BORING LOG

PAGE 1 OF 1

PROJECT NO: 5039 BORING NO: GP-1 PROJECT NAME: 1525 E. Franklin Ave., Mpls, MN
DATE BEGAN: 3-16-95 DATE FINISHED: 3-16-95 FIELD ENGINEER: TEM - PEER
GROUND SURFACE ELEV.: --- GWL DATE/TIME: NE GWL DEPTH: ---
DRILLING METHOD: Geoprobe Boring DRILL EQUIP: --- GWL EQUIP: ---
CONTRACTOR: Precision Environmental CHECKED BY: TEM

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	"N" VALUE	REC (FT)	PROFILE	DESCRIPTION	ASTM	VOLATILE ORGANIC VAPORS (ppm) FID	VOLATILE ORGANIC VAPORS (ppm) PID	REMARKS
0.0	0.00					6" concrete layer at ground surface.				PID Readings taken in accordance with MPCA guidance document "Field Screening Procedures".
						SAND: Fine to coarse grained, brown, moist, no odor, loose to dense.				
5.0	-5.00									
10.0	-10.00	S1		1.0			SP		0	
15.0	-15.00	S2		1.5					0	
20.0	-20.00	S3		1.8					0	
		S4		1.0					0	
25.0	-25.00					END GEOPROBE BORING AT 24.0'. Backfilled with bentonite and cuttings. Capped with 7" concrete.				
30.0	-30.00									
35.0	-35.00									
40.0	-40.00									
	-45.00									

BORING LOG

PAGE 1 OF 1

PROJECT NO: 5034 BORING NO: B-1 PROJECT NAME: 1525 E. Franklin, Mpls, MN

DATE BEGAN: 2-28-95 DATE FINISHED: 2-28-95 FIELD ENGINEER: PRM & TEM - PEER

GROUND SURFACE ELEV.: --- GWL DATE/TIME: --- GWL DEPTH: ---

DRILLING METHOD: Hand Auger DRILL EQUIP: --- GWL EQUIP: ---

CONTRACTOR: PEER, Inc. CHECKED BY: TEM

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	"N" VALUE	REC (FT)	PROFILE	DESCRIPTION	ASTM	VOLATILE ORGANIC VAPORS (ppm) FID	VOLATILE ORGANIC VAPORS (ppm) PID	REMARKS
0.0	0.00					GRAVEL: 1" layer below 5" concrete.	SM			
						SILTY SAND: fine to med grained, black, moist.				
						SAND: fine to coarse grained, brown, moist.				Musty, organic smell to cuttings.
5.0	5.00	S1		5			SP		1.6	
		S2		5					1.5	*Sample submitted for laboratory analysis.
		S3*		5					1.5	
		S4*		5					1.5	
10.0	10.00					END OF BORING AT 9.0'. Hole filled with cuttings.				PID Readings taken in accordance with MPCA guidance document "Field Screening Procedures".
15.0	15.00									
20.0	20.00									
25.0	25.00									
	30.00									

BORING LOG

PAGE 1 OF 1

PROJECT NO: 5034 BORING NO: B-2 PROJECT NAME: 1525 E. Franklin, Mpls, MN

DATE BEGAN: 2-28-95 DATE FINISHED: 2-28-95 FIELD ENGINEER: PRM & TEM - PEER

GROUND SURFACE ELEV.: --- GWL DATE/TIME: --- GWL DEPTH: ---

DRILLING METHOD: Hand Auger DRILL EQUIP: --- GWL EQUIP: ---

CONTRACTOR: PEER, Inc. CHECKED BY: TEM

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	"N" VALUE	REC (FT)	PROFILE	DESCRIPTION	ASTM	VOLATILE ORGANIC VAPORS (ppm) FID	VOLATILE ORGANIC VAPORS (ppm) PID	REMARKS
0.0	0.00					GRAVEL: 1" layer below 5" concrete.	SM			
						SILTY SAND: fine to med grained, black, moist.				
						SAND: fine to coarse grained, brown, moist.				
							SP			
5.0	5.00	S1		5					2.0	Musty, organic smell to cuttings.
		S2		5					2.0	*Sample submitted for laboratory analysis.
		S3*		5					2.0	
		S4*		5					2.0	
10.0	10.00					END OF BORING AT 9.0'. Hole filled with cuttings.				PID Readings taken in accordance with MPCA guidance document "Field Screening Procedures".
15.0	15.00									
20.0	20.00									
25.0	25.00									
	30.00									

