09-46-294882

Wisconsin Electric
POWER COMPANY

231 W. Michigan, P.O. Box 2046, Milwaukee, WI 53201-2046 (414) 221-2345

2 6 1997

November 24, 1997

DEPARTMENT OF NATURAL RESOURCES
Tank Response Unit- SW/3
P.O. Box 7921
Madison, WI 53707

To Tank Response Unit:

RE: Clean Closure Assessment
WI Electric Power Company, Port Washington Power Plant,
Port Washington, WI

Enclosed, please find a copy of a report titled *UST Piping Replacement Sampling Report, dated November 17, 1997.*

If you have any questions, please feel free to contact me at 221-4853 or Ms. Andi Gregg at 359-3030.

Sincerely,

L. Stueck-Mullane

Liz Stueck-Mullane
Senior Environmental Specialist

enclosure

cc: Andi Gregg, STS Consultants, 11425 West Lake Park Drive, Milwaukee, WI 53224

R E P O R T

Wisconsin Electric

333 West Everett Street

Milwaukee, WI 53201

26 1997

UST Piping Replacement Sampling Report

Wisconsin Electric

Port Washington Power Plant
Port Washington, Wisconsin

STS Project No. 85410XA

November 17, 1997

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EXECUTIVE SUMMARY

Wisconsin Electric (WE) retained STS Consultants, Ltd. (STS) to perform a site assessment following the replacement of a 5-foot section of piping from a 2,000-gallon underground storage tank (UST) containing diesel fuel immediately east of a maintenance shed at the Port Washington Power Plant. The assessment was performed to determine if petroleum hydrocarbons were released into the environment. STS prepared this report to summarize field activities and observations.

The UST and piping are located at the Port Washington Power Plant and are used for fueling vehicles. U.S. Petroleum Equipment and Environmental Services (U.S.) replaced the piping on September 3, 1997. Prior to replacement, the product in the piping was drained back to the UST. U.S. then removed the steel piping and transported it off-site for disposal at a scrap yard.

After the piping was removed, STS inspected the piping trench for any evidence of a petroleum release. No petroleum odors or discolored soil were noted in the piping trench. Native soil was not encountered during the piping replacement. It is anticipated that pea gravel backfill extends to the bottom of the UST cavity, or to a depth of approximately eight feet below grade. Water was not encountered during the piping replacement.

Since native soil could not be sampled without additional excavation which may have jeopardized the integrity of the UST, a site assessment soil sample was not collected beneath the piping. STS called Mr. Andy Boettcher, a Wisconsin Department of Natural Resources (WDNR) case worker and asked him about site assessment soil sampling in this situation, particularly when there was no visual or other indications of a release from the piping. Mr. Boettcher recommended preparation of a report indicating that there were no indications of a release from the piping.

U.S. installed new flexible piping connecting the existing diesel UST and dispenser.

Since there was no indication of a release, the WDNR should not require any further action regarding this piping replacement.

UNDERGROUND STORAGE TANK
PIPING REPLACEMENT REPORT
WISCONSIN ELECTRIC POWER COMPANY
PORT WASHINGTON, WISCONSIN

1.0 INTRODUCTION

Wisconsin Electric (WE) retained STS Consultants, Ltd. (STS) to perform a site assessment following the upgrade of a 5-foot section of piping connecting a 2,000-gallon underground storage tank (UST) and a dispenser immediately east of the Port Washington Power Plant. STS prepared this report to document the personnel and companies involved with the project, disposal of the piping, surplus product and sludge, geologic and hydrogeologic conditions, and project conclusions

2.0 PURPOSE AND SCOPE OF WORK

2.1 Purpose of Work

The purpose of the site assessment was 1) to remove the source for potential petroleum hydrocarbon impacts to soil and groundwater at the site; and, 2) to assess soil quality within the piping trench to determine if petroleum was released from the piping into the environment.

2.2 Project Team

The contractors and personnel involved with the project are listed in Appendix A.

3.0 SITE LOCATION AND BACKGROUND INFORMATION

The site is an active coal-fired power plant located in downtown Port Washington. The site location is depicted in Figure 1 and is described as follows.

Port Washington Power Plant
Port Washington, Ozaukee County, Wisconsin
Southwest 1/4 of the Southeast 1/4 of Section 28
Township 11 North, Range 22 East.

