WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District - Annex Building
Post Office Box 12436
4041 N. Richards St.
Milwaukee, Wisconsin 53212
TELEPHONE: 414-961-2727
TELEFAX #: 414-961-2770

April 22, 1993

File Ref:

David Siebold
Marathon Oil Company
9125 North 107th Street
Milwaukee, WI 53224-1508

Dear Mr. Siebold:

RE: Additive underground storage tank at above address

I have looked at the file for closure based on the report submitted by Midwest Engineering services, Inc. (MES). The Department requires no further action regarding impacts from the additive underground storage tank system which appear to have been remediated. Gasoline range organics were found in the soil nearby, but it is my understanding that the site is under investigation for petroleum contamination. Should environmental problems occur in the future that may be related to the former additive tank system, you may be required to do additional work.

Sincerely,

John Feeney
Hydro, Tank Response Unit

cc: MES
SED File

TELEPHONE LOG

SITE NAME/ID#: Marathon Oil #2 DATE/TIME: 3/19/92

CONTACT: Eric Johnson TELEPHONE NUMBER:

COMPANY / AGENCY: Marathon

SUMMARY:

Eric called and requested site close out.

Feeney

Eastern District
Terminal & Transport Department

JAN 2 8 1992

Marathon Oil Company

539 South Main Street
Findlay, Ohio 45840
Telephone 419/422-2121

January 10, 1992

WDNR
Bureau of Solid and Hazardous Waste Management
P.O. Box 7921
Madison, WI 53707

Dear Sirs:

On November 5, 1991, Marathon Oil Co. removed a gasoline additive UST. Enclosed is the closure report documenting the removal activities.

It appears as though contaminated soils exist in this area. However, non-detectable limits for isopropal alcohol (which is a component of the product that was in the tank) in all samples indicate that the contamination is not the result of a leaking underground storage tank. Marathon is currently investigating this site due to a previously reported release and will incorporate this area into our site assessment.

Please contact me at (419) 421-3018 if you have any questions.

Sincerely,

Eric Johnson

Eric J. Johnson
Environmental & Safety Representative

Enclosure

MILWAUKEE CO. RELEASE

midwest engineering services, inc.

geotechnical, environmental, & materials engineers

ADDITIVE UNDERGROUND STORAGE TANK REMOVAL ASSESSMENT

Milwaukee Bulk Terminal

9125 107th Street

Milwaukee, Wisconsin

Prepared for

Marathon Oil Company

539 South Main Street

Findlay, Ohio 45840

November 29, 1991

M.E.S. Project No. 7-11031

midwest engineering services, inc.
111 Wilmont Drive • Waukesha, WI 53186 • 414-521-2125 • FAX 414-521-2471

November 29, 1991

Mr. Eric Johnson
Marathon Oil Company
539 South Main Street
Findlay, OH 45840

SUBJECT: Additive UST Removal Assessment
Milwaukee Bulk Terminal
Milwaukee, Wisconsin
M.E.S. Project No. 7-11031

Dear Mr. Johnson,

In accordance with your request, we have observed the removal of an underground storage tank at the above referenced site. Enclosed are three (3) copies of the report summarizing the observations and test results.

Midwest Engineering Services, Inc. appreciates the opportunity to be of service on this project. If there are any questions concerning this report or if we may be of any further service, please contact us at your convenience.

Sincerely yours,

MIDWEST ENGINEERING SERVICES, INC.

Scott J. Brockway
Staff Geologist

Matthew A. Henderson, P.E.
Principal of Firm

ADDITIVE UNDERGROUND STORAGE TANK REMOVAL ASSESSMENT

Milwaukee Bulk Terminal

9125 107th Street

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Findlay, Ohio 45840

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TABLE OF CONTENTS

INTRODUCTION

General

This report presents the findings and observations of the underground storage tank (UST) removal at the Milwaukee Bulk Terminal site located at 9125 107th Street in Milwaukee, Wisconsin. The removal assessment was performed for Marathon Oil Company at the request of Mr. Eric Johnson.

Purpose

The purpose of this assessment was to observe the removal of one (1) underground storage tank (UST) on the site and to assess and document the tank closure activities.

Scope

The scope of the services included a site reconnaissance, visual and olfactory observations of the excavation, collection of soil samples from the bottom of the excavation through soil borings for field screening and laboratory analysis, photodocumentation of removal activities and the preparation of a closure report.

Authorization

Authorization to perform the UST removal assessment was in the form of a Marathon Work Order No. 14660, issued in response to MES Proposal No. 7-1127 dated October 24, 1991. The project scope and general conditions for providing the removal assessment services were contained in the above referenced proposal.

SITE AND PROJECT DESCRIPTION

Site Features and Background

The subject site is located in the Southeast Quarter of the Northeast Quarter of Section 6, Range 21 East, Township 8 North. The address of the site is 9125 107th Street, Milwaukee, Wisconsin. The property serves Marathon Oil Company as a bulk storage facility for petroleum products that are transferred into tankers for delivery to local service stations. Adjacent properties include bulk storage facilities for other major oil companies to the north, south and east, the property to the west is vacant land.

The bulk facility houses several large capacity aboveground storage tanks which are supplied fuel by a major pipeline which runs from various refineries. The fuel stored in the aboveground tanks is delivered to tankers through the loading racks which are located to the south of the bulk storage units. The site also houses a shop facility, an oil-water separator, a delivery manifold, a vapor recovery system, an aboveground tank for fuel additives, and other facilities.

The additive underground storage tank area is situated to the east of the loading rack in between a light standard and an enclosed aboveground tank group used to store fuel additive. Information supplied by Marathon Oil Company indicates that the fuel additive stored in the underground storage tank is Lubrizol 8163 and is comprised mainly of isopropyl alcohol, xylene and ethylbenzene. The Material Safety Data Sheet (MSDS) is included in the appendix.

The UST, constructed of fiberglass, reportedly was installed in July of 1978 and was first used in December of 1978. The additive UST was connected to the loading rack by a pipeline that is approximately 2 feet below grade, and runs parallel with the loading lanes until it turns south to connect to the three loading racks. The additive is blended with the fuel as it is pumped from its bulk storage into the tankers.

FIELD ACTIVITIES

Observations

On November 5, 1991, an MES representative was on-site to observe and document UST removal activities. Timothy J. Temperly from the Department of Building Inspection, City of Milwaukee, was also on-site to observe removal activities. The additive remaining in the UST was pumped into the separator system and associated plumbing connections were disconnected by Marathon Oil Company personnel. Schmidt Brothers Landscaping and Excavating, Inc. of Monee, Illinois, performed the excavation and UST removal activities at the direction of the client. The soil situated on the top of the tank displayed obvious visual and olfactory indications of petroleum release and was removed and stockpiled to the west of the tank area on plastic sheeting. Due to limited swing space for the backhoe, much of the soil above the north end of the tank was removed manually. Water was encountered at 2 feet below ground surface after the soil above the UST was removed which probably represents a perched condition.

The UST, which measured 9 feet in diameter and 25 feet long

indicating a capacity of 11,000 gallons, was held in place by four straps that were anchored to a 1 foot thick concrete slab that is approximately 11 feet below surface grade. Initially, tank vapors were purged utilizing an air-compressor supplied by Schmidt Bros. The additive tank was then extracted by cutting the two fiberglass bands situated on the south end of the tank. Cutting the straps caused the south end of the UST to rise above surface level, due to hydrostatic uplift caused by water in the tank excavation. After the northern two fiberglass straps were exposed and cut, the backhoe operator removed the UST utilizing a chain and the lifting lugs on top of the tank. The tank appeared to be in good condition with no obvious perforations. The tank was staged temporarily on the pavement located to the south of the loading rack.

The interior of the tank was checked for the presence of explosive vapors and oxygen content by Schmidt Bros. personnel. The tank was then disabled utilizing a Sawz-All, and was cleaned by a Schmidt Bros. employee who was equipped with Level C protection. The drying compound utilized to soak up the excess residual material was containerized in a 5 gallon bucket and transported to the Schmidt Bros. facility in Monee, Illinois for disposal. The UST was demolished by Schmidt Bros. personnel utilizing the backhoe and was also transported to their Monee, Illinois facility for disposal.

After the UST was removed from the excavation, an attempt was made to excavate the affected backfill still contained within the excavation. The backfill, which is comprised mainly of pea gravel, collapsed into the void space each time an attempt was made to remove the backfill. It was determined that an unsafe condition existed by continuing to excavate backfill from the tank area, due to the possible collapse of the soils beneath the light standard and the concrete retaining wall. After discussions between the WDNR case representative and the client, it was decided that an unsafe condition existed and the soil samples needed from the ends of the tank could be obtained utilizing a drill rig and split-spoon sampling techniques.

The product line that connected the additive UST to the loading rack was capped by Marathon Oil Company personnel and left in place due to the presence of additional piping runs which accompany this particular product line towards the loading rack. Removal of the product line was not possible without complete removal of the other product lines.

The excavation's dimensions upon completion of the UST removal were approximately 10 feet wide by 27 feet long and reached a maximum depth of 4 feet, which was the top of the collapsed tank backfill. The excavation was filled in with clean fill

comprised of 3/4" crushed limestone with fines and topped off with 1" crushed limestone.

Reportedly, approximately 30 cubic yards of affected soil was hauled on November 7, 1991 to Waste Management's Parkview Landfill located in Menomonee Falls, Wisconsin. The affected soil was hauled by Autoquip, Inc. under an existing permit.

Field Vapor Screening and Sample Collection

Soil samples collected during excavation and drilling activities were tested for volatile vapors in the field with an Hnu 11.7 eV Model PI-101 Photoionization Analyzer. The Hnu is an electronic instrument that measures the relative concentration of volatile organic vapors in the headspace of a container. The response of the instrument is dependent on volatility, temperature, and ionization potential of gases measured along with the sensitivity of the instrument to those gases. Because, in the majority of cases, the gases to be measured and their concentrations in the headspace are not known, the response of the meter only serves as a relative indication of the presence of VOC's and does not provide an exact measurement of the gases present. The Hnu is, therefore, a qualitative tool for VOC presence and not a quantitative measuring instrument.

Each soil sample was placed in a clean plastic sealable bag and later screened with an 11.7 eV Hnu Photoionization Detector (PID), that was calibrated in the field using Hnu Systems, Inc. span gas. The span setting on the Hnu was set at 2.7 to obtain the target reading which is 63 ppm of benzene equivalents for an 11.7 eV Hnu. The date of the latest factory calibration on the Hnu is August 8, 1991.

