09-084-891680 UIC - D.P. 1/27/95
WHOM WAS PLAYING?

6-12-92 SED

RECEIVED
JUN 29 1994
SPECIAL RESPONSE SECTION
SOLID & HAZRD WASTE

Fluid Management, Inc.

SITE ASSESSMENT FOR UNDERGROUND STORAGE TANK SYSTEM

Site:	Good Shepherd Catholic Church N88 W17658 Christman Road Menomonee Falls, Wisconsin 53051
Site Assessor:	Fluid Management, Inc. Pewaukee, Wisconsin
Date:	April 4, 1994
FMI Project No.	P92.105

SITE ASSESSMENT REPORT DISTRIBUTION:

DILHR:	
DNR:	Tank Response Unit - SW-3 DNR PO Box 7921 Madison, WI 53707
DNR: (Local Office)	
CLIENT:	Good Shepherd Catholic Church N88 W17658 Christman Road Menomonee Falls, Wisconsin 53051

2831 N. Grandview Blvd.
Post Office Box 90
Pewaukee, Wisconsin 53072-0090
Tel: (414) 549-6898
Fax: (414) 549-6938

Fluid Management, Inc.

April 27, 1994

RECEIVED
APR 29
MONITORING & REMEDIAL RESPONSE SECTION
BUR OF SOLID & HAZRD WASTE

Good Shepherd Catholic Church
N88 W17658 Christman Road
Menomonee Falls, Wisconsin 53051

To Whom It May Concern:

Please find enclosed a revised Site Assessment for your Good Shepherd Catholic Church site located in Menomonee Falls, Wisconsin. Fluid Management, Inc. (FMI) inadvertently forgot to include the figures in the original one sent to you and hope we have not caused any inconvenience.

If you should have any questions or require additional information, please contact me at your convenience.

Sincerely,
FLUID MANAGEMENT, INC.

Gary W. Hawk

Gary W. Hawk
Vice President

GWH:dch

Enclosures

cc: Tank Response Unit -SW-3

2831 N. Grandview Blvd.
Post Office Box 90
Pewaukee, Wisconsin 53072-0090
Tel: (414) 549-6898
Fax: (414) 549-6938

1.0 SITE BACKGROUND INFORMATION

UST System Owner/Operator:	Good Shepherd Catholic Church N88 W17658 Christman Road Menomonee Falls, Wisconsin 53051
Property Owner:	Good Shepherd Catholic Church
Tank Site Address:	N88 W17658 Christman Road Menomonee Falls, Wisconsin 53051
Tank Site Legal Description:	SW¼, SE¼, Sec. 4, T8N, R20E
Certified Site Assessor:	Gary W. Hawk #00923
Summary of Past/Current Property and Adjacent Property Use:	The property has been used for church and school purposes in excess of 20 years. Surrounding properties are mainly residential.
Past Tank System History:	The UST was utilized for the storage of fuel oil.
Past Environmental History:	There are no documented spills, overfills or leaks at the site. Leak detection has not been performed.
Local Groundwater History:	Based on the topographic characteristics of the local area, it appears likely that groundwater flow would be oriented to the south.

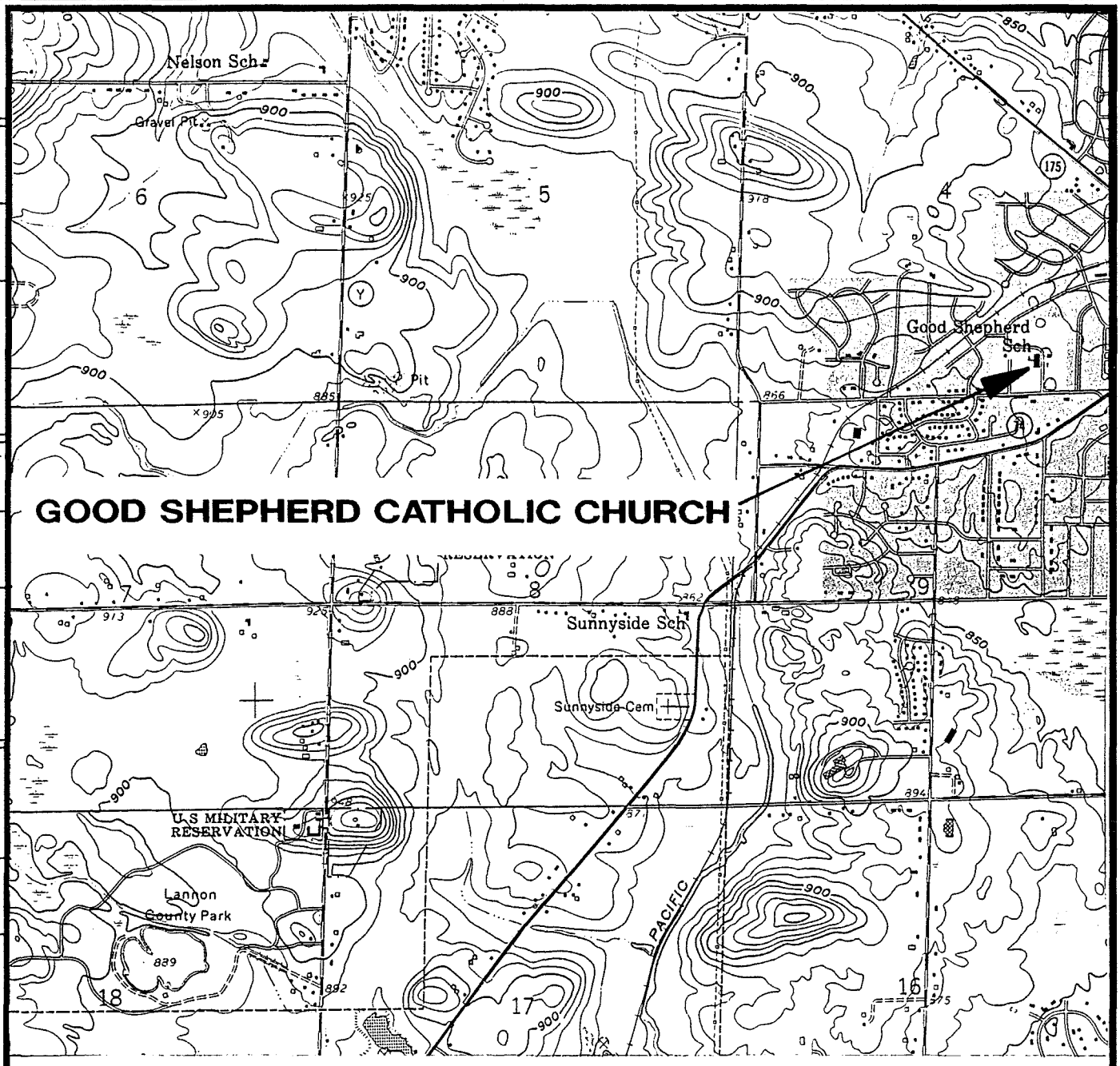
2.0 SITE LOCATION AND LAYOUT

Site Location Map: See Attached Figure 2.1

TANK SYSTEM SUMMARY:

Tank No.	Tank Size	Tank Contents	Composition	Date Installed	Age
#1	6,000 gallon	Fuel Oil	Steel	1965	28 yrs.