4.0 PIPING REPLACEMENT PROCEDURES

4.1 Surplus Product Management

Product in the piping run was drained back into the UST prior to piping replacement activities.

4.2 Piping Replacement

On September 3, 1997, the 5-foot section of steel piping was replaced with flexible piping. U.S. Petroleum personnel broke concrete over the piping run and excavated approximately two feet of pea gravel to access the piping. The one inch diameter steel piping ran to the dispenser, approximately five feet from the UST. A copy of ILHR Checklist for Underground Tank Closure is presented as Appendix B.

4.3 Sludge Management

No sludge was generated from the piping upgrade.

4.4 Piping Disposal

The piping was transported off-site to U.S. Petroleum's facility in Kimberly, Wisconsin for disposal. The certificate of disposal is presented in Appendix C.

5.0 FIELD OBSERVATIONS AND SOIL SAMPLING

5.1 Field Observations

After the piping was removed, an ILHR-certified site assessor from STS visually inspected the piping for holes or other evidence of failures that could contribute to a petroleum release. The piping was noted to be in good condition with no holes. The location and orientation of the piping and UST are depicted in Figure 2.

The backfill around the piping was inspected for petroleum odors or soil discoloration. Native soil was not encountered, and was estimated to be approximately 8 to 9 feet bgs (at the bottom of the tank cavity). No petroleum odors or soil discoloration were present in the piping backfill. No free product or groundwater was encountered during the piping replacement.

5.2 Soil Sampling

A site assessment soil sample (from native soil) could not be collected without additional soil excavation which may have jeopardized the integrity of the 2,000-gallon UST. A sample of the pea gravel backfill from two feet beneath the piping was collected for field screening purposes (see Figure 2).

A Photoionization Detector (PID) was used to screen the soil sample for the presence of Volatile Organic Compounds (VOCs) by means of headspace analysis. The PID was equipped with a 10.6 eV lamp and was calibrated in the field. Prior to headspace analysis, the soil sample was allowed to equilibrate to approximately 70°F and vigorously agitated to facilitate vapor release. The PID reading on the pea gravel sample was zero.

6.0 CONCLUSIONS

Based on field observations and field screening results, a release had not occurred from the piping. There were no indications of a release, including odors, soil staining or discoloration of the pea gravel around the piping. The piping itself did not appear to have any holes or loose connections. Accurate measurements were taken as to the location of the newly-installed fiberglass piping so that if it is required in the future, a soil probe could be advanced in the area of the piping down to native soil to collect a soil sample to provide additional evidence that a release had not occurred. This or other additional work will not be completed with regards to the replaced piping.

7.0 PROJECT SUMMARY

The following summary is based on the observations, activities, and findings of the piping replacement and closure assessment at WE's Port Washington Power Plant:

- On September 3, 1997, a 5-foot section of piping connecting a 2,000-gallon UST containing diesel to a dispenser was replaced at the Port Washington Power Plant.
- Prior to replacement, surplus product was drained from the piping, back into the UST.
- No sludge was generated from the piping replacement.
- The piping was inspected for holes and loose fittings. No holes or loose fittings were noted.

- Physical evidence of a petroleum hydrocarbon release (petroleum odors, soil discoloration and elevated PID values) were not noted in the backfill of the piping trench. Groundwater was not encountered during the piping replacement.
- A site assessment soil sample could not be collected from native soil without overexcavating adjacent to the UST and increasing the potential for jeopardizing the integrity of the 2,000-gallon diesel tank (backfill below the piping is estimated to extend to 8 feet bgs).
- Based on field observations of the piping, fittings and pea gravel backfill, a release does not appear to have occurred from the 5-foot section of UST piping.

8.0 RECOMMENDATIONS

Based on field observations, petroleum hydrocarbons were not released from the replaced UST piping at the site. Therefore, the WDNR should not require any further work for this piping replacement. A copy of this report should also be submitted to the state WDNR office at the following address:

Wisconsin Department of Natural Resources
Tank Response Unit - SW/3
P.O. Box 7921
Madison, WI 53707

9.0 LIMITATIONS OF INVESTIGATION

This report was prepared under constraints of cost, time, and scope. and reflects a limited assessment and evaluation rather than a full, total, complete or extensive assessment and evaluation.

