Rec 10/29/90 FUF

8/17/90

ENVIRONMENTAL INNOVATIONS
P.O. Box 4055 Racine, WI 53404 414-639-9095

BRRTS #
09-52-291645

Frank Fuja
Wisconsin Dept. of Natural Resources
PO Box 12436
Milwaukee, WI 53212-0436

10-26-90

RE: Fox River School, 921 W. Main Street,
Waterford, WI 53185

Dear Frank,

Enclosed is a tank closure assessment documenting tank and grossly contaminated soil removal at 921 W. Main St., Waterford. Waterford Public Schools is the responsible party of record and Richard Marta is the contact person.

If you have questions, please do not hesitate to contact me at 414-639-9095.

Sincerely,

Paul D. Herbert

Paul D. Herbert

CC: Richard Marta

TANK CLOSURE ASSESSMENT

FOR

FOX RIVER SCHOOL

AT

921 WEST MAIN STREET

WATERFORD, WI

REMOVAL OF ONE
UNDERGROUND STORAGE TANK

PREPARED BY

ENVIRONMENTAL INNOVATIONS, LTD.

RACINE, WI

OCTOBER 19, 1990

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UNDERGROUND STORAGE TANK REPORT

AT

921 West Main Street
Waterford, WI

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UNDERGROUND STORAGE TANK REPORT

CUSTOMER MAILING ADDRESS:	Waterford Public Schools 29006 East Evergreen Drive Rochester, WI 53167
OWNER CONTACT:	Waterford Public Schools
SITE CONTACT:	Mr. Richard Marta
JOB LOCATION:	921 West Main Street Waterford, WI 53185
JOB DATES:	08/17/90 - 08/20/90
JOB DESCRIPTION:	UST REMOVAL & SOILS EXCAVATION
EXCAVATOR:	Azarian Co. 800 Water Street Racine, WI 53401 (414) 637-4153
ENVIRONMENTAL CONSULTANT:	Environmental Innovations
FIELD TECHNICIAN:	Dee Zoellner/Tim Smith
PRODUCT:	Diesel

2.0 INTRODUCTION

This project consisted of removal of one underground storage tank. The tank designated FR-1 was used for storage and dispensing of diesel for heating purposes. The Waterford Public School retained Azarian Co. and Environmental Innovations to perform the tank removal; monitor the procedures; collect representative soil samples; make arrangements for analyses; and report field activities and results.

This work was performed according to DILHR and WDNR underground storage tank (UST) regulations and guidelines.

The presence of petroleum hydrocarbons were discovered in the unsaturated soils within the excavation. This report documents the findings and results of removal of the grossly contaminated soil.

3.0 SITE HISTORY

The age of the tank was unknown. The duration and volumes of leakage or spillage is unknown.

The property is located on the west side of the Village of Waterford. The site location is shown in Figure 1 and the site plan is shown in Figure 2.

4.0 SITE STRATIGRAPHY AND GEOLOGY

The facility is located in the ice contact deposit area as described by Hutchinson, 1971. The cross-section of this area shows predominantly sand and gravel in the first 50 to 100 feet.

The strata encountered in the excavations is as follows: 0 to 2 feet asphalt and top soil; 2 to 11 feet was a silty sand.

Groundwater was not encountered at this excavation.

5.0 REMOVAL PROCEDURES

The tank was underground storage tank as described in the attached empty container and tank report in the Appendix. Azarian Co. acquired Waterford Fire Department's approval and paid all necessary fees, see Appendix.

The tank was exposed by excavating to the point where the vessel was accessible. The tank was opened and contained a small amount of fuel. The tank was emptied and material hauled by Azarian Remedial Services and disposed of by ABC Services. Tank No. FR-1 was lifted out of the excavation. LEL meter was used to determine if the tank was safe to dismantle. The tank was visually inspected and photographed as shown in the Appendix. The tank appeared to be in a non-leaking condition. The scrap iron was sent to a salvage company for reuse. After removal of tank FR-1 excavation of contaminated soil began. Readings in the order of 10 ppm were observed on the side walls of the excavation. Contaminated soil continued to be loaded and hauled away until HNU meter readings fell to zero. The excavation was backfilled to grade with clean fill.

After the removal of the tank, fill line, piping and contaminated soil, one open excavation remained, with approximate dimensions 24 X 14 X 12 feet, as shown in Figure 2.