BORING LOG

PAGE 1 OF 1

PROJECT NO: 5034 BORING NO: B-3 PROJECT NAME: 1525 E. Franklin, Mpls, MN

DATE BEGAN: 2-28-95 DATE FINISHED: 2-28-95 FIELD ENGINEER: PRM & TEM - PEER

GROUND SURFACE ELEV.: --- GWL DATE/TIME: --- GWL DEPTH: ---

DRILLING METHOD: Hand Auger DRILL EQUIP: --- GWL EQUIP: ---

CONTRACTOR: PEER, Inc. CHECKED BY: TEM

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	"N" VALUE	REC (FT)	PROFILE	DESCRIPTION	ASTM	VOLATILE ORGANIC VAPORS (ppm) FID	VOLATILE ORGANIC VAPORS (ppm) PID	REMARKS
0.0	0.00					GRAVEL: 1" layer below 5" concrete.	SM			
						SILTY SAND: fine to med grained, black, moist.				
						SAND: fine to coarse grained, brown, moist.				Musty, organic smell to cuttings.
5.0	-5.00	S1		5			SP		2.0	
		S2		5					2.0	*Sample submitted for laboratory analysis.
		S3*		5					2.0	
		S4*		5					2.0	
10.0	-10.00					END OF BORING AT 9.0'. Hole filled with cuttings.				PID Readings taken in accordance with MPCA guidance document "Field Screening Procedures".
15.0	-15.00									
20.0	-20.00									
25.0	-25.00									
	-30.00									

Rcd 3/21

PEER

Peer Environmental & Engineering Resources, Inc.

Ms. Laurie Kania
Tanks and Spills Section
Voluntary Petroleum Investigation and Cleanup
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155

March 21, 1995

RE: Subsurface Investigation Results
Joseph H. Labovsky Property
1525 East Franklin Avenue
Minneapolis, Minnesota

Dear Ms. Kania:

As previously discussed, Peer Environmental and Engineering Resources, Inc. (PEER) is submitting a subsurface investigation report to you for the above referenced site. PEER is requesting, on behalf of Mr. Joseph H. Labovsky (current property owner) and the University of Minnesota (potential future property owner), an expedited review of the report.

Based on the results of the subsurface investigation, a limited amount of petroleum impacted soil is present around the flammable liquids trap located at 1525 East Franklin Avenue, Minneapolis, Minnesota. However, the concentrations are relatively low and the horizontal and vertical extent appears limited.

The property is scheduled to be razed later this year, after the University of Minnesota acquires the property. At the time of razing, PEER recommends that a qualified environmental technician monitor for and segregate any petroleum impacted soil encountered. Based on the relatively low concentrations of the petroleum constituents and the limited extent of the identified petroleum impacts, PEER recommends file closure for the petroleum spill issue.

7710 Computer Avenue, Suite 101 • Minneapolis, Minnesota 55435 • (612) 831-3341 • Fax (612) 831-4552

Should you have any questions regarding this report or if I can be of further assistance, please feel free to contact me at 831-3341.

Sincerely,

Peer Environmental & Engineering Resources, Inc.

Thomas E. McMullen, P.E.
Environmental Engineer

TEM:tm
Enclosure

SUBSURFACE INVESTIGATION
JOE LABOVSKY PROPERTIES
1525 EAST FRANKLIN AVENUE
MINNEAPOLIS, MINNESOTA

MARCH 21, 1995

Prepared for:

Mr. Joseph H. Labovsky
6075 Lincoln Drive
Edina, MN 55439

Prepared by:

Peer Environmental & Engineering Resources, Inc.
7710 Computer Avenue, Suite 101
Minneapolis, Minnesota 55435
(612) 831-3341

PEER File #5034

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1.0 INTRODUCTION

Peer Environmental & Engineering Resources, Inc. (PEER) was retained by Mr. Joseph H. Labovsky to perform a subsurface investigation at 1525 East Franklin Avenue Minneapolis, Minnesota. The purpose of the investigation was to address the integrity of a flammable liquids trap (trap) located inside the Mike's Frame Service building located on the property.