Site Layout Plan: See Attached Figure 2.2



SCALE
1:24000

1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

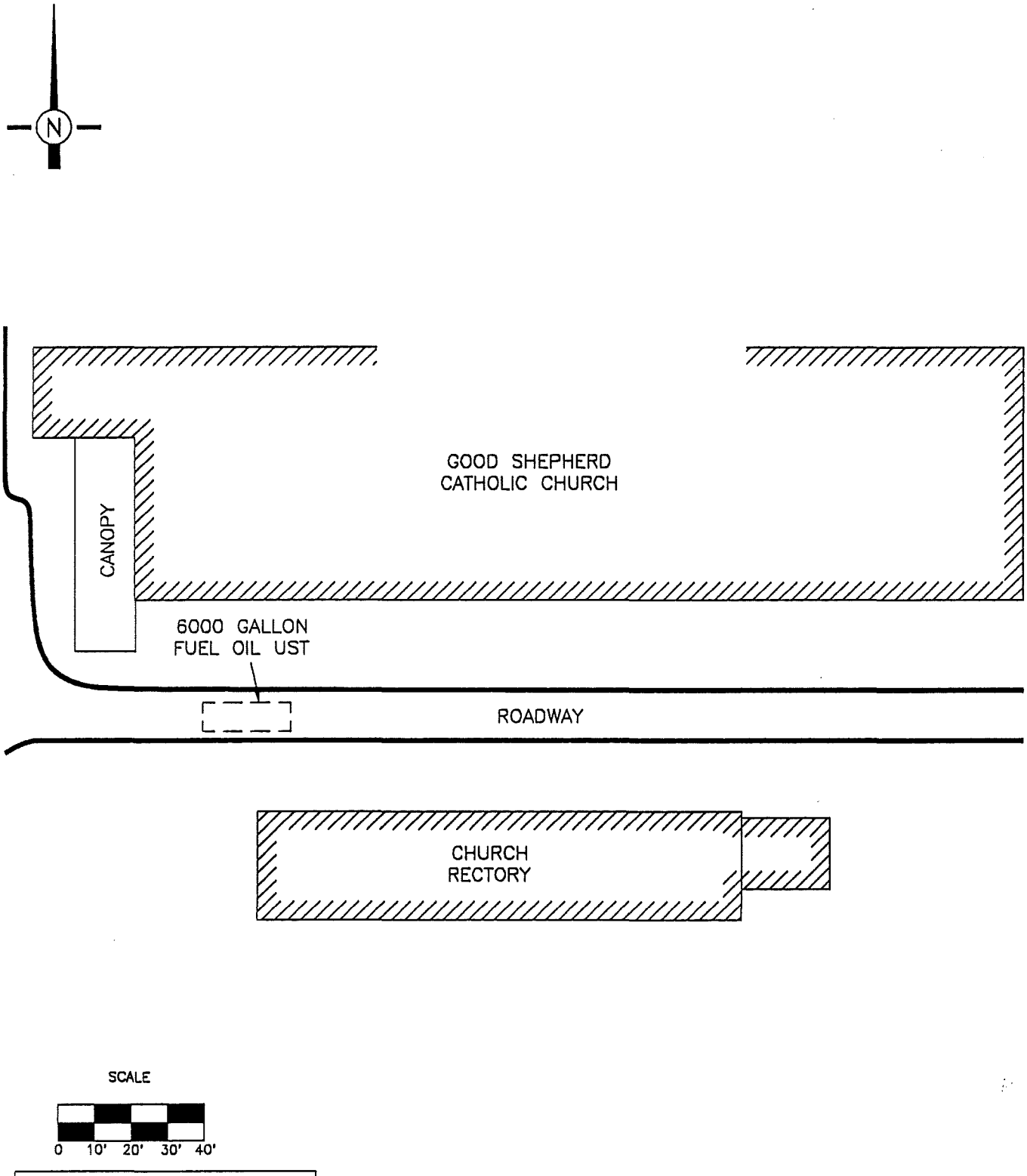
LOCATION

THE INTERPRETATIONS IN THIS FIGURE ARE BASED ON KNOWN POINTS IN TIME AND SPACE AND ARE INTEGRAL TO A WRITTEN REPORT AND SHOULD BE REVIEWED IN THAT CONTEXT.

Fluid Management, Inc.

FIGURE 2.1
SITE LOCATION MAP
GOOD SHEPHERD CHURCH
MENOMONEE FALLS, WISCONSIN

DRAWING NO.	DRAWN BY:	CHECKED BY:	APPROVED BY:
92.105S21	SAJ 4/7/93		



SCALE

0 10' 20' 30' 40'

THE INTERPRETATIONS IN THIS FIGURE ARE BASED ON KNOWN POINTS IN TIME AND SPACE AND ARE INTEGRAL TO A WRITTEN REPORT AND SHOULD BE REVIEWED IN THAT CONTEXT.

Fluid Management, Inc.

FIGURE 2.2
SITE PLAN VIEW
GOOD SHEPHERD CHURCH
MENOMONEE FALLS, WISCONSIN

DRAWING NO.	92.105S22
DRAWN BY:	SAJ
	4/7/93
CHECKED BY:	
APPROVED BY:	

3.0 TANK ACTIVITIES AND EXCAVATION

Method of Closure:

Tank No.	Closure Method	Date
#1	Removal	6-12-92

Excavation Subcont:

Interstate Pump and Tank
John Cusak

Certification Number:

Tank System Components Left On-Site:

None

4.0 TANK CLEANING AND DISPOSAL

Tank Purging Method:	Liquid carbon dioxide employed to remove explosive vapors and properly vented per DILHR requirements to less than 10%of LEL and 0% 0_2.
Tank Cleaning Method:	Cleaning degreaser employed to remove residue. Oil-dry used to remove trace amounts of sludge and residue.
Location Where UST was Cleaned:	The UST was cleaned on the roadway adjacent to the excavation.
Wastewater/Rinsate Handling:	Tank sludge transferred from tank to DOT approved sealed drums-affixed label indicting date and petroleum tank sludge.
Method of Tank Dismantling/Transport Disposal:	Cleaned tank appropriately labeled per DOT regulations and transported to National Tank Service of Wisconsin, Inc., 1813 73rd Street, Milwaukee, Wisconsin 53214.
Subcontractors:	Purging: Interstate Pump & Tank 1701-3 Pearl Street Waukesha, Wisconsin 53186
	Cleaning: Interstate Pump & Tank 1701-3 Pearl Street Waukesha, Wisconsin 53186

Dismantling:
Interstate Pump & Tank
1701-3 Pearl Street
Waukesha, Wisconsin 53186

Hauling:
Interstate Pump & Tank
1701-3 Pearl Street
Waukesha, Wisconsin 53186

Disposal:
Interstate Pump & Tank
1701-3 Pearl Street
Waukesha, Wisconsin 53186

5.0 RESIDUAL PRODUCT MANAGEMENT

Source:

Tank Ref. No.	Type of Product	Quantity	Final Disposition
No residual product to manage.			