Representative soil samples were obtained from the excavation walls and bottom. Samples were visually inspected for petroleum discoloration and field screen for VOC's. Soil samples were sealed in a one quart ziplock bag and allowed to degas before field screening for VOC's with an HNU. The HNU model PI-101 was equipped with a 10.2 electron volt lamp and calibrated to benzene. Every 10 square feet of wall and bottom area in the excavation was screened with the HNU meter to attempt to assure the removal of as much contamination as possible. The wall samples were taken at the base of the wall and bottom on the center of the floor and submitted for laboratory analysis.

All materials excavated from this site were loaded, hauled, and disposed at Land Reclamation, Racine, WI. A copy of the waste characterization profile form for the Land Reclamation, Ltd., Racine, Wisconsin, see Appendix.

6.0 RESULTS OF ANALYSES

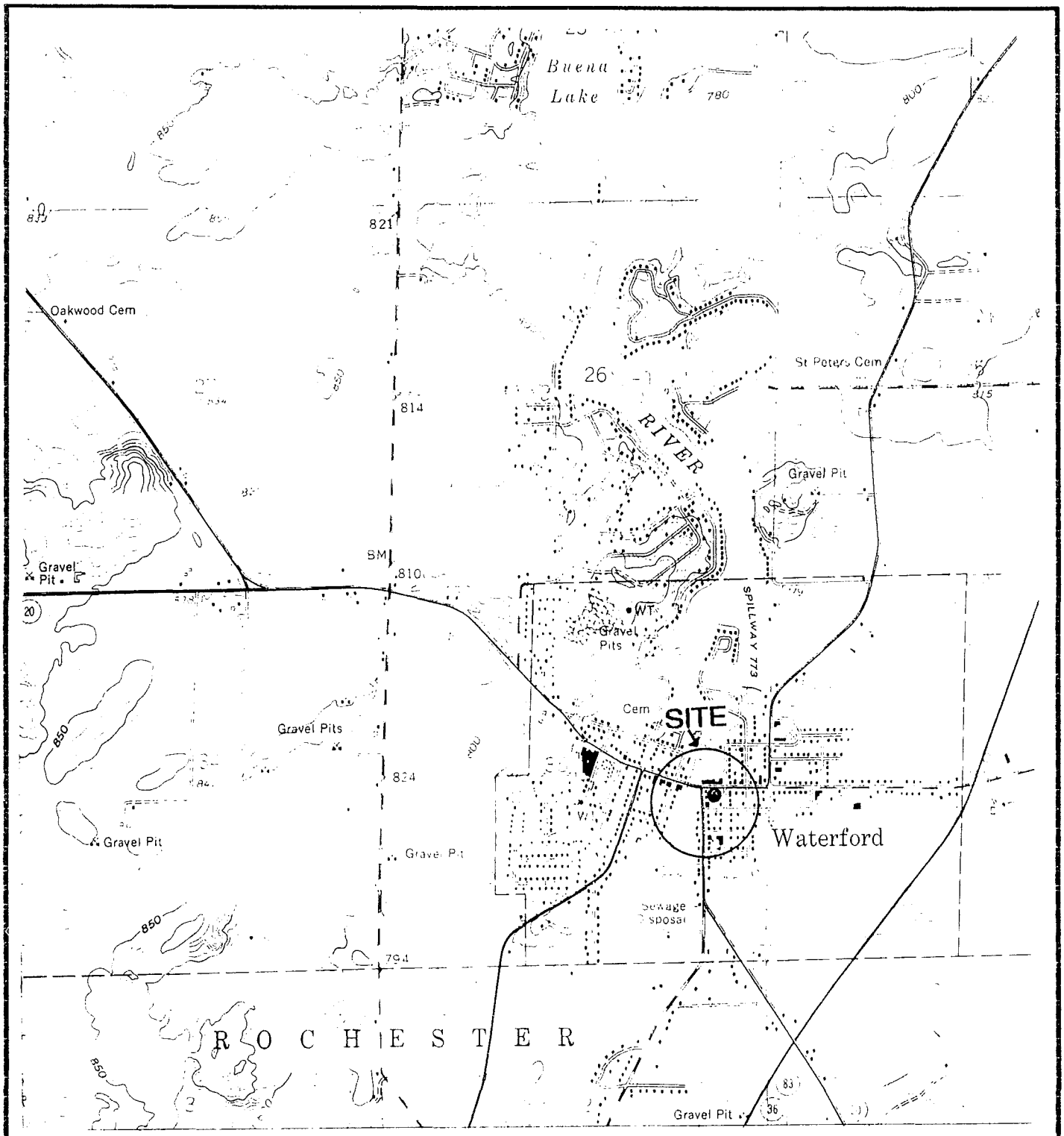
Laboratory reports of representative samples are given in the Appendix and summarized in Table 1 and TPH results are shown on Figure 2.

