10.
9. Source of water added		15. COD .		mg/l
· · · · · · · · · · · · · · · · · · ·	_			
]	I	
	Yes 🗆 No			-
(If yes, attach results)				
Accinonal comments on development				
Additional comments on development				
•		-		
•				
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon				- .
•	,			
eil developed by: Person's Name and Finn		I hereby certify that the	above information is tru	and correct to the best
		of my knowledge.	120	
Brian Durkee		S:	ach I	
		Signature Color	0/4/200	
Morane Environme	Ad Inc	Firm Mic		,
	~~~	LIII. / 200	<u></u>	

State of Wisconsin Department of Natural Resources	2	M Fe	IONTTORING WELL CONS orm 4400-113A	TRUCTION 8-89	
Facility/Project Name	Grid Location		Well Name	7	
Former Johnson Sand and Gravet		fr 🗆 N 🗆 S.	M		
Facility License, Permit or Monitoring Number		fr 🗆 E 🗆 W.	Wis Unique Weil Number	DNR We	ri Nawo
Type of Weil Water Table Observation Well 211	Section Location		Date Weil installed	9.09.6	2 7
Piezometer 🔲 12	NW WAS NEI	1/4 of Section 25	1 2	$\frac{8}{m} \frac{29}{3} \frac{9}{3}$	. <del>7</del>
Distance Weil Is From Waste/Source Boundary			Weil Installed By: (Person	s Name and Fr	<del>(m)</del>
ft	T 7 N.R 19	ĎE □ W	Brich u Ex		, ,
Is Weil A Point of Enforcement Sta. Application?	Location of Weil Relative	to Waste/Source  Sidegradient	- Dyronik Ch	on thinese	127
☐ Yes 图%	☐ Upgratient ☐ Downgratient				
		Not Known			- \r
A. Protective pipe, top elevation	t MSL	1. Cap and h		≥ Ye	□ No
B. Well casing, top elevation f	L MSL		cover pipe:		a ^.
b. Well clisting, top elevation		a. Inside d		-	<i>8</i> .0 ir
C. Land surface elevation f	· MSL	h. Length:		-	. <u>/</u> . <u>0</u> fi
D C C . I because A VCI	100	c Materia	Ŀ		<b>№</b> 0
D. Surface seal, bottom ft. MSL or	"			Other	
12. USCS classification of soil near screen:	1 300	d Addition	nal protection?	☐ Ys	№ No
		If yes, d	iescribe:		_
EXSM DSC DWL DWH DCL DCH		<u></u>		Bentonite	□ 30
D Becrock	\	3. Surface se	ai:	Concrete	<b>S</b> 0
13. Sieve analysis attached?   Yes  N	6 \			Other	
14. Drilling method used: Rotary 1 5	o \	4 Material be	tween well casing and protec		
Hollow Stem Auger 24	, \		served wed anding and prome	Bentonite	<b>□</b> 30
	. \		Α	ular space seal	
Other 🗆	\		Aun	•	
15. Drilling fluid used: Water □ 02 Air □ 0	11 🗒 🖟			Other !	-
Drilling Mud 103 None 209		5. Annulæ sp		ular Benonice /	
Didding Man 1103 Note 1212			s/gai mud weight Benton		
16. Drilling additives used?		M	s/gal mud weight Be	•	
and the second of the different bounds of the	·		Bentonite Bentonite		□ 50
Describe			Ft ³ volume added for any		_
17. Source of water (attach analysis):		How install		Tranie [	
17. Source of water (analis analysis).			Tre	anje brumbed [	<b>0</b> 2
		<u> </u>		Gravity &	<b>₹</b> 08
	-	6. Bentonite s	eal: Bento	nite granules 🕽	70 33
E Bentonite seal, top ft. MSL or	rom 📟 🖁		n. []3/8 in. []1/2 in. Ben		
				Other [	
F. Fine sand, top ft. MSL or /	5.7 ft 7.7 ft 9.7.	7. Fine sand m	naterial: Manufacturer, produ		
			Rad Flint #	-55	
G. Filter pack, top ft_MSL or	77 th \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Volume add			
G. Filler parts, up		2 Filtremek	material: Manufacturer, prod	nct name and m	eh size
H. Well screen, too ft. MSL or	7.7 th 9.7 th	/ · · · · · · · · · · · · · · · · · · ·	Red Flort		
H. Well screen, top ft. MSL or _ /_		Voiume add			
* WSI ~ 10	77 6	9. Weil casing		chedule 40 E	<b>3</b> - 23
L Well screen, bottom ft. MSL or		y. Well cashing	Firsh threaded PVC s	· ·	
5 Met 3			Limit increases and a		-
J. Filter pack, bottom fr. MSL or _ 30			rial: PVC	Other [	I 🚃
		10. Screen mate			_ =====
K. Borehole, bottom ft. MSL or _ 34	··- ··	Screen type:		Facury car	
A .			Con	timuous slot 🗌	
L Borehole, diameter $0 0$ in.		\ · <del></del>		Other 🛚	
		Manufactures	TIMEO		
M. O.D. well casing 225 in.	• • •	Slot size:			10 in
		Slotted lengt			0.0ft
N. LD. well casing 2.00 in.	teras e asigo so	11. Backfill mate	erial (below filter pack):	None 2	۶
	•			Other 🗆	· ·
hereby certify that the information on this f	orm is true and corre	ect to the best of my	knowledge.		
ignature.	Firm				
Harl Dallower.	MEI				
Please complete and return both sales of this form as rec	juired by chs. 144, 147 and	1 160, Wis Stats, and ca.	NR 141, Wis Adm. Code. In	accordance wil	in
		C10 C10	MM for each day of violating	In scrondance	

ch. 144, Wis Stars., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of with ch. 147, Wis. Stars., 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.

TOTAL CONTROL OF THE STREET OF THE STREET

# MONITORING WELL DEVELOPMENT Form 4400-113B 8-89

Facility/Project Name Former Johnson Scaland Gravel	Weil Name M7								
License, Permut or Monitoring Number	Wis Unique Weil No	DNR.W	il Number						
1. Can this well be purged try?	11. Depth to Water	Before Development	After Development						
2. Well development method surged with bailer and bailed 4 1	(from top of well casing)	-24.10a	<u>24.36 ft.</u>						
surged with block and bailed	Date	08129197 mm d d y y	-08,29,97 mm d d y y						
surged with block, bailed and pumped 7 0 compressed air 2 0 bailed only 1 0	Time		2:45						
pumped only	12. Sediment in well bottom  13. Water clarity	inches	inches						
3. Time spent developing well		Turbid Do 15	Turbid 1 25 (Describe)						
4. Depth of well (from top of well casising) 22. If the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s		Hackerdor	Sheen blook cdor						
5. Inside diameter of well  6. Volume of water in filter pack and welling an casing again.			con a / Line gaille						
7. Volume of water removed from well the Seal	Fill in if drilling fluids	were used and well is a							
8. Volume of water added (if any)	solids								
9. Source of water added	15. COD .	mg/l	mg/l						
10. Analysis performed on water added?   [If yes, attach results]			· · · · · · · · · · · · · · · · · · ·						
Additional comments on development	•								
e e e e e e e e e e e e e e e e e e e	•		÷ .						
Weit developed by: Person's Name and Firm	I hereby certify that the of my knowledge.	above information is tru	and correct to the best						
Name: Brion Durkee	Signature:	28/1200							
Morane Environmental, Inc.	Firm Mic	7							

### **APPENDIX F**

## **CHAIN OF CUSTODY FORMS**

Company Name: HORAINE ENUTRAVIME	NTAL ,	TNO	7			A							Page of	3 -7KC
Branch or Location: (MEI) GRAFTON	, WI					E	(Оне	EM INC.		Mail	Report		)	
Project Contact: CHRIS HAASE				٠,	`	//			٠.,	Con	npany:	,		
Telephone: 414-377-9060					_1		ellevue St., Su 1 Bay, WI 5430			Add	ress:	1234	12 TH AU 5302	12
Project Number: MET# Q305					414-	469-24	136 • 1-800-73 414-469-882	36-2436			SILAF	TAN, WI	5302	4
Project Name: JOHNSON- SAND & GRAL	el	;				1111	,	•		Invo	ice To:			
Project Location N8W22590 JOHNSON P.	r. W1.	KESHA	, W							Con	npany:	- 6		
Sampled By (Print): CHUIS HARSE	- SA	0516				ί,			· · · · · · · · · · · · · · · · · · ·	Add	ress:	SAM		
Regulatory Program (circle): USD RCRA C	CLP SD	WA	NR	720 Conf	irmation	n Analysi	s Required?		`	_		5//_		
NPDES/WPDES CAA NR Other_			100 000	Chem w	4.0	rm unles	s otherwise instru	ucted.)		P.O.	No.:	DED AREA FOR LA	Quote No.:	E ONLY
Field ID Sample Description	Coll Date	ection Time	Fleid Screen	Matrix	Filt'd Y/N	Preserv*		alysis uested		Good Cond.	-	Comme	1.2.1 1.11 0	Laboratory Number
SBI BI (16-18)	3/19/7	•	NA	Ĵ&L	No	UNTER	DRO/G	RO/	(oc/pl	$\times X$	2-1	OZIM	521.	174927
SBI BI (24-26)							,						i ga Marina (Marina). Santa ka wasani	174928
THE BILLIAM CAN									/ · .					
SBZ BZ (12-14)							THE PARTY		4(BD)	41				174929
5BZ BZ (24-26)							HIII.CAH			abi si	1.340			174930
SBZ BZ(28-30) *							•							174931
SB3 B3(12-14)														ב17493
SB3 B3(26-28)							·		di	12	V	leit		174933
SBY BY 8-10	)							\	:					174934
SB4 B4(14-16				T		T					V			174935
METH BLANK	Ţ	7:0a	L	MENI	L	теон	GRO/	Voc			2-0	02/M		174936
A=None B=HCL C=H2SO4	Relinquished	LIN 1	ese-			Date/7	/A /	221	Received By:	h	Bed	3/31/96	En Chem Pr 9603.	oject No. 368
D=HN03 E=EnCore F=Methanol G=NaOH O=Other (Indicate)	Relinquished	By	al			Date/Ti	me: ) 1/96 /2/	06	Received By:	.1/	mpe	3/21/90	Sample Rec (Must be rec	eipt Temp. c'd at 4°C)
1 4 4 17 72 21 1 1 1 1 1	Relipquished	By:	upen	<u>ب</u>		Date/Ti	me.	10 1m	Received By			Acrts	RO	$\mathcal{I}$
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Telephone: 9/9-377-	9060	<del>(a)</del>			Greer	ı Bay, WI 54302	Addr	ess:		234 121	" AVE
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Sampled By	(Print): PATRATIEN	SON						: 608-827-5503	Addres	Address:							
Regulatory P	rogram (circle): (UST) RCRA	CLP SC	WA	NR7	720 Conf	firmation	n Analysis	s Required?									
NPDES/WP	DES CAA NR Other_			(En	Chem w		T	s otherwise instructed.)	Mail In	voice To:	DED AREA FOR LA	BORATORY U	SE ONLY				
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Regulatory Program (circle): UST RCRA CLP SD	WA	NR720 Cd	nfirmatio	n Analysis	Required?								
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roject Number	414.377.9060. #0305 Johnson Shand				? (YES/NO)	STOI	OY 76	72	Pag P.O. # Mail Report Company: 104	To: PA+ 1	of  One #  DA HERSON  NVIIZO.
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Project Number: MUL 3015  Project Name: Johnson Son Gravel  Project Location: Wantesta UT			<u> </u>			St., Suite		Addres		<u> </u>			
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Sampled By (	$\sim$ $\sim$ $\sim$ $\sim$		)					: 608-827-5503	Addres	ss:			
Regulatory Pr	ogram (circle): UST RCRA	CLP SD	WA	NR7	'20 Conf	irmation	Analysis	Required?					
