

Abines transferred to DCOM
101054 deleted unincorporated units 801962
#176478 Flammable SW corner 11th St. and Buffalo formerly known as 300 W 10th Block
Closed 1993

Abines 101962 DCOM #109444

Closed #000408

10th Ave

Buffalo

York

Maritime

Drasstock 10-15-01

0 200M

0 200yd



George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Lake Michigan District Headquarters
1125 N. Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448
TELEPHONE: (414)492-5916
TELEFAX: (414)492-5859

April 6, 1993

Wisconsin Central Limited Railroad
Geoffrey Nokes
PO Box 5062
Rosemont, IL 60017-5062

COPY

RE: Case Closure Request. ERRP CASE # 36-00408.

Dear Mr. Nokes:

The Department's Remedial Action Closure Review Panel has just completed a review of the above referenced case. This panel reviews environmental remediation cases for compliance with state laws, standards and guidelines to maintain consistency in the closeout of cases. After a careful review, the panel has decided to close this case.

At the present time, it appears that actions have been taken to the extent practical to restore the environment and minimize the harmful effects from this discharge to the air, lands, and waters of the state. The Department is requiring no further remedial action at this time. This case will appear as closed on the Emergency and Remedial Response Program's tracking system.

Please be aware, however, that this letter does not absolve the current, or any future owner of this property from future decisions regarding this site or impacts which may be discovered and/or traced back to past or future activities at this site.

The Department appreciates your efforts to protect and restore the environment at this site. If you have any questions regarding the content of this letter, please contact me at the number in the letterhead.

Sincerely,

Wawa Kay Quandt
Wawa Kay Quandt
Environmental Specialist
Emergency & Remedial Response Program

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: March 2, 1993
TO: Bruce Urban
FROM: Wava Quandt *WQ*
SUBJECT: Wisconsin Central LTD - 200 North 10th Street; Manitowoc, WI.

I sent the info regarding this case to Chris Klopp. The RP was questioning the validity of ~~TCP~~ analysis...
TRM

Chris said that there is a good indication that the RP is correct and that this is a positive bias, however it would be a judgement call as far as what to do with the case.

As always, your divine guidance will be graciously obeyed.

Preptre Fructose out!
For



OFFICE:

One O'Hare Centre
6250 North River Road
Rosemont, IL 60018
Suite 9000
Tel. (708) 318-4600

MAILING ADDRESS:

P.O. Box 5062
Rosemont, IL 60017-5062

February 15, 1993

Ms. Wava Kay Quandt
State of Wisconsin
Department of Natural Resources
1125 N. Military Ave.
P.O. Box 10448
Green Bay, WI 54307-0448

R E C E I V E D

FEB 17 1993

LMD SOLID WASTE

RE: ERRP CASE 36-00408
200 N. TENTH ST.
MANITOWOC, WI.

Dear Ms. Quandt:

Wisconsin Central Ltd. (WC) is in receipt of your January 27, 1993 letter which addresses the findings of a Phase II Environmental Property Assessment. The letter correspondence prepared by SEC Donohue includes Field Data and Laboratory Analytical Data collected during the Phase II Investigation. The following information was documented:

FIELD COLLECTED DATA

During the collection of the soil sample for MC-SS01-01 the field personnel indicated that "there was no visible indication on the surface or during the soil boring of the soil being impacted". Petroleum contamination at all of the boring locations was not noticed. The soil sample was screened using a MicroTIP photoionization detector by SEC Donohue. The result of the field screening was 1.4 ppm with a background reading of 0.9 ppm. Additionally the physical description of the soil sample collected describes the soil as **Dark Brown Fill with Organic Matter**. Directly above the sample, a **Brown Silty Sand Soil** was described.

LABORATORY ANALYTICAL DATA

During laboratory analysis using EPA method 8260 for VOC's and EPA method 8270 for PAH compounds, the soil sample MC-SS01-01, MC-SS02-01 and MC-SS03-01 contained none of the compounds which were analyzed for above the laboratory detection limits.

During laboratory analysis using EPA Method 9073, the soil sample for MC-SS01-01 indicated a concentration of 309 ppm TRPH to be present. MC-SS02-01 indicated a concentration of 18 ppm TRPH and MC-SS03-01 indicated a concentration of 34 ppm. This test method is an WDNR approved method for determining Total Recoverable Petroleum Hydrocarbons (TRPH). The following table summarizes the analytical data approved by SEC Donohue, WDNR laboratory certificate number 460060920.

LABORATORY RESULT TABLE

<u>SOIL SAMPLE</u>	<u>CHEMICAL ANALYTICAL METHOD</u>	<u>RESULT</u>
MC-SS01-01	EPA Method 8270 PAH Compounds	< D.L.
MC-SS01-01	EPA Method 8260 VOC	< D.L.
MC-SS01-01	EPA Method 9073 TRPH	309 ppm
MC-SS02-01	EPA Method 8270 PAH Compounds	< D.L.
MC-SS02-01	EPA Method 8260 VOC	< D.L.
MC-SS02-01	EPA Method 9073 TRPH	18 ppm
MC-SS02-01	EPA Method 8270 PAH Compounds	< D.L.
MC-SS02-01	EPA Method 8260 VOC	< D.L.
MC-SS02-01	EPA Method 9073 TRPH	34 ppm

< D.L. = LESS THAN DETECTION LIMIT

PETROLEUM RELATED COMPOUNDS RESULTS

This analytical data shows that no petroleum related chemical constituents are present at the locations sampled. Both of the analytical procedures utilized would identify specific contaminants of concern, *i.e.*, Volatile Organic Compounds (VOC's) and Polynuclear Aromatic Hydrocarbons (PAH's) also known as semi volatile hydrocarbons. These test methods are approved by WDNR as acceptable means of determining if hydrocarbon contamination is present at a site.

TRPH POSITIVE BIAS RESULTS

The test method for TRPH is currently being reviewed by WDNR due to positive bias results frequently seen by Leaking Underground Storage Tank (LUST) staff when this test method is used. The August 1992 issue of "Release News" dated December 1992, contains the following information prepared by WDNR Emergency and Remedial Response Section. The article discusses the following procedures for dealing with TRPH results:

In cases where TRPH results, caused by positive bias, may have been reported at a clean site the consultant should:

- 1) Include visual and olfactory observations in your discussion. Discuss the condition of the tank. If there was no staining or odor and there were no holes in the tank this should be noted.**

- 2) Take a background sample from a nearby location with similar soils for comparison or take a DRO sample. DRO analysis can detect heavier oils so can be used as a detect / no detect indicator. It is very difficult to quantitate heavier oils using gas chromatography (used in DRO) so DRO analysis will not be accepted to quantitate a known release of heavy petroleum products.**

The problems with TRPH positive bias have been identified by WDNR to most likely occur in fine grained soils. The sample collected MC-SS01-01, was described as a Silty Sand. Additionally, organic matter was also noted in the sample logs and may have affected the results.

WISCONSIN CENTRAL'S CONCLUSIONS

From evaluating the information and data generated by SEC Donohue, it appears the TRPH readings which ranged from 18 ppm to 309 ppm are positive bias samples and are not indicative of the conditions which exist at the site. This is supported by the analytical results using EPA Methods 8260 (VOC) & 8270 (PAH). The analytical data for both, the complete range of volatile organic compounds and the complete range of semi volatile chemical compounds qualifies the field data. Both the field data and laboratory data using GC/MS substantiate that no hydrocarbon contamination exists at the locations sampled. Since the analytical analysis included the full range of semi volatile compounds, this addresses the heavier, long chain hydrocarbons such as oils and heavier end fuel products. In addition, the analytical analysis for volatile organic compounds included the full range of the lighter chain hydrocarbons such as those compounds found in gasoline and common solvents. This data generated by the laboratory is acceptable in quantifying that no release of petroleum products has been identified by SEC Donohue during the Phase II Investigation.

WISCONSIN SOIL STANDARDS

Further, currently in Wisconsin there is no state standard for TRPH in soils. Guidelines have been printed and are used by WDNR to set clean up goals. Site specific evaluations commonly set the clean up goal at 10 ppm TRPH.

The proposed rules of NR 700 confirm that it is WDNR's intent to get away from basing clean up levels on TRPH. The proposed rules base clean up levels on specific compounds such as Benzene, Toluene, Xylene and Ethylbenzene.

SITE DELISTING REQUEST

WC is requesting that the data generated for TRPH at MC-SS01-01, MC-SS02-01 and MC-SS03-01 be evaluated in light of the field observations of the qualified individuals that collected the samples and the laboratory analytical data from the same identical samples which reported no chemical compounds above detection limits for the full range of specific chemicals analyzed.

After you have reviewed the details of the investigation, please arrange to have this site removed from the State's Emergency and Remedial Response Program (ERRP) listing.

If you should have any questions or wish to discuss this issue further, please call me at (708) 318-4648.

Sincerely,



Geoffrey C. Nokes
Manager of Property Evaluation

CC: Mr. Jeffery Beyer (Manitowoc County)
Ms. Janet Gilbert (WC)
Mr. Robert Ward (WC)
Mr. Art Spiros (RPM)
Ms. Margerat Baxter



Bruce Braun
Acting Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Lake Michigan District Headquarters
1125 N. Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448
TELEPHONE: (414)492-5921
TELEFAX: (414)492-5859

CERTIFIED MAIL/RETURN RECEIPT REQUESTED

COPY

January 27, 1993

Wisconsin Central Limited Railroad
Geoffry Nokes
PO Box 5062
Rosemont, IL 60017-5062

RE: Petroleum Contamination Discovered at 200 North 10th Street; Manitowoc, WI.
ERRP Case 36-00408.

Dear Mr. Nokes:

The Wisconsin Department of Natural Resources (WDNR) has been notified that soil contamination was discovered at the above-referenced location. Soil samples collected as part of an environmental property assessment completed by SEC Donohue, Inc. for the Manitowoc County Department of Public Works detected Total Recoverable Petroleum Hydrocarbons (TRPH) at 309 parts per million (ppm) at a location east of the former railroad turntable. This exceeds the state standard of less than 10 ppm TRPH in soil. This case has been currently ranked as an UNKNOWN priority. The purpose of this letter is to inform you of your legal responsibilities to address this situation.

The WDNR proceeds in contamination cases under the authority of s. 144.76, Wisconsin Statutes, commonly referred to as Wisconsin's Hazardous Substance Spill Law. The definition of "hazardous substances" encompasses any waste of a solid, semisolid, liquid, or gaseous form that can cause harm to the environment or human health.

Wisconsin Statute 144.76(2)(a) states: "A person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance shall notify the Department immediately of any discharge not exempt 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 the state."

Because you possess or control a hazardous substance that has been released to the environment, the Department identifies you as a party responsible for taking the actions necessary to restore the environment. As the responsible party:

1. You will need to hire a qualified environmental, hydrogeologic, or engineering consultant to conduct a remedial investigation of soil and groundwater. A document titled "Selecting an Environmental Consultant" and a Consultant Listing is enclosed for your convenience. Regardless of the priority designation, you are required to proceed with the investigation and clean-up effort.
2. Within 10 days of receipt of this notice, please provide me with a letter containing the name of the consultant you have retained. The consultant that you hire will have 45 days to submit a workplan. Your consultant should send a map of the site location (legal description), the date the investigation will begin, and immediately identify all drinking water wells within 1200 feet of the site.
3. The Department must be notified of any additional information you possess that can aid in determining a priority for

this site. The general information the Department requires from you to prioritize cases includes: a description of any documented groundwater or surface water contamination, the site status and years of operation, and any investigation or remediation efforts that have occurred at this site.

4. Upon completion of the investigation, a remedial action(s) necessary to clean up contaminated soil and groundwater will be chosen and implemented. You must dispose of or treat all products, soils, wastewater, or sludges in compliance with all applicable federal, state, and local laws and regulations.

Due to the Department's workload, it is necessary to prioritize all contamination cases. The system that is being utilized at this time follows this format:

- a. Case identification
- b. Priority rank (High, Low, and Unknown)
- c. Responsible party notification letter
- d. Prescore cases (for potential threat to public health, safety, welfare, and the environment)
- e. Responsible party hires a consultant...investigation phase begins
- f. Remedial design and remedy selection phase (review of design by DNR if high priority)
- g. Remedial action
- h. Long term monitoring/maintenance...if necessary
- i. Close out...this step can only be attained once all remediation is complete and there is no further contamination of soils, groundwater, surface water and air. It is necessary that sampling show no detection exceeding those laws that are applicable to the situation.

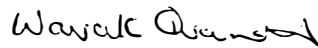
High priority sites have assigned WDNR Project Managers who are actively reviewing and approving investigation and remediation plans. Low priority cases do not always have assigned project managers; however, responsible parties are required to proceed with investigation and clean-up efforts.

Unknown cases are those cases which do not have adequate information to rank. These cases are treated as a HIGH until information is obtained to assign a priority. I will answer any questions that you may have on this case, **however, I am not a project manager for this case.**

If you consider any previous investigation and/or clean-up effort to be sufficiently complete you must provide a detailed report with analytical documentation justifying your position. The Department will make a final determination if close-out of this case can be considered.

Your cooperation in this matter will be appreciated. If you have any question in regard to the contents of this letter, please call me at the number located on the letterhead.