Our assessment was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by professional consultants practicing in this or similar localities. No other warranty or guarantee, expressed or implied, is made as to the conclusions and professional advice included in this report.

The findings of this report are valid as of the present date of the assessment. However, changes in the conditions of the Property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, from the

broadening of knowledge, or from other reasons. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside of our control.

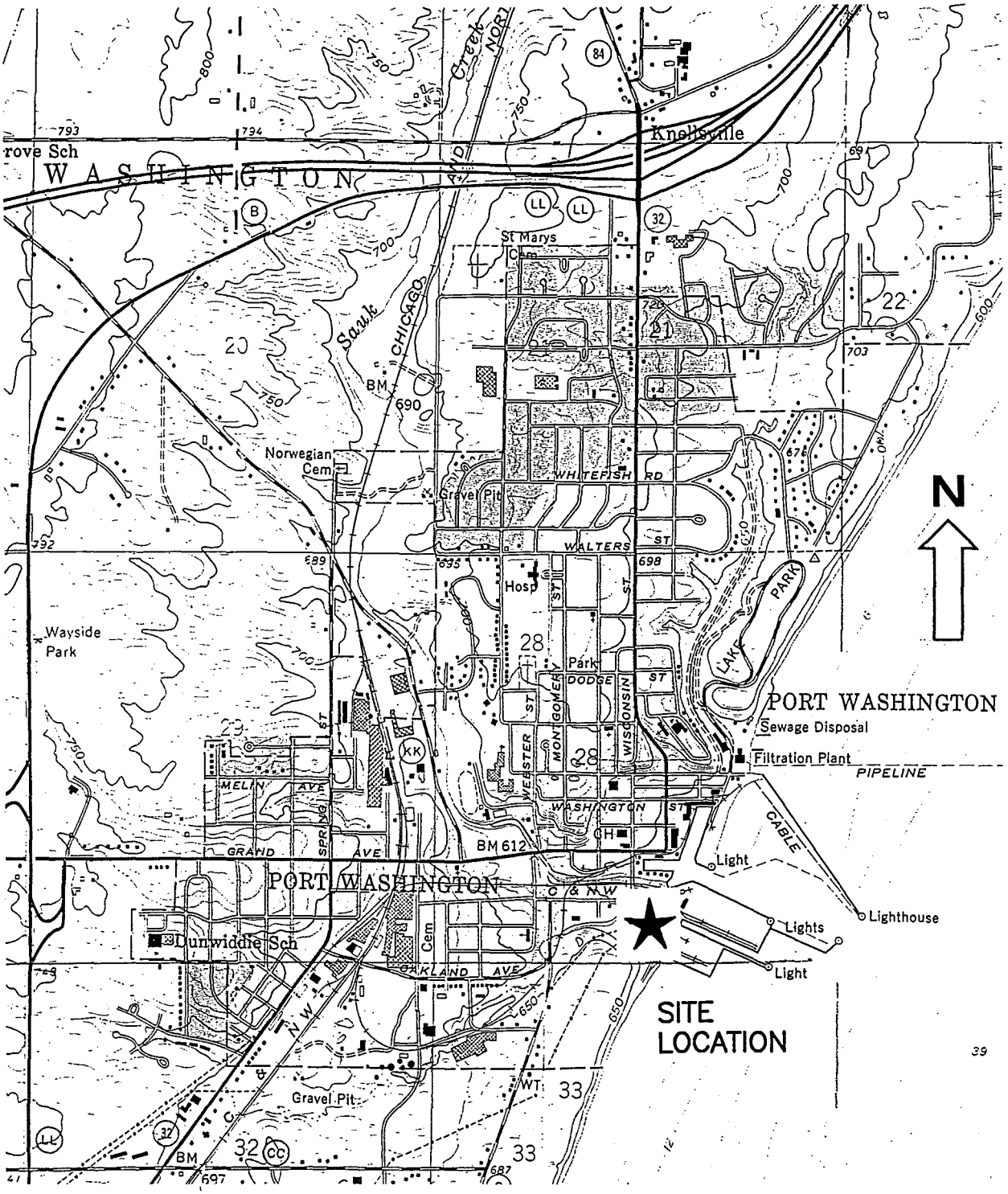
A subsurface exploration was performed and presented in this report. However, subsurface exploration cannot reveal totally what is below the surface. Depending upon the sampling method and frequency, every soil condition may not be observed, and some materials or layers which are present in the subsurface may not be noted.