NPDES/WPE	DES CAA NR Other			(En	Chem w	ill confir	m unless	otherwise instructed.)	Mail tr	voice To			
Field ID	Sample Description	Coli Date	ection Time	Field Screen	Matrix	Filt'd Y/N	Preserv*	Analysis Requested	Good Cond.	Total Bottles			Laboratory Number
1	MIN - 6	7.8	Man.		West		Het.	VOLJARO VRO	X		Core		00/
2	MW-7- Trip Black	78	pu		1/20		HOL	VOC, GRU, DRO, PAH		1			2
3	Trip Blank		41 Sec. 1.		4,0	4.50	114	VOC-610 2.10	10	2-4	sml		3
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the appropriate samples.							<u> </u>	The state of the second second second second second second second second second second second second second se					

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## **APPENDIX G**

## SOIL ANALYTICAL AND BIOLOGICAL LABORATORY DATA



Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

En Chem Proj# : 9603368
Date Reported : 03/27/1996

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 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, wish some baseline rise. Large peak late in DRO window.

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1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

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 This is indicative of DRO or heavier fuels or of GRO window. 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.

Slight fuel hump late in and beyond DRO window, Sample no. 174942: with some baseline rise.

Sample no. 174943: GRO chromatogram had late eluting peaks outside This is indicative of DRO or heavier fuels or of GRO window. 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.

1,3,5-Trimethylbenzene, Ethylbenzene, The presence of Isopropylbenzene, p-Isopropyltoluene, and n-propylbenzene confirmed on 03/26/96 by a second GC/MS analysis.

Sample no. 174944: The presence of sec-Butylbenzene was confirmed Paper 03/26/96 by a second GC/MS analysis.

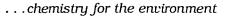


Sample no. 174945: Fuel hump late in and beyond DRO window, with some baseline rise.

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.

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.





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

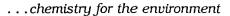
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL				_	_	,		
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
TOTSOLID	Total Solids	90	percent		•••••	•	EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	5.4	mg/kg	3.6	SW846 3050	03/22/1996	SW846 7421	03/22/199	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	540	mg/kg	28		03/22/1996	WDNR MOD GRO	03/26/199	6 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	WONR MOD DRO	03/23/199	6 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	03/25/199	6 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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

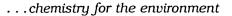
: JOHNSON-SAND & GRAVEL/ #0305 Location

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

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	•	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	100	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					





1795 Industrial Drive

Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE

Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

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

GRAFTON, WI 53024-1924

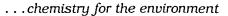
Bill to: MORAINE ENVIRONMENTAL

	BILL CO. MORATHE CHAIRCHWEHINE								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	100	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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:

, Selha





FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL
1234 12TH AVENUE

GRAFTON, WI 53024-1924

Lab Certification No. 405132750

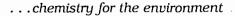
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL				_	_			
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
TOTSOLID	Total Solids	96	percent				EPA 160.3	03/22/1996	6 PHS
PB-S	Lead, soil	3.8	mg/kg	3.4	SW846 3050	03/22/1996	SW846 7421	03/22/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.6		03/22/1996	WONR MOD GRO	03/26/199	6 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	WONR MOD DRO	03/22/199	6 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	6 RJN
	Bromobenzene	ND	ug/kg	25					
	Bromochloromethane	ND	ug/kg	25					
	Bromodichloromethane	ND	ug/kg	25					
	Bromoform	ND	ug/kg	25					
ı	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					





FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL **1234 12TH AVENUE** 

GRAFTON, WI 53024-1924

Lab Certification No. 405132750

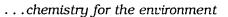
: JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					
	<b>Hexachlorobutadiene</b>	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					





FAX: 414-469-8827

Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: \$B1

Sample Desc. : 81 (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

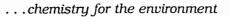
Bill to: MORAINE ENVIRONMENTAL

	DILL CO. HORATHE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	5 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. Suha





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

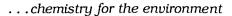
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL			Detection	Prep	Prep	Analysis	Analysis	Anal vzer
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	By
TOTSOLID	Total Solids	92	percent				EPA 160.3	03/22/1996	6 PHS
PB-S	Lead, soil	ND	mg/kg	3.5	sw846 3050	03/22/1996	sw846 7421	03/22/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	350	mg/kg	22		03/22/1996	WDNR MOD GRO	03/28/1996	6 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	03/23/199	6 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	6 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					





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

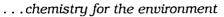
Your Sample ID: SB2

Sample Desc. : B2 (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	Unite	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
	•••••••								•
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	50	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					
	<b>Hexachlorobutadiene</b>	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		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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

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

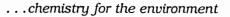
Bill to: MORAINE ENVIRONMENTAL

	BILL TO. MONATURE ENGINEERING								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	50	SW846 5030	03/22/1996	sw846 8260	03/25/1996	6 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:







Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

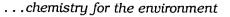
Your Sample ID: SB2

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

Dill to. MODAINE ENVIRONMENTAL

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
TOTSOLID	Total Solids	92	percent				EPA 160.3	03/22/1996	5 PHS
PB-S	Lead, soil	5.4	mg/kg	3.5	SW846 3050	03/22/1996	sw846 7421	03/22/1996	5 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	250	mg/kg	14		03/22/1996	WDNR MOD GRO	03/28/1996	S 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	5 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	5 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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

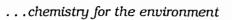
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Unite	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	130	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					
	Ethyi 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					





FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 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

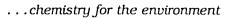
En Chem Lab # : 174930 Date Reported : 03/29/1996

Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	130	sw846 5030	03/22/1996	SW846 8260	03/25/1996	5 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:





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

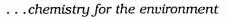
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: \$82

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

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
TOTSOLID	Total Solids	95	percent				EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	5.4	mg/kg	3.3	SW846 3050	03/22/1996	SW846 7421	03/22/199	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	700	mg/kg	52		03/22/1996	WDNR MOD GRO	03/26/199	6 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	03/23/199	6 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	03/25/199	6 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					





1795 Industrial Drive

Green Bay, WI 54302 414-469-2436

800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

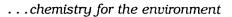
Your Sample ID: SB2

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								
				Detection	•	Prep	Analysis	-	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	By
8260+-S-ME	E 1,2-Dibromoethane	ND	ug/kg	250	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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

Report to: MORAINE ENVIRONMENTAL

GRAFTON, WI 53024-1924

**1234 12TH AVENUE** 

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

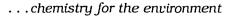
Bill to: MORAINE ENVIRONMENTAL

	DILL TO. HOWATHE ENTIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	250	SW846 5030	03/22/1996	SW846 8260	03/25/1996	S 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:







800-7-ENCHEM FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

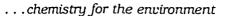
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL			Detection	Prep	Prep	Analysis	Analysis	Analyze
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	By
TOTSOLID	Total Solids	95	percent				EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	9.0	mg/kg	3.4	SW846 3050	03/22/1996	SW846 7421	03/22/199	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.6		03/22/1996	WDNR MOD GRO	03/26/199	6 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	WONR MOD DRO	03/22/199	6 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	03/25/199	6 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					





1795 Industrial Drive Green Bay, WI 54302 414-469-2436

800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

Your Sample ID: SB3

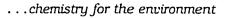
Sample Desc. : 83 (12-14)

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	03/25/199	6 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					
	<b>Hexachlorobutadiene</b>	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					





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

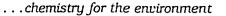
Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	6 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. Sula





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

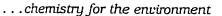
Sample Desc. : B3 (26-28)

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			<b>.</b>	_	_			
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
TOTSOLID	Total Solids	86	percent				EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	4.7	mg/kg	3.7	SW846 3050	03/22/1996	SW846 7421	03/22/199	6 NUM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.9		03/22/1996	WONR MOD GRO	03/25/199	6 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	03/22/199	6 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	5 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					





FAX: 414-469-8827

Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

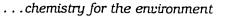
Your Sample ID: SB3

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								
<b>.</b>	Parameter			Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Hethod	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	S 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					
	<b>Hexachlorobutadiene</b>	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					





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. : 83 (26-28)

Sample Matrix : SOIL En Chem Proj# : 9603368 Date Collected: 03/19/1996
Date Received: 03/21/1996

En Chem Lab #: 174933

Date Reported : 03/26/1996

Report to: MORAINE ENVIRONMENTAL

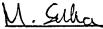
1234 12TH AVENUE GRAFTON, WI 53024-1924

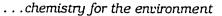
Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	S₩846 8260	03/25/1996	6 RJN
	1,1,1-Trichloroethane	DM	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:







Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

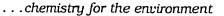
Your Sample ID: SB4 Sample Desc. : 84 (8-10)

Sample Matrix : SOIL Date Collected: 03/19/1996 En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab # : 174934

Date Reported: 03/26/1996

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

	BILL TO: MOKAINE ENVIRONMENTAL												
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By				
TOTSOLID	Total Solids	93	percent				EPA 160.3	03/22/1990	6 PHS				
PB-S	Lead, soil	5.6	mg/kg	3.5	SW846 3050	03/22/1996	SW846 7421	03/22/1996	6 MWM				
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.7		03/22/1996	WONR MOD GRO	03/25/1990	6 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	WONR MOD DRO	03/22/1990	5 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	5 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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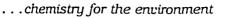
: JOHNSON-SAND & GRAVEL/ #0305 Location

Your Sample ID: SB4 Sample Desc. : B4 (8-10)

Sample Matrix : SOIL Date Collected: 03/19/1996 En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab #: 174934 Date Reported: 03/26/1996

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

	Bill to: MORAINE ENVIRONMENTAL				- 0		A 15		
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	s⊌846 5030	03/22/1996	SW846 8260	03/25/199	6 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					





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

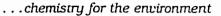
Bill to: MORAINE ENVIRONMENTAL

•	BILL CO. MONATHE ENVIRONMENTAL	, AV I ROMPEN I AL							
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	S 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:







Report to: MORAINE ENVIRONMENTAL

1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

Your Sample ID: S84

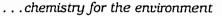
Sample Desc. : B4 (14-16)

Sample Matrix : SOIL Date Collected: 03/19/1996 Date Received: 03/21/1996 En Chem Proj# : 9603368 En Chem Lab #: 174935

Date Reported: 03/28/1996

Bill to: MORAINE ENVIRONM	ENTAL
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	BILL TO: MORAINE ENVIRONMENTAL			Detection	Prep	Prep	Analysis	Analysis	Applyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	By
TOTSOLID	Total Solids	83	percent				EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	13	mg/kg	4.0	SW846 3050	03/22/1996	SW846 7421	03/22/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	3.0		03/22/1996	WONR MOD GRO	03/25/1996	6 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	WONR MOD DRO	03/22/1996	5 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	03/22/199	s 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					





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Location : JOHNSON-SAND & GRAVEL/ #0305

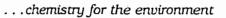
Your Sample ID: SB4

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								
				Detection		Prep	Analysis	Analysis	-
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-MF	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	s₩846 8260	03/22/199	5 CJG
0200 0 112	Dibromomethane	ND	ug/kg	25		00,22,		· · · · · · · · · · · · · · · · · · ·	
	1,2-Dichlorobenzene	ND	ug/kg	25					
	1,3-0ichtorobenzene	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. : 84 (14-16)

Sample Matrix : SOIL En Chem Proj# : 9603368 Date Collected: 03/19/1996 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

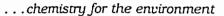
Bill to: MORAINE ENVIRONMENTAL

	BILL TO. MONATUE ENVIRONMENTAL														
	Analysis	Parameter	Detection   Prep   Prep   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analysis   Analy	Analysis Date	Analyzed By										
	8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/22/1996	c1e					
		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	DM	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:







Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

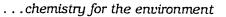
Your Sample ID:

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	s Anatyzed By
GRO	Gasoline Range Organics(GRO)-Water	ND	ug/l	2500	*******	03/22/1996	WDNR MOD GRO	03/25/1996	5 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	s 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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Location : JOHNSON-SAND & GRAVEL/ #0305

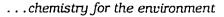
Your Sample ID:

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: MCRAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+	1,1-Dichloroethene	ND	ug/l	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 CJG
	cis-1,2-Dichloroethene	ND	ug/l	25					
	trans-1,2-Dichloroethene	ИD	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					





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

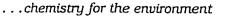
Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+	Vinyl chloride Xylenes, m + p Xylene, o	ND ND ND	ug/l ug/l ug/l	25 25 25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	S CJG

"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. Sulva





Lab Certification No. 405132750

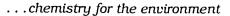
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB5 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			Detection	Prep	Prep	Analysis	Analysis	Analyzeo
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
TOTSOLID	Total Solids	86	percent				EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	12	mg/kg	3.7	SW846 3050	03/25/1996	SW846 7421	03/25/1996	6 MWH
GRO-S	Gasoline Range Organics(GRO)-Soil	. ND	mg/kg	2.9	-	03/22/1996	WONR MOD GRO	03/24/199	6 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	WONR MOD DRO	03/23/199	6 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	6 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					





FAX: 414-469-8827

Lab Certification No. 405132750

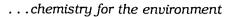
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB5 Sample Desc. : 85 (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				ion Prep		Amalyada	41	
Analysis	Parameter	Result	llmita	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	•
Ariatysis		Result							By
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/22/199	6 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					
	Hexach Lorobutadi ene	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					
	.,-,		~3/ v3						





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

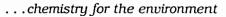
Report to: MORAINE ENVIRONMENTAL
1234 12TH AVENUE
GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

	BILL CO. MORATHE ENVIRONMENTAL			B-446	D	D	Analysis Method	Amalyaia	Analyzed By
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date		Analysis Date	
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/22/1996	5 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.







Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

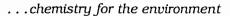
Your Sample ID: SB5

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

BILL to: MORAINE ENVIRONMENTAL

	Bill to: MORAINE ENVIRONMENTAL			D	D	Dann		Analysia	Analyza
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
TOTSOLID	Total Solids	95	percent		•••••		EPA 160.3	03/22/1996	6 PHS
PB-S	Lead, soil	ND	mg/kg	3.4	SW846 3050	03/25/1996	SW846 7421	03/25/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	11	mg/kg	2.6		03/22/1996	WDNR MOD GRO	03/24/199	6 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	03/22/199	6 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	6 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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

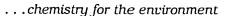
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB5

Sample Desc. : 85 (20-22)

Date Collected: 03/20/1996 Sample Matrix : SOIL En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab # : 174938 Date Reported : 03/28/1996

	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	03/22/199	6 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	NĐ	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					





FAX: 414-469-8827

Location : JOHNSON-SAND & GRAVEL/ #0305 Your Sample ID: S85

Lab Certification No. 405132750

Sample Desc. : 85 (20-22)

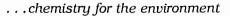
Sample Matrix : SOIL Date Collected: 03/20/1996 En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab # : 174938 Date Reported: 03/28/1996

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	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	sw846 5030	03/22/1996	SW846 8260	03/22/199	6 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.





FAX: 414-469-8827

**1234 12TH AVENUE** GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

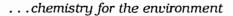
Your Sample ID: SB5

Sample Desc. : B5 (28-30)

Date Collected: 03/20/1996 Sample Matrix : SOIL Date Received: 03/21/1996 En Chem Proj# : 9603368 En Chem Lab #: 174939 Date Reported : 03/28/1996

Report to: MORAINE ENVIRONMENTAL

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
TOTSOLID	Total Solids	92	percent				EPA 160.3	03/22/1996	5 PHS
10100215	Total Jollas	,-	percent				2.7. 10010	00, 20, 17,	
PB-S	Lead, soil	ND	mg/kg	3.6	SW846 3050	03/25/1996	SW846 7421	03/25/1996	5 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.7	,	03/22/1996	WDNR MOD GRO	03/24/1996	5 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	WONR MOD DRO	03/22/1996	5 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	S 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					





1795 Industrial Drive Green Bay, WI 54302 414-469-2436

800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

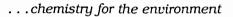
Your Sample ID: SB5

Sample Desc. : 85 (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								
				Detection	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/22/199	6 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					





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. : 85 (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

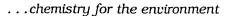
Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

	Bill to: MORAINE ENVIRONMENTAL			_					
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/22/1996	s 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.







FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

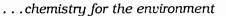
Your Sample ID: SB6

Sample Desc. : B6 (12-14)

Date Collected: 03/20/1996 Sample Matrix : SOIL En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab # : 174940 Date Reported : 03/27/1996

MORAINE ENVIRONMENTAL

	Bill to: MORAINE ENVIRONMENTAL			Detection	Prep	Ргер	Analysis	Analysis	Analyza
Analysis	Parameter	Result	Units	Limit	Hethod	Date	Hethod	Date	By
TOTSOLID	Total Solids	92	percent				EPA 160.3	03/22/1996	6 PHS
PB-S	Lead, soil	7.8	mg/kg	3.5	SW846 3050	03/25/1996	SW846 7421	03/25/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.7		03/22/1996	WDNR MOD GRO	03/24/1990	6 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	WONR MOD DRO	03/23/199	5 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	5 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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

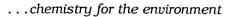
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Unite	Detection Limit	Prep Method	Pr <del>e</del> p Date	Analysis Method	Analysis Date	Analyzed By
Analysis	rarameter	Result							
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	S 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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB6

Sample Desc. : 86 (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

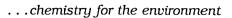
Bill to: MORAINE ENVIRONMENTAL

	BILL TO: MURAINE ENVIRONMENTAL									
	Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
	8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1990	5 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. Suba





FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

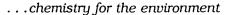
Your Sample ID: SB6

Sample Desc. : 86 (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

Bill	to:	MORAINE	ENVIRONMENTAL

	DILL TO: MORATHE 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	MUM
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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

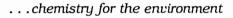
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB6

Sample Desc. : B6 (20-22)

Date Collected: 03/20/1996 Sample Matrix : SOIL Date Received: 03/21/1996 En Chem Proj# : 9603368 En Chem Lab # : 174941 Date Reported: 03/26/1996

	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	03/25/199	6 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					
ì	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					
	• •								





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB6

Sample Desc. : 86 (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

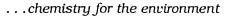
Bill to: MORAINE ENVIRONMENTAL

BILL TO: MUKAINE ENVIRUNMENTAL	RILL TO: MOKATHE ENAIKONMENTAL									
	Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
	8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	6 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 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. Sulra





FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

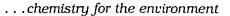
Your Sample ID: SB7

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

MODATUE ENVIRONMENTAL Rill to:

	Bill to: MORAINE ENVIRONMENTAL			B-448	<b>n</b>	D===	Amalyaia	Analymia	Analyza
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
TOTSOLID	Total Solids	94	percent		•	••••••	EPA 160.3	03/22/1996	6 PHS
PB-S	Lead, soil	ND	mg/kg	3.5	SW846 3050	03/25/1996	SW846 7421	03/25/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.7		03/22/1996	WDNR MOD GRO	03/25/1990	5 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	03/22/199	5 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	5 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					





1795 Industrial Drive

Green Bay, WI 54302

414-469-2436

800-7-ENCHEM FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE

GRAFTON, WI 53024-1924

Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

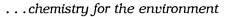
Your Sample ID: SB7 Sample Desc. : B7 (4-6)

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

	Bill to: MORAINE ENVIRONMENTAL			Detection	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					





Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB7

Sample Desc. : B7 (4-6)

En Chem Lab # : 174942

Sample Matrix : SOIL Date Co En Chem Proj# : 9603368 Date Re

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

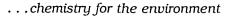
Bill to: MORAINE ENVIRONMENTAL

DILL TO: MORATHE ENVIRONMENTAL										
	Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
	8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

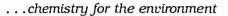
Location : JOHNSON-SAND & GRAVEL/ #0305

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

		BILL to: MORAINE ENVIRONMENTAL								
	Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
	TOTSOLID	Total Solids	94	percent				EPA 160.3	03/22/1990	5 PHS
	PB-S	Lead, soil	ND	mg/kg	3.5	SW846 3050	03/25/1996	SW846 7421	03/25/1996	5 MWM
	GRO-S	Gasoline Range Organics(GRO)-Soil	170	mg/kg	13		03/22/1996	WDNR MOD GRO	03/24/1996	5 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	03/25/1990	5 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	5 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					
1		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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

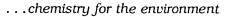
Location : JOHNSON-SAND & GRAVEL/ #0305

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

Bill to: MORAINE ENVIRONMENTAL									
				Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	By
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	5 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					





FAX: 414-469-8827

Report to: HORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

Your Sample ID: SB7

Sample Desc. : B7 (14-16)

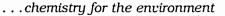
Sample Matrix : SOIL Date Collected: 03/20/1996 En Chem Proj#: 9603368 Date Received: 03/21/1996 En Chem Lab # : 174943 Date Reported: 03/27/1996

Bill to: MORAINE ENVIRONMENTAL

	DICC CO: MORATINE ENVIRONMENTAL										
	Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By	
	8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	6 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	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.







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Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

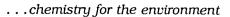
Your Sample ID: SB7 Sample Desc. : B7 (22-24)

Sample Matrix : SOIL Date Collected: 03/20/1996 Date Received: 03/21/1996 En Chem Proj# : 9603368 En Chem Lab #: 174944

Date Reported : 03/27/1996

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

Prep Analysis Analysis Analy				
ysis Analysis A hod Date	Analyzed By			
60.3 03/22/1996	PHS			
7421 03/25/1996	MUM			
MOD GRO 03/24/1996	BSJ			
MOD DRO 03/22/1996	PHS			
8260 03/25/1996	RJN			





Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

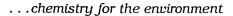
Your Sample ID: SB7

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: 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	03/25/199	6 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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FAX: 414-469-8827 Report to: MORAINE ENVIRONMENTAL

> 1234 12TH AVENUE GRAFTON, WI 53024-1924

Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB7

Sample Desc. : 87 (22-24)

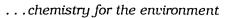
Sample Matrix : SOIL Date Collected: 03/20/1996 En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab # : 174944 Date Reported: 03/27/1996

MODATHE ENVIRONMENTAL

	BILL TO: MORAINE ENVIRONMENTAL				_				
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	5 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.







FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

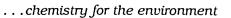
Your Sample ID: SB8

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

MODATUE ENVIRONMENTAL

	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	03/22/199	6 PHS
PB-S	Lead, soil	10.0	mg/kg	3.7	SW846 3050	03/25/1996	SW846 7421	03/25/199	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.8		03/22/1996	WDNR MOD GRO	03/24/199	6 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	03/26/199	6 PHS
	Soil spike	81	% RECOV	50					
	Soil spike duplicate	72	% RECOV	50					
8260+-S-ME	E Benzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					
Ī	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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

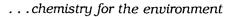
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL			<b>.</b>	ion Door				
				Detection	•	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					





Lab Certification No. 405132750
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB8

Sample Desc. : 88 (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

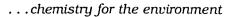
Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

amalumia.	BILL TO. HORATRE ENVIRONMENTAL			Detection		Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	S 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.







FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

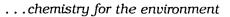
Your Sample ID: SB8

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

MORATHE ENVIRONMENTAL

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
TOTSOLID	Total Solids	89	percent				EPA 160.3	03/22/199	6 PHS
PB-S	Lead, soil	5.2	mg/kg	3.6	SW846 3050	03/25/1996	SW846 7421	03/25/199	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	ND	mg/kg	2.8		03/22/1996	WDNR MOD GRO	03/24/199	6 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	03/22/199	6 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	03/25/199	6 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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

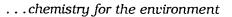
Location : JOHNSON-SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/199	6 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					





800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: S88

Sample Desc. : B8 (18-20)
Sample Matrix : SOIL

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

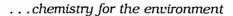
Report to: MORAINE ENVIRONMENTAL
1234 12TH AVENUE
GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

	DICC CO. FIORATIL ENVIRONMENTAL			Detection	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	SW846 5030	03/22/1996	SW846 8260	03/25/1996	5 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.







Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

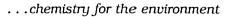
Location : JOHNSON-SAND & GRAVEL/ #0305

Your Sample ID: SB8

Sample Desc. : 88 (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

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
TOTSOLID	Total Solids	92	percent				EPA 160.3	03/22/1996	6 PHS
PB-S	Lead, soil	ND	mg/kg	3.5	sw846 3050	03/25/1996	sw846 7421	03/25/1996	6 MWM
GRO-S	Gasoline Range Organics(GRO)-Soil	30	mg/kg	2.7		03/22/1996	WDNR MOD GRO	03/24/199	6 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	6 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	6 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					
	4-Chlorotoluene	ND	ug/kg	25		,			





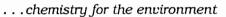
Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

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

	Bill to: MORAINE ENVIRONMENTAL								
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-MF	1,2-Dibromoethane	ND	ug/kg	25	SW846 5030	n3/22/1996	SW846 8260	03/25/199	 6 RJN
02001 0 112	Dibromomethane	ND	ug/kg	25	04040 3030	03, 22, 1770	0.000	03,23,177	
	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	DK	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					





Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

Lab Certification No. 405132750

: JOHNSON-SAND & GRAVEL/ #0305 Location

Your Sample ID: S88

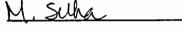
Sample Desc. : 88 (22-24)

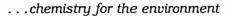
Sample Matrix : SOIL Date Collected: 03/20/1996 En Chem Proj# : 9603368 Date Received: 03/21/1996 En Chem Lab #: 174947 Date Reported : 03/26/1996

Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,2,4-Trichlorobenzene	ND	ug/kg	25	sw846 5030	03/22/1996	SW846 8260	03/25/199	6 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.







Lab Certification No. 405132750

Location : JOHNSON SAND & GRAVEL / #0305

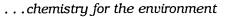
En Chem Proj# : 9608168 Date Reported : 08/14/1996

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.





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. : MW3 (14-16')

Sample Matrix : SOIL En Chem Proj# : 9608168 Date Collected: 08/07/1996 Date Received : 08/08/1996

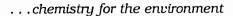
En Chem Lab # : 193246

Date Reported: 08/13/1996

Report to: MORAINE ENVIRONMENTAL

1234 12TH AVENUE GRAFTON, WI 53024-1924

	STEE CO. HONATHE ENTRONMENTAL			Detection	Prep	Prep	Analysis	Analysis A	Analyzad
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	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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FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

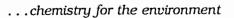
Location : JOHNSON SAND & GRAVEL / #0305

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

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+-S-ME	1,2-Dichlorobenzene	ND	ug/kg	25	sw846 5030	08/09/1996	SW846 8260	08/09/199	6 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					





800-7-ENCHEM FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL

1234 12TH AVENUE GRAFTON, WI 53024-1924 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 Date Received: 08/08/1996

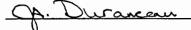
En Chem Proj# : 9608168 En Chem Lab # : 193246

Date Reported: 08/13/1996

Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+-S-ME	1,1,2-Trichloroethane	ND	ug/kg	25	sw846 5030	08/09/1996	SW846 8260	08/09/1996	5 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.





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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
Date Received: 08/08/1996

En Chem Proj# : 9608168 En Chem Lab # : 193247

Date Reported : 08/13/1996

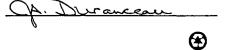
Report to: MORAINE ENVIRONMENTAL
1234 12TH AVENUE

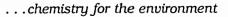
Bill to: MORAINE ENVIRONMENTAL

GRAFTON, WI 53024-1924

Analysis	Parameter	Result Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
TOTSOL ID	Total Solids	94 percent				SM2540G	08/09/1996	6 PHS
DRO-S	Diesel Range Organics(DRO)-Soil Soil spike Soil spike duplicate	120 mg/kg 99 % RECOV 88 % RECOV			08/09/1996	WDNR MOD DRO	08/12/1996	6 PHS

"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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Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

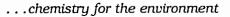
Location : JOHNSON SAND & GRAVEL / #0305

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

	BILL TO: MURAINE ENVIRONMENTAL				D	D===	A1	Amalania	41
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
GRO	Gasoline Range Organics(GRO)-Water	ND	ug/l	2500		08/12/1996	WDNR MOD GRO	08/13/1996	6 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	6 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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FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

: JOHNSON SAND & GRAVEL / #0305 Location

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

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	Prep	Prep	Analysis	Analysis	Analyzec
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+	1,1-Dichloroethene	ND	ug/l	25	SW846 5030	08/09/1996	sw846 8260	08/13/1996	6 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		r			
	1,3,5-Trimethylbenzene	ND	ug/l	25					



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Lab Certification No. 405132750

: JOHNSON SAND & GRAVEL / #0305 Location

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 Date Reported : 08/14/1996

En Chem Lab # : 193248

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+	Vinyl chloride	ND	ug/l	25	SW846 5030	08/09/1996	SW846 8260	08/13/1996	5 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.

# Facsimile Cover Sheet

Technologies, Inc.

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

Date:

April 16, 1996

Pages (incl

cover):

If there is a problem with this transmission,

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

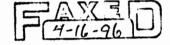
original material to BioRenewal Technologies at the below address via U.S. Postal Service.

recipient or if you have received this transmission in error, please notify us immediately by telephone and return the

please call (608) 276-8980

Thank you for your cooperation.

Comments:



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

# **Bio-Analytical Summary Report**

4/16/96 Job Code: AJE

Technologies, Inc.

#### Site Information

Site Name Location

Contaminant

Johnson Sand and Gravel

Waukesha, WI

vvaukesna, vvi

gasoline (50%), diesel (50%)

Consultant Moraine Environmental, Inc.

Proj. Contact Chris Haase Project Ref ID MEI 0305 Sample Type

Date received

Date of this Report

Number samples

BioRenewal Job Code

21-Mar-96

16-Apr-96

AJE

3

soil

#### 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 micro	bial	Soil moist.					
populat	ions:	content:	%		% TON of		
Exceeds nor	m for:	% of field	Air-filled		% organic		
Passive Passive	Active	capacity	pore space	ρН	matter	C:N	C:P
>1E+06	>1E+03	25-85%	>10%	5.5-8.5	>1.5%	<40	<120
1	2	3	4	5	6	7	_ 8
×	×	NR	NR	×	✓	ж	×
×	×	NR	NR	✓	✓	✓	×
×	×	NR	NR	✓	✓	×	×
	populat Exceeds nor Passive >1E+06	>1E+06 >1E+03  1 2  x x  x	populations:         content:           Exceeds norm for:         % of field           Passive         Active         capacity           >1E+06         >1E+03         25-85%           1         2         3           x         x         NR           x         x         NR	populations:         content:         %           Exceeds norm for:         % of field         Air-filled           Passive         Active         capacity         pore space           >1E+06         >1E+03         25-85%         >10%           1         2         3         4           X         X         NR         NR           X         X         NR         NR	populations:         content:         %           Exceeds norm for:         % of field         Air-filled           Passive         Active         capacity         pore space         pH           >1E+06         >1E+03         25-85%         >10%         5.5-8.5           1         2         3         4         5           x         x         NR         NR         x           x         x         NR         NR         ✓	populations:         content:         %         % TON of           Exceeds norm for:         % of field         Air-filled         % organic           Passive         Active         capacity         pore space         pH         matter           >1E+06         >1E+03         25-85%         >10%         5.5-8.5         >1.5%           1         2         3         4         5         6           x         x         NR         NR         x         ✓           x         x         NR         NR         √         ✓	populations:         content:         %         % TON of           Exceeds norm for:         % of field         Air-filled         % organic           Passive         Active         capacity         pore space         pH         matter         C:N           >1E+06         >1E+03         25-85%         >10%         5.5-8.5         >1.5%         <40

The nutrient/physical paprameters 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.
- 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 bioremedial 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 ozygen 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

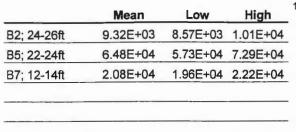
All values in cfu/gm (DSW)

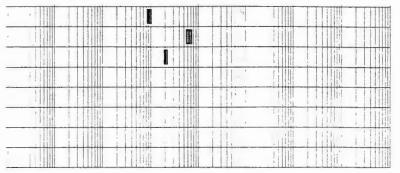
# Soil Samples

Total populations

#### 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





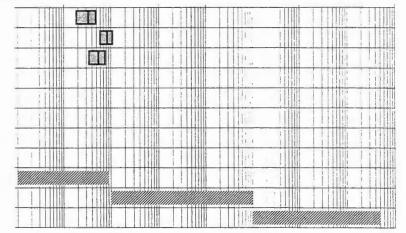
# Soil Samples

Degrader populations

#### 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

		High
3.10E+02	1.87E+02	4.84E+02
8.16E+02	5.95E+02	1.09E+03
5.22E+02	3.46E+02	7.59E+02
	8.16E+02	8.16E+02 5.95E+02



inoculum leveis Active degradation levels

Marginal inoculum

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.

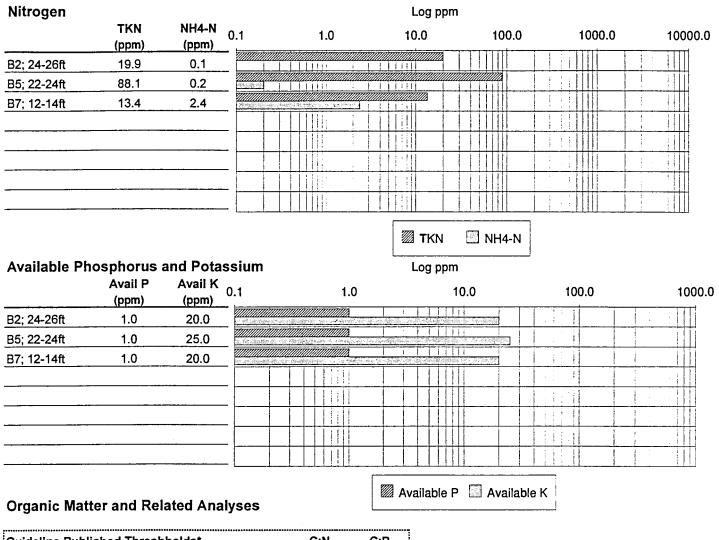
Active degradation levels = Degrader populations greater than 1.0E+06 are generally of sufficient magnitude to support measurable biotransformation. Additional site augmentation may still be required to attain desireable rates of transformation.

Assay conditons		% Carbon	Incubation	Growth	Degrees of	reedom**	
	Carbon source	(v/v)	Temperature	Conditions	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



Guideline Published Threshholds*		C:N	C:P
Wis Dept. Natural Resources	Below:	40	120
Nat'l Academy of Sciences	Below:	6	30

% Organic TOC** **Calculated Ratios** Soluble Salts Capacity **SO4-S** NO3-N C:N C:P mhos x 10-5 Meq/100g pН Matter ppm ppm ppm B2; 24-26ft 0.5% 1,950 98 1,950 NR NR 8.7 NR NR 0.6% 2,340 NR NR NR B5; 22-24ft 2,340 27 NR 8.0 B7; 12-14ft 0.5% 1,950 177 1,950 NR NR 8.4 NR NR

Cation Exc

* 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.

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.

^{**} Estimated total organic carbon (expressed in ppm) calculated from % organic matter - See Methods.

n/a = Not applicable

Technologies, Inc.

# Section IV - Soil Physical Conditions

## Soil Oxygen and Moisture Conditions

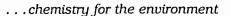
	% Air-filled pore space	% Moisture	% Solids	% Water Holding Capacity	Moisture as % Water Holding Capacity	Bulk Density (g/cc)	0.0%		20.0%	30.0%	40.0%	50.0%
B2; 24-26ft	NR	3.8%	96.2%	NR	NR	NR			i	: !	į	
B5; 22-24ft	NR	8.9%	91.1%	NR	NR	NR	_	₩₩. 	1	1	1	ı
B7; 12-14ft	NR	6.3%	93.7%	NR	NR	NR				1		
								1 1	:			
								1 1 1	i			i
								. !			1	ļ
								!				