The samples analyzed indicate no detection of TPH.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The removal of the contaminated soils from Tanks No. FR-1 at this site appears to be acceptable (below 10 ppm). Groundwater contamination may not be of any concern at this site. There is a possibility that further investigation will be required by the WDNR.

EI recommends that this report is submitted to the DNR and DILHR for review and comments.



SOURCE USGS QUADRANGLE
WATERFORD

SCALE: 1-INCH = 2000 FEET

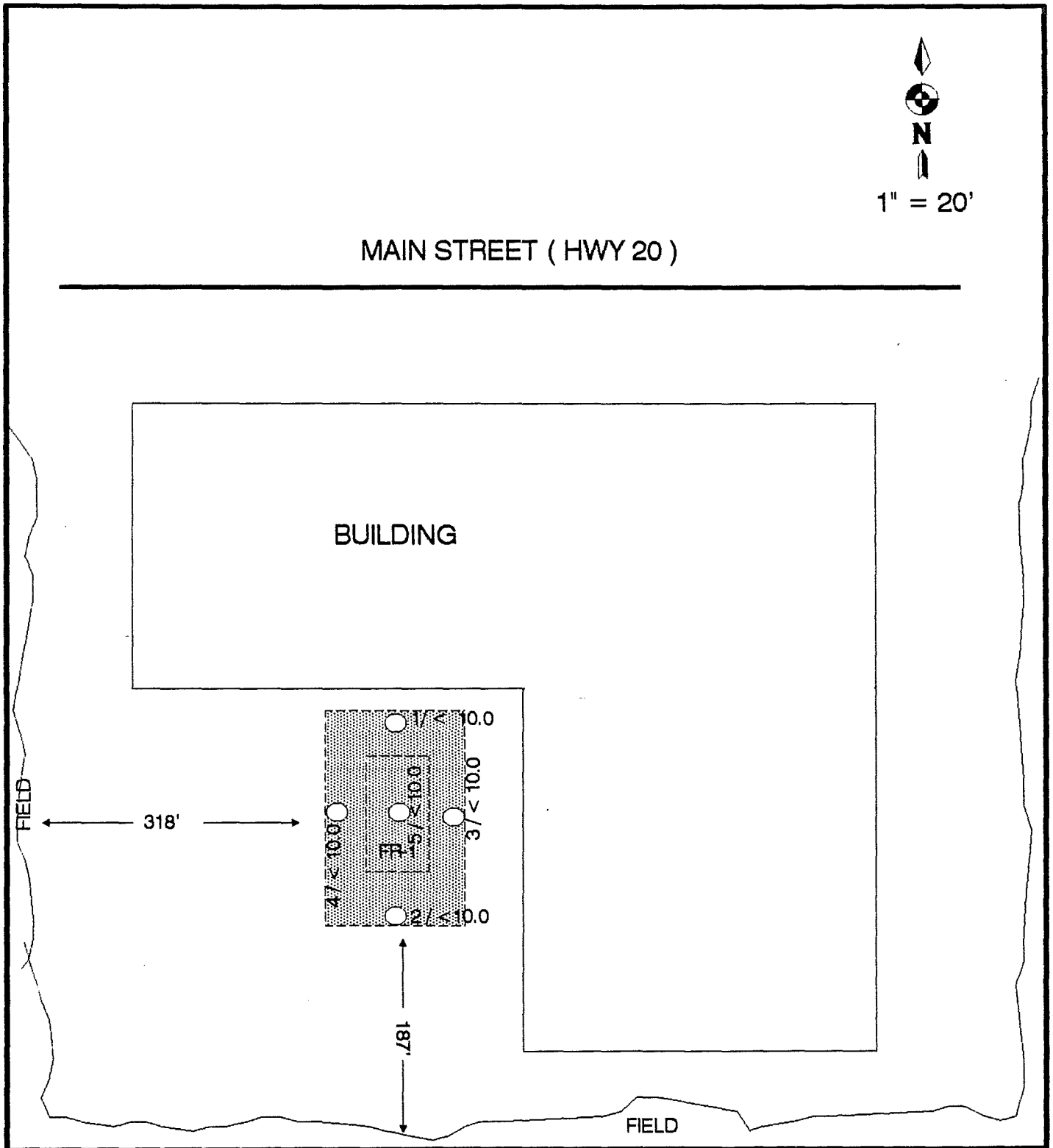
N

ENVIRONMENTAL INNOVATIONS, LTD.

LOCATION MAP

921 W. MAIN STREET
WATERFORD, WI

FIGURE 1



LEGEND

5/4.0 LABORATORY SAMPLE LOCATIONS & TPH RESULTS

LIMITS OF EXCAVATION

PREVIOUS LOCATIONS OF TANKS & ISLAND

ENVIRONMENTAL INNOVATIONS, LTD.

SITE PLAN

921 W. MAIN STREET
WATERFORD, WI

FIGURE 2

EMPTY CONTAINER REPORT

EMPTY CONTAINER AND TANK REPORT

Date: October 4, 1990

OWNER NAME: Waterford Public Schools

OWNER'S ADDRESS: 29006 East Evergreen Drive
Rochester, WI 53167

CONTACT: Mr. Richard Marta
PHONE NO. (414) 534-5065

TANK LOCATION: 921 West Main Street
Waterford, WI 53185

TANK DESIGNATION:

TANK NO.	CAPACITY (gallons)	DIAMETER (feet)	LENGTH (ft/in)	TYPE	AGE (yrs)	CONTENT	CONDITION