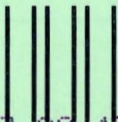
Sincerely,


 Wava Kay Quandt
 Environmental Specialist
 Emergency & Remedial Response Program

Enc: Site Investigation Checklist
 Selection Criteria
 Consultant List

cc: James Aasen - GBA

UNITED STATES POSTAL SERVICE



Official Business

GREEN BAY 543 00 13 02/03 1



RECEIVED

PENALTY FOR PRIVATE
USE, \$300

FEB 03 1993

LMD SOLID WASTE

Print your name, address and ZIP Code here

Quandt

DEPARTMENT OF NATURAL RESOURCES
LAKE MICHIGAN DISTRICT HEADQUARTERS
1125 NORTH MILITARY AVENUE
P. O. BOX 10448
GREEN BAY, WI 54307-0448

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Wis. Central Limited Railroad
Geoffry Nokes
P.O. Box 5062
Rosemont, IL 60017-5062

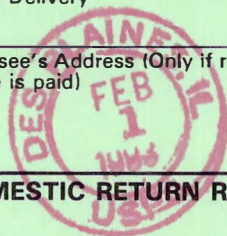
RE: 200 North 10th St., Manitowoc
ERRP Case 36-00408

5. Signature (Addressee)**6. Signature (Agent)****4a. Article Number**

P 028 552 213

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input type="checkbox"/> Insured |
| <input checked="" type="checkbox"/> Certified | <input type="checkbox"/> COD |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Return Receipt for Merchandise |

7. Date of Delivery**8. Addressee's Address (Only if requested and fee is paid)**

P 028 552 213



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse) **Quandt**

Sent to		Wis. Cen. Lim. Railroad Geoffry Nokes	
Street and No.		P.O. Box 5062	
P.O., State and ZIP Code		Rosemont, IL 60017-5062	
Postage		\$	
Certified Fee			
Special Delivery Fee			
Restricted Delivery Fee			
Return Receipt Showing to Whom & Date Delivered			
Return Receipt Showing to Whom, Date, and Addressee's Address			
TOTAL Postage & Fees		\$	
Postmark or Date RE: 200 N. 10th St., Man. ERRP Case 36-00408			

PS Form 3800, June 1991

DNR OFFICE MEMO
Form 9500-43 Rev. 2-92

Date	Time
------	------

To *WAVA*

From *Ube*

Of

(414) Phone
(608)
(715)

Received by

- Please Call Returning Your Call Will Call Again Called to See You

- Comment
 For Your Information
 See Me
 Take Action
 Approve
 Sign
 Revise
 Prepare Reply For My Signature
 Reply Direct
 Per Your Request
 Code
 Route to:
 Return
 File

FOR TRACKING
3 RP letters
- CC Aasen

REQUEST FOR ERRP REVIEW/ACTION

TO: ~~1. Area/Headen Supervisor~~ *WJ* Date: 1/12/93
→ 2. Larry Kriese, LMD

FROM: J. Aasen Phone # 683-4925

SUBJ: SPILL REPORT FORM ATTACHED

Assigned Spill # SP

Additional secondary follow-up is warranted in this case because:

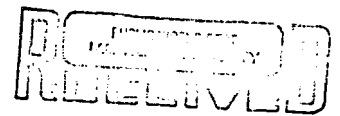
- Groundwater is impacted
- Groundwater potential impacts exist
- Soil disposal approval is necessary
- Private/public wells are in close proximity
- Other, explain DONOVUE REPORT INDICATES

Comments 309 ppm TRPN IN ONE/THREE
TEST HOLE

Check here if other non LE area staff is involved with secondary response. Name _____

3 Route to: Urban - ERRP Supv., LMD Hdqtrs.

LMD Date: _____



DEC 21 1992

December 17, 1992

Mr. Jeffrey Beyer, Director
Manitowoc County Department of Public Works
1010 South 8th Street
Manitowoc, WI 54220

Re: Phase II Environmental Property Assessment
200 North 10th Street
Manitowoc, Wisconsin
SEC Donohue Project No. 70257

Dear Mr. Beyer:

SEC Donohue Inc. is pleased to submit to your attention two copies of this report which presents findings from the Phase II Environmental Property Assessment (EPRA) for 200 North 10th Street in Manitowoc, Wisconsin. The report includes a summary of work performed for the Phase II EPRA, a summary of laboratory analytical results, and an opinion regarding potential environmental impacts associated with the property, based on information obtained by SEC Donohue.

SEC Donohue performed a Phase II EPRA at the above-referenced property at the request of Manitowoc County. The results of the Phase I EPRA led SEC Donohue to recommend a Phase II EPRA to investigate potential environmental impacts due to observed environmental concerns and past practices at the property. As per the agreed upon scope of services, three soil borings were advanced to a maximum depth of 5 feet below ground surface on December 2, 1992. The soil borings were advanced using a Little Beaver® hydraulic auger in the areas specified by you during our preliminary discussions. Mr. Geoffry Nokes from Wisconsin Central Ltd. Railroad was present on-site as an observer.

The soil borings were advanced at the approximate locations shown on Figure 1. Soil boring MC-SS01-01 was advanced at the east side of the property in the parking area. Soil boring MC-SS02-01 was advanced near the railroad tracks on the west side of the recycling facility. Soil boring MC-SS03-01 was advanced on the west side of the property east of the former turntable.



Mr. Jeffrey Beyer
December 17, 1992
Page 2

A summary of analytical results for Total Recoverable Petroleum Hydrocarbons (TRPH) and metals from the three soil samples (one per location) is shown in Table 1. The primary compounds detected were metals and TRPH. The concentration of TRPH detected in the three soil samples is above the Wisconsin Department of Natural Resources (WDNR) recommended enforcement/clean-up level of 10 parts per million (ppm). Although TRPH concentrations from two of the soil borings are near the WDNR clean-up level, the 309 ppm TRPH in soil boring MC-SS01-01 was not anticipated because there was no visible indication on the surface or during the soil boring of the soil being impacted and, therefore, may be indicative of other sources of potential contamination or potentially widespread environmental impacts from past practices on or off the site.

Currently, except for TRPH, the WDNR does not have clean-up or enforcement standards for soil, although they are expected to be published in the near future in Wisconsin Administrative Code NR 700, Hazardous Waste Regulations. The state of New Jersey does have soil clean-up standards, and frequently other states will use existing state's regulations as guidance. Therefore, these clean-up standards are listed on Table 1.

SEC Donohue's scope of services was performed to assess potential on-site sources that may impose environmental impact, and SEC Donohue does not purport to have fully addressed all on-site or off-site concerns. When a limited subsurface exploration of the soil is performed at the site, SEC Donohue cannot present an opinion regarding the extent of latent subsurface conditions which may be the result of on-site or off-site sources. The findings and conclusions given herein are not scientific certainties, but rather probabilities based on professional judgements concerning the results of the data gathered during the course of this assessment.

SEC Donohue is not able to represent whether the site or the adjoining land area contains hazardous waste, oil, or other environmental contaminants beyond that detected or observed by SEC Donohue during this environmental assessment. The possibility exists for contaminants to migrate through soil, surface water, air, or groundwater. Addressing in detail the environmental impacts associated with contamination transport in these media was beyond the scope of this investigation.

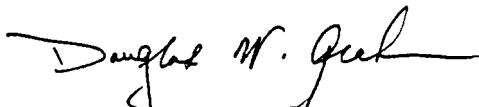
Mr. Jeffrey Beyer
December 17, 1992
Page 3

The Phase I EPRA identified potential environmental impacts to the property both from on-site and off-site sources. After reviewing historical aerial photographs of the property, SEC Donohue had additional information to recommend a Phase II EPRA to investigate potential subsurface concerns. A Phase II EPRA was performed which included three soil borings. Soil samples were collected and laboratory analyzed. The analytical results indicate environmental impacts to the property.

Due to the presence of TRPH in the soil above WDNR guidelines, the State Spills Law, Wisconsin Statute 144.76 is the regulatory guide which the property owner would be responsible. If groundwater is impacted, Wisconsin Administrative Code NR 140 would require clean-up to specified levels. When Wisconsin Administrative Code NR 700 is finalized, soil clean-up standards will be established. Because of the presence of environmental impacts, and because the property owner is responsible for impacts from on- and off-site sources, SEC Donohue recommends the County of Manitowoc discuss the findings of this report with their attorneys and/or the property owner before any real-estate transactions are complete.

Please feel free to contact me should you have any questions or comments regarding this report. We appreciate this opportunity for providing the County of Manitowoc with professional services, and look forward to continuing our relationship.

Sincerely,



Douglas W. Graham
Project Manager

DWG/bjz

enc: As Noted

TR/L/ED4

TABLE 1

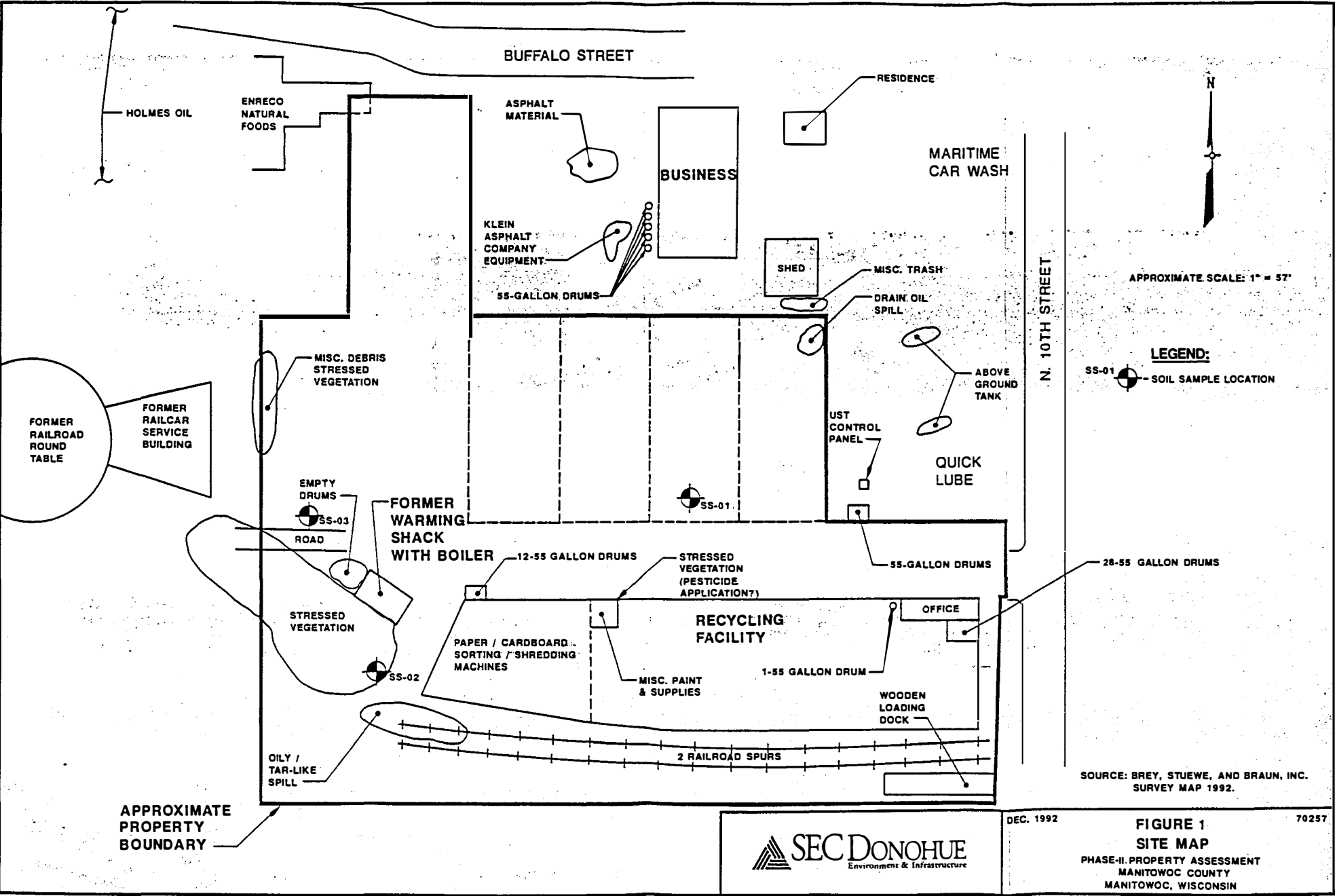
SUMMARY OF LABORATORY DETECTED COMPOUNDS
 Concentrations in PPM
 MANITOWOC COUNTY PHASE II EPRA
 MANITOWOC, WISCONSIN
 DECEMBER 1992

	<u>SS01</u>	<u>SS02</u>	<u>SS03</u>	<u>New Jersey Subsurface Soil Clean-Up Standards</u>
Aluminum	5,140	3,620	5,710	--
Antimony	2.99	.671	1.07	-- (14)
Arsenic	2.85	1.49	1.04	-- (20)
Barium	78.2	9.18	15.7	-- (600)
Beryllium	1.41	.264	.433	-- (2)
Cadmium	2.47	.180	.286	-- (1)
Calcium	34,300	61,600	51,200	--
Chromium	23.2	3.6	6.4	--
Cobalt	4.2	1.77	2.5	--
Copper	119	11	14.2	-- (600)
Iron	74,600	7,420	11,000	--
Lead	275	6.33	7.68	-- (100)
Magnesium	22,000	35,100	28,300	--
Manganese	492	93	129	--
Mercury	.461	.023	.016	--
Nickel	13.7	3.33	5.33	-- (250)
Potassium	498	522	767	--
Selenium	.369	.75	.085	-- (1)
Silver	2.8	1.48	1.55	-- (40)
Sodium	215	224	221	--
Thallium	< 119	< 124	< 125	-- (2)
Vanadium	15.5	15.4	18.8	-- (380)
Zinc	498	8.86	12.2	-- (1500)
TRPH	309	18	34	10 ²
Semivolatile Organic Compounds	ND	ND ¹	ND ¹	

Legend:

- No Standards
- < Less Than
- TRPH Total Recoverable Petroleum Hydrocarbons
- () Indicates Residential Surface Soil Standards
- ND Less Than Laboratory Detection Limit
- 1 High Laboratory Detection Limit
- 2 Wisconsin Department of Natural Resources Standard

ATTACHMENT A
LABORATORY ANALYTICAL RESULTS



APPROXIMATE SCALE: 1" = 57'

LEGEND:

SS-01 SOIL SAMPLE LOCATION

SOURCE: BREY, STUEWE, AND BRAUN, INC. SURVEY MAP 1992.