This report is issued with the understanding that it is the responsibility of the owner(s) to ensure that the information and recommendations contained herein are brought to the attention of the appropriate regulatory agency(ies).

FIGURES

Figure 1 - Site Location Diagram

Figure 2 - Soil Sampling Locations

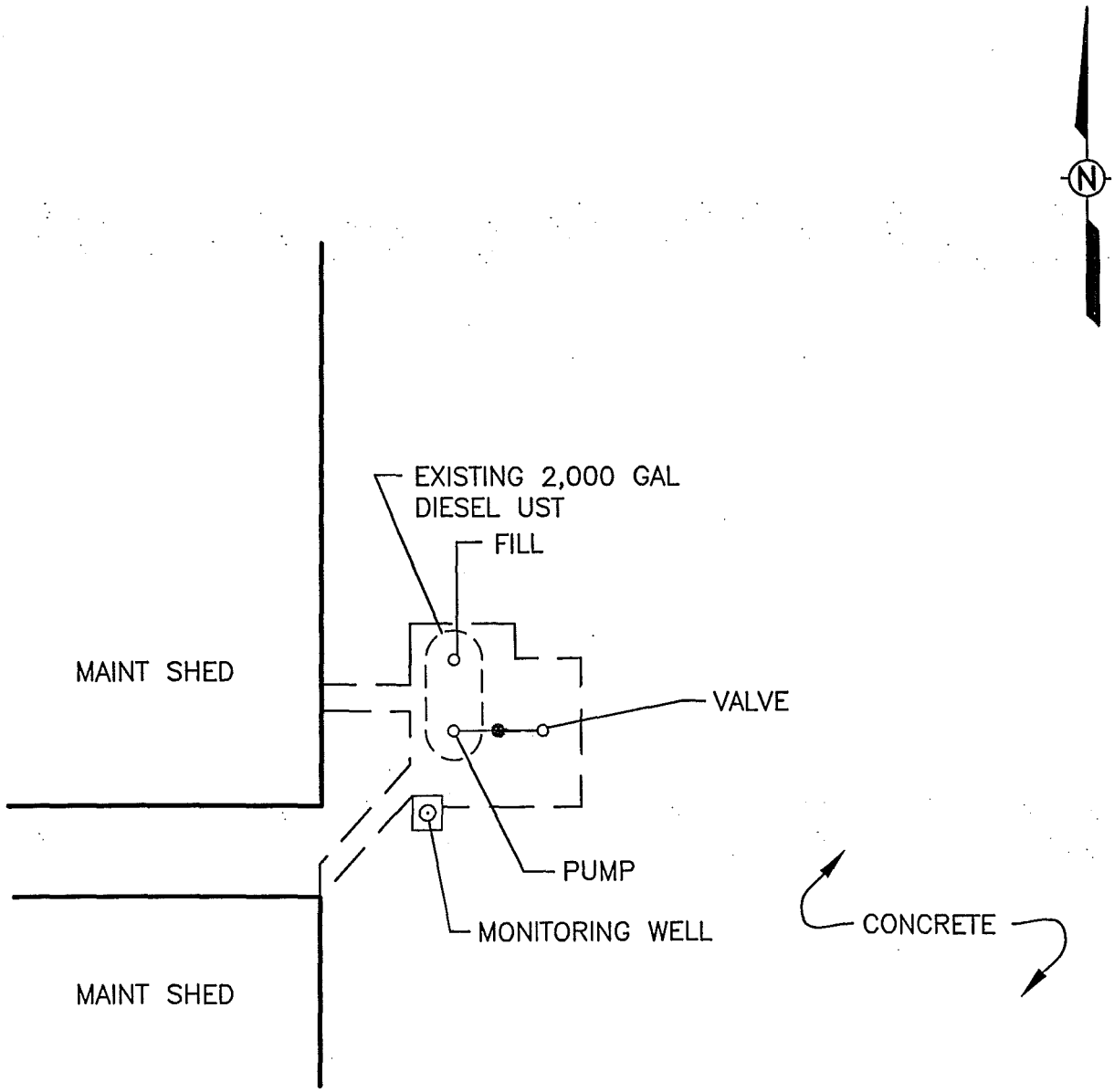


SOURCE: USGS PORT WASHINGTON, WI EAST AND WEST QUADRANGLES DATED 1958, PHOTOREVISED 1971 AND 1976

STS Consultants Ltd.
Consulting Engineers

SITE LOCATION DIAGRAM
WISCONSIN ELECTRIC POWER PLANT
UST PIPING REPLACEMENT
PORT WASHINGTON, WISCONSIN

DRAWN BY	JMS	9-11-97
CHECKED BY	KWY	9-11-97
APPROVED BY	AJG	9-11-97
CADFILE G5410000	SCALE 1"=2000'	
STS PROJECT NO. 85410XA	FIGURE NO. 1	



LEGEND

— — OPEN EXCAVATION PERIMETER

o—o REPLACED PIPING SECTION

● FIELD SCREENING SAMPLE LOCATION

STS Consultants Ltd.
Consulting Engineers

SITE LAYOUT/SOIL SAMPLING LOCATIONS
WISCONSIN ELECTRIC POWER PLANT
UST PIPING REPLACEMENT
PORT WASHINGTON, WISCONSIN

DRAWN BY	JMS	11-6-97
CHECKED BY	KWY	11-6-97
APPROVED BY	AJG	11-6-97
CADFILE G5410000	SCALE NTS	
STS PROJECT NO. 85410XA	FIGURE NO. 2	

K:\projects\85410XA\G5410000 Thu Nov 06 11:20:13 1997 STS CONSULTANTS LTD., MILWAUKEE, WISCONSIN

APPENDICES

A - Involved Parties List
B - ILHR Checklist
C - Piping Disposal Documentation

APPENDIX A

Personnel/Contractor Identification and Certifications

Site Assessor -

Mr. Dave Markelz
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, WI 53224
(414) 359-3030
ILHR Certification No. 00218

Site Owner -

Wisconsin Electric
Contact: Mr. Dan Gruver
333 West Everett Street
Milwaukee, WI 53202
(414) 221-2303

Tank Excavator, Remover and Cleaner -

Mr. Stan Anderson
U.S. Petroleum Equipment and Env. Services
558 Carter Court
Kimberly, Wisconsin 54136
Telephone: 800-490-4915
Remover Certification No. 00568

On-Site DILHR Representative -