Description of Removal/Transport/Disposal:

NA

Subcontractors:

Removal:
NA

Transportation:
NA

Storage:
NA

Disposal:
NA

6.0 TANK SLUDGE MANAGEMENT

Source:

Tank Ref. No.	Description of Sludge	Quantity	Final Disposition
#1	Flammable liquid UN 1993	1 drum	Milwaukee Solvents & Chemicals Corp.

Description of Collection/Removal/ Transportation/Disposal:

Tank sludge transferred to DOT approved drums meeting 49 CFR 173. 17H DOT drums labeled, marked and transport vehicles placarded per 49 CFR 172.

Waste Characterization Profile/ EPA Documentation/Disposal Records:

See Appendix A

Subcontractors:

Removal:
Milwaukee Solvents & Chemicals, Corp.
N59 W14765 Bobolink Avenue
Menomonee Falls, Wisconsin 53051

Transportation:
Milwaukee Solvents & Chemicals, Corp.
N59 W14765 Bobolink Avenue
Menomonee Falls, Wisconsin 53051

Storage:
Milwaukee Solvents & Chemicals, Corp.
N59 W14765 Bobolink Avenue
Menomonee Falls, Wisconsin 53051

Disposal/Recycling:
Milwaukee Solvents & Chemicals, Corp.
N59 W14765 Bobolink Avenue
Menomonee Falls, Wisconsin 53051

7.0 VISUAL INSPECTION

Weather Conditions: 84°F, sunny, southwest wind at 15 mph.

Site Observations: The UST was located in an access roadway adjacent to the Church building.

Detection of Unknown Tanks/Systems:

Tank Ref. No.	Size	Tank Contents/Amount
None		

Excavation Description: The excavation encompassed the former 6' x 29' UST and was approximately 14' in depth.

Description of Water Occurrence: Groundwater was not encountered.

Free Product: Free product was not encountered.

Soil Type: Sand fill and clay.

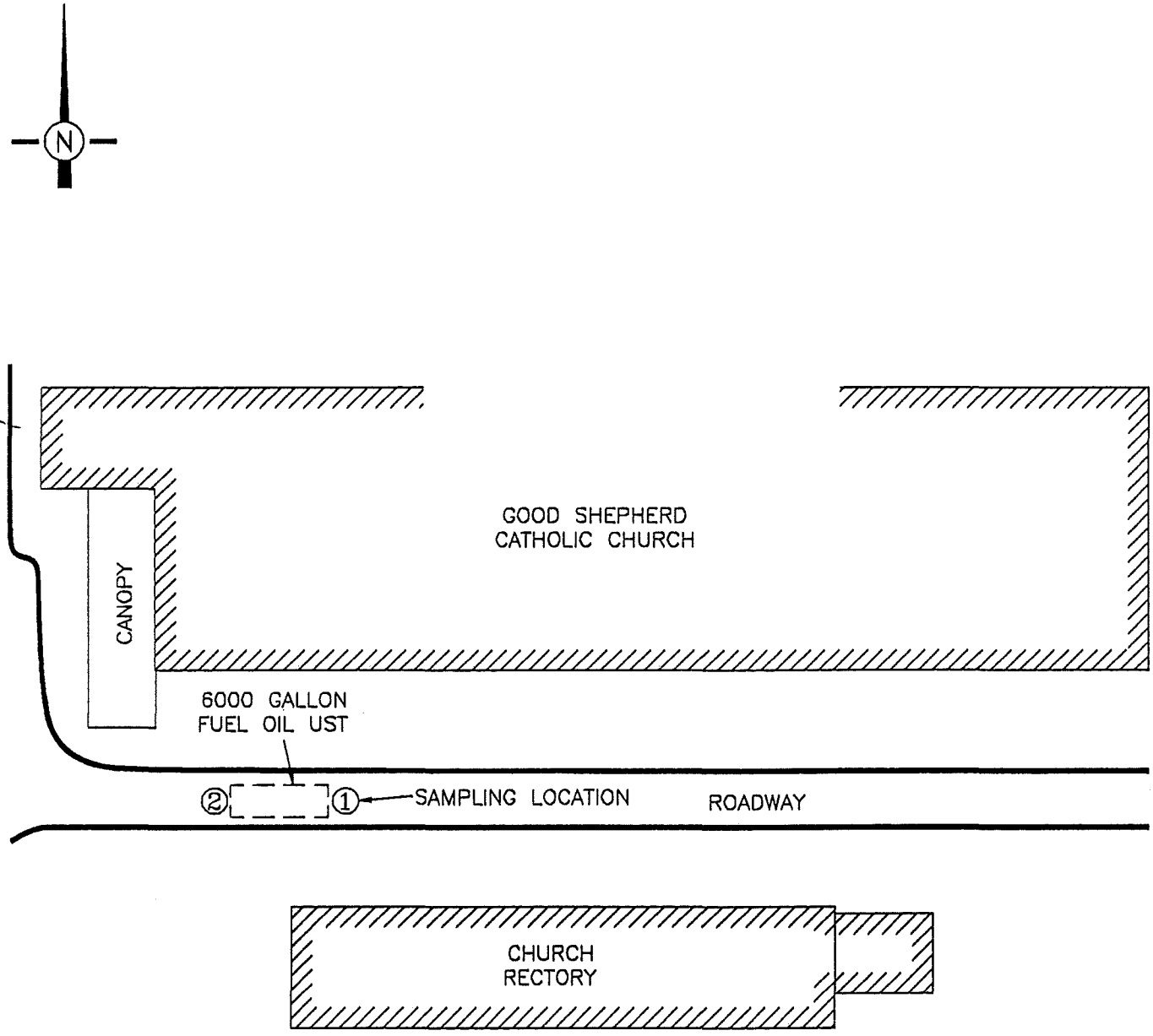
Tank Condition: The UST appeared in sound condition and exhibited no holes or leaks.

Piping Condition: The piping appeared in sound condition and exhibited no holes or leaks.

Description of Potential Release: A petroleum release associated with this UST was not apparent.

8.0 SAMPLING

Sampling Location Description:	Sample #1-Beneath east end of UST. Sample #2-Beneath west end of UST. See Attached Figure 8.1



SCALE

0 10' 20' 30' 40'

THE INTERPRETATIONS IN THIS FIGURE ARE BASED ON KNOWN POINTS IN TIME AND SPACE AND ARE INTEGRAL TO A WRITTEN REPORT AND SHOULD BE REVIEWED IN THAT CONTEXT.

Fluid Management, Inc.

FIGURE 8.1
SAMPLING LOCATIONS
GOOD SHEPHERD CHURCH
MENOMONEE FALLS, WISCONSIN

APPROVED BY:	
CHECKED BY:	4/6/93
DRAWN BY:	SAJ 4/7/93
DRAWING NO.	92.105S81

SOIL SAMPLE RESULTS:

	Soil Sample ID					
	#1	#2				
Date Sampled	6-12-92	6-12-92				
Time Sampled	11:30 am	11:30 am				
Parameter:						
GRO						
DRO	<10.0	<10.0				
TRPH						
TPH						
Lead						
Benzene						
E Benzene						
Toluene						
Xylene						
124 TMB						
135 TMB						
MTBE						
Depth	14'	14'				
Soil Type	Sand and clay	Sand and clay				
Moisture Content						
PID/FID	N.D.	N.D.				
Nasal Observation	No odor	No odor				

Note: All analytical units in mg/kg
ND - No detection

GROUNDWATER RESULTS - Groundwater No Encountered

	Soil Sample ID					
Date Sampled						
Time Sampled						
Parameter:						
GRO						
DRO						
TRPH						
TPH						
Lead						
Benzene						
E Benzene						
Toluene						
Xylene						
124 TMB						
135 TMB						
MTBE						
Depth						
Soil Type						
Moisture Content						
PID/FID						
Nasal Observation						

Laboratory Information: See Appendix B

9.0 DISCUSSION

Release Determination:

Based on field observations supported by field instrumentation and subsequent analytical results, a petroleum release has not occurred associated with the UST system.