NR=not request n/a=not applical							<b>3</b> %	Soil Mo	isture		Nater ho	olding

Contact per		10	(/	7/E1	-)		)			11								(	Cha	in-of	-Cus	tody
Contact per	rson	Toin S	NUET		Sar	mpler	itn	ΣŞ	_/_	MASE	- 4	· sanggisi	No. 19	Regi	ieste	ed a	nalv	ses (	<b>√</b> )	ar i Per		
Project loca	e Jenna	SAW SAW	GRAVEL F	Proje	ect	# 1761#	$\mathcal{C}$	30	<u>S_</u>			<u>, : </u>				7			<del></del>	<del> </del>	1	
						(City)	SHI	4	, 0	(state)		Assay prgw)	il or gw) ailable p	(soil)		<u></u>		core			/ //	
Site contam	inant *	Dre	(used to deter	o omine	CEN degrad	<b>√</b> E der microbial po	pulation	ons)				eration bicon	driel (so itrogen, av olids (s)	apacity (	is (soil)	ace (soil	g capa	<i>'</i> /	r gw)	r gw)		
		free product is ree product incl				carbon source	for er	nume	rating	g the degrader	/e Entire	Standard nutrient parties	and K, pH, % OM (s), % solids (soil or gw) Cation, excel	Particle size	% air-filled	Soil moice.	Bulk densa	y (soil)	Heavy metals (soil or gw)	Soil C		
	Lab use				()	Sample	y y	(#)		Additional	mparati	andard r	K, PH, % C	Irticle cir	air-filled	il moist.	Bulk dens*	tal mine	Pavy met	Other	Other	
Sample ID	only	Date	Time	Soil	Š	depth	Jars	Vials	Core	comments	0 🗷	S i	E C	à	%	8	B	100	Ĭ	Õ	Õ	
B5(22-24)	)	3/20/96	11.00A	X		22.24	1			AJEOI	X	X										
B2(24-26) B7(12-14	)	3/20/96	12:308	X		24-26	1			AJE02	X	×										
B7 (12-14)		3/20/96	1:000	X		12-14	1			AJE03	X	×										
																ļ						ļ
					_				_				_									
	2									İ												
Relinquished	Just 1	Faire		•	D: 3,	atd/time/.  20/96 -	. 6	:01	26	Comments: 6 From Syl	Cocci	ectes	EMMO IST ARM	DEA 71	SCY	Sam	ole co	nditior	upor	arriva	l:	
Received by:	1				_	ate/time:				ROREG H	S# 3.	25"	TABL	E								
1 4	D:	Dana		S	end	results, to:		(		HRES)			Send	invo	ice t	o:	×	Sam	e as i	esults		
	_	)Rene\ hnologies			lam	e Mont	NE	E	VVE	commental,	Inc	٠.										
A State of the second		araday Cente		Name Moratine Environmental Company MET Address 1234 12 TH Ave City Graffor State WE Zip 5							-											
	. Madi	S. Fish Hatche son, WI 53711		City GRAFTON State WE Zip 53 Phone 4/4377 9060 Fax 4/4377 9						5029 170		City.	ne				State Fax	=				
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1 4000

# **APPENDIX H**

# GROUNDWATER ANALYTICAL LABORATORY DATA





1795 Industrial Drive Green Bay, WI 54302

Lab Certification No. 405132750

414-469-2436

Location : JOHNSON SAND & GRAVEL/ #0305

800-7-ENCHEM

En Chem Proj# : 9608509

FAX: 414-469-8827

Date Reported : 09/04/1996

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:

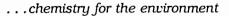
The trip blank was non En Chem in origin.

Sample no. 195173: GRO chromatogram had late eluting peaks outside This is indicative of DRO or heavier fuels or of GRO window. 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.





1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

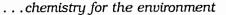
Location : JOHNSON SAND & GRAVEL/ #0305

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

	Bill to: MORAINE ENVIRONMENTAL			_	_	_			
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyze By
M-PB-W-D	Lead, dissolved	2.6	ug/l	2.0			sw846 7421	09/04/199	6 SAB
GRO	Gasoline Range Organics(GRO)-Water	2300	ug/l	100		08/27/1996	WDNR MOD GRO	08/27/199	6 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	08/29/199	6 PHS
	Blank spike	100	% RECOV						
	Blank spike duplicate	99	% RECOV	50					
8260+	Benzene	ND	ug/l	3.0	sw846 5030	08/29/1996	SW846 8260	08/29/199	6 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					





1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

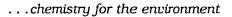
Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 Lab Certification No. 405132750

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

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	•	Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+	1,2-Dichlorobenzene	ND	ug/l	5.0	SW846 5030	08/29/1996	SW846 8260	08/29/199	6 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					





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

Date Collected: 08/23/1996 Date Received: 08/26/1996

En Chem Lab # : 195173

Date Reported: 09/04/1996

Report to: MORAINE ENVIRONMENTAL

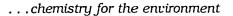
1234 12TH AVENUE GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+	1,1,2-Trichloroethane	ND	ug/l	5.0	sw846 5030	08/29/1996	SW846 8260	08/29/1996	5 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.







800-7-ENCHEM 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

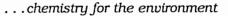
En Chem Lab # : 195174

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	Analyzed By
M-PB-W-D	Lead, dissolved	ND	ug/l	2.0			SW846 7421	09/04/1996	6 SAB
GRO	Gasoline Range Organics(GRO)-Water	ND	ug/l	50		08/27/1996	WDNR MOD GRO	08/27/199	6 CAR2
	Blank spike	107	% RECOV	50					
	Blank spike duplicate	108	% RECOV	50					
DRO	Diesel Range Organics(DRO)-Water		ug/l	100		08/27/1996	WDNR MOD DRO	08/27/199	6 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	6 HW
	Bromobenzene	ND	ug/l	1.0					
	Bromochloromethane	ND	ug/l	1.0					
	Bromodichloromethane	ND	ug/l	1.0					
	Bromoform	ЙD	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					





1795 Industrial Drive

Green Bay, WI 54302

414-469-2436

800-7-ENCHEM

FAX: 414-469-8827

Lab Certification No. 405132750

: JOHNSON SAND & GRAVEL/ #0305 Location

Your Sample ID: 2 Sample Desc. : MW-2

Sample Matrix : WATER Date Collected: 08/23/1996 En Chem Proj# : 9608509 Date Received: 08/26/1996

En Chem Lab # : 195174 Date Reported : 09/04/1996

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

	Bill to: MORAINE ENVIRONMENTAL								
				Detection	Prep	Prep	Analysis	Analysis	Analyzec
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+	1,2-Dichlorobenzene	ND	ug/l	1.0	SW846 5030	08/29/1996	SW846 8260	08/29/199	6 н <b>и</b>
	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/i	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					



## ...chemistry for the environment

Lab Certification No. 405132750

Location : JOHNSON SAND & GRAVEL/ #0305

Your Sample ID: 2 Sample Desc. : MW-2

Sample Matrix: WATER Date Collected: 08/23/1996 En Chem Proj#: 9608509 Date Received: 08/26/1996

En Chem Lab # : 195174 Date Reported : 09/04/1996

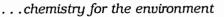
1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

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+	1,1,2-Trichloroethane	ND	ug/l	1.0	sw846 5030	08/29/1996	SW846 8260	08/29/199	6 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.





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Dibromomethane

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 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

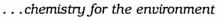
En Chem Lab # : 195175 Date Reported : 09/04/1996

Bill to: MORAINE ENVIRONMENTAL Analysis Analysis Analyzed Detection Prep Prep Analysis Parameter Result Units Limit Method Date Method Date Ву M-PB-W-D Lead, dissolved ug/l 2.0 SW846 7421 09/04/1996 SAB ND GRO Gasoline Range Organics(GRO)-Water ND ug/l 50 08/27/1996 WDNR MOD GRO 08/27/1996 CAR2 50 Blank spike 107 % RECOV Blank spike duplicate 108 % RECOV 50 100 08/27/1996 WDNR MOD DRO 08/27/1996 DRO Diesel Range Organics(DRO)-Water ND ug/l PHS Blank spike 100 % RECOV 50 99 % RECOV 50 Blank spike duplicate 8260+ Benzene ND ug/l 0.6 SW846 5030 08/28/1996 SW846 8260 08/28/1996 Bromobenzene ND ug/l 1.0 Bromochloromethane ND ug/l 1.0 1.0 Bromodichloromethane ND ug/l 1.0 Bromoform ND ug/l 1.0 Bromomethane ND ug/l n-Butylbenzene ND ug/l 1.0 sec-Butylbenzene ND ug/l 1.0 1.0 tert-Butylbenzene ND ug/l Carbon tetrachloride ND ug/l 1.0 1.0 Chlorobenzene ND ug/l Chlorodibromomethane ND 1.0 ug/l Chloroethane ND ug/l 1.0 1.0 Chloroform ND ug/l Chloromethane ND ug/l 1.0 1.0 2-Chlorotoluene ND ug/l 1.0 4-Chlorotoluene ND ug/l 1,2-Dibromo-3-chloropropane ND ug/l 1.0 1.0 1,2-Dibromoethane ND ug/l

1.0

ND

ug/l





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FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924 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

	BILL TO: MORAINE ENVIRONMENTAL			Detection	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
8260+	1,2-Dichlorobenzene	ND	ug/l	1.0	sw846 5030	08/28/1996	sw846 8260	08/28/1996	 6 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					



## . . . chemistry for the environment

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

1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE

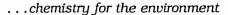
GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+	1,1,2-Trichloroethane	ND	ug/l	1.0	sw846 5030	08/28/1996	SW846 8260	08/28/199	6 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					
	<pre>Xylenes, m + p Xylene, o Dibromofluoromethane (SS) Toluene-d8 (SS)</pre>	ND ND 105 105	ug/l ug/l %Recov %Recov	1.0					

"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.







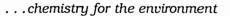
1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX:414-469-8827

Location : JOHNSON SAND & GRAVEL/ #0305 strial Drive Your Sample ID: 4 , WI 54302 Sample Desc. : MW-4 -2436 Sample Matrix : WATER Date Collected:

Lab Certification No. 405132750

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

	Bill to: MORAINE ENVIRONMENTAL								
				Detection		Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
M-PB-W-D	Lead, dissolved	3.9	ug/l	2.0			SW846 7421	09/04/1996	6 SAB
GRO	Gasoline Range Organics(GRO)-Water	ND	ug/l	50		08/27/1996	WDNR MOD GRO	08/27/199	6 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	08/27/199	6 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	08/28/199	6 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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Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE

GRAFTON, WI 53024-1924

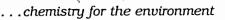
Lab Certification No. 405132750

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

	Bill to: MORAINE ENVIRONMENTAL				tian Daan				
Analysis	Parameter	Result	Unita	Detection Limit	Prep Method	Prep	Analysis		Analyzed
Anatysis	rarameter	Kesult	units	Limit	метлоа	Date	Method	Date	Ву
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-Propyl benzene	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					





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 Date Collected: 08/23/1996 En Chem Proj#: 9608509 Date Received: 08/26/1996

En Chem Lab # : 195176 Date Reported : 09/04/1996

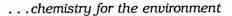
Report to: MORAINE ENVIRONMENTAL

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+	1,1,2-Trichloroethane	ND	ug/l	1.0	sw846 5030	08/28/1996	SW846 8260	08/28/1996	5 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.