During excavation activities on November 5, 1991, the MES representative extracted one sample for vapor screening analysis. The sample was obtained in the vicinity of the fill port at approximately 2 feet below grade. The soil obtained consisted of silty clay fill which displayed obvious visual and olfactory indications of a petroleum product release. The PID reading on the headspace of the sample was 300 parts per million (ppm). No other samples were obtained from the excavation due to the hazards present and the inability to expose the sidewalls and bottom during excavation activities.

Sent to lab?

On November 6, 1991, MES mobilized a drill rig, the drill crew and a geologist to obtain soil samples at locations which were situated at the ends of the former UST. Soil borings were performed with 3 1/4" hollow stem augers that were steam cleaned prior to each boring. Split-spoon samples were

collected in accordance with ASTM D-1586. Split-spoon barrels were cleaned in between sampling intervals with a TSP wash and a potable water rinse. Soil Boring TP-1, located at the south end of the tank excavation, proceeded to a completion depth of 16 feet. Backfill encountered in the 8 to 10 foot sample interval displayed visual and olfactory signs of petroleum product. The PID reading on the headspace of the sample was 120 ppm. A concrete slab was encountered at 11 +/- feet below grade. The soils situated below the slab consist of brown silty clay and did not display obvious visual or olfactory indications of a petroleum product release. PID readings on the headspace of the soils obtained from below the slab were less than 3 ppm. Soil Boring TP-2, located on the north end of the tank excavation also proceeded to a completion of 16 feet. Soil samples were extracted from below the concrete slab and consisted of brown silty clay which did not display obvious visual or olfactory indications of a petroleum product release. PID readings in these soils ranged from 4 to 10 ppm.

To ascertain the condition of the soil adjacent to the product line, an MES representative performed a hand-auger boring on November 15, 1991. Soil Boring HA-1, located midway between the former UST area and the loading rack, reached a completion depth of 4 feet below grade. The soils encountered were comprised of a slightly discolored brown silty clay which displayed olfactory signs of petroleum products. The PID reading on the soil extracted from the 3 to 4 foot interval was 15 ppm.

Samples from the 14 to 16 foot interval in borings TP-1 and TP-2 and the 3 to 4 foot interval in boring HA-1 were collected in clean laboratory glassware provided by Swanson Environmental, Inc. All samples were iced and documented utilizing standard chain of custody procedures. PID screening results are available on Figure 4, and Boring/Sampling locations are presented on Figure 3, in the appendix.

Analytical Testing

Soil samples from the 14 to 16 foot interval in soil borings TP-1 and TP-2, and the 3 to 4 foot interval in soil boring HA-1 were submitted to Swanson Environmental, Inc. in Brookfield, Wisconsin for analysis of Total Petroleum Hydrocarbons (TPH) content as Gasoline Related Organics (GRO) and isopropyl alcohol. The sample from HA-1 was also analyzed for the presence of TPH as Diesel-Related Organics (DRO). These sample parameters were chosen because gasoline constituents and isopropyl alcohol are major constituents of the additive, Lubrizol 8136, which was stored in the UST.

Laboratory Results

Analytical results on TPH content as GRO indicate non-detectable levels for the samples submitted from soil borings TP-1 and TP-2. GRO analysis for the Hand Auger boring (HA-1) sample indicates a concentration of 20 ppm. The scan for Diesel Related Organics (DRO) on the sample from HA-1 indicated non-detectable levels. Concentrations of GRO/DRO were based on gasoline and diesel standards using the State of California method. The detection limit for this method is 5 ppm. The State of California method is the method approved and required by the Wisconsin Department of Natural Resources (WDNR) for underground storage tank removal assessments. Analysis for isopropyl alcohol (isopropanol) indicate non-detectable limits for all samples submitted. The detection limit for isopropanol is 1 ppm. The isopropanol concentration was determined by comparing the test results against a known standard.

CONCLUSIONS AND RECOMMENDATIONS

Soils situated above the UST displayed obvious visual and olfactory signs of a petroleum release. Vapor screening on the headspace of the sample obtained from this area indicated a level of 300 ppm. Affected soil was stockpiled and subsequently hauled to Parkview Landfill in Menomonee Falls, Wisconsin. Headspace PID reading on the backfill obtained from the 8 to 10 foot interval during drilling activities indicated a level of 120 ppm. Water was encountered in the tank cavity during excavation and drilling activities which may represent a perched condition. The soil extracted from the product line area was slightly discolored, displayed olfactory indications of petroleum products and contained 20 ppm of TPH (GRO) as determined through analytical methods.

Analytical results from the samples submitted from the soil beneath the UST yielded non-detection TPH concentrations less than 5 ppm. Analysis on the sample submitted from the product line area indicated a TPH concentration of 20 ppm (GRO). The Wisconsin Department of Natural Resources (WDNR) currently does not have soil clean-up standards. The WDNR does consider soil contamination above 10 ppm TPH discovered at a tank removal the "action level" that triggers the requirement for an investigation to determine the extent of contamination. Typically, UST removal sites are reviewed by the WDNR on case by case basis regarding further remedial and/or investigative action.

Based on visual and olfactory observations, PID screening and analytical data, it appears that remedial action may be required. The remedial action plan, if required, should further address the remaining affected backfill that exists within the tank cavity, the water that is in contact with the backfill, and the soil situated to the north of the product lines which has been affected.

The reports of this site assessment and laboratory data, should be submitted to both DILHR and the DNR at the following locations:

DILHR
Bureau of Petroleum Inspection and Fire Protection
P.O. Box 7969
Madison, WI 53707

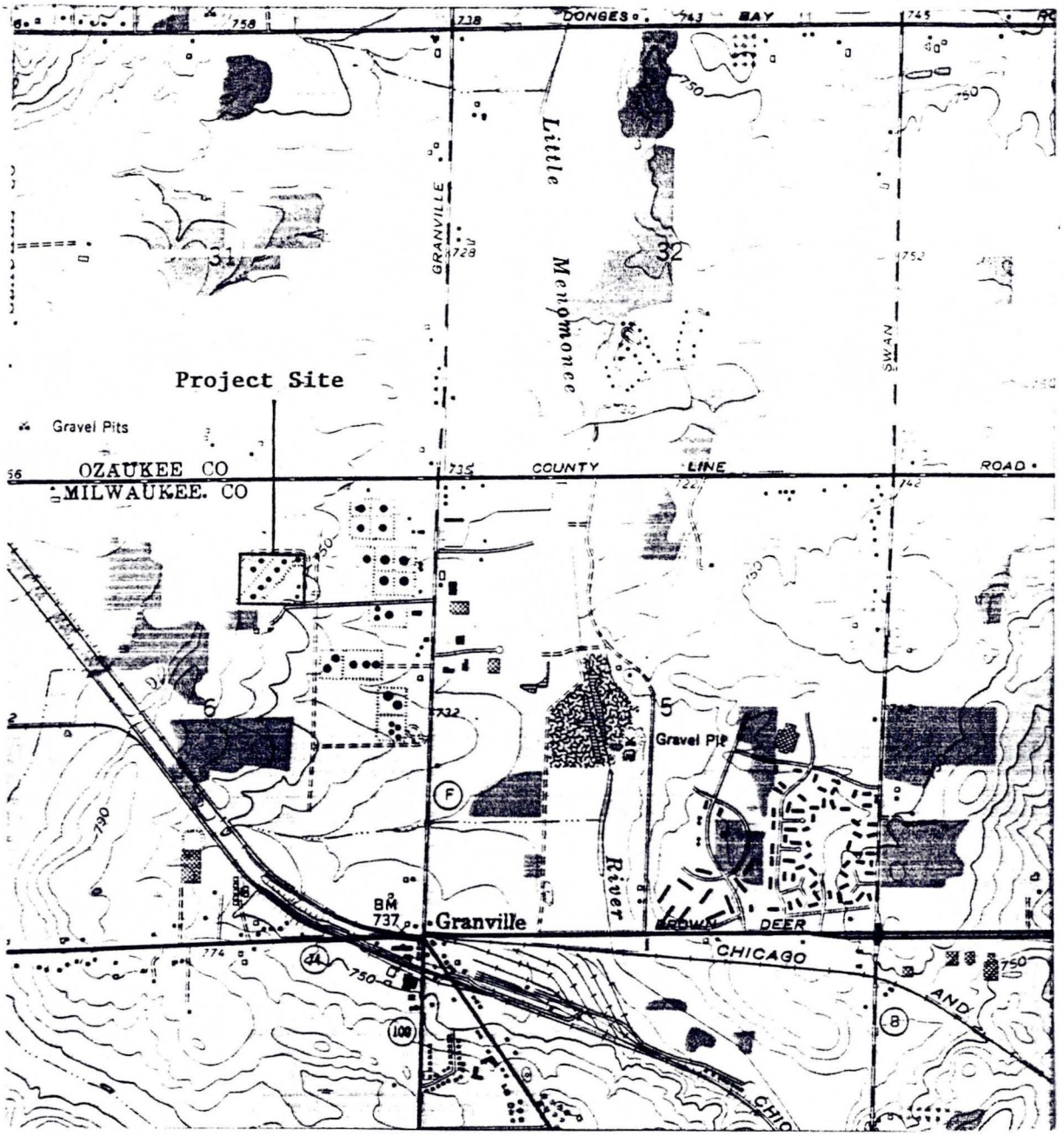
DNR
Bureau of Solid and Hazardous Waste Management
P.O. Box 7921
Madison, WI 53707

In addition, the removal of the UST should be reported to the Safety and Buildings Division, Bureau of Petroleum Inspection and Fire Protection (Phone No. 608-266-8076), through the use of the "Tank Inventory Form" (SBD-7437), to be completed by the owner/operator of the USTs. This form is included in Appendix I.

This UST Removal assessment has been prepared to aid in the evaluation of the soil conditions on this site, and to formulate the follow-up assessment or corrective action planning, if needed. The recommendations presented herein are based on the available data obtained during the excavation activity and therefore should not be misconstrued as an all-inclusive search for petroleum products on the site.

APPENDIX

Appendix I
- Figure 1: Site Location Map
- Figure 2: Site Features Map
- Figure 3: Sample and Boring Location Diagram
- Figure 4: Summary of Hnu Headspace and Analytical Results
- Soil Boring Logs
- General Notes
- Chain-of-Custody Forms
- Analytical Data
- Tank Inventory Form (SBD-7437)
- Material Safety Data Sheet-Lubrizol 8163



midwest engineering services, inc.