DUNCAN-PARNELL, INC. CHARLOTTE, NC 800-768-7788



DEC. 1992

FIGURE 1
SITE MAP
 PHASE-II. PROPERTY ASSESSMENT
 MANITOWOC COUNTY
 MANITOWOC, WISCONSIN

70257

MR. DOUGLAS GRAHAM
 SEC DONOHUE INC.
 4738 N 40TH ST
 SHEBOYGAN WI 53083

DATE REPORTED: 11-DEC-92
 PROJECT NUMBER: 70257.100
 RECV. GROUP NO: 10263
 DATE RECEIVED: 02-DEC-92
 TIME RECEIVED: 08:56
 COOLER TEMP(C): 4

CLIENT NAME: City of Manitowoc
 COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

Sample received on ice.

Arsenic analysis subcontracted to Robert E. Lee & Associates, Inc.

Cadmium sample matrix spike analyzed in duplicate to recover 62% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Chromium sample matrix spike analyzed in duplicate to recover 65% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Lead sample matrix spike analyzed in duplicate to recover 69% and 65%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Manganese detection limit = <12,000 ug/kg.

Nickel sample matrix spike analyzed in duplicate to recover 60% and 59%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Potassium detection limit = <30,100 ug/kg.

Thallium sample matrix spike analyzed in duplicate to recover 57% and 48%; normal acceptable recovery 80-120%. Low recovery very possibly due to matrix interferences.

Zinc sample matrix spike analyzed in duplicate to recover 76% and 71%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Zinc detection limit = <18,000 ug/kg.

Total Recoverable Petroleum Hydrocarbons (TRPH) were observed in the laboratory method blank at a concentration of 1.7 mg/l. The equivalent blank concentration for this sample is 14 mg/kg.

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
Solids, Total	85.0	%	<1		02-DEC-92	2540 G
Aluminum	5,140	mg/kg	<90.2	TD	03-DEC-92	6010

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Antimony	2,990	ug/kg	<481	TD	03-DEC-92	6010
Arsenic	2,850	ug/kg	<119	TD	07-DEC-92	7060
Barium	78,200	ug/kg	<60	TD	03-DEC-92	6010
Beryllium	1,410	ug/kg	<24	TD	03-DEC-92	6010
Cadmium	2,470	ug/kg	<120	TD	04-DEC-92	6010
Calcium	34,300	mg/kg	<361	TD	07-DEC-92	6010
Chromium	23,200	ug/kg	<241	TD	04-DEC-92	7191
Cobalt	4,200	ug/kg	<180	TD	03-DEC-92	6010
Copper	119,000	ug/kg	<241	TD	04-DEC-92	6010
Iron	74,600	mg/kg	<601	TD	04-DEC-92	6010
Lead	275,000	ug/kg	<602	TD	04-DEC-92	7421
Magnesium	22,000	mg/kg	<301	TD	08-DEC-92	6010
Manganese	492,000	ug/kg	No SDL	TD	04-DEC-92	6010
Mercury	461	ug/kg	<10	TD	08-DEC-92	7471
Nickel	13,700	ug/kg	<241	TD	04-DEC-92	6010
Potassium	498,000	ug/kg	No SDL	TD	07-DEC-92	6010
Selenium	369	ug/kg	<55	TD	08-DEC-92	7741
Silver	2,800	ug/kg	<240	TD	08-DEC-92	7760
Sodium	215,000	ug/kg	<4210	TD	07-DEC-92	6010
Thallium	<119	ug/kg	<119	TD	08-DEC-92	279.2
Vanadium	15,500	ug/kg	<60	TD	03-DEC-92	6010
Zinc	498,000	ug/kg	No SDL	TD	04-DEC-92	6010
2,4,5-Trichlorophenol	<2	mg/kg	<2	DB	04-DEC-92	8270
2,4,6-Trichlorophenol	<3	mg/kg	<3	DB	04-DEC-92	8270
2,4-Dichlorophenol	<3	mg/kg	<3	DB	04-DEC-92	8270
2,4-Dimethylphenol	<4	mg/kg	<4	DB	04-DEC-92	8270
2,4-Dinitrophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
2-Chlorophenol	<3	mg/kg	<3	DB	04-DEC-92	8270
2-Nitrophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
4,6-Dinitro-2-Methylphenol	<4	mg/kg	<4	DB	04-DEC-92	8270
4-Chloro-3-Methylphenol	<3	mg/kg	<3	DB	04-DEC-92	8270
4-Nitrophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
Benzoic Acid	<13	mg/kg	<13	DB	04-DEC-92	8270
Benzyl Alcohol	<5	mg/kg	<5	DB	04-DEC-92	8270
o-Cresol(2-Methylphenol)	<2	mg/kg	<2	DB	04-DEC-92	8270
p-Cresol(4-Methylphenol)	<2	mg/kg	<2	DB	04-DEC-92	8270
Pentachlorophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
Phenol	<3	mg/kg	<3	DB	04-DEC-92	8270
1,2,4-Trichlorobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270
1,2-Dichlorobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270
1,2-Diphenylhydrazine	<2	mg/kg	<2	DB	04-DEC-92	8270
1,3-Dichlorobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270
1,4-Dichlorobenzene	<3	mg/kg	<3	DB	04-DEC-92	8270
2,4-Dinitrotoluene	<3	mg/kg	<3	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RO ANALYZED	METHOD
Phenanthrene	<2	mg/kg	<2	DB 04-DEC-92	8270
Pyrene	<2	mg/kg	<2	DB 04-DEC-92	8270
TRPH	309	mg/kg	<8	DB 08-DEC-92	9073
1,1,1,2-Tetrachloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1,1-Trichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1,2,2-Tetrachloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1,2-Trichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1-Dichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1-Dichloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1-Dichloropropene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,3-Trichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,3-Trichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,4-Trichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,4-Trimethylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dibromo-3-Chloropropane	<18.0	ug/kg	<18.0	DB 07-DEC-92	8260
1,2-Dibromoethane (EDB)	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,3,5-Trimethylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,3-Dichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,3-Dichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,4-Dichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
2,2-Dichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
2-Chlorotoluene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
4-Chlorotoluene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Benzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromochloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromodichloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromoform	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromomethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Carbon Tetrachloride	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chloroform	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
cis-1,2-Dichloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Cumene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Cymene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Dibromochloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Dibromomethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Dichlorodifluoromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Ethylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RO</u>	<u>ANALYZED</u>	<u>METHOD</u>
2,6-Dinitrotoluene	<2	mg/kg	<2	DB	04-DEC-92	8270
2-Chloronaphthalene	<2	mg/kg	<2	DB	04-DEC-92	8270
2-Methylnaphthalene	<5	mg/kg	<5	DB	04-DEC-92	8270
2-Nitroaniline	<5	mg/kg	<5	DB	04-DEC-92	8270
3,3'-Dichlorobenzidine	<13	mg/kg	<13	DB	04-DEC-92	8270
3-Nitroaniline	<5	mg/kg	<5	DB	04-DEC-92	8270
4-Bromophenyl Phenyl Ether	<2	mg/kg	<2	DB	04-DEC-92	8270
4-Chloroaniline	<5	mg/kg	<5	DB	04-DEC-92	8270
4-Chlorophenyl Phenyl Ether	<3	mg/kg	<3	DB	04-DEC-92	8270
4-Nitroaniline	<5	mg/kg	<5	DB	04-DEC-92	8270
Acenaphthene	<2	mg/kg	<2	DB	04-DEC-92	8270
Acenaphthylene	<3	mg/kg	<3	DB	04-DEC-92	8270
Anthracene	<3	mg/kg	<3	DB	04-DEC-92	8270
Benzidine	<13	mg/kg	<13	DB	04-DEC-92	8270
Benzo(a)anthracene	<3	mg/kg	<3	DB	04-DEC-92	8270
Benzo(a)pyrene	<2	mg/kg	<2	DB	04-DEC-92	8270
Benzo(b)fluoranthene	<2	mg/kg	<2	DB	04-DEC-92	8270
Benzo(g,h,i)perylene	<3	mg/kg	<3	DB	04-DEC-92	8270
Benzo(k)fluoranthene	<2	mg/kg	<2	DB	04-DEC-92	8270
Bis(2-Chloroethoxy)-Methane	<2	mg/kg	<2	DB	04-DEC-92	8270
Bis(2-Chloroethyl) Ether	<3	mg/kg	<3	DB	04-DEC-92	8270
Bis(2-Chloroisopropyl) Ether	<4	mg/kg	<4	DB	04-DEC-92	8270
Bis(2-Ethylhexyl) Phthalate	<4	mg/kg	<4	DB	04-DEC-92	8270
Butyl Benzyl Phthalate	<3	mg/kg	<3	DB	04-DEC-92	8270
Chrysene	<3	mg/kg	<3	DB	04-DEC-92	8270
Di-n-butyl Phthalate	<3	mg/kg	<3	DB	04-DEC-92	8270
Di-n-octyl Phthalate	<3	mg/kg	<3	DB	04-DEC-92	8270
Dibenzo(a,h)anthracene	<2	mg/kg	<2	DB	04-DEC-92	8270
Dibenzofuran	<5	mg/kg	<5	DB	04-DEC-92	8270
Diethyl phthalate	<4	mg/kg	<4	DB	04-DEC-92	8270
Dimethyl phthalate	<3	mg/kg	<3	DB	04-DEC-92	8270
Fluoranthene	<3	mg/kg	<3	DB	04-DEC-92	8270
Fluorene	<2	mg/kg	<2	DB	04-DEC-92	8270
Hexachlorobenzene	<4	mg/kg	<4	DB	04-DEC-92	8270
Hexachlorobutadiene	<2	mg/kg	<2	DB	04-DEC-92	8270
Hexachlorocyclopentadiene	<5	mg/kg	<5	DB	04-DEC-92	8270
Hexachloroethane	<2	mg/kg	<2	DB	04-DEC-92	8270
Indeno(1,2,3-cd)pyrene	<2	mg/kg	<2	DB	04-DEC-92	8270
Isophorone	<3	mg/kg	<3	DB	04-DEC-92	8270
N-Nitrosodi-N-Propylamine	<2	mg/kg	<2	DB	04-DEC-92	8270
N-Nitrosodimethylamine	<3	mg/kg	<3	DB	04-DEC-92	8270
N-Nitrosodiphenylamine	<4	mg/kg	<4	DB	04-DEC-92	8270
Naphthalene	<3	mg/kg	<3	DB	04-DEC-92	8270
Nitrobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
Hexachlorobutadiene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
m & p-Xylene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Methylene Chloride	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
N-Butylbenzene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
N-Propylbenzene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Naphthalene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
o-Xylene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
sec-Butylbenzene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Styrene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
tert-Butylbenzene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Tetrachloroethylene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Toluene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
trans-1,2-Dichloroethylene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Trichloroethylene	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Trichlorofluoromethane	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260
Vinyl Chloride	<5.9	ug/kg	<5.9	DB	07-DEC-92	8260

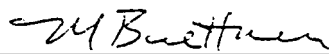
No SDL - No Sample Detection Limit (SDL) available for this analyte.

RQ Result Qualifier(s)

- DB Results expressed as dry weight.
- TD Result expressed as total on dry weight basis.

Analyses performed according to procedures approved by the United States Environmental Protection Agency. Certified by the Wisconsin Dept. of Natural Resources. ID # 460060920

Michael Buettner - Lab Project Manager


 Approved By _____ Date 12/11/92

MR. DOUGLAS GRAHAM
SEC DONOHUE INC.
4738 N 40TH ST
SHEBOYGAN WI 53083

DATE REPORTED: 11-DEC-92
PROJECT NUMBER: 70257.100
RECV. GROUP NO: 10263
DATE RECEIVED: 02-DEC-92
TIME RECEIVED: 08:56
COOLER TEMP(C): 4

CLIENT NAME: City of Manitowoc

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham

SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

Sample received on ice.

Antimony sample matrix spike analyzed in duplicate to recover 28% and 18%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

Arsenic analysis subcontracted to Robert E. Lee & Associates, Inc.

Barium sample matrix spike analyzed in duplicate to recover 52% and 49%; normal spike recover 80-120%. Low spike recovery possibly due to matrix interferences.

Beryllium sample matrix spike analyzed in duplicate to recover 79% and 79%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

Cadmium sample matrix spike analyzed in duplicate to recover 62% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Chromium sample matrix spike analyzed in duplicate to recover 65% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Cobalt sample matrix spike analyzed in duplicate to recover 61% and 59%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

Lead sample matrix spike analyzed in duplicate to recover 69% and 65%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Nickel sample matrix spike analyzed in duplicate to recover 60% and 59%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Potassium detection limit = <56,000 ug/kg.

Thallium sample matrix spike analyzed in duplicate to recover 57% and 48%; normal acceptable recovery 80-120%. Low recovery very possibly due to matrix interferences.

Vanadium sample matrix spike analyzed in duplicate to recover 69% and 67%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

Zinc sample matrix spike analyzed in duplicate to recover 76% and 71%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Total Recoverable Petroleum Hydrocarbons (TRPH) were observed in the laboratory method blank at a concentration of 1.7 mg/l. The equivalent blank concentration for this sample is 12 mg/kg.