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: 5
Sample Desc. : MW-5

Sample Matrix : WATER

Date Collected: 08/23/1996

En Chem Proj# : 9608509

Date Received: 08/26/1996

En Chem Lab # : 195177

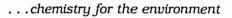
Date Reported : 09/04/1996

Report to: MORAINE ENVIRONMENTAL

1234 12TH AVENUE

GRAFTON, WI 53024-1924

	BILL CO: MORATHE ENVIRONMENTAL			D	D===	Dana	Analysis	Analysis	Analysas
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
M-PB-W-D	Lead, dissolved	ND	ug/l	2.0			sw846 7421	09/04/1996	S SAB
GRO	Gasoline Range Organics(GRO)-Water	ND	ug/l	50		08/27/1996	WDNR MOD GRO	08/27/1996	S 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	5 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	5 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					





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

Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX:414-469-8827

1795 Industrial Drive

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	08/28/199	6 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

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FAX: 414-469-8827

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Lab Certification No. 405132750

Location : JOHNSON SAND & GRAVEL/ #0305

Your Sample ID: 5
Sample Desc. : MW-5

Sample Matrix : WATER Dat

Date Collected: 08/23/1996

En Chem Proj# : 9608509 En Chem Lab # : 195177 Date Received : 08/26/1996 Date Reported : 09/04/1996

Report to: MORAINE ENVIRONMENTAL

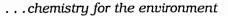
1234 12TH AVENUE GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

				Datastian	0.000	Deen	Analysis	Amalyaia	A1
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
8260+	1,1,2-Trichloroethane	ND	ug/l	1.0	SW846 5030	08/28/1996	SW846 8260	08/28/199	6 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.







800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

: JOHNSON SAND & GRAVEL/ #0305 Location

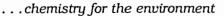
Your Sample ID: TB

Sample Desc. : TRIP BLANK

Sample Matrix : WATER Date Collected: 08/23/1996 En Chem Proj# : 9608509 Date Received : 08/26/1996 Date Reported : 08/29/1996 En Chem Lab # : 195178

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE GRAFTON, WI 53024-1924

	Bill to: MORAINE ENVIRONMENTAL								
				Detection		Prep	Analysis	Analysis	
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
GRO	Gasoline Range Organics(GRO)-Water	ND	ug/l	50		08/27/1996	WDNR MOD GRO	08/27/199	6 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	08/28/199	6 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					





800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

Location : JOHNSON SAND & GRAVEL/ #0305

Your Sample ID: TB

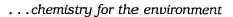
Sample Desc. : TRIP BLANK

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			<b>.</b>			A	A	
Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	By
8260+	1,1-Dichloroethene	. ND	ug/l	1.0	sw846 5030	08/28/1996	SW846 8260.	08/28/199	6 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-Propyl benzene	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					





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

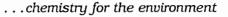
Report to: MORAINE ENVIRONMENTAL

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	Analyzed By
8260+	Vinyl chloride	ND	ug/l	1.0	SW846 5030	08/28/1996	SW846 8260	08/28/1996	5 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.





1795 Industrial Drive Green Bay, WI 54302

Green Bay, WI 54302 414-469-2436

800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750

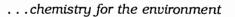
Location : JOHNSON SAND & GRAVEL / #0305

En Chem Proj# : 9609124 Date Reported : 09/12/1996

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:

Sample no. 196855: PAH surrogate recovery not available due to high dilution.





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# : 9609124

Date Collected: 09/06/1996 Date Received: 09/09/1996

En Chem Lab # : 196855

Date Reported : 09/12/1996

Report to: MORAINE ENVIRONMENTAL 1234 12TH AVENUE

GRAFTON, WI 53024-1924

Bill to: MORAINE ENVIRONMENTAL

Analysis	Parameter	Result Un	Detection nits Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzec By
РАН	Acenaphthene	530 ug	ı/L 500	SW846 3510	09/10/1996	sw846 8310	09/12/1996	5 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						
	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.



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

Client: MORAINE ENVIRONMENTAL INC

WI DNR LAB ID: 40513270

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.

Approval Signature

Date



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM Fax: 920-469-8827

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 reanslysis. 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.





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

Report Date: 9/9/97

Lab Sample Number: 872276-001

Collection Date: 8/29/97

WI DNR LAB ID: 40513270

Matrix Type: WATER

# **Organic Results**

DIESEL RANGE ORGANICS -	WATER		Prep Met	thod: WIN	IOD DRO	Prep Date:	9/3/97	Analyst: NJS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis <b>M</b> ethod
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

<b>EPA 8260 VOLATILE LIST- WATE</b>		R		Prep Method: SW846 5030			Prep Date:	9/4/97	Analyst: HW
Analyte	F	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



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

Dibromomethane	< 2	2.8 2	.8	8.9	ug/L		9/5/97	SW846 8260
1,3-Dichlorobenzene				8.9	ug/L		9/5/97	SW846 8260
1,4-Dichlorobenzene				9.2	ug/L		9/5/97	SW846 8260
1,2-Dichloroethane	< 2	2.4 2		7.6	ug/L		9/5/97	SW846 8260
,2-Dichlorobenzene	< 3	3.2 3	.2	10	ug/L		9/5/97	SW846 8260
,1-Dichloroethene	< 2	2.8 2	.8	8.9	ug/L		9/5/97	SW846 8260
cis-1,2-Dichloroethene	2	24 2		8.9	ug/L		9/5/97	SW846 8260
Dichlorodifluoromethane	< 2	2.5 2	.5	8.0	ug/L		9/5/97	SW846 8260
rans-1,2-Dichloroethene	< 2	2.5 2	.5	8.0	ug/L		9/5/97	SW846 8260
,2-Dichloropropane	< 2	2.4 2	.4	7.6	ug/L		9/5/97	SW846 8260
,1-Dichloroethane	< 2	2.6 2	.6	8.3	ug/L		9/5/97	SW846 8260
,3-Dichloropropane	< 2	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-Dichloropropene	< 2	2.6 2	.6	8.3	ug/L		9/5/97	SW846 8260
is-1,3-Dichloropropene	< 4	.8 4	.8	15	ug/L		9/5/97	SW846 8260
ans-1,3-Dichloropropene	< 4	.5 4	.5	14	ug/L		9/5/97	SW846 8260
iisopropyl ether	9	9 4	.3	14	ug/L		9/5/97	SW846 8260
thylbenzene	5	4 2	.3	7.3	ug/L		9/5/97	SW846 8260
luorotrichloromethane	< 2	9 2	.9	9.2	ug/L		9/5/97	SW846 8260
lexachlorobutadiene	< 3	3.1	.1	9.9	ug/L		9/5/97	SW846 8260
sopropylbenzene	3	6 2	.7	8.6	ug/L		9/5/97	SW846 8260
-Isopropyltoluene	2	6 2	.2	7.0	ug/L		9/5/97	SW846 8260
lethylene chloride	< 2	2 2	.2	7.0	ug/L		9/5/97	SW846 8260
Methyl-tert-butyl-ether	< 5	5.3	.3	17	ug/L		9/5/97	SW846 8260
laphthalene	1	30 6	.6	21	ug/L		9/5/97	SW846 8260
-Propylbenzene	4	3 2	.7	8.6	ug/L		9/5/97	SW846 8260
tyrene	< 1	.9 1	.9	6.1	ug/L		9/5/97	SW846 8260
,1,2,2-Tetrachloroethane	< 4	.6 4	.6	15	ug/L		9/5/97	SW846 8260
,1,1,2-Tetrachloroethane	< 2	.1 2	.1	6.7	ug/L		9/5/97	SW846 8260
etrachloroethene	7	.8 2	.7	8.6	ug/L	Q	9/5/97	SW846 8260
oluene	< 2	.8 2	.8	8.9	ug/L		9/5/97	SW846 8260
2,3-Trichlorobenzene	< 3	.2 3	.2	10	ug/L		9/5/97	SW846 8260
,2,4-Trichlorobenzene	< 4	.8 4	.8	15	ug/L		9/5/97	SW846 8260
,1,1-Trichloroethane	< 2	.7 2	.7	8.6	ug/L		9/5/97	SW846 8260
,1,2-Trichloroethane	< 3	.0 3	.0	9.6	ug/L		9/5/97	SW846 8260



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

Report Date: 9/9/97

Lab Sample Number: 872276-001

Collection Date: 8/29/97

WI DNR LAB ID: 40513270

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	4 2.5	8.0	ug/L		9/5/97	SW846 8260
/inyl chloride	< 2.	3 2.3	7.3	ug/L		9/5/97	SW846 8260
(ylenes, -m, -p	6.	7 5.1	16	ug/L	Q	9/5/97	SW846 8260
(ylene, -o	4.	0 2.8	8.9	ug/L	Q	9/5/97	SW846 8260
4-Bromofluorobenzene	98	3		%Recov		9/5/97	SW846 8260
Dibromofluoromethane	91	t		%Recov		9/5/97	SW846 8260
Toluene-d8	99	9		%Recov		9/5/97	SW846 8260

# **Organic Results**

GASOLINE RANGE ORGANICS	GASOLINE RANGE ORGANICS - WATER			hod: 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

PAH (HPLC) LIST - SEMIV	AH (HPLC) LIST - SEMIVOLATILES			Prep Meti	hod: SW8	346 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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-1

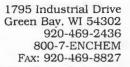
Report Date: 9/9/97

Lab Sample Number: 872276-001

Collection Date: 8/29/97

WI DNR LAB ID: 40513270

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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2 Report Date: 9/9/97

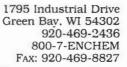
Lab Sample Number: 872276-002 Collection Date: 8/29/97

WI DNR LAB ID: 40513270 Matrix Type: WATER

# **Organic Results**

DIESEL RANGE ORGANICS -		Prep Met	hod: WI	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

EPA 8260 VOLATILE LIST- WATER		VOLATILE LIST- WATER Prep Meth				846 5030	Prep Date:		Analyst: HW
Analyte	F	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-2

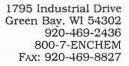
Report Date: 9/9/97

Lab Sample Number: 872276-002

Collection Date: 8/29/97

WI DNR LAB ID: 40513270

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
rans-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
sopropylbenzene	<	0.27	0.27	0.86	ug/L	9/3/97	SW846 8260
o-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-Tetrachioroethane	<	0.46	0.46	1.5	ug/L	9/3/97	SW846 8260
,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
oluene	<	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





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

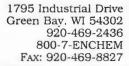
Collection Date: 8/29/97

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

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: WI	MOD.GRO	Prep Date:	9/3/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGAN	NICS < 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



Client: MORAINE ENVIRONMENTAL INC



# - Analytical Report -

Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Field ID: MW-3 Report Date: 9/9/97

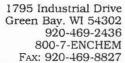
Lab Sample Number: 872276-003 Collection Date: 8/29/97

WI DNR LAB ID: 40513270 Matrix Type: WATER

# **Organic Results**

DIESEL RANGE ORGANICS -	WATER Prep Method: WI MOD DRO Prep Da						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

EPA 8260 VOLATILE LIST- WATER  Analyte Result			Prep Method: SW846 5030			Prep Date:	9/3/97	Analyst: HW	
		Result		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-Butyibenzene	<	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-Chlorotoiuene	<	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Field ID: MW-3

Report Date: 9/9/97

Client: MORAINE ENVIRONMENTAL INC

Lab Sample Number: 872276-003

Collection Date: 8/29/97

Matrix Type: WATER WI DNR LAB ID: 40513270

			-				
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
rans-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-Dichloropropene	<	0.26	0.26	0.83	ug/L	9/3/97	SW846 8260
is-1,3-Dichloropropene	<	0.48	0.48	1.5	ug/L	9/3/97	SW846 8260
ans-1,3-Dichloropropene	<	0.45	0.45	1.4	ug/L	9/3/97	SW846 8260
iisopropyl ether	<	0.43	0.43	1.4	ug/L	9/3/97	SW846 8260
thylbenzene	<	0.23	0.23	0.73	ug/L	9/3/97	SW846 8260
luorotrichloromethane	<	0.29	0.29	0.92	ug/L	9/3/97	SW846 8260
lexachlorobutadiene	<	0.31	0.31	0.99	ug/L	9/3/97	SW846 8260
sopropylbenzene	<	0.27	0.27	0.86	ug/L	9/3/97	SW846 8260
-Isopropyitoluene	<	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
laphthalene	<	0.66	0.66	2.1	ug/L	9/3/97	SW846 8260
-Propylbenzene	<	0.27	0.27	0.86	ug/L	9/3/97	SW846 8260
tyrene	<	0.19	0.19	0.61	ug/L	9/3/97	SW846 8260
,1,2,2-Tetrachloroethane	<	0.46	0.46	1.5	ug/L	9/3/97	SW846 8260
,1,1,2-Tetrachloroethane	<	0.21	0.21	0.67	ug/L	9/3/97	SW846 8260
etrachloroethene	<	0.27	0.27	0.86	ug/L	9/3/97	SW846 8260
oluene	<	0.28	0.28	0.89	ug/L	9/3/97	SW846 8260
,2,3-Trichlorobenzene	<	0.32	0.32	1.0	ug/L	9/3/97	SW846 8260