FIGURE 1

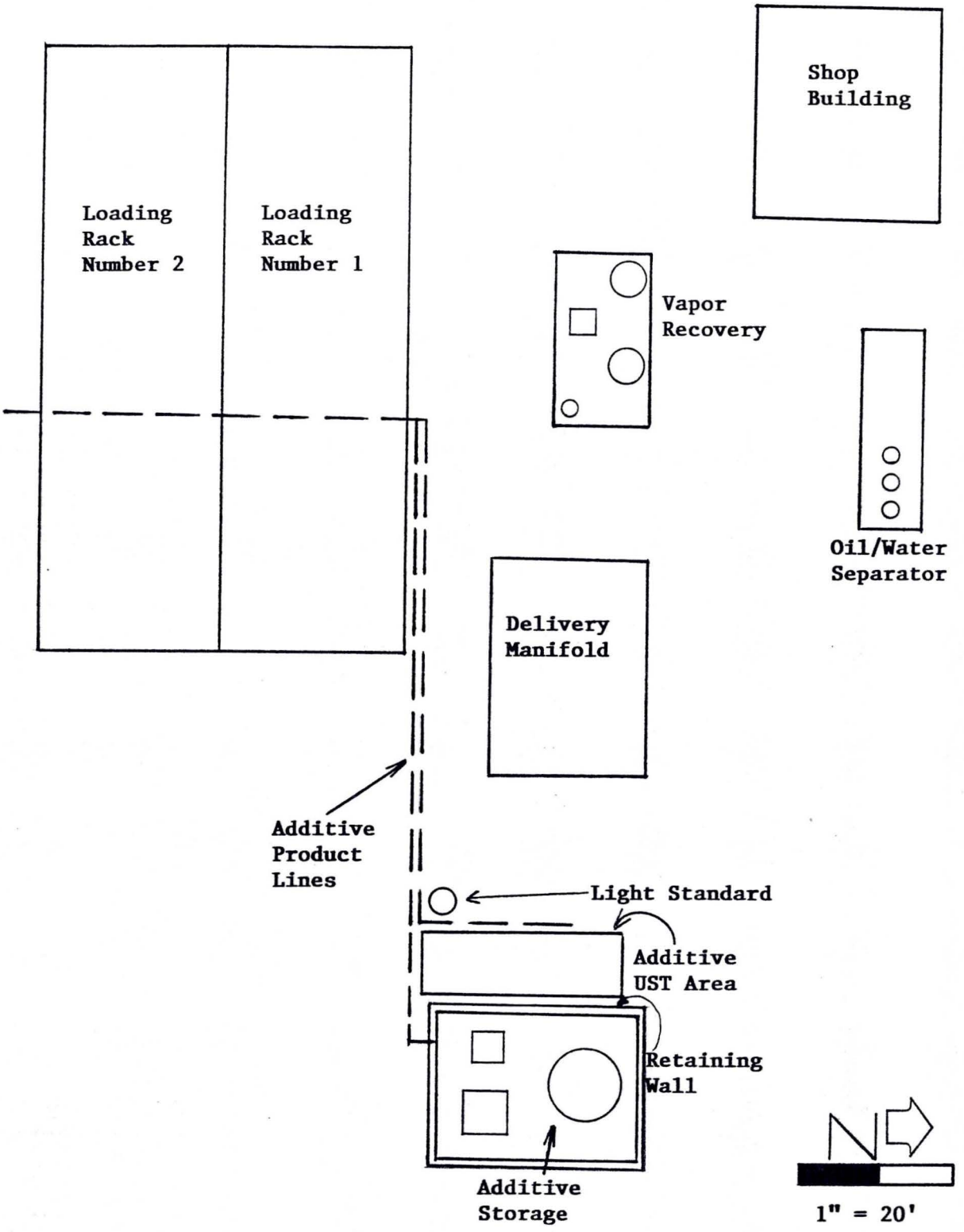
Site Location Map
Marathon Oil Company
Milwaukee Bulk Terminal
9125 107th Street
Milwaukee, Wisconsin

PROJECT NUMBER:

7-11031

DATE:

11-26-91



midwest engineering services, inc.

FIGURE 2

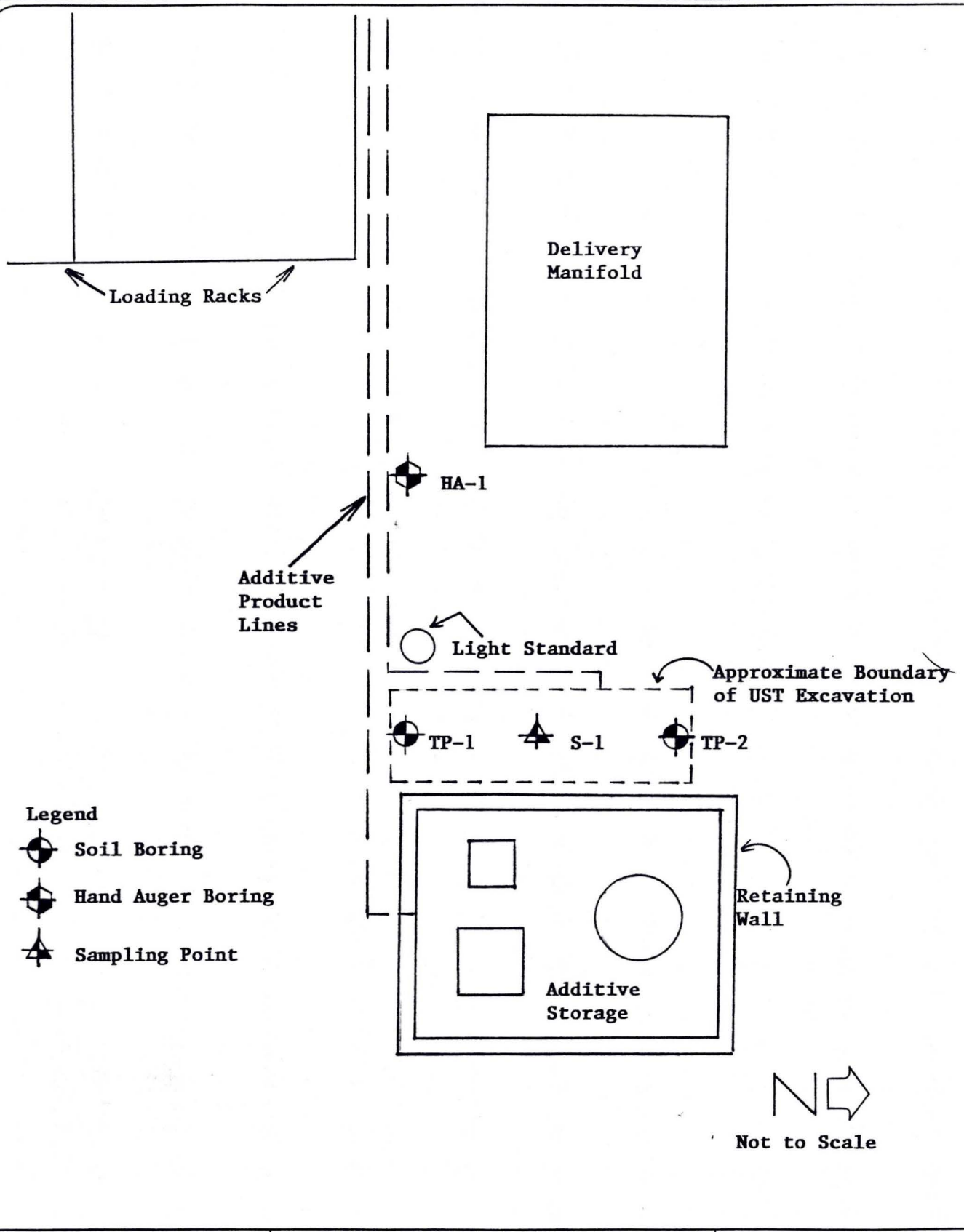
Site Features Map
Marathon Oil Company
Milwaukee Bulk Terminal
9125 107th Street
Milwaukee, Wisconsin

PROJECT NUMBER:

7-11031

DATE:

11-26-91



midwest engineering services, inc.

FIGURE 3

Sample and Boring Location Diagram
Marathon Oil Company
Milwaukee Bulk Terminal
9125 107th Street
Milwaukee, Wisconsin

PROJECT NUMBER:
7-11031

DATE:
11-27-91

Figure 4

Summary of Hnu Headspace and Analytical Results
Marathon Oil Company
Milwaukee Bulk Terminal
Milwaukee, Wisconsin
M.E.S. Project No. 7-11031

Sample No.	Location and Soil Classification	Hnu (ppm)	TPH (ppm)	Isopropanol (ppm)
S-1	Above center of UST - 2 ' Black Brown Silty Clay	300	--	--
TP-1				
1-SS	8 - 10', TP-1, Pea Gravel	120	--	--
2-SS	10 - 12', TP-1, Pea Gravel	55	--	--
3-SS	12 - 14', TP-1, Brown Silty Clay	3	<5	<1
4-SS	12 - 16', TP-1, Brown Silty Clay	1.5	<5	<1
TP-2				
1-SS	12 - 14', TP-2, Brown Silty Clay	10	<5	<1
2-SS	14 - 16', TP-2, Brown Silty Clay	4	<5	<1
HA-1				
1-HA	3 - 4', HA-1, Black/Brown Silty Clay	15	20	<1

ND: Non-Detectable
ppm: Parts per million
<5.0: Below the analytical detection limits
NOTE: Depths shown are referenced to surface.

SOIL BORING LOG

midwest engineering services, inc.

BORING NO. TP-1

PROJECT NO. 7-11031

PROJECT NAME: Additive UST Removal Assessment

DATE OF BORING: 11-06-91

LOCATION: Marathon Bulk Terminal

Milwaukee, Wisconsin

FIELD REPRESENTATIVE:

Scott Brockway

VISUAL SOIL CLASSIFICATION GROUND SURFACE: *ELEVATION*	DEPTH (feet)	SAMPLE NO.	N	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	REMARKS
3/4 inch Crushed Limestone								
Pea Gravel (Tank Backfill)	5							8 Feet
		1-SS	7				120	Petroleum Odor
	10	2-SS	56				55	Present
Concrete Slab								
Brown Silty CLAY; Trace Fine to Coarse Sand		3-SS	10				3	
	15	4-SS	32				1.5	
End of Boring: 16 Feet Boring Collapsed Upon Removal of Hollow Stem Auger to a Depth of 1 Foot Below Grade. PID: Photoionization Detector	20 25 30 35 40							

*Lines of demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes, such as fill-to-natural soil zone transitions.*

SOIL BORING LOG

midwest engineering services, inc.