The Scope of Services for the subsurface investigation was implemented in accordance with PEER's proposals dated February 10, 1995 and March 14, 1995.

Based on the results of the investigation, low levels of petroleum impacts to soil were detected around the trap. Mr. Labovsky intends to donate the property to the University of Minnesota. Prior to accepting the property, the University of Minnesota would like the petroleum spill identified at the site to be investigated and file closure issued by the MPCA.

The purpose for submitting this report to the Voluntary Petroleum Investigation and Cleanup (VPIC) Program is to obtain "File Closure" for the petroleum spill identified at the site. A copy of the VPIC application which has already been submitted to the MPCA is included in Appendix A.

2.0 BACKGROUND INFORMATION

2.1 PROPERTY DESCRIPTION

The subject property is located on Franklin Avenue, between Bloomington Avenue and 16th Avenue in Minneapolis (See Figure 1). The property is approximately 6,750 square feet (0.16 acres) in size and is located in an commercial and residential area. The property includes a building with approximately 5,000 square feet of floor space. The property is currently leased by Mike's Frame Service, which operates an auto body repair shop. The subject property is owned by Mr. Labovsky. The trap is located within the building (See Figure 2).

2.2 BACKGROUND INFORMATION

A Limited Phase I Environmental Assessment of the property (in conjuction with adjacent properties) was completed by EnecoTech Midwest, Inc. A copy of the report, dated November 22, 1994, is included in Appendix B. The report was prepared for the University of Minnesota, a potential purchaser of the property. The report identified the trap located on the site as a potential environmental concern.

PEER was retained by Mr. Labovsky to complete additional investigation activities related to the trap. The investigation activities included removing the residual oily water and sludge from the trap, completion of three hand auger borings and completion of one Geoprobe boring.

3.0 FIELD INVESTIGATION ACTIVITIES

3.1 FLAMMABLE LIQUIDS TRAP CLEANOUT

PEER retained Determan Welding & Tank Service, Inc. (Determan) to remove and dispose of the oily water and sludge in the flammable liquids trap. The purpose this task was to allow good observation of the sides and bottom of the trap to evaluate it's integrity.

Determan removed approximately 320 gallons of oily water and 200 gallons of sludge from the trap. The trap is constructed of concrete and is 4 feet by 3.5 feet by 5 feet deep in size. Based on visual observations, the trap appeared to be in relatively good condition with no obvious holes.

3.2 HAND AUGER BORINGS

Three hand auger borings (B-1 through B-3) were advanced around the trap on February 28, 1995 (See Figure 3). The boring locations were selected to evaluate representative subsurface conditions in the vicinity of the flammable liquids trap. A detailed description of field methods and procedures is provided in Appendix C.

The borings were completed through the concrete floor inside the building. A concrete coring machine was used to core through the floor. Copies of the boring logs are included in Appendix D.

Soil samples were collected in each hand auger boring at three intervals; 5-5.5 feet, 7-7.5 feet and 8-9 feet. The samples were screened for the presence of organic vapors with a photoionization detector (PID). The samples were also checked for visual evidence of contamination or odors. The soil samples from the 8-9 foot interval from each soil boring was submitted for analytical testing. The samples were submitted for analysis of volatile organic compounds (VOCs), diesel range organics (DRO), gasoline range organics (GRO), polychlorinated biphenyls (PCBs) and the eight RCRA Metals which include arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.

3.3 GEOPROBE BORING

Additional soil sampling and analysis was completed at the site using a Geoprobe sampling rig. Geoprobe services were completed on March 16, 1995 by Precision Environmental Services, Inc. (Precision). A copy of Precision's report, including their methods and procedures and analytical testing results, is included in Appendix E.