2,4-Trichlorobenzene	<	0.48	0.48	1.5	ug/L	9/3/97	SW846 8260
,1,1-Trichloroethane	<	0.27	0.27	0.86	ug/L	9/3/97	SW846 8260
,1,2-Trichloroetharie	<	0.30	0.30	0.96	ug/L	9/3/97	SW846 8260





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Lab Sample Number: 872276-003

Client: MORAINE ENVIRONMENTAL INC

Report Date: 9/9/97

Field ID: MW-3

Collection Date: 8/29/97

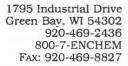
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WI DNR LAB ID: 40513270

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		91			%Recov	9/3/97	SW846 8260
Toluene-d8		100			%Recov	9/3/97	SW846 8260

GASOLINE RANGE ORGANICS - WATER		Prep Method: WI MOD.GRO Prep Date					9/3/97 Analyst: PMS		
Analyte	Percella		LOD LOQ EQ		Units	Code	Analysis Date	Analysis Method	
GASOLINE RANGE ORGAN	VICS < 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	





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Report Date: 9/9/97

Lab Sample Number: 872276-004

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						Analyst:	NJS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date		nalysis lethod
DIESEL RANGE ORGANICS	< 100			100	ug/l		9/3/97	W	MOD DRO
Blank spike	93			50	%Recov		9/3/97	W	I MOD DRO
Blank spike duplicate	91			50	%Recov		9/3/97	W	MOD DRO

EPA 8260 VOLATILE LIST- WATER		ER Prep Method: S		hod: SW8	346 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



Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Lab Sample Number: 872276-004

Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-4

Collection Date: 8/29/97

Report Date: 9/9/97

WI DNR LAB ID: 40513270

					4 4		
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-isopropyitoluene	<	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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

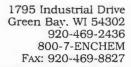
Field ID: MW-4 Report Date: 9/9/97

Lab Sample Number: 872276-004 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

GASOLINE RANGE ORGA	NICS - 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 ORGA	NICS < 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305 Client: MORAINE ENVIRONMENTAL INC

Field ID: MW-5 Report Date: 9/9/97

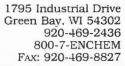
Lab Sample Number: 872276-005 Collection Date: 8/29/97

WI DNR LAB ID: 40513270 Matrix Type: WATER

# **Organic Results**

DIESEL RANGE ORGANICS - WATER			Prep Met	hod: WI	MOD DRO	Prep Date:	9/3/97	Analyst:	NJS	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date		nalysis lethod	
DIESEL RANGE ORGANICS	170			100	ug/l		9/3/97	W	MOD DRO	
Blank spike	93			50	%Recov		9/3/97	WI	MOD DRO	
Blank spike duplicate	91			50	%Recov		9/3/97	W	MOD DRO	

EPA 8260 VOLATILE LIST- WATER			Prep Method: SW846 503			Prep Date:	Analyst: HW	
Analyte	Result	LOD	LOQ EQL Uni		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





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

		0.02.0						
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
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
rans-1,2-Dichloroethene	<	0.25	0.25	0.80	ug/L		9/3/97	SW846 8260
,2-Dichloropropane	<	0.24	0.24	0.76	ug/L		9/3/97	SW846 8260
,1-Dichloroethane	<	0.26	0.26	0.83	ug/L		9/3/97	SW846 8260
,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-Dichloropropene	<	0.26	0.26	0.83	ug/L		9/3/97	SW846 8260
is-1,3-Dichloropropene	<	0.48	0.48	1.5	ug/L		9/3/97	SW846 8260
ans-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
thylbenzene	<	0.23	0.23	0.73	ug/L		9/3/97	SW846 8260
luorotrichloromethane	<	0.29	0.29	0.92	ug/L		9/3/97	SW846 8260
lexachlorobutadiene	<	0.31	0.31	0.99	ug/L		9/3/97	SW846 8260
sopropylbenzene	<	0.27	0.27	0.86	ug/L		9/3/97	SW846 8260
-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
laphthalene	<	0.66	0.66	2.1	ug/L		9/3/97	SW846 8260
-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
,1,2,2-Tetrachloroethane	<	0.46	0.46	1.5	ug/L		9/3/97	SW846 8260
,1,1,2-Tetrachloroethane	<	0.21	0.21	0.67	ug/L		9/3/97	SW846 8260
etrachloroethene	<	0.27	0.27	0.86	ug/L		9/3/97	SW846 8260
oluene	<	0.28	0.28	0.89	ug/L		9/3/97	SW846 8260
,2,3-Trichlorobenzene	<	0.32	0.32	1.0	ug/L		9/3/97	SW846 8260
,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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Client: MORAINE ENVIRONMENTAL INC

Report Date: 9/9/97

Lab Sample Number: 872276-005

Collection Date: 8/29/97

WI DNR LAB ID: 40513270

Field ID: MW-5

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

GASOLINE RANGE ORGA	NICS - WATER		Prep Met	hod: WI	MOD.GRO	Prep Date:	9/3/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
GASOLINE RANGE ORGA	NICS < 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





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

Report Date: 9/4/97

Client: MORAINE ENVIRONMENTAL INC

Field ID: TRIP BLANK

Collection Date: 8/29/97

WI DNR LAB ID: 40513270

Lab Sample Number: 872276-006

Matrix Type: WATER

EPA 8260 VOLATILE LIST- W	ATE	R		Prep Met	hod: SW	846 5030	Prep Date:	9/3/97	Analyst: HW
Analyte	F	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
-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
-Chlorotoluene	<	0.30	0.30	0.96		ug/L		9/3/97	SW846 8260
,2-Dibromo-3-chloropropane	<	0.58	0.58	1.8		ug/L		9/3/97	SW846 8260
,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
,3-Dichlorobenzene	<	0.28	0.28	0.89		ug/L		9/3/97	SW846 8260
,4-Dichlorobenzene	<	0.29	0.29	0.92		ug/L		9/3/97	SW846 8260
,2-Dichloroethane	<	0.24	0.24	0.76		ug/L		9/3/97	SW846 8260
,2-Dichlorobenzene	<	0.32	0.32	1.0		ug/L		9/3/97	SW846 8260
,1-Dichloroethene	<	0.28	0.28	0.89		ug/L		9/3/97	SW846 8260
is-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
rans-1,2-Dichloroethene	<	0.25	0.25	0.80		ug/L		9/3/97	SW846 8260



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

				10.00			
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
rans-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
luorotrichloromethane	< 0.29	0.29	0.92	ug/L		9/3/97	SW846 8260
dexachlorobutadiene	< 0.31	0.31	0.99	ug/L		9/3/97	SW846 8260
sopropylbenzene	< 0.27	0.27	0.86	ug/L		9/3/97	SW846 8260
o-isopropyitoluene	< 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
laphthalene	< 0.66	0.66	2.1	ug/L		9/3/97	SW846 8260
-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
,1,2,2-Tetrachloroethane	< 0.46	0.46	1.5	ug/L		9/3/97	SW846 8260
,1,1,2-Tetrachloroethane	< 0.21	0.21	0.67	ug/L		9/3/97	SW846 8260
etrachloroethene	< 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
,2,3-Trichlorobenzene	< 0.32	0.32	1.0	ug/L		9/3/97	SW846 8260
,2,4-Trichlorobenzene	< 0.48	0.48	1.5	ug/L		9/3/97	SW846 8260
,1,1-Trichloroethane	< 0.27	0.27	0.86	ug/L		9/3/97	SW846 8260
,1,2-Trichloroethane	< 0.30	0.30	0.96	ug/L		9/3/97	SW846 8260
,2,4-Trimethylbenzene	< 0.30	0.30	0.96	ug/L		9/3/97	SW846 8260
richloroethene	< 0.20	0.20	0.64	ug/L		9/3/97	SW846 8260
,2,3-Trichloropropane	< 0.48	0.48	1.5	ug/L		9/3/97	SW846 8260
,3,5-Trimethylbenzene	< 0.25	0.25	0.80	ug/L		9/3/97	SW846 8260
inyl chloride	< 0.23	0.23	0.73	ug/L		9/3/97	SW846 8260
(ylenes, -m, -p	< 0.51	0.51	1.6	ug/L		9/3/97	SW846 8260
(ylene, -o	< 0.28	0.28	0.89	ug/L		9/3/97	SW846 8260
-Bromofluoroberizene	97			%Recov		9/3/97	SW846 8260
Dibromofluoromethane	93			%Recov		9/3/97	SW846 8260





Project Name: JOHNSON SAND & GRAVEL

Project Number: 0305

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

Client: MORAINE ENVIRONMENTAL INC

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

WI DNR LAB ID: 40513270

Client: MORAINE ENVIRONMENTAL INC

Report Date: 9/17/97

Collection Collection Sample No. Field ID Sample No. Field ID Date Date 872485-001 MW-6 9/8/97 872485-002 MW-7 9/8/97 872485-003 TRIP BLANK 9/8/97

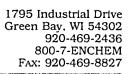
The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

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

Date

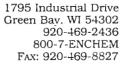




PAHLC-W

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.

Hump in the chromatogram; elevated detection limits.





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 Met	hod: Will	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

EPA 8260 VOLATILE LIST- WATER			Prep Meth	od: SW846 5030	•	Analyst: HW
Analyte	Result	LOD	LOQ	EQL Units	Analysis Code 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-Butyibenzene	< 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



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

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



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

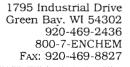
Collection Date: 9/8/97

WI DNR LAB ID: 40513270

Matrix Type: WATER

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

GASOLINE RANGE ORGANICS - WATER			Prep Met	hod: WH	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





Project Name: FORMER JOHNSON SAND'S GRAVEL

Project Number: 305

Field ID: MW-7

Report Date: 9/16/97

Lab Sample Number: 872485-002

Matrix Type: WATER

Collection Date: 9/8/97

Client: MORAINE ENVIRONMENTAL INC

WI DNR LAB ID: 40513270

### **Organic Results**

DIESEL RANGE ORGANICS -	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

EPA 8260 VOLATILE LIST- WATER			Prep Meth	nod: SW8	346 5030	Prep Date:	9/15/97	Analyst: RJN	
Analyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	<	0.82	0.82	2.6	<del>-</del> .	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



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

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-Isopropyitoluene		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-Tetrachioroethane	<	0.42	0.42	1.3	ug/L	9/13/97	SW846 8260
Tetrachioroethene		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



Project Name: FORMER JOHNSON SAND'S GRAVEL

Project Number: 305

Field ID: MW-7

Report Date: 9/16/97

Client: MORAINE ENVIRONMENTAL INC

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/ <b>L</b>	9/13/97	SW846 8260
Xylene, -o		4.1	0.56	1.8	ug/ <b>L</b>	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 Met	hod: WII	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

PAH (HPLC) LIST - SEMIVOLATILES			Prep Met	nod: SW8	346 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





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

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



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

EPA 8260 VOLATILE LIST- WATER		Prep Method: SW846 503			0 Prep Date: 9/10/97 Analyst: HW			
Analyte	Result	LOD	LOQ	EQL Units	Analysis Code 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		



Project Name: FORMER JOHNSON SAND'S GRAVEL

Project Number: 305

Client: MORAINE ENVIRONMENTAL INC

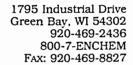
Field ID: TRIP BLANK

Report Date: 9/15/97

Lab Sample Number: 872485-003

Collection Date: 9/8/97

WI DNR LAB II	D: 40	513270			Matrix Type: WA	TER	
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





Project Name: FORMER JOHNSON SAND'S GRAVEL

Project Number: 305

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

Client: MORAINE ENVIRONMENTAL INC

SW846 8260

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 ORGAN	ICS < 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	

# REMEDIATION 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: <u>SER</u> Person/phone completing form: <u>NANCY</u> KY Site Name/Location: <u>JOHNSON SAND + GRAVEL</u>	AN
BRRTS # 0368 004 228 F10 # 268 4386 10 Date: 8-27-9	9
Answer 1-4 for Lists 3 & 4. If all answers are no, sites will be transferred to	
Active Enforcement Action.     (negotiated compliance schedule, Administrative Order or DOJ referral only)	YES NO
2. Groundwater Contamination > or = ES.	<u> </u>
<ul> <li>3. Co – Contamination (a) petroleum and other compound(s).</li> <li>In soils (specify contaminant <u>CISI, 2-DCE</u>) PCE</li> <li>In GW (specify contaminant <u>PCE</u>) TZE</li> </ul>	<u> </u>
<ol> <li>Two or more gw samples confirm &gt; NR 140 PAL in a public or private well.</li> </ol>	
In addition, answer 5-8 just for the list of clay sites screened from the GIS.	