10.0 CERTIFICATION

This Site Assessment has been prepared in accordance with generally accepted engineering and hydrogeologic principles and practices of this time and location.

The site activities and results presented herein have been developed and interpreted from limited available information. Subsurface conditions may vary over time and space and the results of this site assessment should be evaluated in that context.

The recommendations contained in the Site Assessment represent our professional opinions.

This Site Assessment was prepared by Fluid Management, Inc.

Gary W. Hawk
Certified UST Assessor

11.0 SUPPORT DOCUMENTATION

Standard Sampling Procedures:	See Appendix C.
Copies of Tank Forms:	See Appendix D.

APPENDIX A

Waste Characterization and Disposal Documentation

mailed to EPA on 12/5/92

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved. OMB No. 2050-0028. Expires 5-30-92
GSA No. 1244-EPA-GT

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

EPA Notification of Regulated Waste Activity

United States Environmental Protection Agency

Date Received (For Official Use Only)

I. Installation's EPA ID Number (*Mark "X" in the appropriate box*)

[X] A. First Notification [ ] B. Subsequent Notification (*complete item C*)

C. Installation's EPA ID Number

II. Name of Installation (*Include company and specific site name*)

GOOD SHEPHERD LUTHERAN CHURCH

III. Location of Installation (*Physical address, not P.O. Box or Route Number*)

Street: NEF WILLISE CHRISTMAN RDC

Street (continued): MENOMONEE FALLS

City or Town: | State: WI | ZIP Code: 53051

County Code: | County Name: WAUKESHA

IV. Installation Mailing Address (*See instructions*)

Street or P.O. Box: SAME

City or Town: SAME | State: | ZIP Code:

V. Installation Contact (*Person to be contacted regarding waste activities at site*)

Name (*last*): STRAISHAR | (*first*): JOSEPH

Job Title: | Phone Number (*area code and number*): 414-255-2035

VI. Installation Contact Address (*See instructions*)

A. Contact Address Location: [X] Mailing: [ ]

B. Street or P.O. Box:

City or Town: | State: | ZIP Code:

VII. Ownership (*See instructions*)

A. Name of Installation's Legal Owner: GOOD SHEPHERD LUTHERAN CHURCH

Street, P.O. Box, or Route Number: N88 W16558 CHRISTMAN ROAD

City or Town: MENOMONEE FALLS | State: WI | ZIP Code: 53051

Phone Number (*area code and number*)	B. Land Type	C. Owner Type	D. Change of Owner Indicator	(Date Changed) Month Day Year
414-255-2035	P	P	Yes [ ] No [X]	

APPENDIX B

Analytical Support Documentation

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120

ANALYTICAL REPORT

Mr. Gary W. Hawk
FLUID MANAGEMENT, INC.
PO Box 90
Pewaukee, WI 53072

06/25/1992
Job No: 92.2527
Account No: 28500
Page 1

JOB DESCRIPTION: P92.105 (SA)
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: SEE BELOW

Date Received: 06/16/1992 14:30

Date Taken: SEE BELOW SEE BELOW

Parameter	Results	Units	Detection Limit	Date Analyzed
46957 #1 East End 6000 gal P92.105 (SA)			06/12/1992	11:30
Solids, Total	83.	%		06/18/1992
DRO - NONAQUEOUS	<10.	mg/kg	5.0	06/19/1992
46958 #2 West End 6000 gal P92.105 (SA)			06/12/1992	11:30
Solids, Total	82.	%		06/18/1992
DRO - NONAQUEOUS	<10.	mg/kg	5.0	06/19/1992

David W. Havick, Manager
Watertown Division
Certification No. 128053530

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Watertown Division
602 Commerce Drive
P.O. Box 288
Watertown, WI 53094
Tel: (414) 261-1660
Fax: (414) 261-8120

CHAIN OF CUSTODY

92.2527

Client: Fluid Management, Inc.	Project Name: PGD.105 (SA)
Send Report to: Gary Hank	
Address: P.O. Box 90, Pewaukee, WI 53072-0090	Collected by: Gary W. Hank
Telephone #: 414-549-6898	

Collection Information								Parameters
Sample ID	Sampling Location	Date	Time	GRAB	COMP	Sample Type	No. of Container	DRO
F1	EDGE END GCCOGEL F.O.	6/4/92	11:30 Am	X		Soil	2	+
F2	WEST END GCCOGEL F.O.	6/4/92	11:30 Am	X		Soil	2	+

Remarks:

Relinquished by:	Date	Time	Received by:	Date	Time
[illegible]	6/4/92	1:15pm	[illegible]	6/4/92	1:15pm

Shipping Notes/Lab Comments

Received for NET Midwest by: Amy Voegt 6/10/92 1430

Samples Field Filtered: ___ Yes ___ No
Seals Intact Upon Receipt: ___ Yes ___ No ___ N/A

THESE GUIDELINES DIDN'T
EXIST UNTIL 3 MONTHS
AFTER ZAMK WAS REMOVED

APPENDIX C

Standard Sampling Procedures

APPENDIX C

Standard Sampling Procedures

Sample Collection

A. Sampler Certification

Persons collecting soil samples for ILHR 10 site assessments must be certified by DILHR or supervised by a certified site assessor. Attachment 4 provides information on certification.

B. Soil Sample Locations

Collect samples in the native soil, not in the backfill material around the tank, from all of the following locations:

1. In native soil one to three feet beneath each end of each tank in the excavation.

2. In native soil on the supply side one to three feet beneath each dispenser. Only take one sample beneath each dispenser, regardless of the number of products dispensed.

3. In native soil one to three feet beneath the surface every 20 feet, or segment thereof, along piping runs. In doing so, take samples preferentially under swing joints, flex connectors, and pipe elbows, choosing the joints to sample. Collect at least one piping sample in addition to any pump island samples, if the piping run is greater than 10 feet.

4. In native soil 5 feet beneath remote fill pipe opening, if present.

5. Beneath the middle of tanks over 18 feet long.

These are minimum sample locations and attachment 2 includes examples. Additional sample locations include changes in soil type and underground conduits for utilities. Collect additional samples if warranted on the basis of field screening or other factors.