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RO</u>	<u>ANALYZED</u>	<u>METHOD</u>
Solids, Total	85.1	%	<1		02-DEC-92	2540 G
Aluminum	3,620	mg/kg	<84.1	TD	03-DEC-92	6010
Antimony	671	ug/kg	<449	TD	03-DEC-92	6010
Arsenic	1,490	ug/kg	<124	TD	07-DEC-92	7060
Barium	9,180	ug/kg	<56	TD	03-DEC-92	6010
Beryllium	264	ug/kg	<22	TD	03-DEC-92	6010
Cadmium	180	ug/kg	<112	TD	04-DEC-92	6010
Calcium	61,600	mg/kg	<336	TD	07-DEC-92	6010
Chromium	3,600	ug/kg	<224	TD	04-DEC-92	7191
Cobalt	1,770	ug/kg	<168	TD	03-DEC-92	6010
Copper	11,000	ug/kg	<224	TD	04-DEC-92	6010
Iron	7,420	mg/kg	<56	TD	04-DEC-92	6010
Lead	6,330	ug/kg	<561	TD	04-DEC-92	7421
Magnesium	35,100	mg/kg	<280	TD	08-DEC-92	6010
Manganese	93,000	ug/kg	<112	TD	04-DEC-92	6010
Mercury	22.7	ug/kg	<9	TD	08-DEC-92	7471
Nickel	3,330	ug/kg	<224	TD	04-DEC-92	6010
Potassium	522,000	ug/kg	No SDL	TD	07-DEC-92	6010
Selenium	75.1	ug/kg	<56	TD	08-DEC-92	7741
Silver	1,480	ug/kg	<224	TD	08-DEC-92	7760
Sodium	224,000	ug/kg	<7830	TD	07-DEC-92	6010
Thallium	<124	ug/kg	<124	TD	08-DEC-92	279.2
Vanadium	15,400	ug/kg	<56	TD	03-DEC-92	6010
Zinc	8,860	ug/kg	<168	TD	04-DEC-92	6010
2,4,5-Trichlorophenol	<200	ug/kg	<200	DB	04-DEC-92	8270
2,4,6-Trichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dimethylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2,4-Dinitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2-Chlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4,6-Dinitro-2-Methylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4-Chloro-3-Methylphenol	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Benzoic Acid	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzyl Alcohol	<500	ug/kg	<500	DB	04-DEC-92	8270
o-Cresol(2-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
p-Cresol(4-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270
Pentachlorophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Phenol	<300	ug/kg	<300	DB	04-DEC-92	8270
1,2,4-Trichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Diphenylhydrazine	<200	ug/kg	<200	DB	04-DEC-92	8270
1,3-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,4-Dichlorobenzene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dinitrotoluene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,6-Dinitrotoluene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Chloronaphthalene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Methylnaphthalene	<500	ug/kg	<500	DB	04-DEC-92	8270
2-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
3,3'-Dichlorobenzidine	<1300	ug/kg	<1300	DB	04-DEC-92	8270
3-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
4-Bromophenyl Phenyl Ether	<200	ug/kg	<200	DB	04-DEC-92	8270
4-Chloroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
4-Chlorophenyl Phenyl Ether	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
Acenaphthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Acenaphthylene	<300	ug/kg	<300	DB	04-DEC-92	8270
Anthracene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzidine	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzo(a)anthracene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzo(a)pyrene	<200	ug/kg	<200	DB	04-DEC-92	8270
Benzo(b)fluoranthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Benzo(g,h,i)perylene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzo(k)fluoranthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Bis(2-Chloroethoxy)-Methane	<200	ug/kg	<200	DB	04-DEC-92	8270
Bis(2-Chloroethyl) Ether	<300	ug/kg	<300	DB	04-DEC-92	8270
Bis(2-Chloroisopropyl) Ether	<400	ug/kg	<400	DB	04-DEC-92	8270
Bis(2-Ethylhexyl) Phthalate	<400	ug/kg	<400	DB	04-DEC-92	8270
Butyl Benzyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Chrysene	<300	ug/kg	<300	DB	04-DEC-92	8270
Di-n-butyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Di-n-octyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Dibenzo(a,h)anthracene	<200	ug/kg	<200	DB	04-DEC-92	8270
Dibenzofuran	<500	ug/kg	<500	DB	04-DEC-92	8270
Diethyl phthalate	<400	ug/kg	<400	DB	04-DEC-92	8270
Dimethyl phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Fluoranthene	<300	ug/kg	<300	DB	04-DEC-92	8270
Fluorene	<200	ug/kg	<200	DB	04-DEC-92	8270
Hexachlorobenzene	<400	ug/kg	<400	DB	04-DEC-92	8270
Hexachlorobutadiene	<200	ug/kg	<200	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ ANALYZED</u>	<u>METHOD</u>
Hexachlorocyclopentadiene	<500	ug/kg	<500	DB 04-DEC-92	8270
Hexachloroethane	<200	ug/kg	<200	DB 04-DEC-92	8270
Indeno(1,2,3-cd)pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Isophorone	<300	ug/kg	<300	DB 04-DEC-92	8270
N-Nitrosodi-N-Propylamine	<200	ug/kg	<200	DB 04-DEC-92	8270
N-Nitrosodimethylamine	<300	ug/kg	<300	DB 04-DEC-92	8270
N-Nitrosodiphenylamine	<400	ug/kg	<400	DB 04-DEC-92	8270
Naphthalene	<300	ug/kg	<300	DB 04-DEC-92	8270
Nitrobenzene	<200	ug/kg	<200	DB 04-DEC-92	8270
Phenanthrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
TRPH	18	mg/kg	<7	DB 08-DEC-92	9073
1,1,1,2-Tetrachloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1,1-Trichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1,2,2-Tetrachloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1,2-Trichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1-Dichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1-Dichloroethylene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1-Dichloropropene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,3-Trichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,3-Trichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,4-Trichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,4-Trimethylbenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dibromo-3-Chloropropane	<18.0	ug/kg	<18.0	DB 07-DEC-92	8260
1,2-Dibromoethane (EDB)	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,3,5-Trimethylbenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,3-Dichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,3-Dichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,4-Dichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
2,2-Dichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
2-Chlorotoluene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
4-Chlorotoluene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Benzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromochloromethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromodichloromethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromoform	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromomethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Carbon Tetrachloride	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Chlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Chloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260

MR. DOUGLAS GRAHAM
SEC DONOHUE INC.
4738 N 40TH ST
SHEBOYGAN WI 53083

DATE REPORTED: 11-DEC-92
PROJECT NUMBER: 70257.100
RECV. GROUP NO: 10263
DATE RECEIVED: 02-DEC-92
TIME RECEIVED: 08:56
COOLER TEMP(C): 4

CLIENT NAME: City of Manitowoc
COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

Sample received on ice.

Arsenic analysis subcontracted to Robert E. Lee & Associates, Inc.

Cadmium sample matrix spike analyzed in duplicate to recover 62% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Chromium sample matrix spike analyzed in duplicate to recover 65% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Lead sample matrix spike analyzed in duplicate to recover 69% and 65%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Nickel sample matrix spike analyzed in duplicate to recover 60% and 59%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Potassium detection limit = <62,000 ug/kg.

Thallium sample matrix spike analyzed in duplicate to recover 57% and 48%; normal acceptable recovery 80-120%. Low recovery very possibly due to matrix interferences.

Zinc sample matrix spike analyzed in duplicate to recover 76% and 71%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Total Recoverable Petroleum Hydrocarbons (TRPH) were observed in the laboratory method blank at a concentration of 1.7 mg/l. The equivalent blank concentration for this sample is 12 mg/kg.

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
Solids, Total	83.7	%	<1		02-DEC-92	2540 G
Aluminum	5,710	mg/kg	<93.0	TD	03-DEC-92	6010
Antimony	1,070	ug/kg	<496	TD	03-DEC-92	6010
Arsenic	1,040	ug/kg	<63	TD	07-DEC-92	7060
Barium	15,700	ug/kg	<62	TD	03-DEC-92	6010
Beryllium	433	ug/kg	<25	TD	03-DEC-92	6010

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Cadmium	286	ug/kg	<124	TD	04-DEC-92	6010
Calcium	51,200	mg/kg	<372	TD	07-DEC-92	6010
Chromium	6,400	ug/kg	<248	TD	04-DEC-92	7191
Cobalt	2,500	ug/kg	<186	TD	03-DEC-92	6010
Copper	14,200	ug/kg	<248	TD	04-DEC-92	6010
Iron	11,000	mg/kg	<62	TD	04-DEC-92	6010
Lead	7,680	ug/kg	<620	TD	04-DEC-92	7421
Magnesium	28,300	mg/kg	<310	TD	08-DEC-92	6010
Manganese	129,000	ug/kg	<124	TD	04-DEC-92	6010
Mercury	11.5	ug/kg	<10	TD	08-DEC-92	7471
Nickel	5,330	ug/kg	<248	TD	04-DEC-92	6010
Potassium	767,000	ug/kg	No SDL	TD	07-DEC-92	6010
Selenium	85.2	ug/kg	<58	TD	08-DEC-92	7741
Silver	1,550	ug/kg	<248	TD	08-DEC-92	7760
Sodium	221,000	ug/kg	<8680	TD	07-DEC-92	6010
Thallium	<125	ug/kg	<125	TD	08-DEC-92	279.2
Vanadium	18,800	ug/kg	<62	TD	03-DEC-92	6010
Zinc	12,200	ug/kg	<186	TD	04-DEC-92	6010
2,4,5-Trichlorophenol	<200	ug/kg	<200	DB	04-DEC-92	8270
2,4,6-Trichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dimethylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2,4-Dinitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2-Chlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4,6-Dinitro-2-Methylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4-Chloro-3-Methylphenol	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Benzoic Acid	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzyl Alcohol	<500	ug/kg	<500	DB	04-DEC-92	8270
o-Cresol(2-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270
p-Cresol(4-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270
Pentachlorophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Phenol	<300	ug/kg	<300	DB	04-DEC-92	8270
1,2,4-Trichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Diphenylhydrazine	<200	ug/kg	<200	DB	04-DEC-92	8270
1,3-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,4-Dichlorobenzene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dinitrotoluene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,6-Dinitrotoluene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Chloronaphthalene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Methylnaphthalene	<500	ug/kg	<500	DB	04-DEC-92	8270
2-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
3,3'-Dichlorobenzidine	<1300	ug/kg	<1300	DB	04-DEC-92	8270
3-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
4-Bromophenyl Phenyl Ether	<200	ug/kg	<200	DB	04-DEC-92	8270
4-Chloroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
4-Chlorophenyl Phenyl Ether	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
Acenaphthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Acenaphthylene	<300	ug/kg	<300	DB	04-DEC-92	8270
Anthracene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzidine	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzo(a)anthracene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzo(a)pyrene	<200	ug/kg	<200	DB	04-DEC-92	8270
Benzo(b)fluoranthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Benzo(g,h,i)perylene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzo(k)fluoranthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Bis(2-Chloroethoxy)-Methane	<200	ug/kg	<200	DB	04-DEC-92	8270
Bis(2-Chloroethyl) Ether	<300	ug/kg	<300	DB	04-DEC-92	8270
Bis(2-Chloroisopropyl) Ether	<400	ug/kg	<400	DB	04-DEC-92	8270
Bis(2-Ethylhexyl) Phthalate	<400	ug/kg	<400	DB	04-DEC-92	8270
Butyl Benzyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Chrysene	<300	ug/kg	<300	DB	04-DEC-92	8270
Di-n-butyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Di-n-octyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Dibenzo(a,h)anthracene	<200	ug/kg	<200	DB	04-DEC-92	8270
Dibenzofuran	<500	ug/kg	<500	DB	04-DEC-92	8270
Diethyl phthalate	<400	ug/kg	<400	DB	04-DEC-92	8270
Dimethyl phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Fluoranthene	<300	ug/kg	<300	DB	04-DEC-92	8270
Fluorene	<200	ug/kg	<200	DB	04-DEC-92	8270
Hexachlorobenzene	<400	ug/kg	<400	DB	04-DEC-92	8270
Hexachlorobutadiene	<200	ug/kg	<200	DB	04-DEC-92	8270
Hexachlorocyclopentadiene	<500	ug/kg	<500	DB	04-DEC-92	8270
Hexachloroethane	<200	ug/kg	<200	DB	04-DEC-92	8270
Indeno(1,2,3-cd)pyrene	<200	ug/kg	<200	DB	04-DEC-92	8270
Isophorone	<300	ug/kg	<300	DB	04-DEC-92	8270
N-Nitrosodi-N-Propylamine	<200	ug/kg	<200	DB	04-DEC-92	8270
N-Nitrosodimethylamine	<300	ug/kg	<300	DB	04-DEC-92	8270
N-Nitrosodiphenylamine	<400	ug/kg	<400	DB	04-DEC-92	8270
Naphthalene	<300	ug/kg	<300	DB	04-DEC-92	8270
Nitrobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
Phenanthrene	<200	ug/kg	<200	DB	04-DEC-92	8270
Pyrene	<200	ug/kg	<200	DB	04-DEC-92	8270
TRPH	34	mg/kg	<8	DB	08-DEC-92	9073
1,1,1,2-Tetrachloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ ANALYZED</u>	<u>METHOD</u>
1,1,1-Trichloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,1,2,2-Tetrachloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,1,2-Trichloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,1-Dichloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,1-Dichloroethylene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,1-Dichloropropene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2,3-Trichlorobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2,3-Trichloropropane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2,4-Trichlorobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2,4-Trimethylbenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2-Dibromo-3-Chloropropane	<18.0	ug/kg	<18.0	DB 07-DEC-92	8260
1,2-Dibromoethane (EDB)	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2-Dichlorobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2-Dichloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,2-Dichloropropane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,3,5-Trimethylbenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,3-Dichlorobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,3-Dichloropropane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
1,4-Dichlorobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
2,2-Dichloropropane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
2-Chlorotoluene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
4-Chlorotoluene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Benzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Bromobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Bromochloromethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Bromodichloromethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Bromoform	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Bromomethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Carbon Tetrachloride	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Chlorobenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Chloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Chloroform	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Chloromethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
cis-1,2-Dichloroethylene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Cumene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Cymene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Dibromochloromethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Dibromomethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Dichlorodifluoromethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Ethylbenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Hexachlorobutadiene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
m & p-Xylene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
Methylene Chloride	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260
N-Butylbenzene	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
N-Propylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Naphthalene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
o-Xylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
sec-Butylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Styrene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
tert-Butylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Tetrachloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Toluene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
trans-1,2-Dichloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Trichloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Trichlorofluoromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Vinyl Chloride	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260

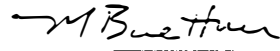
No SDL - No Sample Detection Limit (SDL) available for this analyte.