5. Clay site verification (b) (Please read definition before answering).	
6. GW > NR 140 ES within 100' of a private well or 1000' or a public well.	<u> </u>
7. Free product of .01 foot or more in repeated measurements.	<u> </u>
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 = 1x10⁻⁵ cm/sec. (ie. 1x10⁻⁶ or 1x10⁻⁸, 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 SANA+ GRAVEL WI	AUKESHA	
BRRTS # 36800422B FID 268438610		
Active Enforcement Action (NON, NOV, Admin. Order, etc.) Yes/No		
SIR Submitted     SIR complete     Petroleum contamination in soil only, no PAL exceedances)     (if yes, please transfer site to COMM, do not fill in rest of form)	YES NO	UNKNOWN
<ul> <li>2. Co – Contamination ⁽¹⁾ petroleum and other compound(s)</li> <li>In soils (specify contaminant <u>CIS-12-ΔCE</u>) <u>PCE</u></li> <li>In GW (specify contaminant <u>PCE</u>) <u>TCE</u></li> </ul>	<u></u>	
<ul> <li>3.Contaminant Type</li> <li>Fuel Oil/ Diesel</li> <li>Gasoline</li> <li>Contaminant with no NR 140 standard</li> <li>Waste oil</li> </ul>		
4.Groundwater contamination > PAL & < ES in NR 140.  If no co-contamination and/or compound(s) w/out NR 140 standard(s) exist, please fill out this form and transfer site to COMM as soon as possible.)  On site  Off Site		
<ul> <li>5. Clay sites (2)</li> <li>On site</li> <li>GW contamination &lt; or = 300x ES in clay</li> <li>GW contamination &gt; or = 300x ES in clay</li> <li>Off site</li> <li>GW contamination &lt; or = 300x ES in clay</li> <li>GW contamination &lt; or = 300x ES in clay</li> <li>GW contamination &gt; or = 300x ES in clay</li> </ul>		
<ul> <li>6. GW contamination in non-clay formation &gt; or = ES.</li> <li>On site</li> <li>Off site</li> </ul>	<u> </u>	

# PETROLEUM ASSESSMENT FORM 3-19-99

7 Environmental Factor(a) (aver) present	YES	NO	UNKNOW
7. Environmental Factor(s) (ever) present			
Expanding plume  From product > 0.1 fact thick			
Free product > .01 foot thick  Potable well w/or firmed impacts > DAI			
Potable well w/confirmed impacts > PAL			-
Contamination in/within 1m bedrock			
<ul> <li>Discharge surface water/wetland</li> </ul>			
EF(s) still present (name if more than one)			
8.Other impacted receptors of concern: (ie. basements, utilities)			
<ul> <li>Vapors</li> </ul>			
• Seepage			
<ul> <li>Public well w/in 1000' of monitoring well w/ &gt; ES</li> </ul>			-
Private well w/in 100' of monitoring well w/ > ES			
	********		-
• other:			
9. Remediation Method: Not proposed			
Soil remediation/startup date (3)			_
<ul> <li>In-situ engineered</li> </ul>			
Ex-situ engineered (biopiles, landspread )			
Soil excavated/landfilled	**********		
Remedy still in use?			
Groundwater remediation/startup date (3)			
Active engineered (ORC, pump & treat, etc.)			
<b>—</b>			
Passive system (natural attenuation)			
Remedy still in use?	*********		
10. Site eligible for proactive closure (see 12-14-98 memo)		V	
11. Other relevant information			/
Footnotes:			•
(1)Petroleum includes all contaminants that have been released from a petroleum to	ank evetor	n at the	a site C
contamination includes all non-petroleum contaminants (found with petroleum) that			
petroleum tank system.		.0.000	
(2) DNR-COMM MOU Definition of Clay Site: "A site with fine-grained soils, for a dep	th of 3 met	ers or	more, v
soils have an in-situ hydraulic conductivity of 10-6 centimeters per second; the sit	e does not	contai	n depc
laterally extensive coarse grained materials, and the site does not contain utility tr			
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 developme			
(3) If remedy not implemented, write "Not Started". For NA monitoring, date on whice and used as demonstration of effectiveness of NA.	n data was	initiali	y coi
Name of person completing forms T 1204 6/100	Datos	21-7-	ac
Name of person completing form: Phone:	Date.	7-1	
Email Prione:		-	



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 Farly 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,

Gregory S. Michael Hydrogeologist PECFA Site Review Section



#### 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 Belin 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.

.

Frank Schultz

Sincerely.

Solid & Hazardous Waste Supervisor



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,

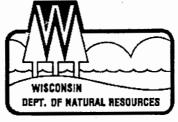
Moraine Environmental, Inc.

Thomas C. Sweet

President

TCS/cah

E:\WPWIN\MEITECH3\0305DNRN.LTR



#### George E. Meyer Secretary

May 20, 1994

#### State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District
Post Office Box 12436
4041 N. Richards Street
Milwaukee, Wisconsin 53212
TELEPHONE: 414-961-2777
TELEFAX #: 414-961-2770

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 <u>Low Priority Rank</u> 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 C rap Fund (PECFA). This fund may reimburse you for eligible costs associated with the remedia. Evestigation 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

Man Giselle Hed

c: Ms. Amy Bucher - Moraine Environmental, P. O. Box 488, Mequon, WI 53092
SED Case File

Department of Natural Resources

Gina Lust	168438610 entered 5/20
UID Number: #4228 FID Number:	PMN Number:
County:  Site Name:   Ormson Sand + Scarce  Address:   N8 W22590 Qclube: In:  Dankson 53186	
Municipality:	Person/Firm Reporting:
Legal Descript.:1/41/4 secT N R(R	
Lat.: Long.:	Phone Number: ( )
Score: Init.: Date: _	
(F) Free Product Removal  (E) RP Emergency Response  (R) LTF Emergency Response  (L) Long Term Monitoring  Responsible Party  Contact Person:  Company Name:   Address:  Phone Number: (414) 542-9424	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  (5) Soil Contamination
CC's:	(5) Soil Contamination  (6) Other:  (7) Surface Water Impacts  (9) Floating Product
Consultant	Substances # Tank(s) Size
Contact Name:  Company Name:: 1 Contact State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State St	
Telephone: ( )	(8) Other (12) Waste Oil

UID#	s	SITE NAME		PROJECT M	1GR
			ACTION CODES		
02 = RP Letter Sent * 03 = Notice of Noncompliance 04 = Enforcement Conference * 14 = Notice of Violation * 18 = Admin. Order Issued * 19 = Admin. Order Modified	* 21 = * 23 = 30 = 31 =	Admin. Order Cancelled Contest Case Hearing * Referral to DOJ * Notice to Proceed * Tnk Cls/SA Workplan Rec'd Tnk Cls/SA Workplan Appvo	33 = Tank Cls/SA Report Re 34 = Tank Cls/SA Report Ap 35 = SI Workplan Rec'd * 36 = SI Workplan Appvd * 37 = SI Report Rec'd * 38 = SI Report Appvd *		45 = Form 4 Approved 46 = Form 4 Denied 47 = PECFA Reimbursement 48 = Free Product Recovery * 49 = Alternate Water Supplied *
60 = Consent Order +				NOTE:	* = EPA Reporting Requirements
			ACTION UPDATES		
Entered in Tracking	Code	Action Date (Received / Sent)	Compliance Due Date	Comment	Compliance Achieved
1 1					
		1 1			
1 1		1 1	1 1.		
/ /					
11					
			///		/
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					/
		/	//		

____/___/____

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			ACTION CODES	i			
02 = RP Letter Sent * 03 = Notice of Noncompliance * 04 = Enforcement Conference * 14 = Notice of Violation * 18 = Admin. Order Issued * 19 = Admin. Order Modified	21 = 23 = 30 = 31 =	Admin. Order Cancelled Contest Case Hearing * Referral to DOJ * Notice to Proceed * Thk Cls/SA Workplan Rec' Thk Cls/SA Workplan App		t Appvd 40 = RA Workplan * 41 = RA Report Re	Appvd * cc'd * ppvd *	45 = Form 4 Approved 46 = Form 4 Denied 47 = PECFA Reimbursement 48 = Free Product Recovery 3 49 = Alternate Water Supplied	*
60 = Consent Order +					NOTE:	* = EPA Reporting Requirem	nents
			ACTION UPDATE	es es es es es es es es es es es es es e	•		
Entered in Tracking	Code	Action Date (Received / Sent)	Compliance Due Date	Comment		Compliance Ac	chieved
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PROJECT MGR

SITE NAME

UID#

#### 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, or has a high potential of causing substantial impacts to the soil, waters and air of the State of Wisconsin).

EMERGENCY FACTORS:	HIGH FACTORS:
Contaminated private or public well >NR 140 enf. std.  Explosive or toxic vapors in structures  Threat of fire	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 a but which shows levels of contamination that may cause substantial ended and Moderate soil contamination with potential for impacting ground Impacted surface water - no critical habitat threats.  Groundwater contamination >NR 140 PAL.	- · · · · · · · · · · · · · · · · · · ·
LOW FACTORS: (DEFINITION: Any case where contamination threat to human health and vital natural resources.)  Soil contamination which appears to have a limited potential for Initial Remedial action has substantially reduced environmental to UNKNOWN FACTORS: (DEFINITION: Any case where some is inaccurate information the level of threat to human health or the environmental inadequate information to assign a high, medium, or low ranking	ndication of contamination is present, but due to incomplete or comment can not be assessed at this time.)
NIMERICAL LIS	ST SCORING WORKSHEET

#### GROUNDWATER & SOILS:

PO	INTS:	Pol	nts;
20	Municipal well impacted	10	Major soil and/or gw >ES within 1200' of a public well
18	>6 private wells impacted	8	Major soil and/or gw >ES within 1200' of one or more private wells
16	4 - 6 private wells impacted	6	Groundwater contamination >ES
14	2 - 3 private wells impacted	4	Groundwater contamination <es< td=""></es<>
12	1 private well impacted	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:

	CALL DATE OF THE CALL	<u> </u>	
POINTS	S: CONFIRMED	<b>POTENTIAL</b>	
	20	10	Explosive levels in a residence or building
	16	8	Explosive levels in a sewer or other confined space
	12	6	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	POTENTIAL	
	14	7	Visible sheen or product on sensitive surface water environment
		·	(e.g. wetland, trout stream)
	10	5	Visible sheen or product on non-sensitive surface water area.
	6	3	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	DISSOLVED PRODUCT	
	12	8	Gasoline, mixture of gasoline and other products, other light petroleum products.
	10	6	Diesel, fuel oil.
Dept. of Natural Res Form 4400-159 2-9	. •	2	Bunker oil, other heavy oils or crude fractions.

MARKS:	, •
- dispensers leaked	
- under tank locks O.K.	
under tank locks o.K.	
- no GW (0) 14112 ft	
- a lot of file in this area.	,
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# 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

LUST - DNR

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