C. Variations to Soil Sample Locations

1. Redundant samples

Eliminate redundant samples. Examples include the following:

a. If the length of the tank is less than 5 feet, collect only one sample beneath the tank instead of two.

b. If the pump is located above the tank or within 2.5 feet of the end of tank do not collect a pump sample.

c. If dispensers are separated no more than 5 feet, collect one sample for every two dispensers.

d. If two or more tanks are laid end to end and are within 2.5 feet of each other, collect one sample instead of two between the two tank ends. Samples should still be collected under each end of each tank for tanks laid side by side.

e. If part of the piping runs above the tank(s), do not collect separate piping samples under those sections.

f. If the tank is less than 5 feet from a building and the piping leads directly from the tank into the building (e.g. waste oil tanks, fuel oil tanks), do not collect a piping sample.

g. If a piping run contains more than one product line or lines are separated by less than 2.5 feet, collect only one sample every 20 feet.

2. Sampling Backfill

If native soil is absent from the soil sample locations described above then sample backfill, provided the type of backfill is coarse sand or finer. DO NOT SAMPLE PEA GRAVEL AND COARSER MATERIAL. If pea gravel or coarser material extends more than three feet beneath the prescribed sample locations, excavate to native soil for the purposes of sample collection. if groundwater is encountered in gravelly backfill (i.e. the depth to groundwater is less than the depth to native soil) then excavate laterally to sample native soil from the sidewalls of the excavation just above the water level.

3. Obvious Contamination

If free product, strong petroleum product odors, stained soil or backfill, or other conditions make it obvious that a release from the tank has occurred, then do not complete the site assessment soil sampling. Report the release immediately in accordance with attachment 3 and collect one sample of contaminated soil for laboratory analysis to provide confirmation of the release. Collect the sample from an area that is representative of the contamination in accordance with the soil sampling guidance presented in this document. Do not collect a composite sample from several locations.

In addition, complete the documentation requirements for a release (see below). "Overexcavation" of obvious contamination, if attempted, should be conducted in accordance with reference 1. The site assessment soil sampling locations do not apply to overexcavation. Closeout samples for overexcavations should conform to the procedures for documenting LUST case closure provided in reference 2.

4. Closure in Place

ILHR 10 allows closure in place of USTs in a limited number of circumstances. Closure in place must be requested in writing from the DILHR authorized agent responsible for closure verification. Only written permission for closure in place is valid. Site assessments are still

required when tanks are closed in place. Collect soil samples from all of the locations specified above by one of the following methods.

a. **Soil borings** through the use of a drill rig, power auger, or hand auger. Conduct the borings within three feet of and below each end of each tank, drilling at an angle if necessary. Conduct soil borings along piping runs and pump islands immediately adjacent to these structures. The borings must be completed, documented and abandoned in compliance with the requirements of ch. NR 141, Wis. Adm. Code, which governs monitoring wells and soil borings.

b. **Holes cut in the bottom of the tank(s).** If the tank(s) can be safely entered, and holes can be cut in the bottom, the soil beneath the tank(s) may be sampled through the holes. Cut the holes near each end of each tank. If native soil cannot be accessed from the holes, sample the backfill material. Include visual observations of the interior of the tank in the closure documentation.

c. **Test pits beside the tank(s). Many tanks are abandoned in place due to their proximity to building foundations. Often it is possible to excavate a test pit or trench on the side of the tank opposite the foundation.** Soil conditions can then be visually assessed and soil samples collected directly.

d. **Groundwater monitoring.** If soil samples cannot be collected within 3 feet of the tank ends then it is necessary to assess the site using groundwater monitoring. Install at least three groundwater monitoring wells within 20 feet of the tank(s), accurately measure water levels in the wells to determine the hydraulic gradient, and conduct at least one round of groundwater sampling in accordance with the LUST analytical guidance. The wells must be constructed and documented in accordance with ch. NR 141, Wis. Adm. Code.

NOTE: Closure in place makes site assessment more difficult. It may require special equipment or persons with special qualifications or training. Some certified site assessors may not be technically qualified to conduct a site assessment for closure in place. The closure in place may also present problems if remediation is necessary, in future property sales, or in future construction. Therefore it is advisable to remove the tank(s) if possible. Contact the DNR District LUST project manager for the county in which the tank is located to discuss site-specific sampling problems and additional alternatives for conducting an adequate site assessment.

5. Shallow Depth to Groundwater

If the groundwater table occurs within the tank or piping excavation, collect soil samples from the side walls of the excavation above the water level as near as possible to all of the sample locations described above.

NOTE: Do not collect groundwater samples for the purpose of ***conducting the site assessment. However, water removed from the excavation must be disposed of properly and this may require sampling.***

6. Alternate Sampling Plans

Tank owners and their consultants may submit alternative site-specific site assessment sampling plans where the total number of samples according to the site assessment guidance would exceed 15 samples. The site assessor should develop the plan and submit it to the DNR for review prior to tank closure. The purpose of an alternate sampling plan is to eliminate unnecessary or excessive sampling. The plan should describe how the number of samples specified by the site assessment guidance is excessive and how the alternate plan will adequately check for the presence of a release. Submit alternate sampling plans at least 30 business days prior to the site assessment to the DNR.

7. Late Site Assessments

Soil sampling for site assessments should be performed at the time of tank closure while the tank excavation is open and the soil sampling locations are readily accessible. However, occasionally site assessments must be performed at a later date (e.g. if the tank owner closed the tank and did not know that a site assessment was required). In these cases, use and document the following procedures, which also apply to resampling of sites when holding times are exceeded or samples are cross-contaminated or broken:

a. Collect samples from all of the areas specified under sample locations above.

b. Collect samples using test pits or soil borings. If borings are used, use hammer sampler to collect undisturbed samples.

c. Collect samples from a depth greater than the depth of the original excavation since contamination migrates downward. Samples collected at shallower depths are unreliable due to dilution by clean backfill.

d. Identify and report all soil types including the native soil type, the type backfill used to fill in the excavation following removal, and the original backfill used to install the tank (if still present).

Reports prepared for late site assessments should provide all of the information included under "Documentation" and should be submitted to DILHR and the appropriate DNR office.

D. Analytical Parameters, Methods, Holding Times, and Quality Control

All soil samples sent to a laboratory must be analyzed for parameters and using methods appropriate for the substance contained in the UST system. The

parameters and methods to use for petroleum USTs are specified below and summarized in Table 2 in accordance with the "Leaking Underground Storage Tank Analytical Guidance" PUBL-SW-130-92REV (reference 6). Contact the DNR District LUST project manager with questions regarding parameters and methods for investigating suspected releases from chemical tank systems.

1. Parameters

The parameters for which soil samples must be analyzed depend on the substance stored in the UST and/or piping as shown below.

a. Analyze soil samples from tank systems that stored regular or unleaded gasoline, aviation fuel (grades 80, 100, and 100 low lead) for gasoline range organics (GRO).

b. Analyze soil samples from tank systems that stored diesel, jet fuel, or fuel oil (# 1, 2 & 4) for diesel range organics (DRO).

c. Analyze soil samples from tank systems that stored crude oil, lubricating oil, waste oil or fuel oil (#6) for total recoverable petroleum hydrocarbons (TRPH).

d. Analyze soil samples from tank systems where the substance stored is unknown for both gasoline range organics (GRO) and diesel range organics (DRO).

e. Analyze soil samples collected under system components where multiple substances were stored for the low volatility parameter. For example, if a piping run contains both a gasoline line and a diesel line, collect only one sample every 20 feet and analyze it for GRO. Similarly, if a diesel tank and a waste oil tank are laid end-to-end, analyze the sample collected between them for DRO.