RQ Result Qualifier(s)

- DB Results expressed as dry weight.
- TD Result expressed as total on dry weight basis.

Analyses performed according to procedures approved by the United States Environmental Protection Agency. Certified by the Wisconsin Dept. of Natural Resources. ID # 460060920

Michael Buettner - Lab Project Manager


 Approved By _____ Date 12/11/92

Chain of Custody Record

Check delivery method:
 Samples delivered in person
 Donohue courier
 Common carrier
 Mail

Custody Seal # 001 002

Project Number		Project Name/Client				Analysis Required										Matrix	
70257.000		HAMILTON COUNTY				<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">MDS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EMCS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TOLLENTS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TEPH</div> </div>											
Item No.	Sample Description (Field ID Number)	Date	Time	Grab	Comp.	Lab Sample Number	Container Number	MDS	EMCS	TOLLENTS	TEPH	X-Field Filtered	X-Susp. Hazard Mat.	Sample Type (Water, Soil) etc.	Sample Container		
1	HC-5501-01	10/17/12	1734	X				X						Soil	1 11.3		
2			258		X			X							1 8.2		
3									X						1 8.2		
4										X					1 11.3		
5	HC-5502-01		1054	X				X							1 11.3		
6					X			X							1 2.2		
7									X						1 8.2		
8										X					1 4.2		
9	HC-5503-01		1122	X				X							2 11.3		
10					X			X							1 8.2		
11									X						1 8.2		
12										X					1 11.3		
13																	
14																	
15																	
16																	

Relinquished by: (Signature) <i>D. Graham</i>	Date/Time 10/17/12	Received by: (Signature) <i>[Signature]</i>	Disposed of by: (Signature)	Items:	Date/Time
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time	Received by: (Signature) [Laboratory]	Disposed of by: (Signature)	Items:	Date/Time

Send Lab Results To: D. GRAHAM SHEB (X2538)	Remarks: 5 DAY TAT	Laboratory Receiving Notes: Custody Seal Intact? Temp. of Shipping Container: Sample Condition:
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ATTACHMENT B

FIELD LOGS

Donohue

Soils Data Form

Soil Sample Area Manitowoc Co.

Soil Subsample N/A

Engineers & Architects & Scientists

Site MC-5501-01 Project No. 70257.000

DATE 12-07-92

TIME _____

COLLECTOR DWC
RWS

MICROTIP:

BKGD = 0.9

2' ⇒ 1.4-.9

SAMPLE DEPTH 18" VOC 0934
24" Rest 0958

PHYSICAL DESCRIPTION OF SUBSAMPLING LOCATION: TOP 11" FROZEN

1 1/2' SILTY SAND BROWN

2' Thick Brown fill w/ organic Matter

HOLE #1 Metal pipe @ ~ 20"

HOLE #2 ADJACENT TO HOLE #1 - NO METAL

DESCRIPTION OF SUBSAMPLE: 72' N OF RECYCLING CENTER 20' S OF

ANY OTHER CHARACTERISTICS OF NOTE: Surface 6" Frozen

Donohue

Soils Data Form

Soil Sample Area Manitowoc Co.

Soil Subsample N/A

Engineers & Architects & Scientists


Site MC-5502-01

Project No. 70257.000

DATE 12-02-92

TIME 1054

COLLECTOR DUE
RWS

SAMPLE DEPTH 7054  40"

PHYSICAL DESCRIPTION OF SUBSAMPLING LOCATION: _____

42' west of SW corner of recycling facility

DESCRIPTION OF SUBSAMPLE: _____

Top 3' dark brown top soil binders Microtip = 0 ppm

4' ~~light~~ silty sand

46" = H₂O Table

ANY OTHER CHARACTERISTICS OF NOTE: _____

Donohue

Soils Data Form

Soil Sample Area Manitowoc Co.

Soil Subsample N/A

Engineers & Architects & Scientists

Site MC-5503-01

Project No. 70257.000

DATE 12-02-92

$MNU = 1.1 @ 40''$

TIME 1122

COLLECTOR DWG
RWS

SAMPLE DEPTH 40''

PHYSICAL DESCRIPTION OF SUBSAMPLING LOCATION: _____

90' W & 39' N OF NW CORNER OF RECYCLING BUILDING.
ADJACENT ON E/W Road to N side of road

DESCRIPTION OF SUBSAMPLE: _____

6" BLACK CINDERS
6"-3/16" YELLOW BROWN FINE SILTY SAND w/ GRAVEL
Clayey silt

ANY OTHER CHARACTERISTICS OF NOTE: _____

MR. DOUGLAS GRAHAM
SEC DONOHUE INC.
4738 N 40TH ST
SHEBOYGAN WI 53083

DATE REPORTED: 11-DEC-92
PROJECT NUMBER: 70257.100
RECV. GROUP NO: 10263
DATE RECEIVED: 02-DEC-92
TIME RECEIVED: 08:56
COOLER TEMP(C): 4

CLIENT NAME: City of Manitowoc
COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

Sample received on ice.

Arsenic analysis subcontracted to Robert E. Lee & Associates, Inc.

Cadmium sample matrix spike analyzed in duplicate to recover 62% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Chromium sample matrix spike analyzed in duplicate to recover 65% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Lead sample matrix spike analyzed in duplicate to recover 69% and 65%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Manganese detection limit = <12,000 ug/kg.

Nickel sample matrix spike analyzed in duplicate to recover 60% and 59%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Potassium detection limit = <30,100 ug/kg.

Thallium sample matrix spike analyzed in duplicate to recover 57% and 48%; normal acceptable recovery 80-120%. Low recovery very possibly due to matrix interferences.

Zinc sample matrix spike analyzed in duplicate to recover 76% and 71%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Zinc detection limit = <18,000 ug/kg.

Total Recoverable Petroleum Hydrocarbons (TRPH) were observed in the laboratory method blank at a concentration of 1.7 mg/l. The equivalent blank concentration for this sample is 14 mg/kg.

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Solids, Total	85.0	%	<1		02-DEC-92	2540 G
Aluminum	5,140	mg/kg	<90.2	TD	03-DEC-92	6010

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

<i>Quebec</i> ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Antimony	2,990	ug/kg	<481	TD	03-DEC-92	6010
Arsenic	2,850 ✓	ug/kg	<119	TD	07-DEC-92	7060
Barium	78,200 ✓	ug/kg	<60	TD	03-DEC-92	6010
Beryllium	1,410	ug/kg	<24	TD	03-DEC-92	6010
Cadmium	2,470 ↑	ug/kg	<120	TD	04-DEC-92	6010
Calcium	34,300	mg/kg	<361	TD	07-DEC-92	6010
Chromium	23,200 ✓	ug/kg	<241	TD	04-DEC-92	7191
Cobalt	4,200 ✓	ug/kg	<180	TD	03-DEC-92	6010
Copper	119,000 ↑↑	ug/kg	<241	TD	04-DEC-92	6010
Iron	74,600	mg/kg	<601	TD	04-DEC-92	6010
Lead	275,000 ↑↑	ug/kg	<602	TD	04-DEC-92	7421
Magnesium	22,000	mg/kg	<301	TD	08-DEC-92	6010
Manganese	492,000	ug/kg	No SDL	TD	04-DEC-92	6010
Mercury	461 ↑	ug/kg	<10	TD	08-DEC-92	7471
Nickel	13,700 ✓	ug/kg	<241	TD	04-DEC-92	6010
Potassium	498,000	ug/kg	No SDL	TD	07-DEC-92	6010
Selenium	369 ✓	ug/kg	<55	TD	08-DEC-92	7741
Silver	2,800 ✓	ug/kg	<240	TD	08-DEC-92	7760
Sodium	215,000	ug/kg	<4210	TD	07-DEC-92	6010
Thallium	<119	ug/kg	<119	TD	08-DEC-92	279.2
Vanadium	15,500	ug/kg	<60	TD	03-DEC-92	6010
Zinc	498,000 ↑	ug/kg	No SDL	TD	04-DEC-92	6010
2,4,5-Trichlorophenol	<2	mg/kg	<2	DB	04-DEC-92	8270
2,4,6-Trichlorophenol	<3	mg/kg	<3	DB	04-DEC-92	8270
2,4-Dichlorophenol	<3	mg/kg	<3	DB	04-DEC-92	8270
2,4-Dimethylphenol	<4	mg/kg	<4	DB	04-DEC-92	8270
2,4-Dinitrophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
2-Chlorophenol	<3	mg/kg	<3	DB	04-DEC-92	8270
2-Nitrophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
4,6-Dinitro-2-Methylphenol	<4	mg/kg	<4	DB	04-DEC-92	8270
4-Chloro-3-Methylphenol	<3	mg/kg	<3	DB	04-DEC-92	8270
4-Nitrophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
Benzoic Acid	<13	mg/kg	<13	DB	04-DEC-92	8270
Benzyl Alcohol	<5	mg/kg	<5	DB	04-DEC-92	8270
o-Cresol(2-Methylphenol)	<2	mg/kg	<2	DB	04-DEC-92	8270
p-Cresol(4-Methylphenol)	<2	mg/kg	<2	DB	04-DEC-92	8270
Pentachlorophenol	<4	mg/kg	<4	DB	04-DEC-92	8270
Phenol	<3	mg/kg	<3	DB	04-DEC-92	8270
1,2,4-Trichlorobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270
1,2-Dichlorobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270
1,2-Diphenylhydrazine	<2	mg/kg	<2	DB	04-DEC-92	8270
1,3-Dichlorobenzene	<2	mg/kg	<2	DB	04-DEC-92	8270
1,4-Dichlorobenzene	<3	mg/kg	<3	DB	04-DEC-92	8270
2,4-Dinitrotoluene	<3	mg/kg	<3	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MG-SS01-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RO ANALYZED</u>	<u>METHOD</u>
2,6-Dinitrotoluene	<2	mg/kg	<2	DB 04-DEC-92	8270
2-Chloronaphthalene	<2	mg/kg	<2	DB 04-DEC-92	8270
2-Methylnaphthalene	<5	mg/kg	<5	DB 04-DEC-92	8270
2-Nitroaniline	<5	mg/kg	<5	DB 04-DEC-92	8270
3,3'-Dichlorobenzidine	<13	mg/kg	<13	DB 04-DEC-92	8270
3-Nitroaniline	<5	mg/kg	<5	DB 04-DEC-92	8270
4-Bromophenyl Phenyl Ether	<2	mg/kg	<2	DB 04-DEC-92	8270
4-Chloroaniline	<5	mg/kg	<5	DB 04-DEC-92	8270
4-Chlorophenyl Phenyl Ether	<3	mg/kg	<3	DB 04-DEC-92	8270
4-Nitroaniline	<5	mg/kg	<5	DB 04-DEC-92	8270
Acenaphthene	<2	mg/kg	<2	DB 04-DEC-92	8270
Acenaphthylene	<3	mg/kg	<3	DB 04-DEC-92	8270
Anthracene	<3	mg/kg	<3	DB 04-DEC-92	8270
Benzidine	<13	mg/kg	<13	DB 04-DEC-92	8270
Benzo(a)anthracene	<3	mg/kg	<3	DB 04-DEC-92	8270
Benzo(a)pyrene	<2	mg/kg	<2	DB 04-DEC-92	8270
Benzo(b)fluoranthene	<2	mg/kg	<2	DB 04-DEC-92	8270
Benzo(g,h,i)perylene	<3	mg/kg	<3	DB 04-DEC-92	8270
Benzo(k)fluoranthene	<2	mg/kg	<2	DB 04-DEC-92	8270
Bis(2-Chloroethoxy)-Methane	<2	mg/kg	<2	DB 04-DEC-92	8270
Bis(2-Chloroethyl) Ether	<3	mg/kg	<3	DB 04-DEC-92	8270
Bis(2-Chloroisopropyl) Ether	<4	mg/kg	<4	DB 04-DEC-92	8270
Bis(2-Ethylhexyl) Phthalate	<4	mg/kg	<4	DB 04-DEC-92	8270
Butyl Benzyl Phthalate	<3	mg/kg	<3	DB 04-DEC-92	8270
Chrysene	<3	mg/kg	<3	DB 04-DEC-92	8270
Di-n-butyl Phthalate	<3	mg/kg	<3	DB 04-DEC-92	8270
Di-n-octyl Phthalate	<3	mg/kg	<3	DB 04-DEC-92	8270
Dibenzo(a,h)anthracene	<2	mg/kg	<2	DB 04-DEC-92	8270
Dibenzofuran	<5	mg/kg	<5	DB 04-DEC-92	8270
Diethyl phthalate	<4	mg/kg	<4	DB 04-DEC-92	8270
Dimethyl phthalate	<3	mg/kg	<3	DB 04-DEC-92	8270
Fluoranthene	<3	mg/kg	<3	DB 04-DEC-92	8270
Fluorene	<2	mg/kg	<2	DB 04-DEC-92	8270
Hexachlorobenzene	<4	mg/kg	<4	DB 04-DEC-92	8270
Hexachlorobutadiene	<2	mg/kg	<2	DB 04-DEC-92	8270
Hexachlorocyclopentadiene	<5	mg/kg	<5	DB 04-DEC-92	8270
Hexachloroethane	<2	mg/kg	<2	DB 04-DEC-92	8270
Indeno(1,2,3-cd)pyrene	<2	mg/kg	<2	DB 04-DEC-92	8270
Isophorone	<3	mg/kg	<3	DB 04-DEC-92	8270
N-Nitrosodi-N-Propylamine	<2	mg/kg	<2	DB 04-DEC-92	8270
N-Nitrosodimethylamine	<3	mg/kg	<3	DB 04-DEC-92	8270
N-Nitrosodiphenylamine	<4	mg/kg	<4	DB 04-DEC-92	8270
Naphthalene	<3	mg/kg	<3	DB 04-DEC-92	8270
Nitrobenzene	<2	mg/kg	<2	DB 04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ ANALYZED	METHOD
Phenanthrene	<2	mg/kg	<2	DB 04-DEC-92	8270
Pyrene	<2	mg/kg	<2	DB 04-DEC-92	8270
TRPH	309 ←	mg/kg	<8	DB 08-DEC-92	9073
1,1,1,2-Tetrachloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1,1-Trichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1,2,2-Tetrachloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1,2-Trichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1-Dichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1-Dichloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,1-Dichloropropene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,3-Trichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,3-Trichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,4-Trichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2,4-Trimethylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dibromo-3-Chloropropane	<18.0	ug/kg	<18.0	DB 07-DEC-92	8260
1,2-Dibromoethane (EDB)	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dichloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,2-Dichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,3,5-Trimethylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,3-Dichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,3-Dichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
1,4-Dichlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
2,2-Dichloropropane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
2-Chlorotoluene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
4-Chlorotoluene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Benzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromochloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromodichloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromoform	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Bromomethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Carbon Tetrachloride	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chlorobenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chloroethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chloroform	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Chloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
cis-1,2-Dichloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Cumene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Cymene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Dibromochloromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Dibromomethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Dichlorodifluoromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Ethylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10263 MATRIX: SOIL DESCRIPTION: MC-SS01-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ ANALYZED</u>	<u>METHOD</u>
Hexachlorobutadiene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
m & p-Xylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Methylene Chloride	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
N-Butylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
N-Propylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Naphthalene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
o-Xylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
sec-Butylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Styrene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
tert-Butylbenzene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Tetrachloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Toluene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
trans-1,2-Dichloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Trichloroethylene	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Trichlorofluoromethane	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260
Vinyl Chloride	<5.9	ug/kg	<5.9	DB 07-DEC-92	8260