Roman Nespodzany
Inspector Certification No. 35245
Telephone: 800-422-8220

Surplus Product -

Drained back into 2,000-gallon diesel UST

Sludge Disposal Facility -

No sludge generated.

Piping Disposal Facility -

U.S. Oil Company
558 Carter Court
Kimberly, Wisconsin 54136
Telephone: 800-444-0202

Laboratory Services -

Not Applicable

APPENDIX B

ILHR Checklist for Underground Tank Closure

Wisconsin Department of Industry, Labor and Human Relations

Complete one form for each site closure.

CHECKLIST FOR UNDERGROUND Piping ~~TANK~~ CLOSURE

The information you provide may be used by other government agency programs [Privacy Law, s. 15.04 (1) (m)].

RETURN COMPLETED CHECKLIST TO:
Safety & Buildings Division
Fire Prevention & Underground Storage Tank Section
P. O. Box 7969, Madison, WI 53707

A. IDENTIFICATION: (Please Print) Indicate whether closure is for: ☐ Tank System ☐ Tank Only ☒ Piping Only

1. Site Name: Port Washington Power Plant	2. Owner Name: Wisconsin Electric Power Company
Site Street Address (not P.O. Box): 146 S. Wisconsin St.	Owner Street Address: 333 W. Everett St.
☒ City ☐ Village ☐ Town of: Port Washington	☒ City ☐ Village ☐ Town of: Milwaukee; State: WI; Zip Code: 53201
State: Wisconsin; Zip Code: 53074; County: Ozaukee	County: Milwaukee; Telephone No. (include area code): 414 221-2416
3. Closure Company Name (Print): U.S. Petroleum Equipment	Closure Company Street Address: 558 Carter Ct.
Closure Company Telephone No. (include area code): (414) 735-8287	Closure Company City, State, Zip Code: Kimberly, WI 54136
4. Name of Company Performing Closure Assessment: STS Consultants	Assessment Company Street Address, City, State, Zip Code: 11425 W. Lake Park Dr., Milwaukee, WI 53224
Telephone # (include area code): (414) 359-3030; Certified Assessor Name (Print):	Assessor Signature: ; Assessor Certification No.:

Tank ID #	Closure	Temp. Closure	Closure In Place	Tank Capacity	Contents *	Closure Assessment
1. 450600194	Piping	☐	☐	2000	01	☒ Y ☐ N
2.	☐	☐	☐			☐ Y ☐ N
3.	☐	☐	☐			☐ Y ☐ N
4.	☐	☐	☐			☐ Y ☐ N
5.	☐	☐	☐			☐ Y ☐ N
6.	☐	☐	☐			☐ Y ☐ N

* Indicate which product by numeric code: 01-Diesel; 02-Leaded; 03-Unleaded; 04-Fuel Oil; 05-Gasohol; 06-Other; 09-Unknown; 10-Premix; 11-Waste oil; 13-Chemical (indicate the chemical name(s) or numbers(s) _____ _____ _____; 14-Kerosene; 15-Aviation.

Written notification was provided to the local agent 15 days in advance of closure date. ☒ Y ☐ N ☐ NA
All local permits were obtained before beginning closure. ☒ Y ☐ N ☐ NA

Check applicable box at right in response to all statements in Sections B - E.

	Remover Verified	Inspector Verified	NA
B. TEMPORARILY OUT OF SERVICE			
Written inspector approval of temporary closure obtained, which is effective until (provide date) _____	☐ Y ☐ N	☐	☐
1. Product Removed			
a. Product lines drained into tank (or other container) and resulting liquid removed, AND	☐ Y ☐ N	☐	☐
b. All product removed to bottom of suction line, OR	☐ Y ☐ N	☐	☐
c. All product removed to within 1" of bottom.	☐ Y ☐ N	☐	☐
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	☐ Y ☐ N	☐	☐
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	☐ Y ☐ N	☐	☐
4. Dispensers/pumps left in place but locked and power disconnected.	☐ Y ☐ N	☐	☐
5. Vent lines left open.	☐ Y ☐ N	☐	☐
6. Inventory form filed indicating temporary closure.	☐ Y ☐ N	☐	☐
C. CLOSURE BY REMOVAL			
1. Product from piping drained into tank (or other container).	☒ Y ☐ N	☐	☐
2. Piping disconnected from tank and removed.	☒ Y ☐ N	☐	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☒ Y ☐ N	☐	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☒ Y ☐ N	☐	☐
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. **NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR.**	☒ Y ☐ N	☐	☐
6. Vent lines left connected until tanks purged.	☐ Y ☐ N	☐	☒
7. Tank openings temporarily plugged so vapors exit through vent.	☐ Y ☐ N	☐	☒
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☐ Y ☐ N	☐	☒
9. Tank removed from excavation after **PURGING/INERTING**; placed on level ground and blocked to prevent movement.	☐ Y ☐ N	☐	☒
10. Tank cleaned before being removed being removed from site.	☐ Y ☐ N	☐	☒

- CONTINUE ON NEXT PAGE -

C. CLOSURE BY REMOVAL (continued)

	Remover Verified	Inspector Verified	NA
11. Tank labeled in 2" high letters after removal but before being moved from site.	☐ Y ☐ N	☑	☑
NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.			
12. Tank vent hole (1/8 th " in uppermost part of tank) installed prior to moving the tank from site.	☐ Y ☐ N	☑	☑
13. Inventory form filed by owner with Safety and Buildings Division indicating closure by removal.	☑ Y ☐ N	☑	☐
14. Site security is provided while the excavation is open.	☑ Y ☐ N	☑	☐

D. CLOSURE IN PLACE

NOTE: CLOSURES IN PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS OR LOCAL AGENT.