TABLE 2

Analytical Parameters, Method, Holding Times, and Quality Control

Substance in Tank	Analytical Parameter	Analytical Method	Shipping/ Extraction	Holding Time	Jars/ Size	Quality Control	Notes
Regular Unleaded Aviation Fuel (Grades 80 & 100)	Gasoline Range Organics (GRO)	Wisconsin DNR Modified GRO Method	Shipping: 4 Days	14 Days	60 ml WM 25 gm	Trip Blank Temperature Blank if "Blue Ice" Used	Use Field Preservation with Methanol
Diesel Jet Fuel Fuel Oil ((#'s 1, 2, &4)	Diesel Range Organics (DRO)	Wisconsin DNR Modified DRO Method	Shipping: 4 days Extraction: 18 Hours After Receipt	47 days	60 ml WM 25 gm	Temperature Blank if "Blue Ice" Used	
Crude Oil Lubricating Oil #6 Fuel Oil Waste Oil	Total Recoverable Petroleum Hydrocarbons (TRPH)	Wisconsin DNR Modified EPA Method 9073	Shipping: 7 days Extraction: Within 7 days of Collection	47 Days	8 oz WM Full	Temperature Blank if "Blue Ice" Used	Some Soils May be Subject to Positive Bias

2. Methods

Soil samples should be analyzed according to the analytical methods approved by the DNR as shown below. A laboratory certified for purgeable organics under ch. NR 149, Wisconsin Administrative Code, must conduct the analysis.

a. The approved method for gasoline range organics (GRO) is the **Wisconsin DNR Modified GRO Method.** This method includes field preservation of samples using methanol.

b. The approved method for diesel range organics (DRO) is the **Wisconsin DNR Modified DRO Method.**

c. The approved method for total recoverable petroleum hydrocarbons (TRPH) is the **Wisconsin DNR Modified EPA Method 9073**

3. Holding Times

Handle and process all samples in accordance with the following timelines:

a. GRO samples should be preserved in the field with methanol, delivered to the lab within 4 days of collection and analyzed within 14 days of collection.

b. DRO samples should be delivered to the lab within 4 days of collection. The lab should add solvent within 18 hours of receipt and analyze the samples within 47 days of collection.

c. TRPH samples should be delivered to the lab within 7 days of collection, extracted within 7 days of collection and analyzed within 47 days of collection.

4. Quality Control

The following quality control measures apply to samples collected for site assessment:

a. If a GRO sample is collected, one GRO trip blank (i.e. a tared jar containing 25 mls of purge and trap grade methanol) should accompany the sample jars to the site and be analyzed with the soil samples. The jar should undergo all procedures performed on soil samples. If soil is added directly to jars containing methanol, open and close the trip blank at one of the sampling locations. If methanol is added to the jars using one of the transfer procedures described in attachment 6, perform the transfer procedure on the trip blank.

b. All samples must have their temperature measured upon receipt by the lab. If ice is used in the cooler then no special measures are necessary because the lab can determine the temperature directly from either the ice or the meltwater. However, if "blue ice" or other commercial coolants are used then a temperature blank (i.e. a sample jar containing ordinary water) should accompany the samples to the lab.

The preceding guidance is summarized in Table 2. Reference 6 provides additional information about the analytical parameters and methods.

E. Sample Collection Procedures

Collect soil samples in accordance with the soil type, substance, and analytical parameters and methods. Sample collectors should observe all standard scientific and industry practices. All certified site assessors must submit written descriptions of their standard sample collection techniques to DILHR and DNR. The following sampling procedures are provided as guidance. Attachment 6 includes additional suggestions and a list of sampling equipment suppliers.

1. Identify sample collection points based on tank system layout and soil sample locations specified above. Assign sample I.D. numbers at this time or at the time of collection.

2. Identify the type of analysis for each sample location. For example, two GRO samples for each gasoline tank, two DRO samples for each diesel tank, etc. Collect GRO samples in tared wide mouth 60 mL VOC vials containing 25 mls of purge and trap grade methanol. Collect DRO samples in tared 60 mL VOC vials.. Collect TRPH samples in 8 oz. wide mouth bottles. All sample jars should have teflon lined caps.

   NOTE: The purpose of methanol preservation is to reduce errors due to volatilization and biodegradation. Soil preserved in methanol is a hazardous waste unless analyzed by a lab. DNR advises site assessors ***not to collect extra GRO samples and to analyze all GRO samples they collect. Additional information on methanol sample preservation is*** *included in attachment 6.*

   NOTE: TRPH may be subject to false positives in some fine grained and organic soils. The DNR recommends collection of a background sample or a companion DRO sample if warranted by site-specific *conditions and the professional judgement of the site assessor.*

3. Gain access to the soil sample locations. This can be done directly by entering the excavation, remotely using a soil coring device such as a hand auger or split barrel core sampler, or indirectly by sampling from the backhoe bucket.

   NOTE: Enter excavations only if they are extremely shallow or if entry will comply with applicable OSHA regulations. Sampling from the backhoe bucket, while convenient and safe, increases errors due to non-representative samples, volatilization, and cross-contamination. Therefore, it is especially important to follow all recommended sampling procedures when sampling from the backhoe bucket.

4. Use appropriate sampling equipment to collect samples. Sampling equipment should be capable of rapidly collecting samples with a minimum of atmospheric exposure. Depending on the type of equipment used, transfer the soil to the laboratory jar directly or using a lab spatula or a hand trowel.

   a. **Hand augers** are limited to use in unconsolidated sediments and are particularly useful in sandy materials but tend to be impractical in dense clays or stony materials. Use of extensions may provide remote access to soil sample locations at some excavations.

   b. **Trowels** can be used to collect soil samples from in place or the backhoe bucket.

   c. **A large (30 ml) plastic syringe** with the end cut off can be used to collect soil samples with a minimum of disturbance in sands and silts.

   d. **A metal pipe can be used to collect soil samples with minimal disturbance in heavy clays. The pipe can be pounded into the** soil and the resulting sample extruded using a metal or plastic plunger.

   e. **Split spoon samplers** consist of a metal cylinder split longitudinally and threaded on both ends. A cutting head is threaded onto the lower end and a drill-rod attachment onto the upper end. The split spoon sampler is driven into the formation at the bottom of the borehole, usually using a drilling rig. When withdrawn and opened, the sample is relatively undisturbed and shows the natural stratification of the geologic material. They are most commonly used with borings (i.e. for closure in place or advance sampling) but can be used to sample soil directly.

f. Shelby tubes are thin-walled metal tubes that are driven into the formation, usually using a drilling rig.

g. Gloves are recommended for personal protection from exposure to contaminants. Wear either specially formulated (e.g. nitrile) or disposable gloves for this purpose. Do not wear work gloves while collecting samples because they cannot be adequately decontaminated.

5. Collect at least one soil sample from each sample location from a freshly exposed surface. Remove at lease 18" of soil from the immediate surface area where the sample is to be taken. Work quickly and minimize agitation of the soil to prevent loss of volatile contaminants. Collect at least 25 g of soil for GRO and DRO samples. Fill TRPH sample jars completely with soil leaving no headspace. Do not combine soil from several different locations into one sample because it decreases the specificity of the sample and increases the potential for volatilization.