FR-1	7,000	7	21'5"	Steel	---	Diesel	Non-Leaker

TANK REMOVAL CONTRACTOR: Azarian Co. (414) 637-4153
800 Water Street
Racine, WI 53401

EMPTYING/CLEANING CONTRACTOR: Azarian Remedial Services
800 Water St.
Racine, WI 53401
(414) 637-4153

ENVIRONMENTAL CONSULTANT: Environmental Innovations

FIELD TECHNICIAN: Dee Zoellner / Tim Smith

ULTIMATE REUSE, DISPOSAL, OR RECYCLING DESTINATION(S):

1. PREVIOUS CONTENTS:

1a. TREATMENT, STORAGE, DISPOSAL, or RECYCLING FACILITY:

ABC Services (414) 552-9090
5910 49th St.
Kenosha, WI 53144

1b. TYPE DISPOSAL:

Recycled

EMPTY CONTAINER AND TANK REPORT (Continued)

1c. HAULER:

Azarian Remedial Services

2. DECONTAMINATION OR CLEANING RESIDUE

2a. TREATMENT, STORAGE, DISPOSAL, or RECYCLING FACILITY:

Land Reclamation (414) 886-6172
1989 Oakes Road
Racine, WI 53406

2b. TYPE DISPOSAL:

Recycled

2c. HAULER:

Azarian Co.

3. TANK OR CONTAINER

3a. TREATMENT, STORAGE, DISPOSAL, or RECYCLING FACILITY:

DEGASSED, TORCH CUT ON SITE, AND SCRAPED

Johnson Metal Co. (414) 634-4341
3056 Hamilton St.
Racine, WI 53402

3b. HAULER:

Azarian Co.

CERTIFICATION:

We hereby certify that the tank(s) or container(s) described above is (are) empty and/or cleaned in accordance with Federal Regulations 40 CFR 261.7.

COMPANY: ENVIRONMENTAL INNOVATIONS LTD.