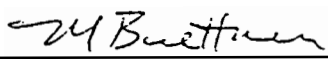
No SDL - No Sample Detection Limit (SDL) available for this analyte.

RQ Result Qualifier(s)

- DB Results expressed as dry weight.
- TD Result expressed as total on dry weight basis.

Analyses performed according to procedures approved by the United States Environmental Protection Agency. Certified by the Wisconsin Dept. of Natural Resources. ID # 460060920

Michael Buettner - Lab Project Manager



 Approved By 12/11/92
Date

MR. DOUGLAS GRAHAM
SEC DONOHUE INC.
4738 N 40TH ST
SHEBOYGAN WI 53083

DATE REPORTED: 11-DEC-92
PROJECT NUMBER: 70257.100
RECV. GROUP NO: 10263
DATE RECEIVED: 02-DEC-92
TIME RECEIVED: 08:56
COOLER TEMP(C): 4

CLIENT NAME: City of Manitowoc
COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

Sample received on ice.

Antimony sample matrix spike analyzed in duplicate to recover 28% and 18%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

Arsenic analysis subcontracted to Robert E. Lee & Associates, Inc.

Barium sample matrix spike analyzed in duplicate to recover 52% and 49%; normal spike recover 80-120%. Low spike recovery possibly due to matrix interferences.

Beryllium sample matrix spike analyzed in duplicate to recover 79% and 79%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

Cadmium sample matrix spike analyzed in duplicate to recover 62% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Chromium sample matrix spike analyzed in duplicate to recover 65% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Cobalt sample matrix spike analyzed in duplicate to recover 61% and 59%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

Lead sample matrix spike analyzed in duplicate to recover 69% and 65%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Nickel sample matrix spike analyzed in duplicate to recover 60% and 59%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Potassium detection limit = <56,000 ug/kg.

Thallium sample matrix spike analyzed in duplicate to recover 57% and 48%; normal acceptable recovery 80-120%. Low recovery very possibly due to matrix interferences.

Vanadium sample matrix spike analyzed in duplicate to recover 69% and 67%; normal acceptable recovery 80-120%. Low spike recovery possibly due to matrix interferences.

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

Zinc sample matrix spike analyzed in duplicate to recover 76% and 71%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Total Recoverable Petroleum Hydrocarbons (TRPH) were observed in the laboratory method blank at a concentration of 1.7 mg/l. The equivalent blank concentration for this sample is 12 mg/kg.

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Solids, Total	85.1	%	<1		02-DEC-92	2540 G
Aluminum	3,620	mg/kg	<84.1	TD	03-DEC-92	6010
Antimony	671	ug/kg	<449	TD	03-DEC-92	6010
Arsenic	1,490	ug/kg	<124	TD	07-DEC-92	7060
Barium	9,180	ug/kg	<56	TD	03-DEC-92	6010
Beryllium	264	ug/kg	<22	TD	03-DEC-92	6010
Cadmium	180	ug/kg	<112	TD	04-DEC-92	6010
Calcium	61,600	mg/kg	<336	TD	07-DEC-92	6010
Chromium	3,600	ug/kg	<224	TD	04-DEC-92	7191
Cobalt	1,770	ug/kg	<168	TD	03-DEC-92	6010
Copper	11,000	ug/kg	<224	TD	04-DEC-92	6010
Iron	7,420	mg/kg	<56	TD	04-DEC-92	6010
Lead	6,330	ug/kg	<561	TD	04-DEC-92	7421
Magnesium	35,100	mg/kg	<280	TD	08-DEC-92	6010
Manganese	93,000	ug/kg	<112	TD	04-DEC-92	6010
Mercury	22.7	ug/kg	<9	TD	08-DEC-92	7471
Nickel	3,330	ug/kg	<224	TD	04-DEC-92	6010
Potassium	522,000	ug/kg	No SDL	TD	07-DEC-92	6010
Selenium	75.1	ug/kg	<56	TD	08-DEC-92	7741
Silver	1,480	ug/kg	<224	TD	08-DEC-92	7760
Sodium	224,000	ug/kg	<7830	TD	07-DEC-92	6010
Thallium	<124	ug/kg	<124	TD	08-DEC-92	279.2
Vanadium	15,400	ug/kg	<56	TD	03-DEC-92	6010
Zinc	8,860	ug/kg	<168	TD	04-DEC-92	6010
2,4,5-Trichlorophenol	<200	ug/kg	<200	DB	04-DEC-92	8270
2,4,6-Trichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dimethylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2,4-Dinitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2-Chlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4,6-Dinitro-2-Methylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4-Chloro-3-Methylphenol	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Benzoic Acid	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzyl Alcohol	<500	ug/kg	<500	DB	04-DEC-92	8270
o-Cresol(2-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MC-SS02-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
p-Cresol(4-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270
Pentachlorophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Phenol	<300	ug/kg	<300	DB	04-DEC-92	8270
1,2,4-Trichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Diphenylhydrazine	<200	ug/kg	<200	DB	04-DEC-92	8270
1,3-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,4-Dichlorobenzene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dinitrotoluene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,6-Dinitrotoluene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Chloronaphthalene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Methylnaphthalene	<500	ug/kg	<500	DB	04-DEC-92	8270
2-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
3,3'-Dichlorobenzidine	<1300	ug/kg	<1300	DB	04-DEC-92	8270
3-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
4-Bromophenyl Phenyl Ether	<200	ug/kg	<200	DB	04-DEC-92	8270
4-Chloroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
4-Chlorophenyl Phenyl Ether	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270
Acenaphthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Acenaphthylene	<300	ug/kg	<300	DB	04-DEC-92	8270
Anthracene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzidine	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzo(a)anthracene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzo(a)pyrene	<200	ug/kg	<200	DB	04-DEC-92	8270
Benzo(b)fluoranthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Benzo(g,h,i)perylene	<300	ug/kg	<300	DB	04-DEC-92	8270
Benzo(k)fluoranthene	<200	ug/kg	<200	DB	04-DEC-92	8270
Bis(2-Chloroethoxy)-Methane	<200	ug/kg	<200	DB	04-DEC-92	8270
Bis(2-Chloroethyl) Ether	<300	ug/kg	<300	DB	04-DEC-92	8270
Bis(2-Chloroisopropyl) Ether	<400	ug/kg	<400	DB	04-DEC-92	8270
Bis(2-Ethylhexyl) Phthalate	<400	ug/kg	<400	DB	04-DEC-92	8270
Butyl Benzyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Chrysene	<300	ug/kg	<300	DB	04-DEC-92	8270
Di-n-butyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Di-n-octyl Phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Dibenzo(a,h)anthracene	<200	ug/kg	<200	DB	04-DEC-92	8270
Dibenzofuran	<500	ug/kg	<500	DB	04-DEC-92	8270
Diethyl phthalate	<400	ug/kg	<400	DB	04-DEC-92	8270
Dimethyl phthalate	<300	ug/kg	<300	DB	04-DEC-92	8270
Fluoranthene	<300	ug/kg	<300	DB	04-DEC-92	8270
Fluorene	<200	ug/kg	<200	DB	04-DEC-92	8270
Hexachlorobenzene	<400	ug/kg	<400	DB	04-DEC-92	8270
Hexachlorobutadiene	<200	ug/kg	<200	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MG-SS02-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ ANALYZED	METHOD
Hexachlorocyclopentadiene	<500	ug/kg	<500	DB 04-DEC-92	8270
Hexachloroethane	<200	ug/kg	<200	DB 04-DEC-92	8270
Indeno(1,2,3-cd)pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Isophorone	<300	ug/kg	<300	DB 04-DEC-92	8270
N-Nitrosodi-N-Propylamine	<200	ug/kg	<200	DB 04-DEC-92	8270
N-Nitrosodimethylamine	<300	ug/kg	<300	DB 04-DEC-92	8270
N-Nitrosodiphenylamine	<400	ug/kg	<400	DB 04-DEC-92	8270
Naphthalene	<300	ug/kg	<300	DB 04-DEC-92	8270
Nitrobenzene	<200	ug/kg	<200	DB 04-DEC-92	8270
Phenanthrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
TRPH	18	mg/kg	<7	DB 08-DEC-92	9073
1,1,1,2-Tetrachloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1,1-Trichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1,2,2-Tetrachloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1,2-Trichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1-Dichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1-Dichloroethylene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,1-Dichloropropene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,3-Trichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,3-Trichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,4-Trichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2,4-Trimethylbenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dibromo-3-Chloropropane	<18.0	ug/kg	<18.0	DB 07-DEC-92	8260
1,2-Dibromoethane(EDB)	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dichloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,2-Dichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,3,5-Trimethylbenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,3-Dichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,3-Dichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
1,4-Dichlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
2,2-Dichloropropane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
2-Chlorotoluene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
4-Chlorotoluene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Benzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromochloromethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromodichloromethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromoform	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Bromomethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Carbon Tetrachloride	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Chlorobenzene	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260
Chloroethane	<6.0	ug/kg	<6.0	DB 07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10264 MATRIX: SOIL DESCRIPTION: MG-SS02-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Chloroform	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Chloromethane	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
cis-1,2-Dichloroethylene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Cumene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Cymene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Dibromochloromethane	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Dibromomethane	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Dichlorodifluoromethane	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Ethylbenzene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Hexachlorobutadiene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
m & p-Xylene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Methylene Chloride	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
N-Butylbenzene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
N-Propylbenzene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Naphthalene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
o-Xylene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
sec-Butylbenzene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Styrene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
tert-Butylbenzene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Tetrachloroethylene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Toluene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
trans-1,2-Dichloroethylene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Trichloroethylene	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Trichlorofluoromethane	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260
Vinyl Chloride	<6.0	ug/kg	<6.0	DB	07-DEC-92	8260

No SDL - No Sample Detection Limit (SDL) available for this analyte.

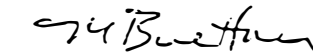
RQ Result Qualifier(s)

DB Results expressed as dry weight.

TD Result expressed as total on dry weight basis.

Analyses performed according to procedures approved by the United States Environmental Protection Agency. Certified by the Wisconsin Dept. of Natural Resources. ID # 460060920

Michael Buettner - Lab Project Manager



12/11/92

Approved By

Date

MR. DOUGLAS GRAHAM
 SEC DONOHUE INC.
 4738 N 40TH ST
 SHEBOYGAN WI 53083

DATE REPORTED: 11-DEC-92
 PROJECT NUMBER: 70257.100
 RECV. GROUP NO: 10263
 DATE RECEIVED: 02-DEC-92
 TIME RECEIVED: 08:56
 COOLER TEMP(C): 4

CLIENT NAME: City of Manitowoc
 COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

Sample received on ice.

Arsenic analysis subcontracted to Robert E. Lee & Associates, Inc.

Cadmium sample matrix spike analyzed in duplicate to recover 62% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Chromium sample matrix spike analyzed in duplicate to recover 65% and 61%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Lead sample matrix spike analyzed in duplicate to recover 69% and 65%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Nickel sample matrix spike analyzed in duplicate to recover 60% and 59%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Potassium detection limit = <62,000 ug/kg.