NOTE: GRO samples should contain at least 25 g of soil but do not need to weigh exactly 25 g (the laboratory determines the exact sample weight). Correct sample size can be determined prior to sampling by weighing-out 25 g of site soil using pocket spring scale, placing it into an empty 60 ml jar and marking a fill line. It is not necessary to weigh actual samples intended for analysis and weighing can cause excessive volatilization of contaminants in the sample. A 30 ml plastic syringe, if used, can also be used to ensure an ample sample.

6. Seal the sample making sure that no soil particles are present on the mouth of the jar or cap. Use a toothbrush or other utensil to sweep particles off the rim. Also sweep the inside of the lid, if you put it down. A good sample seal is necessary to prevent loss of volatile contaminants. Shake GRO samples after sealing to coat the soil with methanol.

7. Pack samples for lab analysis in ice immediately. Keep samples at or below 4°C after collection and prior to analysis.

8. Collect an additional sample for field screening (if used) from each soil sample location. Refer to the "LUST Field Screening Procedures" PUBL-SW-176 (reference 7) for more information on field screening. DO NOT PERFORM HEADSPACE ANALYSIS ON SAMPLES COLLECTED FOR LAB ANALYSIS.

9. Collect an additional sample for dry weight determination at each sampling location. Do not put dry weight samples for GRO analysis in jars containing methanol.

10. Collect grab samples for field identification of soil type.

11. Properly label each sample collected. Assign an I.D. (if not done previously) and write the number directly on the sample label in waterproof ink. Write the sample I.D., the time of collection, the sample location, type of analysis, and method of preservation (if applicable) on the chain-of-custody form. Also write the number and time and date collected in the field notebook along with a verbal description of the sample location (e.g., north end of 10,000 gallon unleaded tank). It may also be helpful sketch the site in the field notebook and to write the number on the sketch.

12. Look at the sample for the presence of obvious contamination or staining. Identify the soil texture using the USCS classification and note soil color. Note any obvious sample odor. Also note the moisture content (dry, damp, moist, saturated). Record observations in field notebook.

NOTE: DO NOT SNIFF SOIL SAMPLES. Petroleum vapors are extremely toxic and the human nose cannot objectively measure for the presence of contamination. Rely on field screening and lab results.

13. Decontaminate sample collection equipment between each sampling location. Scrub sampling tools in detergent or solvent solution, rinse (repeatedly) in pure water, wipe dry with paper towel or allow to air dry. Use rinse water that is distilled or obtained from a source that is known to be uncontaminated. Wash bare hands or safety gloves (neoprene, nitrile, etc.) in addition to the sampling tools. Change disposable gloves, if used, between each sampling location. Decontaminate syringes between each sample location or use a different syringe for each sample location. Decontaminate plastic syringes, if reused, using soap and water only because solvents can cause them to leach phthalates. It is not necessary to decontaminate equipment between lab, headspace, dry-weight, and grab sample collection at a particular sampling location.

14. Proceed with field analysis (if used). Reference 7 provides field screening procedures.

15. Complete the LUST chain-of-custody form included in attachment 6. List name of sampler, name of project/property, time samples relinquished.

    NOTE: Samplers can use their own chain-of-custody form as long as it contains all data included on the standard LUST program chain-of-custody form.

16. Pack samples in ice and ship to certified lab. Use insulated styrofoam shippers or other style of ice chest. Follow methanol shipping instructions included in attachment 6.

ATTACHMENT 2

Examples of Tanks Requiring Site Assessments

ILHR 10 specifies that a site assessment shall be performed for certain tanks under specific conditions. The tanks affected include all underground storage tanks except tanks less than 60 gallons, farm and residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes, and USTs of 4,000 gallons or less capacity used for storing heating oil for consumptive use the premises where stored.

In general, site assessments are required for affected tanks at the time of closure (i.e. removal or abandonment) or change-in-service. For example:

Site Assessment Required:

100 gallon gasoline tank removed from bakery;
1,200 gallon gasoline tank abandoned in place at a residence;
1,500 gallon diesel tank removed from a farm;
4,100 gallon heating oil tank removed from a residence;
500 gallon heating oil tank removed from a gas station (fuel was sold from the tank).

Site Assessment Not Required:

55 gallon gas tank removed (anywhere);
700 gallon diesel tank removed from a farm;
3,000 gallon heating oil tank removed from a school.

The definition of tank in ILHR 10 includes all associated piping and a separate assessment is required for piping if abandoned at a different time from the UST. A "change-in-service" is defined as the continued use of a federally regulated UST to store a non-regulated substance. The definition of "farm tank" means a tank located on a tract of land (including fish hatcheries, rangeland and nurseries) devoted to the

production of crops or raising animals and associated residences and improvements ("farm" tanks must be located on farm property). The definition of "residential tank" means a tank located on the same property as a one- or 2-family dwelling or an ILHR 57 residential building (apartments, condominiums, hotels, motels, dormitories, etc.) and used only by the residents or for the maintenance of the property.

Note: Tanks at these facilities must have site assessments if the product stored in them was ever sold.

Site Assessment Required:

Piping run removed from gas station (1,000 gallon gas tank removed in 1985);
550 gallon gas tank removed from a marina (product sold to motorboats);
550 gallon gas tank removed from a resort (product sold to snowmobiles);
1,500 gallon gas tank emptied and used to store process water.

Site Assessment Not Required:

550 gallon tank removed from a resort (product never sold);
550 gallon gasoline tank removed from a hotel (product never sold).

ATTACHMENT 4

Contractor Certification in Wisconsin

(1) ILHR 10 establishes contractor certification in eight categories:

- Underground tank installers
- Aboveground tank installers
- Tank removers
- Inspectors
- Tank tightness testers
- Tank cleaners
- Tank site assessors
- Tank liners

(2) Certification is only required when work is performed on a tank system covered by ILHR 10. That means:

- The site assessor must be certified only when ILHR 10 requires a site assessment, i.e., for fleet and retail motor fuel tanks; farm and residential noncommercial motor fuel tanks larger than 1100 gallons; and heating oil USTs larger than 4000 gallons.

- The tank remover and cleaner must be certified for all tanks covered by ILHR 10's closure requirements. In essence, this means all tanks where the product stored has a flashpoint of 200°F or less.

(3) Once contamination is discovered, the scope of work changes to a remedial investigation. Since a site assessment is no longer required, the person doing the investigation need not be certified by DILHR. The tank remover and cleaner still do need to be certified.

Copies of Chapter ILHR 10 may be purchased for $8.00 (plus tax) from the following contact:

Department of Administration
Document Sales
P.O. Box 7840
Madison, WI 53707
(608) 266-3358

Information on contractor certification must be requested in writing from the following contact:

DILHR/Safety and Buildings Division
Attention: Luann Robb
P.O. Box 7969
Madison, WI 53707-7969
FAX (608) 267-0592

ATTACHMENT 6

Methanol Field Preservation for GRO Samples
Questions & Answers

What is the methanol field preservation?

Methanol field preservation involves placing soil samples in jars containing methanol or adding methanol to jars containing soil while at the sampling location. The methanol reduces volatilization and biodegradation of soil contaminants prior to lab analysis, thus giving more accurate sample results.