SIGNATURE Paul D. Herbert

PAUL D. HERBERT
HAZARDOUS MATERIALS CONSULTANT

CHAIN OF CUSTODY RECORD(s)

CHAIN OF CUSTODY RECORD

PROJ. NO.:

PROJECT NAME: Fox River - Waterford

SAMPLERS: Larson

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH	LEAD					SAMPLE DESCRIPTION: Soil	Depth	HNU
1	8/20	PM		X	North Wall	1							Sand	11'	0ppm
2					South Wall								"	11'	"
3					East Wall								"	11'	"
4					West Wall								"	11'	"
5					Bottom			X					"	12'	"

Relinquished By:	Date / Time	Received By:	Relinquished By:	Date / Time	Received By:
Dee Zollner	8-21-90 AM				

Remarks: Gabriel

Report To:

ENVIRONMENTAL INNOVATIONS
P.O. Box 4055 Racine, WI 53404 414-639-9095

LABORATORY REPORT(s)

LABORATORY REPORT

3307 - 14th Avenue
Kenosha, Wisconsin 53140
Phone (414) 652-5656

Fax (414) 652-5902
1-800-284-3823

gabriel - midwest, ltd.
Environmental & Technical Services

TO: Mr. Paul Herbert, Environmental Innovations, Racine, WI
SUBJECT: Fox River - Waterford, TPH
GML WI CERTIFICATION ID: 252087440
GL WI CERTIFICATION ID: 999520940
P.O. #: Verbal
SAMPLE DATE: 08/20/90 DATE RECEIVED: 08/21/90
GML SAMPLE CODE: SEE BELOW ANALYSIS COMPLETED: 08/21/90
REPORT NUMBER: 1308
REPORT DATE: 08/22/90

GML SAMPLE CODE	3235E-90	3236E-90	
SAMPLE DESCRIPTION	NORTH WALL	SOUTH WALL	DET. LIMIT
TPH	NOT DETECTED	NOT DETECTED	10.0 ppm

GML SAMPLE CODE	3237E-90	3238E-90	
SAMPLE DESCRIPTION	EAST WALL	WEST WALL	DET. LIMIT
TPH	NOT DETECTED	NOT DETECTED	10.0 ppm

White Copy - Client
Yellow Copy - Control
Pink Copy - Billing

LAB DIRECTOR 8/29/90

LABORATORY REPORT

3307 - 14th Avenue
Kenosha, Wisconsin 53140
Phone (414) 652-5656

Fax (414) 652-5902
1-800-284-3823

gabriel - midwest, ltd.
Environmental & Technical Services

TO: Mr. Paul Herbert, Environmental Innovations, Racine, WI
SUBJECT: Fox River, Waterford, TPH & Total Lead
GML WI CERTIFICATION ID: 252087440
GL WI CERTIFICATION ID: 999520940
P.O. #: Verbal
SAMPLE DATE: 08/20/90 DATE RECEIVED: 08/21/90
GML SAMPLE CODE: 3239E-90 ANALYSIS COMPLETED: 08/29/90
REPORT NUMBER: 1364
REPORT DATE: 08/30/90

GML SAMPLE CODE	3239E-90	
SAMPLE DESCRIPTION	Fox River Bottom 12 feet	DET. LIMIT
TPH	NOT DETECTED	10.0 ppm
Total Lead	<2.00 mg/kg	2.00 mg/kg

LAB DIRECTOR 8-30-90

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Pink Copy - Billing

TANK REMOVAL PERMIT

VILLAGE OF WATERFORD
APPLICATION FOR PERMIT

Application No: 90-0016 #6

Voucher No: _____ Date: August 14, 1990

Owner: Fox River School Address: 921 W. Main St.

The undersigned hereby applies for a permit to do the work herein described and hereby agrees that all work will be done in accordance with all the laws of the State of Wisconsin and all the ordinances of the Village of Waterford applicable to the following premises:

Address: 921 W. Main St. Lot: _____ Block: _____ Subbdivision: _____

Description: Removal of 10,000 gal underground tank — Documentation to be held by Village

Signed: _____, Owner Signed: Joe Spell for, Agent

BUILDING PERMIT APPLICATION

Class of Construction: _____ No. of Stories: _____

Size: _____ wide x _____ long; Area _____ sq. ft. Height _____; Volume _____

Work Consists of:

New Building: _____ Razing: _____ Designed by: _____

Garage: _____ Moving: _____ Contractor: _____

Addition: _____ Alterations: _____ Plat-sketch submitted: _____

Repairs: _____ Plans and Specifications: _____

Other: ✓ tank removal Estimated Cost: $1000.00 Fee: $25.00

Remarks: _____ Permit Issued (Date): Aug. 14, 1990

Aaron Davies Inspector

Zoning District: _____ Premises Occupied and Used as: _____

Lot Area: _____ sq. ft.; Front Yard: _____ ft.; Side Yards _____ and _____ ft.