1. Product from piping drained into tank (or other container).			
2. Piping disconnected from tank and removed.	☐ Y ☐ N	☐	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☐ Y ☐ N	☐	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☐ Y ☐ N	☐	☐
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	☐ Y ☐ N	☐	☐
NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR - EDUCTOR OUTPUT 12 FT ABOVE GRADE.			
6. Vent lines left connected until tanks purged.	☐ Y ☐ N	☐	☐
7. Tank openings temporarily plugged so vapors exit through vent.	☐ Y ☐ N	☐	☐
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☐ Y ☐ N	☐	☐
9. Tank properly cleaned to remove all sludge and residue.	☐ Y ☐ N	☐	☐
10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled.	☐ Y ☐ N	☐	☐
11. Vent line disconnected or removed.	☐ Y ☐ N	☐	☑
12. Inventory form filed by owner with Safety and Buildings Division indicating closure in place.	☐ Y ☐ N	☐	☐

E. CLOSURE ASSESSMENTS

NOTE: DETERMINE IF A CLOSURE ASSESSMENT IS REQUIRED BY REFERRING TO ILHR 10.

1. Individual conducting the assessment has a closure assessment plan (written) which is used as the basis for their work on the site.	☐ Y ☑ N	☐	☐
2. Do points of obvious contamination exist?	☑ Y ☐ N	☑	☐
3. Are there strong odors in the soils?	☑ Y ☐ N	☑	☐
4. Was a field screening instrument used to pre-screen soil sample locations?	☐ Y ☐ N	☐	☐
5. Was a closure assessment omitted because of obvious contamination?	☐ Y ☐ N	☐	☐
6. Was the DNR notified of suspected or obvious contamination?	☐ Y ☐ N	☐	☐

Agency, office and person contacted: _____

7. Contamination suspected because of: ☐ Odor ☐ Soil Staining ☐ Free Product ☐ Sheen On Groundwater ☐ Field Instrument Test

F. METHOD OF ACHIEVING 10% LEVEL DESCRIPTION

☐ Educator Or Diffused Air Blower
Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of 12 feet above ground. Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.

☐ Dry Ice
Dry ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed over the greatest possible tank area. Dry ice evaporated before proceeding.

☐ Inert Gas (CO/2 or N/2) **NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHERE. THE TANK MAY NOT BE ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT**
Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank opposite the vent. Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing device grounded.

☐ Tank atmosphere monitored for flammable or combustible vapor levels.
Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space monitored at bottom, middle and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained before removing tank from ground.

G. NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW

H. REMOVER/CLEANER INFORMATION

Remover Name (print)	Remover Signature	Remover Certification No.	Date Signed
Stan W. Anderson	Stan W. Anderson	00566	9-11-97

I. INSPECTOR INFORMATION

Inspector Name (print)	Inspector Signature	Inspector Certification No.
Roman Nasiorzaski	Roman Nasiorzaski	3245

FDID # For Location Where Inspection Performed	Inspector Telephone Number	Date Signed
4101 Port Washington	414-122-5270	9/11/97

OWNER

APPENDIX C

Piping Disposal Documentation

Petroleum Equipment & Environmental Services
A DIVISION OF U.S. OIL CO., INC.

MEMBER PEI

KIMBERLY
558 Carter Ct.
Kimberly, WI 54136
920-735-8287 or 1-800-490-4915
FAX 920-739-0741
Website: http://www.usoil.com
E-Mail: uspe@usoil.com

BROOKFIELD
1425 Commerce Ave. Unit C
Brookfield, WI 53045
414-786-8742 or 1-800-490-4925
FAX 414-786-8853

October 15, 1997

Mr. Ken Yass
STS Consultants LTD
11425 West Lake Park Drive
Milwaukee, WI 53224

RE: Underground Petroleum Storage Tank piping closure services for Wisconsin Electric Power Co. (WEPCO), 146 S. Wisconsin St., Port Washington, WI

Dear Mr. Yass:

On September 4, 1997, U.S. Petroleum Equipment & Environmental Services excavated, dismantled, and removed steel piping from one UST system located at WEPCO's Port Washington Power Plant.

The steel piping was transported to U.S. Petroleum Equipment & Environmental Services' location in Kimberly and rendered useless for all but scrap. Sadoff Iron and Metal of Fond du Lac, WI picked up the scrap for salvage. The fuel stored in the piping was drained into the UST before dismantling.

Sincerely,

Todd Broeckel
Sales Representative

\rd

wepcopw.rpt