Is the methanol preservation necessary?

There is strong evidence that samples which are not preserved in the field underestimate the contamination present. Scientific data shows that losses of 30 percent or more are typical. This data is supported by field experience where screening, odor and staining of soils indicate that contamination was present but lab samples showed no detect.

What is the procedure for preserving samples with methanol?

For samples collected for site assessments (i.e. closure assessments for underground storage tanks), the DNR recommends adding 25 gm of soil directly to a tared 60 ml jar containing 25 mls of purge and trap grade methanol. It is not advisable to weigh out exactly 25 gm of soil for each sample because this is a ball park figure and any agitation causes unnecessary volatilization. Instead weigh out one 25 gm sample of site soil into an empty 60 ml jar, mark a fill line and use this jar as a model for collecting the actual samples.

There are three ways to add methanol to the soil. The first two involve the use of a glass syringe and noncoring syringe needle to transfer the methanol from a septa vial containing purge and trap grade methanol to the sample vial. Both require the sampler to use a fresh syringe needle for each sample to avoid cross contamination. The first

method requires loosening the cap to relieve pressure buildup from the methanol addition. The second method is to use a smaller sample size and less methanol to overcome sample pressurization. All samples must maintain a 1:1 ratio of milliliters (ml) of methanol to grams. DNR recommends using 10 gm soil and 10 ml of methanol but the laboratory analyzing the samples should approve the sample size. It is also possible to remove the cap and add the methanol directly to the jar. However, this method increases the potential for volatilization, cross contamination, and spillage. Add the methanol to samples within 2 hours of collection.

How can I dispose of soil samples that aren't sent in for analysis?

Soil preserved in methanol is a hazardous waste. Soil samples are exempt from hazardous waste regulations if they are analyzed at a laboratory. Any samples that are not analyzed are hazardous waste and the generator is legally responsible for proper disposal. In general, do not collect and preserve excess samples, and if you collect and preserve a sample, have it analyzed.

What can be done to insure personal safety while handling the methanol?

Do not store the methanol in a hot place. On hot days carry the methanol samples in your sample cooler prior to sample collection. Beware of pressure buildup in heated sample jars containing methanol. Avoid inhaling the methanol vapors. Work quickly while filling sample jars to minimize your exposure to the methanol.. Open only one methanol vial at a time.

What is a dry-weight sample and how many do I have to collect?

A dry weight sample is simply a jar filled with dirt that is required by the lab to calculate the percent moisture of the soil at the sampling location. Dry weight samples should be tightly sealed to prevent loss of soil moisture but, since they are not analyzed for contaminants, they do not require special preservation. You need to collect a dry-weight sample for each sampling location at the site.

APPENDIX D

Tank Inventory and Closure Forms

Wisconsin Department of Industry, Labor and Human Relations

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Information Required By Sec. 102.142, Wis. Stats.

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

For Office Use Only:
Tank ID #

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. 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. Have you previously registered this tank by submitting a form? ■ YES ☐ NO If yes, are you correcting/updating information only? ■ Yes ☐ No

This registration applies to a tank that is (check one):
1. ☐ In Use or 1B. ☐ Newly Installed
2. ☐ Abandoned With Product
3. ☐ Abandoned No Product (empty) or With Water
4. ■ Closed - Tank Removed
5. ☐ Closed - Filled With Inert Material
7. ☐ Out of Service - Provide Date: _____
8. ☐ Changed Ownership (Indicate new owner below)

Fire Department Providing Fire Coverage Where Tank Located: Menomonee Falls Fire Dept.

A. IDENTIFICATION: (Please Print)

1. Tank Site Name: Good Sheperd Catholic Church
Site Address: N88 W17658 Christman Road
Site Telephone No.: (414) 255-2035
City: Menomonee Falls ■ Village ☐ Town of:
State: WI
Zip Code: 53051
County: Waukesha

2. Owner Name (mail sent here unless indicated otherwise in #3 below): Good Sheperd Catholic Church
Owner Mailing Address (mail sent here unless indicated otherwise in #3): N88 W17658 Christman Road
City: Menomonee Falls ■ Village ☐ Town of:
State: WI
Zip Code: 53501
County: Waukesha

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): 1965
5. Tank Capacity (gallons): 6,000
6. Tank Manufacturer's Name (if known): Unknown

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): Church/School

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 - Date _____
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.

F. Tank Closed, Give Date (mo/day/yr): 6-12-92
Has a site assessment been completed? (see reverse side for details) ■ Yes ☐ No

G. 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): JOSEPH C. STRAZISHAR GOOD SHEPHERD ADMINISTRATOR
Indicate Whether: ■ Owner or ☐ Operator

Signature of Owner or Operator:
Date Signed: 4/21/94

D-7437 (R. 12/91)

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

Wisconsin Department of Industry, Labor and Human Relations

Complete one form for each site closure.

CHECKLIST FOR UNDERGROUND TANK CLOSURE

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

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

1. Site Name: GOOD SHEPHERD CATHOLIC CHURCH	2. Owner Name: GOOD SHEPHERD CATHOLIC CHURCH
Site Street Address (not P.O. Box): N88 W17658 CHRISTMAN ROAD	Owner Street Address: N88 W17658 CHRISTMAN ROAD
☐ City ☒ Village ☐ Town of: MENOMONEE FALLS	☐ City ☒ Village ☐ Town of: MENOMONEE FALLS; State: WI; Zip Code: 53051
State: WI; Zip Code: 53051; County: WAUKESHA	County: WAUKESHA; Telephone No. (include area code): (414) 255-2035
3. Closure Company Name (Print): INTERSTATE PUMP & TANK	Closure Company Street Address: PO Box 304 ~~Butler, WI~~
Closure Company Telephone No. (include area code): 414) 252-3565	Closure Company City, State, Zip Code: BUTLER WI 53007
4. Name of Company Performing Closure Assessment: FLUID MANAGEMENT, INC.	Assessment Company Street Address, City, State, Zip Code: 2831 N. GRANDVIEW BLVD, MILWAUKEE, WI 53072
Telephone # (include area code): 414) 549-6898; Certified Assessor Name (Print): GARY W. HAWK	Assessor Signature: [signature]; Assessor Certification No.: #00923

	Tank ID #	Closure	Temp. Closure	Closure In Place	Tank Capacity	Contents *	Closure Assessment
		☒	☐	☐	6,000 GAL	04	☒ Y ☐ N
2.		☐	☐	☐			☐ Y ☐ N
		☐	☐	☐			☐ Y ☐ N
		☐	☐	☐			☐ Y ☐ N
5.		☐	☐	☐			☐ Y ☐ N
		☐	☐	☐			☐ 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 -

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	☒	☐

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	☐	☒

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

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.

NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW

DILHR INSPECTOR NOT ON SITE DURING UST REMOVAL.

REMOVER/CLEANER INFORMATION

Remover Name (print)	Remover Signature	Remover Certification No.	Date Signed
John Cusak	[signature]		6-12-92

INSPECTOR INFORMATION

Inspector Name (print)	Inspector Signature	Inspector Certification No.

FDID # For Location Where Inspection Performed	Inspector Telephone Number	Date Signed