BORING NO. TP-2

PROJECT NO. 7-11031

PROJECT NAME: Additive UST Removal Assessment

DATE OF BORING: 11-06-91

LOCATION: Marathon Bulk Terminal
Milwaukee, Wisconsin

FIELD REPRESENTATIVE: Scott J. Brockway

VISUAL SOIL CLASSIFICATION GROUND SURFACE: *ELEVATION*	DEPTH (feet)	SAMPLE NO.	N	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	REMARKS
3/4 inch Crushed Limestone								
Pea Gravel (Tank Backfill)	5							8 Feet ▼
	10							
Concrete Slab								
Brown Silty CLAY: Trace Fine to Coarse Sand		1-SS	41				10	
	15	2-SS	35				4	
End of Boring: 16 Feet Boring Collapsed Upon Removal of Hollow Stem Auger to a Depth of 1 Foot Below Grade PID: Photoionization Detector	20							
	25							
	30							
	35							
	40							

*Lines of demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes, such as fill-to-natural soil zone transitions.*

SOIL BORING LOG

midwest engineering services, inc.

BORING NO. HA-1

PROJECT NO. 7-11031

PROJECT NAME: Additive UST Removal Assessment

DATE OF BORING: 11-15-91

LOCATION: Marathon Bulk Terminal
Milwaukee, Wisconsin

FIELD REPRESENTATIVE: Scott Brockway

VISUAL SOIL CLASSIFICATION GROUND SURFACE: *ELEVATION*	DEPTH (feet)	SAMPLE NO.	N	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	REMARKS
Note A Black/Brown Silty CLAY, Trace Silt and Clay		1-HA					15	Petroleum Odor Present Discoloration
End of Boring: 4 Feet Backfilled with Cuttings Upon Completion Note A: 8 inches of Crushed Limestone PID: Photoionization Detector	5 10 15 20 25 30 35 40							

*Lines of demarcation represent an **approximate** boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes, such as fill-to-natural soil zone transitions.*

GENERAL NOTES

SAMPLE IDENTIFICATION

Visual soil classifications are made in general accordance with the Unified Soil Classification System on the basis of textural and particle size categorization, and various soil behavior characteristics. Visual classifications should be substantiated by appropriate laboratory testing when a more exact soil identification is required to satisfy specific project applications criteria.

PARTICLE SIZE ±

Boulders: 8 inches Cobbles: 3 to 8 inches Gravel: 5 mm to 3 inches	Coarse Sand: 2mm to 4mm Medium Sand: 0.42mm to 2mm Fine Sand: 0.074 to 0.42mm	Silt: 0.005mm to 0.074mm Clay: -0.005mm

DRILLING & SAMPLING SYMBOLS

SS: Split-spoon, 2" O.D. by 1 3/8" I.D.
ST: Shelby Tube, 2" O.D. or 3" O.D., as noted in text
AU: Auger Sample
DB: Diamond Bit
CB: Carbide Bit
RB: Roller Bit
WS: Wash Sample
BS: Bag Sample
HA: Hand Auger

SOIL PROPERTY SYMBOLS

N: Standard penetration count, indicating number of blows of a 140 lb. hammer with a 30 inch drop, required to advance a split-spoon sampler one foot.
Qu: Unconfined compressive strength, tons per square foot (tsf)
Qp: Calibrated hand penetrometer resistance, tsf
MC: moisture content, %
LL: Liquid Limit PL: Plastic Limit PI: Plasticity Index
Dd: Dry Density, pounds per cubic foot (pcf)
PID: Photoionization Detector (Hnu meter) volatile vapor level, ppm

SOIL RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

NON-COHESIVE SOILS		COHESIVE SOILS		
Classifier	N-Value Range	Classifier	Qu Range (tsf)	N-Value Range
very loose	0 - 3	very soft	0 - 0.25	0 - 2
loose	3 - 7	soft	0.25 - 0.5	2 - 5
medium dense	7 - 15	medium stiff	0.5 - 1.0	5 - 10
dense	15 - 38	stiff	1.0 - 2.0	10 - 14
very dense	38 +	very stiff	2.0 - 4.0	14 - 32
		hard	4.0 +	32+

GROUNDWATER

: Approximate Groundwater level at time noted on soil boring log, measured in open bore hole unless otherwise noted. Groundwater levels often vary with time, and are affected by soil permeability characteristics, weather conditions, & lateral drainage conditions.

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
11031	[illegible]

SAMPLERS: [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA 8260	TPH 418.1	SVOC 8270				SAMPLE DESCRIPTION
	11/5/91				MW-2	2	X						[illegible]
	11/6/91				MW-1	2	X						↓
	11/6/91				MW-3 & 3	2	X						
	11/6/91				TRIP BLANK	1	X						
	11/6/91				FIELD BLANK	1	X		SVOC				
	11/6/91			X	TP 1 10' 16'	2		X	X				Soil
	11/6/91			X	TP 2 10' 16'	2		X	X				↓

RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	RELINQUISHED BY:	DATE / TIME	RECEIVED BY:
[illegible]	11/7 1:55	[illegible]			
RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	RELINQUISHED BY:	DATE / TIME	RECEIVED BY:

CORPORATE OFFICE:
24156-58 Haggerty Rd.
Farmington Hill, MI 48335
(313) 478-2700
Fax (313) 478-3819

LABORATORY SERVICES:
3150 North Brookfield Rd.
Brookfield, WI 53045
(414) 783-6111
Fax (414) 783-5752

SWANSON ENVIRONMENTAL INC.

REMARKS: STD T.A.T.

REPORT TO: Scott Brockway

DISTRIBUTION: WHITE-Accompanies Shipment, YELLOW-Laboratory File, PINK-Field File

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
7-11031	MES

SAMPLERS: Sandy Bucholz

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH (SW 1000)	ISOPROPYL ALCOHOL					SAMPLE DESCRIPTION
	11/5/91	1100		X	MA 1 CFI	1	X	X					

RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	RELINQUISHED BY:	DATE / TIME	RECEIVED BY:
Sandy Bucholz	11/5/91 1130	[illegible]			
RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	RELINQUISHED BY:	DATE / TIME	RECEIVED BY:

CORPORATE OFFICE:
24156-58 Haggerty Rd.
Farmington Hill, MI 48335
(313) 478-2700
Fax (313) 478-3819

LABORATORY SERVICES:
3150 North Brookfield Rd.
Brookfield, WI 53045
(414) 783-6111
Fax (414) 783-5752

SWANSON ENVIRONMENTAL INC.

REMARKS:

REPORT TO:

DISTRIBUTION: WHITE-Accompanies Shipment, YELLOW-Laboratory File, PINK-Field File

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road
Brookfield, Wisconsin 53045
telephone (414) 783-6111
facsimile (414) 783-5752

AIHA Accreditation #352
WDNR Certification #268181760

ANALYTICAL REPORT

REPORT NUMBER: B7297

Midwest Engineering Services, Inc.
111 Wilmont Drive
Waukesha, WI 53186

Attn: Mr. Matt Henderson
Project #7-11031

DATE: November 18, 1991
PURCHASE ORDER:
SEI JOB NO: WL9050
DATE COLLECTED: 11/06/91
DATE RECEIVED: 11/07/91

Soil Samples (MES)

Units: mg/kg (ppm)

Parameter	SEI ID / Sample ID	9050-1 IP-1 14-16'	9050-2 IP-2 14-16'
Isopropanol		<1	<1
Total Petroleum Hydrocarbons* (GRO)		<5	<5

* Concentration based on a gasoline standard using the State of California Method.

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Director

ORIGINAL

SWANSON ENVIRONMENTAL INC.

3150 North Brookfield Road
Brookfield, Wisconsin 53045
telephone (414) 783-6111
facsimile (414) 783-5752

AIHA Accreditation #352
WDNR Certification #268181760

REPORT NUMBER: B7400

ANALYTICAL REPORT

Midwest Engineering Services, Inc.
111 Wilmont Drive
Waukesha, WI 53186

Attn: Mr. Scott Brockway
Project #7-11031

DATE: November 25, 1991
PURCHASE ORDER:
SEI JOB NO: WL9152
DATE COLLECTED: 11/15/91
DATE RECEIVED: 11/15/91

Soil Sample (MES)

Units: mg/kg (ppm)

Parameter	SEI ID / Sample ID	9152-1 / HA-1
Isopropyl alcohol		<1
Total Petroleum Hydrocarbons* (DRO)		<5
Total Petroleum Hydrocarbons* (GRO)		20

* Concentration based on a diesel fuel standard using the Modified State of California Method.

** Concentration based on a gasoline standard using the State of California Method.

Reviewed & Approved by:

Rosemary L. Dineen
Laboratory Director

Wisconsin Department of Industry, Labor and Human Relations

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Send Completed Form To:
Safety & Buildings Division
P.O. Box 7969
Madison, WI 53707
Telephone (608) 267-5280

For Office Use Only:
Tank ID #

This form is to be completed pursuant to Section 101.142, Wis. Stats., to register all underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (included piping) located below ground level. A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner.

This registration applies to a tank that is (check one):
1 ☐ Purchase or New
2 ☐ Abandoned With Product
3 ☐ Abandoned No Product (empty) or With Water
4 ☐ Closed - Tank Removed
5 ☐ Closed - Filled With Inert Material
6 ☐ Out of Service
7 ☐ Changed Ownership - Indicate new owner below

Fire Department Providing Fire Coverage Where Tank Located

A. IDENTIFICATION: (Please Print)

1. Tank Site Name	Site Address	Site Telephone No

☐ City ☐ Village ☐ Town of:	State	Zip Code	County

2. Owner Name (mail sent here unless indicated otherwise in #3 below)	Owner Mailing Address (mail sent here unless indicated otherwise in #3)

☐ City ☐ Village ☐ Town of:	State	Zip Code	County

3. Alternate Mailing Name if Different Than #2	Alternate Mailing Street Address if Different From #2

☐ City ☐ Village ☐ Town of:	State	Zip Code	County

4. Tank Age (date installed, if known; or years old)	5. Tank Capacity (gallons)	6. Tank Manufacturer's Name (if known)

B. **TYPE OF USER (check one):**
1 ☐ Gas Station 2 ☐ Bulk Storage 3 ☐ Utility 4 ☐ Mercantile
5 ☐ Industrial 6 ☐ Government 7 ☐ School 8 ☐ Residential
9 ☐ Agricultural 10 ☐ Other (specify): _____

C. **TANK CONSTRUCTION:**
1 ☐ Bare Steel 2 ☐ Cathodically Protected and Coated Steel (A ☐ Sacrificial Anodes or B ☐ Impressed Current)
3 ☐ Coated Steel 4 ☐ Fiberglass 5 ☐ Other (specify): _____
6 ☐ Relined 7 ☐ Steel - Fiberglass Reinforced Plastic Composite 9 ☐ Unknown

Approval: 1 ☐ Nat'l Std 2 ☐ UL 3 ☐ Other:	Is Tank Double Walled? ☐ Yes ☐ No
Overfill Protection Provided? ☐ Yes ☐ No - If yes, identify type:	Spill Containment? ☐ Yes ☐ No