Thallium sample matrix spike analyzed in duplicate to recover 57% and 48%; normal acceptable recovery 80-120%. Low recovery very possibly due to matrix interferences.

Zinc sample matrix spike analyzed in duplicate to recover 76% and 71%; normal acceptable range 80-120%. Low spike recovery possibly due to sample matrix interferences.

Total Recoverable Petroleum Hydrocarbons (TRPH) were observed in the laboratory method blank at a concentration of 1.7 mg/l. The equivalent blank concentration for this sample is 12 mg/kg.

ANALYTE NAME	RESULT	UNITS	SAMP DL	RQ	ANALYZED	METHOD
Solids, Total	83.7	%	<1		02-DEC-92	2540 G
Aluminum	5,710	mg/kg	<93.0	TD	03-DEC-92	6010
Antimony	1,070	ug/kg	<496	TD	03-DEC-92	6010
Arsenic	1,040	ug/kg	<63	TD	07-DEC-92	7060
Barium	15,700	ug/kg	<62	TD	03-DEC-92	6010
Beryllium	433	ug/kg	<25	TD	03-DEC-92	6010

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

ANALYTE NAME	RESULT	UNITS	SAMP DL	RO	ANALYZED	METHOD
Cadmium	286	ug/kg	<124	TD	04-DEC-92	6010
Calcium	51,200	mg/kg	<372	TD	07-DEC-92	6010
Chromium	6,400	ug/kg	<248	TD	04-DEC-92	7191
Cobalt	2,500	ug/kg	<186	TD	03-DEC-92	6010
Copper	14,200	ug/kg	<248	TD	04-DEC-92	6010
Iron	11,000	mg/kg	<62	TD	04-DEC-92	6010
Lead	7,680	ug/kg	<620	TD	04-DEC-92	7421
Magnesium	28,300	mg/kg	<310	TD	08-DEC-92	6010
Manganese	129,000	ug/kg	<124	TD	04-DEC-92	6010
Mercury	11.5	ug/kg	<10	TD	08-DEC-92	7471
Nickel	5,330	ug/kg	<248	TD	04-DEC-92	6010
Potassium	767,000	ug/kg	No SDL	TD	07-DEC-92	6010
Selenium	85.2	ug/kg	<58	TD	08-DEC-92	7741
Silver	1,550	ug/kg	<248	TD	08-DEC-92	7760
Sodium	221,000	ug/kg	<8680	TD	07-DEC-92	6010
Thallium	<125	ug/kg	<125	TD	08-DEC-92	279.2
Vanadium	18,800	ug/kg	<62	TD	03-DEC-92	6010
Zinc	12,200	ug/kg	<186	TD	04-DEC-92	6010
2,4,5-Trichlorophenol	<200	ug/kg	<200	DB	04-DEC-92	8270
2,4,6-Trichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dichlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dimethylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2,4-Dinitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
2-Chlorophenol	<300	ug/kg	<300	DB	04-DEC-92	8270
2-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4,6-Dinitro-2-Methylphenol	<400	ug/kg	<400	DB	04-DEC-92	8270
4-Chloro-3-Methylphenol	<300	ug/kg	<300	DB	04-DEC-92	8270
4-Nitrophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Benzoic Acid	<1300	ug/kg	<1300	DB	04-DEC-92	8270
Benzyl Alcohol	<500	ug/kg	<500	DB	04-DEC-92	8270
o-Cresol(2-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270
p-Cresol(4-Methylphenol)	<200	ug/kg	<200	DB	04-DEC-92	8270
Pentachlorophenol	<400	ug/kg	<400	DB	04-DEC-92	8270
Phenol	<300	ug/kg	<300	DB	04-DEC-92	8270
1,2,4-Trichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,2-Diphenylhydrazine	<200	ug/kg	<200	DB	04-DEC-92	8270
1,3-Dichlorobenzene	<200	ug/kg	<200	DB	04-DEC-92	8270
1,4-Dichlorobenzene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,4-Dinitrotoluene	<300	ug/kg	<300	DB	04-DEC-92	8270
2,6-Dinitrotoluene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Chloronaphthalene	<200	ug/kg	<200	DB	04-DEC-92	8270
2-Methylnaphthalene	<500	ug/kg	<500	DB	04-DEC-92	8270
2-Nitroaniline	<500	ug/kg	<500	DB	04-DEC-92	8270

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RO ANALYZED</u>	<u>METHOD</u>
3,3'-Dichlorobenzidine	<1300	ug/kg	<1300	DB 04-DEC-92	8270
3-Nitroaniline	<500	ug/kg	<500	DB 04-DEC-92	8270
4-Bromophenyl Phenyl Ether	<200	ug/kg	<200	DB 04-DEC-92	8270
4-Chloroaniline	<500	ug/kg	<500	DB 04-DEC-92	8270
4-Chlorophenyl Phenyl Ether	<300	ug/kg	<300	DB 04-DEC-92	8270
4-Nitroaniline	<500	ug/kg	<500	DB 04-DEC-92	8270
Acenaphthene	<200	ug/kg	<200	DB 04-DEC-92	8270
Acenaphthylene	<300	ug/kg	<300	DB 04-DEC-92	8270
Anthracene	<300	ug/kg	<300	DB 04-DEC-92	8270
Benzidine	<1300	ug/kg	<1300	DB 04-DEC-92	8270
Benzo(a)anthracene	<300	ug/kg	<300	DB 04-DEC-92	8270
Benzo(a)pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Benzo(b)fluoranthene	<200	ug/kg	<200	DB 04-DEC-92	8270
Benzo(g,h,i)perylene	<300	ug/kg	<300	DB 04-DEC-92	8270
Benzo(k)fluoranthene	<200	ug/kg	<200	DB 04-DEC-92	8270
Bis(2-Chloroethoxy)-Methane	<200	ug/kg	<200	DB 04-DEC-92	8270
Bis(2-Chloroethyl) Ether	<300	ug/kg	<300	DB 04-DEC-92	8270
Bis(2-Chloroisopropyl) Ether	<400	ug/kg	<400	DB 04-DEC-92	8270
Bis(2-Ethylhexyl) Phthalate	<400	ug/kg	<400	DB 04-DEC-92	8270
Butyl Benzyl Phthalate	<300	ug/kg	<300	DB 04-DEC-92	8270
Chrysene	<300	ug/kg	<300	DB 04-DEC-92	8270
Di-n-butyl Phthalate	<300	ug/kg	<300	DB 04-DEC-92	8270
Di-n-octyl Phthalate	<300	ug/kg	<300	DB 04-DEC-92	8270
Dibenzo(a,h)anthracene	<200	ug/kg	<200	DB 04-DEC-92	8270
Dibenzofuran	<500	ug/kg	<500	DB 04-DEC-92	8270
Diethyl phthalate	<400	ug/kg	<400	DB 04-DEC-92	8270
Dimethyl phthalate	<300	ug/kg	<300	DB 04-DEC-92	8270
Fluoranthene	<300	ug/kg	<300	DB 04-DEC-92	8270
Fluorene	<200	ug/kg	<200	DB 04-DEC-92	8270
Hexachlorobenzene	<400	ug/kg	<400	DB 04-DEC-92	8270
Hexachlorobutadiene	<200	ug/kg	<200	DB 04-DEC-92	8270
Hexachlorocyclopentadiene	<500	ug/kg	<500	DB 04-DEC-92	8270
Hexachloroethane	<200	ug/kg	<200	DB 04-DEC-92	8270
Indeno(1,2,3-cd)pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Isophorone	<300	ug/kg	<300	DB 04-DEC-92	8270
N-Nitrosodi-N-Propylamine	<200	ug/kg	<200	DB 04-DEC-92	8270
N-Nitrosodimethylamine	<300	ug/kg	<300	DB 04-DEC-92	8270
N-Nitrosodiphenylamine	<400	ug/kg	<400	DB 04-DEC-92	8270
Naphthalene	<300	ug/kg	<300	DB 04-DEC-92	8270
Nitrobenzene	<200	ug/kg	<200	DB 04-DEC-92	8270
Phenanthrene	<200	ug/kg	<200	DB 04-DEC-92	8270
Pyrene	<200	ug/kg	<200	DB 04-DEC-92	8270
TRPH	34	mg/kg	<8	DB 08-DEC-92	9073
1,1,1,2-Tetrachloroethane	<6.1	ug/kg	<6.1	DB 07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
1,1,1-Trichloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,1,2,2-Tetrachloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,1,2-Trichloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,1-Dichloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,1-Dichloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,1-Dichloropropene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2,3-Trichlorobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2,3-Trichloropropane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2,4-Trichlorobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2,4-Trimethylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2-Dibromo-3-Chloropropane	<18.0	ug/kg	<18.0	DB	07-DEC-92	8260
1,2-Dibromoethane(EDB)	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2-Dichlorobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2-Dichloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,2-Dichloropropane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,3,5-Trimethylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,3-Dichlorobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,3-Dichloropropane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
1,4-Dichlorobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
2,2-Dichloropropane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
2-Chlorotoluene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
4-Chlorotoluene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Benzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Bromobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Bromochloromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Bromodichloromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Bromoform	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Bromomethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Carbon Tetrachloride	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Chlorobenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Chloroethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Chloroform	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Chloromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
cis-1,2-Dichloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Cumene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Cymene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Dibromochloromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Dibromomethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Dichlorodifluoromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Ethylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Hexachlorobutadiene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
m & p-Xylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Methylene Chloride	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
N-Butylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260

COLLECTED: 02-DEC-92 00:00 SAMPLER: Donohue P.O. NO: Per D. Graham
 SAMPLE NUMBER: 10265 MATRIX: SOIL DESCRIPTION: MC-SS03-01

<u>ANALYTE NAME</u>	<u>RESULT</u>	<u>UNITS</u>	<u>SAMP DL</u>	<u>RQ</u>	<u>ANALYZED</u>	<u>METHOD</u>
N-Propylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Naphthalene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
o-Xylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
sec-Butylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Styrene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
tert-Butylbenzene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Tetrachloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Toluene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
trans-1,2-Dichloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Trichloroethylene	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Trichlorofluoromethane	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260
Vinyl Chloride	<6.1	ug/kg	<6.1	DB	07-DEC-92	8260

No SDL - No Sample Detection Limit (SDL) available for this analyte.

RQ Result Qualifier(s)

DB Results expressed as dry weight.

TD Result expressed as total on dry weight basis.

Analyses performed according to procedures approved by the United States Environmental Protection Agency. Certified by the Wisconsin Dept. of Natural Resources. ID # 460060920

Michael Buettner - Lab Project Manager

M Buettner

12/11/92

Approved By

Date

Chain of Custody Record

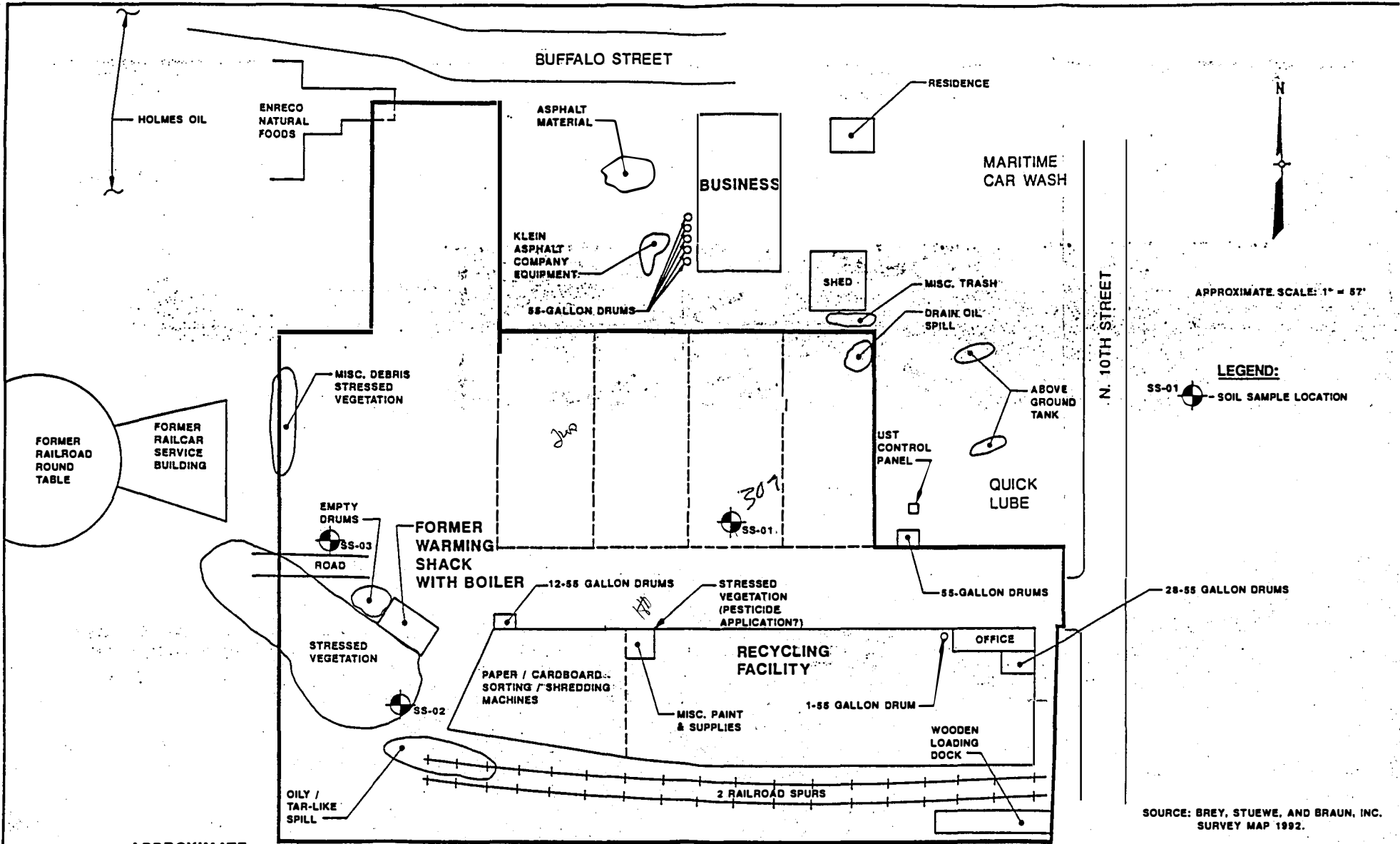
Check delivery method:
 Samples delivered in person
 Donohue courier
 Common carrier
 Mail