Because low levels of petroleum impacts were detected in the soil samples collected around the trap, one geoprobe boring was completed to determine the extent of the impacts. One probe (GP-1) was advanced through the concrete floor at the location indicated on Figure 3. The Geoprobe location was selected by PEER. Soil samples were collected at approximately five foot intervals beginning at 8 feet and ending at 24 feet. The actual sampling intervals are shown on the boring log included in Appendix D.

The soil samples obtained from the Geoprobe boring were analyzed on-site in Precision's mobile laboratory. In addition, select soil samples were submitted for analytical testing at an independent laboratory.

4.0 RESULTS

Geology

The hand auger borings and geoprobe boring encountered well-graded, brown sand to the termination depth. Published geologic information indicates that soils in the vicinity of the site consist of terrace sand deposits to a depth of 50 feet. Ground water at the site is estimated to occur at 30-35 feet below ground surface.

Organic Vapor Screening

PID screening results for the hand auger borings are summarized in Table 1. Low headspace readings were detected in all of the soil samples (i.e. less than 2.0 parts-per-million). No odors were noted in any of the samples.

In addition, soil samples from the geoprobe boring were monitored with the PID. No elevated headspace readings were detected in any of the soil samples collected from the Geoprobe boring.

Mobile Laboratory Analytical Results

The results for the soil samples analyzed in Precision's Mobile Laboratory are included in Appendix E. The samples were analyzed for DRO and BETX (benzene, ethyl benzene, toluene and xylenes). In summary, none of the analyzed parameters were detected above the laboratory detection limits.

Laboratory Analytical Results

The analytical results for the soil samples are summarized in Table 2. The laboratory analytical reports are presented in Appendix F. The soil samples obtained from the hand auger borings were analyzed for DRO, GRO, VOCs, PCBs and the eight RCRA Metals. The soil samples obtained from the geoprobe boring were analyzed for a combination of DRO and PVOCs.

In summary, the analytical results indicate that elevated concentrations of DRO were detected in soil samples obtained from adjacent borings B-1 and GP-1. In addition, low levels of petroleum related VOCs were also detected in borings B-1, B-2 and B-3. No non-petroleum related VOCs were detected in the soil samples.

GRO was not detected in any of the samples. In addition, metals concentrations detected in the samples are considered within the range of normal background concentrations and do not appear to represent an environmental concern.

PCB analytical testing results were not available from the laboratory at the time this report was finalized. The PCB analytical results will be provided to Mr. Labovsky, the University of Minnesota and the MPCA upon receipt.

5.0 CONCLUSIONS

Based on the results of the subsurface investigation, the following conclusions are provided:

- The subsurface impacts detected in the soil samples obtained from around the trap at the property constituted a reportable release per State of Minnesota Statute 115.061.

- The results of PID monitoring and analytical testing indicate that subsurface impacts exist in the vicinity of the trap. The constituents detected appear consistent with petroleum products, most likely waste oil or lubricating oil. Based on the relatively low levels detected in the soil samples, the impacts appear to be minor and do not represent a significant environmental concern.

- The horizontal and vertical extent of the impacts appears limited. Based on the results, ground water at the site is not expected to be impacted.

- The property is scheduled to be donated to the University of Minnesota to construct an adddition to the Hospital located on the adjacent property to the south. The property is tenatively scheduled to be razed later this year. At the time of building demolition, the area around the former trap will be monitored by an environmental technician. Any contaminated soil that is encountered will be segregated, as necessary, and disposed of in an appropriate manner.

6.0 RECOMMENDATIONS

Based on the results of the Investigation activities, a limited amount of petroleum impacted soil is present around the flammable liquids trap located at 1525 East Franklin Avenue, Minneapolis, Minnesota. However, the concentrations are relatively low and the extent of the petroleum impacts is limited. In addition, PEER recommends that a qualified environmental consultant be present on site to monitor the potential contact with the petroleum impacted soil during demolition activities.

PEER recommends that the MPCA consider file closure for the petroleum release associated with the trap.

7.0 STANDARD OF CARE

The services performed by Peer Environmental & Engineering Resources, Inc. have been conducted with that level of care and skill ordinarily exercised by reputable members of the profession, practicing in the same locality under similar budget and time constraints. No other warranty is made or intended.