Tank leak detection method: 1 ☐ Automatic tank gauging 2. ☐ Vapor monitoring 3 ☐ Groundwater monitoring 4 ☐ Inventory control and tightness testing 5 ☐ Interstitial monitoring 6. ☐ Not required at present 7 ☐ Manual Tank Gauging (only for tanks of 1,000 gallons or less)

D. **PIPING CONSTRUCTION**
1 ☐ Bare Steel 2. ☐ Cathodically Protected and Coated or Wrapped Steel (A ☐ Sacrificial Anodes or B. ☐ Impressed Current) 3. ☐ Coated Steel
4 ☐ Fiberglass 5. ☐ Other (specify): _____ 9. ☐ Unknown

Piping System Type: 1 ☐ Pressurized piping with: A. ☐ auto shutoff; B ☐ alarm; or C ☐ flow restrictor 2. ☐ Suction piping with check valve at tank
3 ☐ Suction piping with check valve at pump and inspectable

Piping leak detection method: used if pressurized or check valve at tank: 1. ☐ Vapor monitoring 2. ☐ Interstitial monitoring
3 ☐ Groundwater monitoring 4 ☐ Tightness testing 5. ☐ Line Leak Detector 6. ☐ Not Required

Approval: 1 ☐ Nat'l Std 2. ☐ UL 3. ☐ Other:	Double Walled: ☐ Yes ☐ No

E. **TANK CONTENTS**
1 ☐ Diesel 2. ☐ Leaded 3 ☐ Unleaded 4 ☐ Fuel Oil
5 ☐ Gasohol 6 ☐ Other 7. ☐ Empty 8. ☐ Sand/Gravel/Slurry
9 ☐ Unknown 10. ☐ Premix 11. ☐ Waste Oil 12. ☐ Propane
13 ☐ Chemical * _____ _____ _____ 14 ☐ Kerosene 15. ☐ Aviation

* If # 13 is checked, indicate the chemical name(s) or number(s) of the chemical or waste

If Tank Closed, Give Date (mo/day/yr):	Has a site assessment been completed? (see reverse side for details) ☐ Yes ☐ No

If installation of a new tank is being reported, indicate who performed the installation inspection:
1 ☐ Fire Department 2. ☐ DILHR 3. ☐ Other (identify) _____

Name of Owner or Operator (please print):	Indicate Whether: ☐ Owner or ☐ Operator
Signature of Owner or Operator:	Date Signed:

SBD-7437 (R. 03/91)

IMPORTANT: Complete as many items on this form as possible. Failure to provide sufficient information may cause you to fall under additional regulations.

BACKGROUND FOR TANK INVENTORY

On May 4, 1984, legislation commonly known as the Ground Water Protection Act was signed into law. This legislation required the creation of an inventory of underground petroleum product storage tanks. A record of this information was necessitated by numerous reported incidents of ground water contamination by petroleum products. Many tanks have been installed, used and forgotten. These installations can threaten the ground water.

This underground tank inventory is being established to help identify the need for future actions required to clear up potential problems before they occur. Your help in identifying abandoned, "in use" and "new use" tank locations will greatly assist this effort to protect Wisconsin's ground water.

SITE ASSESSMENT INFORMATION

Requirements for a site assessment at the closure or change in service for a federally regulated underground storage tank were outlined in federal rules published in the September 23,1988 Federal Register, 40 CFR 280 and 281.

The requirements in § 280.72 state:

> (a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. The requirements of this section are satisfied if one of the external release detection methods allowed in § 280.43 (e) and (f) is operating in accordance with the requirements in § 280.43 at the time of closure, and indicates no release has occurred.

The external release detection methods in § 280.43 (e) and (f) are summarized below:

> "(e) *Vapor monitoring.*" This sub section refers to the testing or monitoring for vapors within the soil gas of the tank's excavation zone. It further requires seven (7) conditions to be met to qualify the testing program as a valid vapor monitoring system.
>
> "*(f) Ground-water monitoring.*" This sub section refers to the testing or monitoring for liquids on the ground water below the tank. It establishes the requirements for an acceptable system that effectively monitors the ground water for the presence of regulated substances and insures the integrity of the monitoring wells so the wells themselves do not become conduits for ground water contamination.

Complete written guidelines on the conduct of a site assessment can be obtained from the DILHR Bureau of Petroleum Inspection & Fire Protection at the following address:

Bureau of Petroleum Inspection and Fire Protection
P.O. Box 7969
Madison, WI 53707

Site assessments are to be submitted to <u>both</u> the DILHR office and to the DNR at the following addresses:

Bureau of Petroleum Inspection & Fire Protection
P.O. Box 7969
Madison, WI 53707

Bureau of Solid and Hazardous Waste Management
P.O. Box 7921
Madison, WI 53707

*** SECTION 1 PRODUCT IDENTIFICATION ***

MSDS ID: 111LUB001

LUBRIZOL CORPORATION
29400 LAKELAND BOULEVARD
WICKLIFFE, OH 44092
EMERGENCY PH: 800-424-9300
VENDOR PH: 216-943-4200

CAS REGISTRY NO:
PRODUCT CODE:
U.N. NUMBER: UN1993
CHEM FORMULA:
CHEM FAMILY:
INFO SUPPLIER:

--- SYNONYMS (ALIASES)

*** SECTION 2 PHYSICAL PROPERTIES ***

BOILING PT: F C
MELTING PT: F C
PH: N/D AT G/L H2O
SPECIFIC GRAVITY (H2O=1): .88 @15.6C
PACKING DENSITY: (KG/M3)
APPEARANCE: DARK COLORED LIQUID
EVAPORATION RATE: N/D

VAPOR PRESSURE: N/D
VAPOR DEN. (AIR=1): N/D
SOLUBILITY IN WATER: INSOLUBLE
% VOLATILES BY VOL:
ODOR: PUNGENT
ODOR THRESHOLD (PPM): UNKNOWN

---------- ADDITIONAL COMMENTS ----------

VISCOSITY: 2.6 CENTISTOKES @ 40C
1.1 CENTISTOKES @ 100C
PERCENT VOLATILE: UNKNOWN

*** SECTION 3 FIRE & EXPLOSION HAZARD DATA ***

FLASH PT: 66.2 PMCC F, 19 PMCC C
AUTOIGNITION TEMP: F, C
LOWER EXPLOSIVE LIMIT (LEL): UNKNOWN % VOL.
UPPER EXPLOSIVE LIMIT (UEL): N/D % VOL.
SPEC. HAZARD:

--NFPA CLASS--
HEALTH: 2
FIRE: 3
REACTIVITY: 0
OTHER:

---------- FIRE AND EXPLOSION HAZARDS ----------

TOXIC FUMES, GASES OR VAPORS MAY EVOLVE ON BURNING. VAPORS MAY BE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND TO A DISTANT IGNITION SOURCE AND FLASH BACK. CONTAINER MAY RUPTURE ON HEATING.

---------- EXTINGUISHING MEDIA ----------

CO2, DRY CHEMICAL, ALCOHOL FOAM. WATER CAN BE USED TO COOL AND PROTECT EXPOSED MATERIAL.

--------- SPECIAL FIRE FIGHTING INSTRUCTIONS ----------

RECOMMEND WEARING SELF-CONTAINED BREATHING APPARATUS. WATER MAY BE INEFFECTIVE FIGHTING FIRES.

STABILITY: STABLE
CONDITIONS TO AVOID: MATERIAL IS NORMALLY STABLE AT MODERATELY ELEVATED TEMPERATURES AND PRESSURES.

INCOMPATIBLE MATERIALS: SEE COMMENTS

HAZARDOUS DECOMPOSITION PRODUCTS: SEE COMMENTS

POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID:

---------- ADDITIONAL COMMENTS ----------

INCOMPATIBLE MATERIALS: BASES. STRONG OXIDIZING AGENTS. ALDEHYDES. AMINES. HALOGENS AND HALOGENATED COMPOUNDS (CHLORINE).

THERMAL DECOMPOSITION: SMOKE, CARBON MONOXIDE, ALDEHYDES AND OTHER PRODUCTS OF INCOMPLETE COMBUSTION. UNDER COMBUSTION CONDITIONS, OXIDES OF THE FOLLOWING ELEMENTS WILL BE FORMED: NITROGEN.

********** SECTION 4 COMPONENTS WITH EXPOSURE LIMITS **********
A=ACGIH O=OSHA N=NIOSH S=STATE OSHA M=MARATHON R=NRC C=CORPORATE 9=OTHER

COMPONENTS	PERCENT RANGE		EXP. LIMIT		UNITS	
ISOPROPYL ALCOHOL	10.0000	30.0000	400.0000	A	PPM	8 HR
			500.0000	A	PPM	STEL
			400.0000	O	PPM	8 HR
			500.0000	O	PPM	STEL
CAS #67-63-0						
XYLENE	46.6000		100.0000	O	PPM	8 HR
			150.0000	O	PPM	STEL
			100.0000	A	PPM	8 HR
			150.0000	A	PPM	STEL
CAS #1330-20-7						
ETHYL BENZENE	13.5000		100.0000	A	PPM	8 HR
			125.0000	A	PPM	STEL
			100.0000	O	PPM	8 HR
			125.0000	O	PPM	STEL
CAS #100-41-4						

ETHOXYLATED LONG CHAIN ALKYLAM	5.0000	10.0000
LONG CHAIN ALKYLAMINE	1.0000	5.0000

***
** PLEASE NOTE THAT THE CHEMICAL IDENTITY OF SOME OR ALL OF THE ABOVE HAZARDOUS INGREDIENTS IS CONFIDENTIAL BUSINESS INFORMATION AND IS BEING WITHHELD AS PERMITTED BY 29CFR 1910.1200 AND VARIOUS STATE RIGHT TO KNOW LAWS. **

-------- PRODUCT EXPOSURE LIMITS --------

****
*** SECTION 5 POTENTIAL HEALTH EFFECTS ***
****

---------- ADDITIONAL TOXICITY INFORMATION ----------

THIS MATERIAL IS NOT KNOWN TO CONTAIN GREATER THAN 0.1% OF ANY CARCINOGEN REQUIRED TO BE LISTED UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29CFR 1910.1200).

ORAL TOXICITY: THE LD50 IN RATS IS BETWEEN 2000 MG/KG AND 5000 MG/KG. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS.

DERMAL TOXICITY: THE LD50 IN RABBITS IS >2000 MG/KG. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS. COMPONENTS OF THIS MATERIAL MAY BE ABSORBED THROUGH THE SKIN.