Custody Seal # 001 002

Project Number		Project Name/Client				Analysis Required										Matrix	
70257.000		HARD ROCK CONCRETE				/ / / / / / / / / / / / / / / /										/ /	
Samplers: (Signature) D. Graham						Lab Sample Number	Container Number	UICs	ELICs	TOLICs	TRPH	X-Field Filtered	X-Sub Hazard Matl	Sample Type (Water, Soil) etc.	Sample Container		
Item No.	Sample Description (Field ID Number)	Date	Time	Grab	Comp.												
1	HC-5501-01	12/02/07	1134	X				X						Soil	7 4 07		
2			1158		X			X							7 8 07		
3									X						1 8 07		
4										X					1 11 07		
5	HC-5502-01		1054	X				X							7 11 07		
6					X			X							7 2 07		
7									X						1 8 07		
8										X					1 4 07		
9	HC-5503-01		1122	X				X							7 11 07		
10					X			X							7 8 07		
11									X						1 8 07		
12										X					1 4 07		
13																	
14																	
15																	
16																	

Relinquished by: (Signature) D. Graham	Date/Time 12/02/07 1134	Received by: (Signature) D. Graham	Disposed of by: (Signature)	Items:	Date/Time
Relinquished by: (Signature) D. Graham	Date/Time	Received by: (Signature) [Laboratory]	Disposed of by: (Signature)	Items:	Date/Time

Send Lab Results To: D. GRAHAM SHEB (X2538)	Remarks: 5 DAY TAT	Laboratory Receiving Notes: Custody Seal Intact? Temp. of Shipping Container: Sample Condition:
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APPROXIMATE SCALE: 1" = 57'

LEGEND:

SS-01 - SOIL SAMPLE LOCATION

SOURCE: BREY, STUEWE, AND BRAUN, INC. SURVEY MAP 1992.

PUNCAIN - PARNELL, INC. CHARLOTTE, NC 800-768-7788

APPROXIMATE PROPERTY BOUNDARY



DEC. 1992

FIGURE 1
SITE MAP
PHASE-II PROPERTY ASSESSMENT
MANITOWOC COUNTY
MANITOWOC, WISCONSIN

Spill ID Number

Y Y M M D D 0-99

Date of Incident <u>II.K.</u>	Day of Week	Time of Incident <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	Reported By (Name) <u>Jeff Beyer</u>	Telephone Number <u>(414) 683-4085</u>
Date Reported <u>1/6/93</u>	Day of Week <u>Wed</u>	Time Reported <u>1:00</u> <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.	Agency or Firm Reporting <u>MTWC. Co Solid Waste</u>	Reported thru Div. Emergen. Gov't. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Substance Involved <u>Oil/Gasoline</u>	Quantity <u>II.K.</u>	Units	Person or Firm Responsible <u>Wisconsin Central Ltd. Railroad</u>	
Substance Involved	Quantity	Units	Contact Name <u>Geoffry Nokes</u>	Telephone Number <u>(708) 318-4600</u>
Physical Characteristics <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Semisolid <input type="checkbox"/> Gas Color _____ Odor _____			Address - Street or Route <u>P.O. BOX 5062</u> City, State, Zip Code <u>Rosemont, IL. 60017-5062</u>	
Cause of Incident <u>Probable Spillage</u> Exact Location Description (intersection, mileage, etc.) <u>200 North 10th St. Manitowoc, WI 54220</u> County Location <u>Manitowoc</u> DNR Dist <u>LMD</u> DNR Area <u>G.B.</u> Groundwaters Affected <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential			Action Taken By Spiller <input type="checkbox"/> No Action Taken <input type="checkbox"/> No Notification <input checked="" type="checkbox"/> Investigate <input type="checkbox"/> Containment; Type _____ <input checked="" type="checkbox"/> Cleanup; Method <u>None</u> <input type="checkbox"/> Amount Recovered _____ <input type="checkbox"/> Monitor _____ <input type="checkbox"/> Contractor Hired; Name _____ <input checked="" type="checkbox"/> Other Action <u>PROPERTY ASSESSMENT - SEC DONOHUE</u>	
Surface Waters Affected <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential	Name of Surface Water <u>Manitowoc River</u>		Spill Location <input type="checkbox"/> Industrial Facility/Paper Mill/Chem. Co. <input type="checkbox"/> Gas/Service Station/Garage, Auto Dealer, Repair Shop <input type="checkbox"/> Ag Coop/Facility/Cheese Factory/Creamery <input type="checkbox"/> Other Small Business (bank, grocery, insurance co., etc.) <input type="checkbox"/> Public Property (city, county, state, church, school, etc.) <input type="checkbox"/> Utility Co., Power Generating/Transfer Facility <input type="checkbox"/> Private Property (home/farm) <input type="checkbox"/> Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler <input type="checkbox"/> Transportation Accident, Fuel Supply Tank Spill <input type="checkbox"/> Transportation Accident, Load Spill <input type="checkbox"/> Construction, Excavation, Wrecking, Quarry, Mine <input checked="" type="checkbox"/> Other <u>Railroad Property</u>	
Date District Notified	Day of Week	Time District Notified <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.		
District Person Notified	Telephone Number ()			
Date Investigated <u>1/6/93</u>	Day of Week <u>Wed</u>	Time Investigated <u>1:00</u> <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.		
Person Investigating <u>J. Aaden</u>	Telephone Number <u>(414) 683-4925</u>			
Action Taken By DNR <input type="checkbox"/> No Action Taken <input checked="" type="checkbox"/> Investigation <input type="checkbox"/> Supervise/Conduct Cleanup				
Spiller Required To Take Action; Type _____				
Contractor Hired By DNR; Name _____				
Amount Recovered _____				
<input type="checkbox"/> 29:29 Enforcement				
Other Agencies on Scene				
Local _____				
State _____				
Federal _____			Person Filing This Report (print name) <u>J. Aaden</u> Signature <u>[Signature]</u> Date Signed <u>1/12/93</u>	

Additional Comments:
The results of an environmental property assessment by SEC Donohue for Manitowoc county revealed 309ppm TRPH in one of 3 test borings. Manitowoc County (Public Works). Has been a tenant at this site. (SEE ATTACHED REPORT - PHASE II EPRA FROM SEC DONOHUE.
DISTRICT

Closed 3/19/93

I.D. # 408

District: LMD County: 36 Case No.: _____ PMN: _____
 Site Name: 200 N 10th St FID: _____
 Proj. Mgr: E SYSTEM
 Address: _____ Support Person: _____
 Legal Municipality: Manitowoc Legal Desc: NE 1/4 SE 1/4 Sec 19, T 19, R 24 (EW)
 Lat: N _____ Long: W _____
 Date of Discovery: 01 / 27 / 93 Date of RP Contact: 01 / 27 / 93

PRIORITY SCREENING: <input type="checkbox"/> 1 = High <input type="checkbox"/> 3 = Low <input checked="" type="checkbox"/> 4 = Unknown	FUNDING SOURCE: <input checked="" type="checkbox"/> 1 = RP <input type="checkbox"/> 2 = LTF <input type="checkbox"/> 3 = EF <input type="checkbox"/> 4 = SF <input type="checkbox"/> 5 = None <input type="checkbox"/> 6 = Other (Describe in Comments) <input type="checkbox"/> 7 = EPA Emergency Resp.	ENFORCEMENT AUTHORITY: <input checked="" type="checkbox"/> 1 = Spill Law s. 144.76, Wis. Stats. <input type="checkbox"/> 2 = Envir Repair Law s. 144.442, Wis. Stats. <input type="checkbox"/> 3 = Hazardous Waste Rules NR 600 Series <input type="checkbox"/> 4 = Solid Waste Rules NR 500 Series <input type="checkbox"/> 5 = CERCLA <input type="checkbox"/> 6 = Abandoned Container s. 144.77, Wis. Stat. <input type="checkbox"/> 7 = Other (Describe in Comments)
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PROGRAMS INVOLVED: (L - LEAD S - SUPPORT)

<input type="checkbox"/> Aban Containers	<input type="checkbox"/> NR 500 Solid Waste	<input type="checkbox"/> Water Supply
<input type="checkbox"/> Lust	<input checked="" type="checkbox"/> Spills	<input type="checkbox"/> Water Resources Mgt
<input type="checkbox"/> NR 600 Hazardous Waste	<input type="checkbox"/> Superfund	<input type="checkbox"/> Env. Repair

RESPONSIBLE PARTY:

Business Name: <u>Wisconsin Central Ltd RR</u> Owner/Mgr.: <u>Geoffrey Nokes</u> Address: <u>PO Box 5062</u> <u>Rockton IL 60017-5062</u> Phone: <u>708 / 318-4600</u> Contact Person: _____	Business Name: <u>Manitowoc Co Dept of Pubworks</u> Owner/Mgr.: <u>Jeffrey Buger</u> Address: _____ Phone: _____ / _____ Contact Person: _____
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	KNOWN IMPACTS (X)	POTENTIAL IMPACTS (X)
No Threat	_____	_____
Fire/Explosion threat (1)	_____	_____
Contaminated Private Well (2)	_____	_____
Contaminated Public Well (3)	_____	_____
Groundwater Contamination (4)	<u>P</u>	_____
Soil Contamination (5)	<u>L</u>	_____
Direct Contact (10)	_____	_____
Contaminated Surface Water (7)	<u>P</u>	_____
Contaminated Air (8)	_____	_____
Other (6)	_____	_____

CONSULTANT INFORMATION:

Company: <u>SEC Donohue (Per memo)</u> Contact Person: <u>Douglas Graham</u> Address: <u>4738 N 40th St</u> <u>Sheboygan WI 53083</u> Phone: <u>414 / 458-8711</u> (List additional on separate sheet & attach.)	Company: _____ Contact Person: _____ Address: _____ Phone: _____ / _____
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EXAMPLE

CASE SUMMARY AND CLOSEOUT

PROJECT MANAGER: E. System

FIRM OR AGENCY: WDNR

DATE: March 9, 1993

NAME OF SITE: 200 North 10th Street

LOCATION: Manitowoc COUNTY: 36-Manitowoc

TYPE OF DISCHARGE: ERP XX LUST Other

CONTAMINATION TYPE: (list all compounds) Possible gas and/or oil

PRELIM. REVIEW: _____

REMEDIAL ACTION COMPLETED
CASE CLOSEOUT
DATE: 3-9-93
ROUTE TO:
 URBEN
 BARNUM
 STOLL

CONTAMINATION PRESENT IN: Soil XX Groundwater Other

I. **SOIL:**

Extent Defined: Yes No N/A XX

Number of: Lab Analyses 12 Field Analyses 0 No Data

Methodology and/or Detection Devices: TRPH, VOC, Metals, BNA

Total Number of Sample Points: 3

PRE-REMEDICATION

POST-REMEDICATION

Contaminant:	Location:	Concentration:	Date:	Concentration:	Date:	Applicable Std:
TRPH	SS01-1	309 mg/kg	12/11/92			Background
	SS02-1	18 mg/kg	12/11/92			
	SS03-1	34 mg/kg	12/11/92			

Soil Remedial Action Taken:

None

JUSTIFICATION FOR CLOSURE:

According to the data provided, there is a good possibility that the TRPH analysis indicated a positive bias rather than actual conditions.

Soil Remedial Action Completed: Yes XX No

This recommendation for case closure is based on all the available data as of this date Feb. 15, 1993 and submitted by Geoffrey Nokes of Wisconsin Central LTD.

II. **GROUNDWATER:** Groundwater encountered: Yes _____ No XX Depth to Groundwater: _____

Groundwater impacted: Yes _____ No _____ Extent Defined: Yes _____ No _____ N/A _____

Number of: Lab Analyses _____ Field Analyses _____ No Data _____

Methodology and/or detection devices: _____

GROUNDWATER MONITORING:

Excavation water samples: _____ # Recovery Sumps: _____
NR 141 Monitoring Wells: _____ # NR 141 Temporary Wells: _____
Prv. Water Supply Wells: _____ # Municipal Wells: _____

TOTAL # OF SAMPLE ROUNDS: _____

PRE-REMEDIATION

POST-REMEDIATION

Contaminant:	Location:	Concentration:	Date:	Concentration:	Date:	Applicable Std:

GROUNDWATER REMEDIAL ACTION TAKEN:

N/A

JUSTIFICATION FOR CLOSURE:

Groundwater Remedial Action Completed: Yes _____ No _____ N/A _____ Has site been remediated to current standards? Yes X No _____

This recommendation for case closure is based on all the available data as of this date March 9, '93 and submitted by

Wawa Qianat of LMD
(Name) (WDNR-LMD)

SUMMARY OF CASE:

An Environment Assessment was completed on the property for Manitowoc County. TRPH levels indicated contamination. The RP has argued that the results are due to a positive bias. A copy of the analytical data was sent to Chris Klopp, who agreed that there is a good possibility that there was a positive bias in this case.

COMMITTEE RECOMMENDATION: _____ REMEDIAL ACTION COMPLETED: YES X NO _____
Further work needed: _____