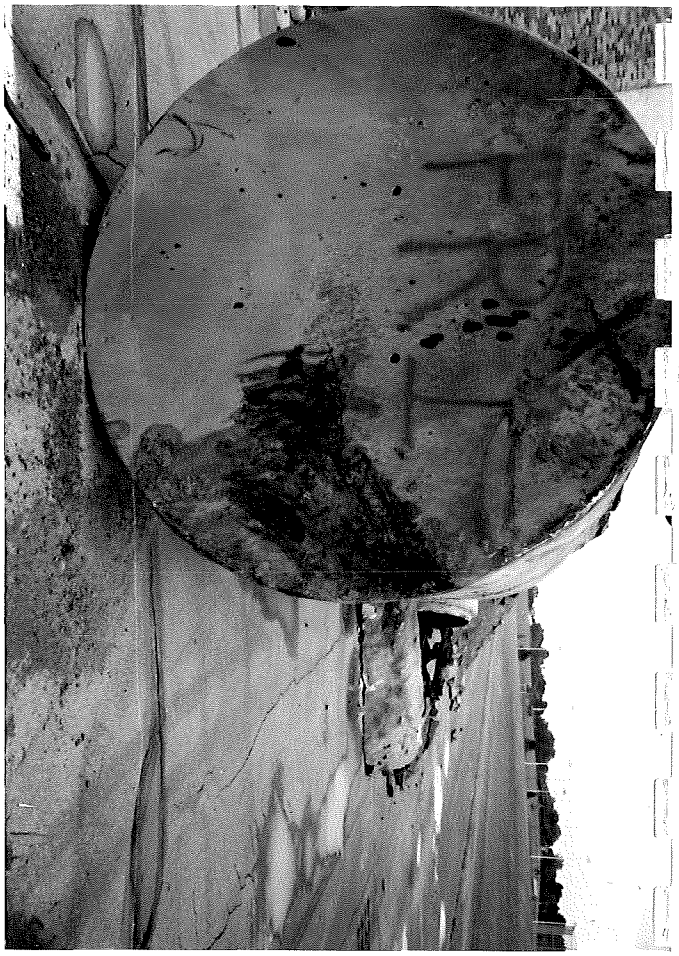
Rear Yard: _____ ft.; Building Height: _____ ft.

APPLICATION FOR: _____ Signs or Billboards: _____;

Temporary Building: _____; Use Permit: _____;

Street or Road Occupancy: _____

PROJECT PHOTOGRAPHS



WASTE CHARACTERIZATION PROFILE FORM AND LABORATORY REPORT

LAND RECLAMATION COMPANY
P. O. 081220
1989 Oakes Road
Racine, WI 53406
414/886-6172

WASTE CHARACTERIZATION PROFILE FORM

PROFILE NUMBER _____

BILL DISPOSAL COSTS TO: ADDRESS & PHONE
AZARIAN REMEDIAL
800 WATER ST
RACINE, WI 53403

GENERATOR:

Firm Name: WATERFORD GRADED SCHOOL DISTRICT

Contact Person: RICHARD MARTA

Site Address: (Where material is generated)

405 - 922 WEST MAIN ST
Number Street

WATERFORD WI 53167
City State Zip

Phone # 414-534-5065

Process generating waste: CONTAMINATED SOIL FROM HEATING OIL UNDERGROUND STORAGE TANKS

Anticipated volume is: 1000 TONS

PHYSICAL PROPERTIES

Physical state at room temperature (25°C) SOLID

Phases/layers bilayered _____ Multilayered _____ None X

Total solids: 94.54 % Percent free liquids NONE %

pH: 9.35 Flash point: > 212 °F

Density: 1.0 - 1.3 Solubility (GR/100GR H_2O at 20°C) NONE

Date of most recent analysis: 8/9/90

NAME OF LABORATORY PERFORMING ANALYSIS GREBE MIDWEST

COMPOSITION DATA IN ppm OR %

	TOTAL	EP. TOXICITY
ARSENIC		
BARIUM		
CADMIUM		
CHROMIUM		
COPPER		
IRON		
LEAD	2.50 ppm	
MERCURY		
MANGANESE		
NICKEL		
SELENIUM		
SILVER		
ZINC		
TOTAL CYANIDE		
FREE CYANIDE		
SULFIDE		
AMMONIA		
CHLORINE		
PHENOL		

[X] PETROLEUM CONTAMINATED SOILS ONLY (CHECK BOX)

THE GENERATOR HAS CERTIFIED THAT THIS WASTE IS NOT HAZARDOUS WASTE AS SPECIFIED BY NR181 OR 40CFR 261.
THE GENERATOR HAS CERTIFIED THAT THIS MATERIAL DOES NOT CONTAIN MORE THAN 50 PPM OF PCB MATERIALS.
THE GENERATOR HAS CERTIFIED THAT THIS INFORMATION IS REPRESENTATIVE OF HIS WASTE.