CHRONIC TOXICITY: XYLENE HAS BEEN FOUND TO CAUSE CARDIAC, LIVER AND KIDNEY EFFECTS, ANEMIA AND EYE DAMAGE IN LABORATORY ANIMALS. PROLONGED AND REPEATED INHALATION OF HYDROCARBON SOLVENTS SUCH AS XYLENE CAN CAUSE CHRONIC NEUROLOGICAL DISTRUBANCES.

CARCINOGENICITY: NO DATA AVAILABLE TO INDICATE ANY COMPONENTS PRESENT AT GREATER THAN 0.1% MAY PRESENT A CARCINOGENIC HAZARD.

MUTAGENICITY: NO DATA AVAILABLE TO INDICATE PRODUCT OR ANY COMPONENTS PRESENT AT GREATER THAN 0.1% ARE MUTAGENIC OR GENOTOXIC.

REPRODUCTIVE TOXICITY: NO DATA AVAILABLE TO INDICATE EITHER PRODUCT OR COMPONENTS PRESENT AT GREATER THAN 0.1% THAT MAY CAUSE REPRODUCTIVE TOXICITY.

TERATOGENICITY: NO DATA AVAILABLE TO INDICATE PRODUCT OR ANY COMPONENTS CONTAINED AT GREATER THAN 0.1% MAY CAUSE BIRTH DEFECTS.

-------- ROUTES OF EXPOSURE AND EFFECTS - EYE ---------

EYE IRRITANT. RISK OF IRREVERSIBLE DAMAGE TO EYES. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS.

-------- ROUTES OF EXPOSURE AND EFFECTS - SKIN --------

SKIN IRRITANT. RISK OF IRREVERSIBLE DAMAGE TO EYES. PROLONGED OR REPEATED CONTACT AS FROM CLOTHING WET WITH THE MATERIAL MAY CAUSE BURNS. MAY CAUSE SKIN SENSITIZATION. THE ABOVE IS BASED ON DATA FROM COMPONENTS OR SIMILARY MATERIALS.

----------ROUTES OF EXPOSURE AND EFFECTS - INHALATION-------

HIGH CONCENTRATIONS MAY CAUSE HEADACHES, DIZZINESS, FATIGUE, NAUSEA VOMITING, DROWSINESS, STUPOR, OTHER CENTRAL NERVOUS SYSTEM EFFECTS LEADING TO VISUAL IMPAIRMENT, RESPIRATORY FAILURE, UNCONSCIOUNESS AND DEATH. NOSE, THROAT AND LUNG IRRITANT. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS. NO DATA AVAILABLE TO INDICATE PRODUCT OR COMPONENTS MAY BE RESPIRATORY SENSITIZERS.

------ ROUTES OF EXPOSURE AND EFFECTS - INGESTION -----

SWALLOWING THIS MATERIAL CAUSES IRRITATION OF MOUTH, ESOPHAGUS AND STOMACH, WITH NAUSEA, VOMITING, DIARRHEA AND ABDOMINAL PAIN. INGESTION OF THIS MATERIAL MAY CAUSE HEADACHE, DIZZINESS, UNCOORDINATION, AND GENERAL WEAKNESS.

------------------- FIRST AID - EYE -------------------

FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.

------------------- FIRST AID - SKIN ------------------

WASH IMMEDIATELY WITH SOAP AND WATER. IMMEDIATELY REMOVE CONTAMINATED CLOTHING. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE AND DISCARD SHOES AND OTHER LEATHER ARTICLES SATURATED WITH THE MATERIAL.

--------------- FIRST AID - INHALATION ---------------

REMOVE EXPOSED PERSON TO FRESH AIR IF ADVERSE EFFECTS ARE OBSERVED. IF BREATHING IS LABORED, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, APPLY ARTIFICIAL RESPIRATION. IF IRRITATION PERSISTS OR IF TOXIC SYMPTOMS ARE OBSERVED, GET MEDICAL ATTENTION.

---------------- FIRST AID - INGESTION --------------

DO NOT INDUCE VOMITING. ASPIRATION OF MATERIAL DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. IF CONSCIOUS, GIVE 2 GLASSES OF WATER AND GET IMMEDIATE MEDICAL ATTENTION TO PERFORM GASTRIC LAVAGE.

NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY.

*** SECTION 6 SPECIAL PROTECTION INFORMATION ***

VENTILATION

USE LOCAL EXHAUST VENTILATION TO CONTROL MISTS OR VAPORS. ADDITIONAL VENTILATION OR EXHAUST MAY BE REQUIRED TO MAINTAIN AIR CONCENTRATIONS BELOW RECOMMENDED EXPOSURE LIMITS. USE EXPLOSION PROOF EQUIPMENT.

PERSONAL PROTECTIVE EQUIPMENT - RESPIRATOR

USE NIOSH/MSHA APPROVED FULL FACE RESPIRATOR WITH A COMBINATION ORGANIC VAPOR AND HIGH EFFICIENCY FILTER CARTRIDGE IF THE RECOMMENDED EXPOSURE LIMIT IS EXCEEDED. USE SELF-CONTAINED BREATHING APPARATUS FOR ENTRY INTO CONFINED SPACE AND FOR OTHER POORLY VENTILATED AREAS AND FOR LARGE SPILL CLEAN-UP SITES.

PERSONAL PROTECTIVE EQUIPMENT - EYE

FACESHIELD.

PERSONAL PROTECTIVE EQUIPMENT - GLOVES

VITON. TEFLON. POLYVINYL ALCOHOL. NOTE: POLYVINYL ALCOHOL GLOVES ARE WATER SOLUBLE AND SHOULD NOT BE USED WHEN THERE IS POTENTIAL FOR WATER CONTACT.

OTHER PROTECTIVE EQUIPMENT

LONG SLEEVED SHIRT IS RECOMMENDED. WEAR A CHEMICALLY PROTECTIVE APRON WHEN CONTACT WITH MATERIAL MAY OCCUR. USE NEOPRENE OR NITRILE RUBBER BOOTS WHEN NECESSARY TO AVOID CONTAMINATING SHOES. DO NOT WEAR RINGS, WATCHES OR SIMILAR APPAREL THAT COULD ENTRAP THE MATERIAL AND CAUSE A SKIN REACTION. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

*** SECTION 7 SPILL OR LEAK PROCEDURES ***

- STEPS TO BE TAKEN IN CASE OF SPILL, LEAK OR RELEASE -

MAY FORM EXPLOSIVE MIXTURES WITH AIR. IMMEDIATELY EVACUATE ALL PERSONNEL FROM DANGER AREA. PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN, SEE SPECIAL PROTECTION INFORMATION SECTION FOR PPE RECOMMENDATIONS. ELIMINATE ALL SOURCES OF HEAT, SPARKS PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAMES. VENTILATE SPILL AREA. PREVENT ENTRY

INTO SEWERS AND WATERWAYS. PICK UP FREE LIQUID FOR RECYCLE AND/OR DISPOSAL IF CAN BE ACCOMPLISHED SAFELY WITH EXPLOSION PROOF EQUIPMENT. RESIDUAL LIQUID CAN BE ABSORBED ON INERT MATERIAL. CHECK SECTION 11 UNDER DOT/CERCLA AND SARA HAZARDOUS SUBSTANCES TO DETERMINE REGULATORY REPORTING REQUIREMENTS FOR SPILLS.

---------- WASTE DISPOSAL METHOD ----------

MATERIAL, IF DISCARDED, EXPECTED TO BE HAZARDOUS WASTE UNDER RCRA DUE TO IGNITABILITY AND TOXICITY. CONSIDER U.S. EPA RCRA HAZARDOUS WASTE NUMBER D001 AND ITS ASSOCIATED TREATMENT STANDARD. IF DISCARDING THIS MATERIAL, CONSIDER THE POSSIBLE RELEVANCE OF THE PRESENCE OF THE FOLLOWING CHEMICALS AND THE TREATMENT STANDARDS FOR THE ASSOCIATED U.S. EPA RCRA HAZARDOUS WASTE NUMBERS:

47%	XYLENE	CAS #1330-20-7	F003
13%	ETHYL BENZENE	CAS # 100-41-4	F003
0.006%	BENZENE	CAS # 71-43-2	D018

*** SECTION 8 HANDLING & STORAGE PRECAUTIONS ***

KEEP MATERIAL AWAY FROM HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME. ISOLATED OUTSIDE STORAGE IS PREFERRED. INSIDE STORAGE AREA SHOULD BE IN FLAMMABLE LIQUIDS CABINET OR STORAGE AREA. OPEN CONTAINER IN A WELL VENTILATED AREA. AVOID BREATHING VAPORS. KEEP CONTAINERS CLOSED WHEN NOT IN USE. WASH THOROUGHLY AFTER HANDLING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. EMPTY CONTAINERS RETAIN MATERIAL RESIDUE. DO NOT CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE CONTAINERS TO HEAT, FLAME, SPARK OR OTHER SOURCES OF IGNITION.

*** SECTION 9 HAZARD WARNING ***

DANGER!
EYE IRRITATION-RISK OF IRREVERSIBLE EYE DAMAGE.
FLAMMABLE LIQUID, MAY CREATE A FLASH FIRE HAZARD.
HARMFUL IF INHALED.
CAUSES SKIN IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE CHRONIC HEALTH EFFECTS. BASED ON DATA WITH LABORATORY ANIMALS

*** SECTION 10 COMMENTS ***

GENERIC/CHEMICAL NAME: MIXTURE
PRODUCT TYPE: FUEL ADDITIVE: GASOLINE DETERGENT/DISPERSANT
HMIS CODE: HEALTH - 2; FIRE - 3; REACTIVITY - 0.

****
*** SECTION II REGULATORY INFORMATION ***
****

DOT PROPER SHIPPING NAME: FLAMMABLE LIQUID, N.O.S. (CONTAINS XYLENE, ETHYLBENZENE, ISOPROPYL ALCOHOL)
DOT HAZARD CLASS: FLAMMABLE LIQUID
DOT ID NUMBER (UN NO): UN1993
IMO CLASS: 3.2, PACKAGING GROUP II.
ICAO CLASS: CLASS 3, PACKING GROUP II.

CERCLA HAZARDOUS SUBSTANCES: FOR SOURCES IN TRANSIT:
PRODUCT RQ 293 GAL. DUE TO XYLENE
PRODUCT RQ 1012 GAL. DUE TO ETHYLBENZENE
FOR STATIONARY SOURCES:
PRODUCT RQ 293 GAL. DUE TO XYLENE
PRODUCT RQ 1012 GAL. DUE TO ETHYLBENZENE
PRODUCT RQ 30356 GAL. DUE TO TOLUENE

U.S. TSCA INVENTORY: ALL COMPONENTS OF THIS MATERIAL ARE ON THE US TSCA INVENTORY.

OTHER TSCA REG.: SECTION 4A (C9 AROMATIC HYDROCARBONS). SECTION 4A (ISOPROPYL ALCOHOL). MAY BE SUBJECT TO EXPORT NOTIFICATION UNDER TSCA SECTION 12 (B).

EEC EINECS: ALL COMPONENTS ARE IN COMPLIANCE WITH THE EEC SIXTH AMENDMENT DIRECTIVE 79/831.

JAPAN MITI: THIS PRODUCT REQUIRES NOTIFICATION IN JAPAN.

AUSTRALIA: THIS PRODUCT REQUIRES NOTIFICATION BEFORE SALE IN AUSTRALIA.

CANADA: ALL COMPONENTS ARE IN COMPLIANCE WITH CHEMICAL NOTIFICATION REQUIREMENTS WITH THE CANADIAN ENVIRONMENTAL PROTECTION ACT.

AUSTRIA: ALL COMPONENTS ARE IN COMPLIANCE WITH THE AUSTRIAN CHEMICAL LAWS.

SWITZERLAND: NOT DETERMINED.

SARA EXT. HAZ. SUBST.: THIS PRODUCT IS NOT KNOWN TO CONTAIN GREATER THAN 1.0% OF ANY CHEMICAL SUBSTANCE ON THE SARA EXTREMELY HAZARDOUS SUBSTANCES LIST.

SARA SECTION 313: 13.5% ETHYLBENZENE, CAS NO.: 100-41-4
46.6% XYLENE, CAS NO.: 1330-20-7

CAL. PROP. 65: CALL FOR FURTHER INFORMATION CONCERNING THE STATUS OF THIS PRODUCT UNDER CALIFORNIA PROPOSITION 65.

** CONTINUED IN SECTION 12 **

****
*** SECTION 12 REGULATIONS/COMMENTS CONTINUED ***
****

** CONTINUED FROM SECTION 11**

PRECAUTIONARY LABELS:
DANGER!
EYE IRRITATION-RISK OF IRREVERSIBLE EYE DAMAGE.
FLAMMABLE LIQUID, MAY CREATE A FLASH FIRE HAZARD.
HARMFUL IF INHALED.
CAUSES SKIN IRRITATION.
CAUSES RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE CHRONIC HEALTH EFFECTS. BASED ON DATA WITH LABORATORY ANIMALS.

APPENDIX

Appendix II
Photographs of Removal Activities

1. Schmidt Bros. personnel excavating soil from the top of the UST.

2. South end of UST rises above surface level after fiberglass straps are cut.

midwest engineering services, inc.

FIGURE

Additive UST Removal Assessment
Marathon Oil Company
Milwaukee Bulk Terminal
Milwaukee, Wisconsin

PROJECT NUMBER:
7-11031

DATE:
11-21-91

3. Removal of Additive UST.

4. Collapsed backfill and standing water in excavation.

midwest engineering services, inc.

FIGURE

Additive UST Removal Assessment

Marathon Oil Company
Milwaukee Bulk Terminal
Milwaukee, Wisconsin

PROJECT NUMBER:
7-11031

DATE:
11-21-91

5. Disabled Additive UST; Schmidt Bros. employee outfitted in Level C preparing to extract sludge from UST.

6. Stockpiled soils excavated from the surface in the UST area.

midwest engineering services, inc.	FIGURE Additive UST Removal Assessment Marathon Oil Company Milwaukee Bulk Terminal Milwaukee, Wisconsin	PROJECT NUMBER: 7-11031 DATE: 11-21-91

FILE NOTE

Facility/Company Name	Location (Address or ¼¼)	City, State, Zip Code
Marathon Oil		

Facility Type	District	County	Contact Method	Date	Time (24-Hour Clock)
Bulk Storage			☐ Telephone ☐ In-Person	4/17/91 M M D D Y Y	— — — —

Facility Representative Contacted	Title or Position of Representative	Telephone Number (include area code)
Dave Siebold		(414) 421-2629

Dave Called

(1) wanted to know which program would be handling case.

(2) He said leak occurred from sampling line to the West Shore pipeline that feeds their bulk storage facility.

(3) I gave him go-ahead to start clean up.

Check if additional sheets attached ☐

By John Feeney

File Note

3/18/91

Dave Siebold of Marathon Oil called. Just received RP letter - Said site is not a LUST. Wants to know if guidance is different and who will be project manager.

Dave Siebold Marathon Oil
419-421-2629

Call him.

3/18/91 Talked to Jeff. He said a line leak @ a bulk storage facility is considered a LUST.

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

Box 12436
Milwaukee, Wisconsin 53212
Fax: (414) 562-1258

March 13, 1991

File Ref: 4440

Mr. David Siebold
Mr. Charles Hopkins
Marathon Oil Co
9125 North 107th Street
Milwaukee, WI 53224-1508

Dear Mr Siebold or Mr Hopkins:

RE: Marathon Oil Co, 9125 N 107th St, Milwaukee, WI

The Wisconsin Department of Natural Resources (WDNR) has been notified that petroleum contamination was discovered February 21, 1991 at the above referenced location. John Feeney, the Leaking Underground Storage Tank (LUST) Project Manager for your area, may be reached at the above address or at (414) 263-8654. Based on the site specific information provided, this case has been assigned to the Medium Priority Rank group. The purpose of this letter is to inform you of your legal responsibilities to address this situation.

Releases from underground storage tanks regulated under Subtitle I of the Resource Conservation and Recovery Act require compliance with the provisions of 40 CFR Parts 280 and 281. The Environmental Protection Agency (EPA) has the authority to take enforcement action at any time, but will generally not take action against parties cooperating with the state. The WDNR proceeds in LUST cases under the authority of s. 144.76, Wisconsin Statutes, commonly referred to as Wisconsin's Hazardous Substance Spill Law. The definition of "hazardous substance" as found in s. 144.01(4m), Wisconsin Statutes, includes petroleum products.

> Wisconsin Statute 144.76(2a) states: "A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall notify the Department immediately of any discharge not exempted under sub.(9)."
>
> Wisconsin Statute 144.76(3) states: "A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of this state."

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

1. Immediately notify your WDNR Project Manager, or the Spills Hotline at (414) 562-9615 should emergency conditions involving explosive vapors and/or well contamination develop.

2. Conduct an investigation to determine the extent of soil and groundwater contamination.

3. Remediate all of the environmental impacts caused by this situation.

The Department suggests that you have a qualified environmental engineer or hydrogeologist direct the remedial investigation, assess the environmental impact, and coordinate the implementation of a cleanup program. . Within 15 days of receiving this letter, you should provide your WDNR Project Manager with the following information:

1. The name of the individual/firm directing the investigation.

2. The date the remedial investigation will begin.

In accordance with NR 141.23 and NR 141.25 The Department requires that the location of the tank and/or release be submitted with the work plan. **Requirements for location are Latitude, Longitude, 1/4, 1/4, Township, and Range (east or west).**

Final documentation of the investigation and cleanup should be prepared according to the guidance enclosed and sent to this office on completion of the project. Remedial actions must adequately cleanup contaminated soil and/or groundwater to current WDNR guidelines and/or standards. All product, soil, wastewater, and sludge must be disposed of in compliance with all applicable federal, state and local laws and regulations. Because the Department is experiencing a backlog of leaking underground storage tank cases of emergency status and your case is not currently ranked as an emergency, your submittals will be reviewed as time permits. Investigation and cleanup should not, however, be delayed pending WDNR review.

You are encouraged to contact the Department of Industry, Labor, and Human Relations (DILHR), the state agency that administers the Petroleum Environmental Cleanup Fund (PECFA). This fund may reimburse you for eligible costs associated with the remedial investigation and cleanup. DILHR should be contacted at (608) 267-4545 to obtain current information regarding the PECFA program.

Your cooperation in this matter will be appreciated. Please be aware that your ability to use PECFA funds is dependent on your cooperation in adequately addressing this problem. If you have any questions, please contact your WDNR Project Manager.

Sincerely,

Sharon Graham

Sharon Graham
Program Assistant,Environmental Repair Section

Enclosures: Remedial Investigation Checklist
Application to Treat or Dispose of Petroleum Contaminated Soil
Selecting a Consultant
Contractor List

c: SED Case File

Department of Natural Resources

SOLID WASTE MANAGEMENT FACILITY CONTACT FORM
Form 4400-106 6-86

NOTE: DO NOT USE THIS FORM WHEN DOCUMENTING INSPECTIONS AT HAZARDOUS WASTE AND SOLID WASTE FACILITIES. SEE BACK SIDE OF THIS FORM FOR MORE INFORMATION.

SDC

ATTN: _____

License Number _____

☐ Residuals Management SW/3 ☐ District _____

EPA ID Number WI-_____

☐ Hazardous Waste Management SW/3 Unit _____ ☐ Environmental Enforcement EE/5

Facility ID Number _____

☐ Systems Management SW/3 ☐ _____

L.U.S.T.

Facility/Company Name	Location (Address or ¼¼)	City, State, Zip Code

Facility Type	District	County	Contact Method	Date (M M D D Y Y)	Time (24-Hour Clock)
		Milw	☑ Telephone ☐ In-Person	02/22/91	0855

Facility Representative Contacted	Title or Position of Representative	Telephone Number (include area code)
Dave Siebold & Chas. Hopkins	Marathon Oil	(414) 354 1805

9125 N 107th St
Milwaukee 53224-1508

Incident 2-21 1000

Report 2-22 0844 to DEG → to Becky Madison LG

Underground pipe ruptured, 100 gal unleaded gas
Receipt Manifold area at above address
no gw - no surf water
Cut line to stop flow
Sand backfill on a clay base
Hired consultant
no local response - on scene

Check if additional sheets attached ☐

By _____

Dist. Director-SED

FYI

State of Wisconsin
Department of Natural Resources

TOXIC AND HAZARDOUS SPILL REPORT

Form 4400-91 Rev. 6-86

State Div. Emergency Gov't. (608) 266-3232
U.S. Nat'l. Response Center (800) 424-8802
Chemtrec/Pesticides/Chlorine (800) 424-9300

Spill ID Number CHPK. - FYI
Y Y M M D D 0-99

Date of Incident	Day of Week	Time of Incident	Reported By (Name)	Telephone Number
2-21-91	Thur.	10:00 ☒ A.M. ☐ P.M.	Dave Siebold	(414) 354-1805
Date Reported	**Day of Week**	**Time Reported**	**Agency or Firm Reporting**	**Reported thru Div. Emergen. Gov't.**
2-22-91	Fri.	8:44 ☒ A.M. ☐ P.M.	Marathon Oil	☒ Yes ☐ No

Substance Involved	Quantity	Units	Person or Firm Responsible
Unleaded gas	100	gals.	
Substance Involved	**Quantity**	**Units**	**Contact Name / Telephone Number**
			Charlie Hopkins (414) 354-1805

Physical Characteristics
☐ Solid ☒ Liquid Color ____
☐ Semisolid ☐ Gas Odor ____

Address — Street or Route: 9125 N. 107 St.
City, State, Zip Code: Milwaukee 53224-1508

Cause of Incident: underground pipe rupture

Exact Location Description (intersection, mileage, etc.): receipt manifold area at above address

County Location	¼¼, ¼, Section, Town, Range
Milw.	___, ___, ___, T___ N, R___

DNR Dist	DNR Area	Groundwaters Affected
SED		☐ Yes ☒ No ☐ Potential

Surface Waters Affected: ☐ Yes ☒ No ☐ Potential
Name of Surface Water:

Date District Notified	Day of Week	Time District Notified
2-22-91	Fri.	9:00 ☒ A.M. ☐ P.M.