COMMENTS: ENVIRONMENTAL INNOVATIONS - TECHNICAL CONTACT 639-9095

TPH 42.9 ppm
Benzene 273.8 ppb Toluene 0 ppb
Ethylbenzene 0 ppb Xylene 54.5 ppb

RICHARD MARTA Richard Marta SUPERINTENDENT 8/9/90
GENERATOR'S SIGNATURE (ATTACH LABORATORY REPORT) TITLE DATE F127-1/90

LABORATORY REPORT

3307 - 14th Avenue
Kenosha, Wisconsin 53140
Phone (414) 652-5656

Fax (414) 652-5902
1-800-284-3823

gabriel - midwest, ltd.
Environmental & Technical Services

TO: Mr. Paul Herbert, Environmental Innovations, Racine, WI
SUBJECT: Waterford Graded, Waste Management Soil Profile
GML WI CERTIFICATION ID#: 252087440
GL WI CERTIFICATION ID#: 999520940
P.O. #: Verbal
SAMPLE DATE: 07/28/90 DATE RECEIVED: 07/30/90
GML SAMPLE CODE: 2926E-90 ANALYSIS COMPLETED: 08/06/90
REPORT NUMBER: 1220
REPORT DATE: 08/09/90

SAMPLE DESCRIPTION	Sand 14'	DET. LIMIT
Flashpoint, Deg. F	>212.0	
pH, Standard Units	9.35	
% Total Solids	94.54 %	
Total Lead	2.50 mg/kg	2.00 mg/kg
EP Lead	NOT REQUIRED	
Benzene	273.8 ug/kg	50.0 ug/kg
Ethylbenzene	NOT DETECTED	50.0 ug/kg
Toluene	NOT DETECTED	50.0 ug/kg
Xylene Isomers	54.5 ug/kg	50.0 ug/kg
TPH	42.9 mg/kg	10.0 mg/kg
Free Liquids	NONE PRESENT	

LAB DIRECTOR William J. Z[illegible] Jr.

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SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

This Report is intended for the sole use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME: Gabriel Midwest, Ltd.
ADDRESS: 3307 14th Avenue, Kenosha, WI 53140 LAB MGR. PHONE: (414) 652-5656
DATE SAMPLE RECEIVED AT LAB: 07/30/90 DATE SAME TAKEN 07/28/90
LAB SAMPLE NUMBER ASSIGNED: 2926E-90 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☐ NO

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT: 08/09/90 SIGNATURE: William J. Liniewicz Jr.
LAB MANAGER NAME: William J. Liniewicz, Jr.

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
✓	pH, s.u.	9.35		8/9/90	✓	Xylene Isomers	54.5	ug/kg	8/9/90
	Acidity, %, as					Phenols, mg/l			
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
✓	Total Solids @ 105°C, %	94.54%		8/9/90		Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	TPH	42.9 mg/kg		8/9/90
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
✓	Benzene	273.8		8/9/90		Total Alkalinity, M, as $CaCO_3$, mg/l			
✓	Flash Point, °F (closed cup)	>212.0°F		8/9/90		Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
✓	Ethylbenzene	ND @	50.0 ug/kg	8/9/90					
	Arsenic, as As, mg/l					Oil and Grease, mg/l			
	Barium, as Ba, mg/l				✓	Paint Filter Test, free liquids, %	NONE	PRESENT	8/9/90
	Cadmium, as Cd, mg/l					Water Content, as H_2O, %			
	Chromium, Total, as Cr, mg/l								
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l	2.50 mg/kg		8/9/90		Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
	Mercury, as Hg, mg/l					Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
	Selenium, as Se, mg/l					2,4-D, mg/l			
	Silver, as Ag, mg/l					2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
✓	Toluene	ND @	50.0 ug/kg	8/9/90					
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l								
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l								