District Person Notified: Sharon Graham
Telephone Number: (414) 263-8644

Date Investigated	Day of Week	Time Investigated
		☐ A.M. ☐ P.M.

Person Investigating:
Telephone Number: ( )

Action Taken By DNR
☐ No Action Taken ☐ Investigation ☐ Supervise/Conduct Cleanup
☐ Spiller Required To Take Action; Type ____
☐ Contractor Hired By DNR; Name ____
☐ Amount Recovered ____
☐ 29.29 Enforcement

Other Agencies on Scene
Local ____
State ____
Federal ____

L.U.S.T.

Action Taken By Spiller
☐ No Action Taken ☐ No Notification ☐ Investigate
☐ Containment; Type ____
☐ Cleanup; Method ____ (cut line)
☒ Amount Recovered flow stopped - not completely recovered
☐ Monitor
☒ Contractor Hired; Name Env. consultant
☐ Other Action ____

Spill Location
☐ Industrial Facility/Paper Mill/Chem. Co.
☐ Gas/Service Station/Garage, Auto Dealer, Repair Shop
☐ Ag Coop/Facility/Cheese Factory/Creamery
☐ Other Small Business (bank, grocery, insurance co., etc.)
☐ Public Property (city, county, state, church, school, etc.)
☐ Utility Co., Power Generating/Transfer Facility
☐ Private Property (home/farm)
☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
☐ Transportation Accident, Fuel Supply Tank Spill
☐ Transportation Accident, Load Spill
☐ Construction, Excavation, Wrecking, Quarry, Mine
☐ Other ____

Spilled Substance Destination
☐ Air
☐ Soil
☐ Groundwater
☐ Surface Water
☐ Storm Sewer
☐ Sanitary Sewer
☐ Contained/Recovered
☒ Other sand backfill on day base

RECEIVED
1991 FEB 25 AM 9 00
DNR/HEADQUARTERS
SED

Person Filing This Report (print name): Rebecca Odegaard
Signature: Rebecca Odegaard **Date Signed:** 2/22/91

Additional Comments:

CENTRAL OFFICE COORDINATOR

REV. 10/89

DEPARTMENT OF NATURAL RESOURCES
LEAKING UNDERGROUND STORAGE TANK

1407

COMPUTER TRACKING
FORM 4400

PMN#: _____ FID#: _____

PROJECT MGR: J Feeney

SUPPORT PERSON: _____

DISTRICT: SCD COUNTY: Milw HNDI: ___

SITE NAME: Marathon Oil Co, #2

ADDRESS: 9125 N 107th St

Milwaukee 53224-1508 TN CITY VIL

LEGAL DESC: ___1/4 ___1/4 SEC ___T ___R ___E/W

DATE OF INITIAL CONTACT: 02/22/91 (mo day yr)

DATE OF RP LETTER: 03/13/91 (mo day yr)

DATE SITE CLOSURE APPROVED: __/__/__ (mo day yr)

LUST TRUST ELIGIBLE: (x)
✓ 1 = FEDERAL
___ 2 = NON-FEDERAL

STATUS: (X)
___ 1 = STATE LEAD
✓ 2 = RP LEAD

PRIORITY SCREENING: (X)
___ 1 = HIGH SCORE: ___
✓ 2 = MEDIUM
___ 3 = LOW
___ 4 = UNKNOWN

(see worksheet on back)

FUNDING SOURCE: (X)
✓ 1 = RESPONSIBLE PARTY
___ 2 = LUST TRUST FUND
___ 3 = ENVIRONMENTAL RESPONSE FUND
___ 4 = SUPER FUND
___ 5 = NONE
___ 6 = OTHER _____

(X AS APPROPRIATE)	DATE INITIATED (MO DAY YR)	DATE COMPLETED (MO DAY YR)	COMMENTS:
___ NO ACTION TAKEN			
___ EMERGENCY			
✓ EMERGENCY RESPONSE	02/21/91		sunkline to stop flow
___ FIELD INVESTIGATION	~~02/21/91~~		
___ REMEDIAL ACTION			
___ LONG TERM MONITORING			

FIRM OR PERSON RESPONSIBLE: same

CONTACT: Dave Sielbeck or Charles Hopkins

ADDRESS: _____

PHONE: 414/354-1805
(list additional on separate list & attach)

CONSULTANT: _____

CONTACT: _____

ADDRESS: _____

PHONE: ___/_____

AMOUNT COMMITTED: $_____.___ AMOUNT SPENT: $_____.___
(list additional on separate list & attach)

PECFA REVIEW REQUESTED:(X) ___YES ___NO

DATE PECFA REQUEST RECEIVED:(mo day yr) ___/___/___

	KNOWN IMPACTS:(x)	POTENTIAL IMPACTS:(X)
FIRE/EXPLOSION THREAT	___	___
CONTAMINATED PRIVATE WELL	___	___
CONTAMINATED PUBLIC WELL	___	___
GROUNDWATER CONTAMINATION	___	___
SOIL CONTAMINATION	✓	___
OTHER: _____	___	___

SUBSTANCES:(X) QUANTITY DISCHARGED:(gals) _____

___ LEADED GAS ___ VOCS
✓ UNLEADED GAS ___ PESTICIDE
___ DIESEL
___ FUEL OIL
___ UNKNOWN HYDROCARBONS
___ OTHER _____

ENFORCEMENT ACTION TAKEN

01=INF. CONTACT,RESP INITIATED
02=RP LETTER,RESP INITIATED
03=NTC OF NON COMPLIANCE
06=INSPECTION LETTER
07=RESPONSE RECEIVED
11=CLOSE OUT
14=NOTICE OF VIOLATION
18=ADMIN. ORDER FINAL
20=ADMIN. ORDER CANCELLED
23=REFERRAL TO DOJ
25=REFERRAL TO EPA
99=OTHER ACTION: _____

ACTION (code from above)	DATE (mo/day/yr)	COMMENT:
01	02/22/91	RP notified
02	03/13/91	RP letter, mail
___	___/___/___	
___	___/___/___	

(for additional action codes see instructions/list additional on separate list and attach)

OVER ALL CASE COMMENT: see attach

LUST CASE PRIORITY SCREENING WORKSHEET

H FACTORS: (DEFINITION: Any case which presents an actual threat to human health, or has a high potential of causing a threat human health and property; and/or any case which has caused or has a high potential of causing substantial impacts to the soil ers and air of the State of Wisconsin)

H FACTORS:

__ Contaminated private or public well >NR140 enf. std.
__ Explosive or toxic vapors in structures
__ Threat of fire

HIGH OR MEDIUM FACTORS: (write in choice of high or medium)

____ Floating product (medium if no receptors within 1 mile)
____ Known gw contamination (private or public well <140 enf. std.
____ Impacted surface water--wetland, trout stream, etc. impacted
____ saturated soil contamination

IUM FACTORS: (DEFINITION: Any case which does not appear to be an immediate threat to human health or vital natural resources which shows levels of contamination that may cause substantial environmental impacts if left unaddressed.)

__ Moderate soil contamination with moderate potential for impacting groundwater.
__ Impacted surface water--no critical habitat threats.

FACTORS: (DEFINITION: Any case where contamination has been documented, but which presents limited potential for any ediate threat to human health and vital natural resources.)

__ Soil contamination which appears to have a limited potential for impacting groundwater.
__ Initial remedial action has substantially reduced environmental threat.

NOWN FACTOR: (DEFINITION: Any case where some indication of contamination is present, but due to incomplete or ccurate information the level of threat to human health or the environment can not be assessed at this time.)

__ Inadequate information to assign a high, medium, or low ranking.

ALL RANKING: The screening rank for the site along with the date of ranking. This may be updated when additional informa- is received. Special circumstances for a particular case may be taken into account in the comment section. The District coordinator may independently set the ranking of a site based upon "special circumstances."

le one & date, indicate in priority screening box opposite side _____HIGH_____MEDIUM_____LOW_____UNKNOWN

ENT:_____

NUMERICAL LUST SCORING WORKSHEET (complete for LUST cases ranked HIGH)

GROUNDWATER & SOILS: (circle one)

POINTS	Documented Petroleum Contamination:	POINTS	
20	Municipal well	8	Soil & gw within 1200' of a public well
18	>6 private wells	6	Soil & gw within 1200' of one or more private wells
16	4 - 6 private wells	4	GW contamination, no wells within 1200'
14	2 - 3 private wells	2	Soil contamination
12	1 private well		

XPLOSIVE OR TOXIC VAPORS: (circle one)

POINTS CONFIRMED	POTENTIAL	
20	10	Explosive levels in a residence or building
16	8	Explosive levels in a sewer or structure
12	6	Toxic levels in a residence or building

Note: Explosive levels determined to be >20% LEL as per an explosivity meter; toxicity levels are based on OSHA permissible exposure limits (PEL)

YDROGEOLOGIC SETTING: (circle one)

POINTS

2 Highly permeable sub-soils (gravel, well sorted sand, fractured bedrock or utilities capable of intercepting and directing flow) and groundwater within 25 feet of the ground surface.
0 Highly permeable sub-soils and groundwater more than 25 feet below ground surface.
8 Moderately permeable sub-soils (silty sands, silty gravel, clayey sands) and groundwater within 25 feet of ground surface
6 Moderately permeable sub-soils and groundwater greater than 25 feet below ground surface.
4 Low permeability sub-soils (silt, clayey silt, sand clays) and groundwater within 25 feet of ground surface.
2 Low permeability sub-soils and groundwater greater than 25 feet below ground surface.

YPE OF PRODUCT: (circle one)

INTS	NOTE: Add 4 points if free product is present. (score in parentheses)
8 (12)	Gasoline, mixture of gasoline and other products, other light petroleum products.
6 (10)	Diesel, fuel oil
2 (6)	Bunker oil, other heavy oils or crude fractions