Prepared by:

Thomas E. McMullen, P.E.
Environmental Engineer

Reviewed by:

Kenneth A. Larsen, P.E.
Senior Project Manager

TEM/KAL:tm

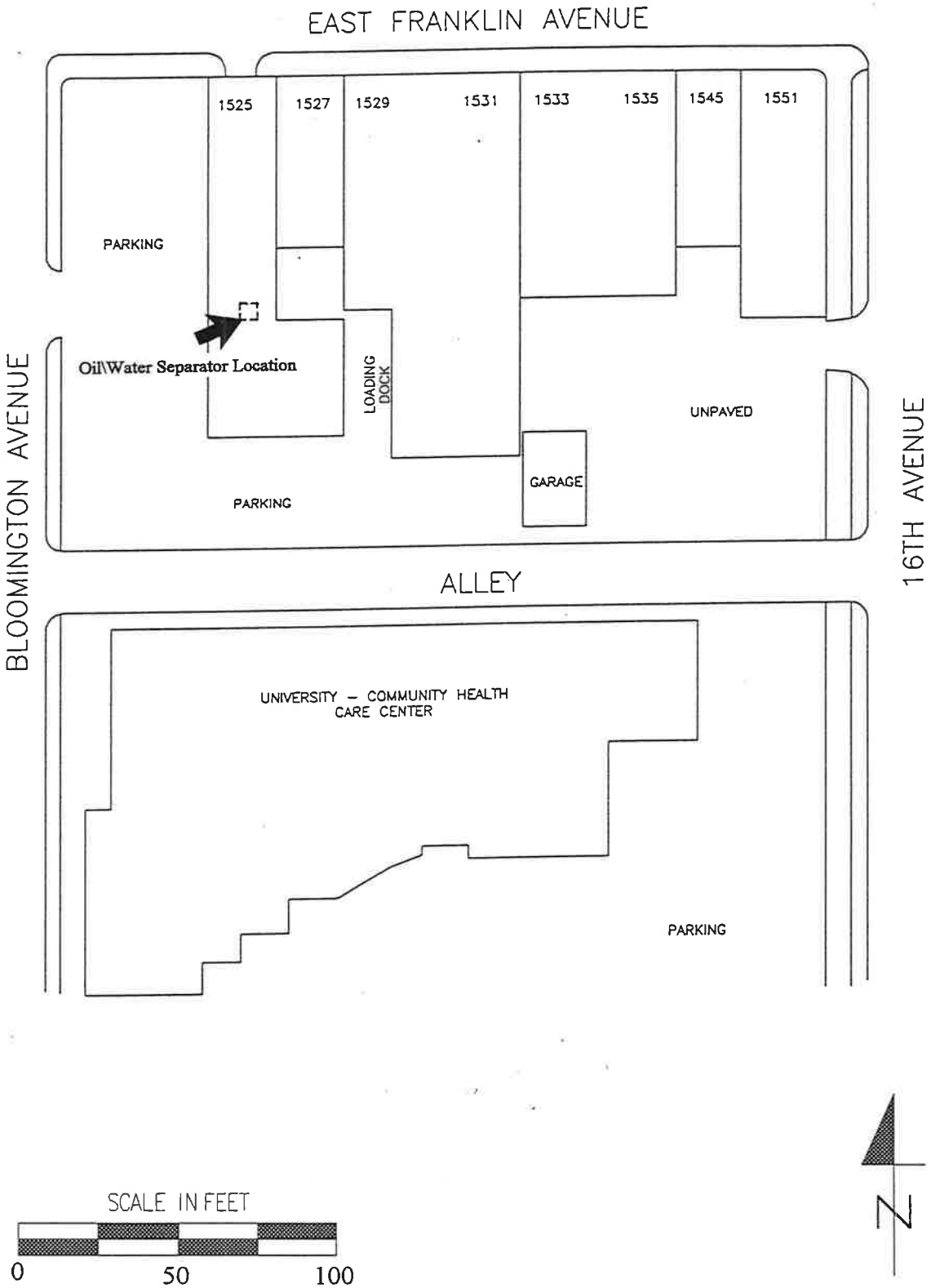
SCALE IN MILES

0 0.5 1.0

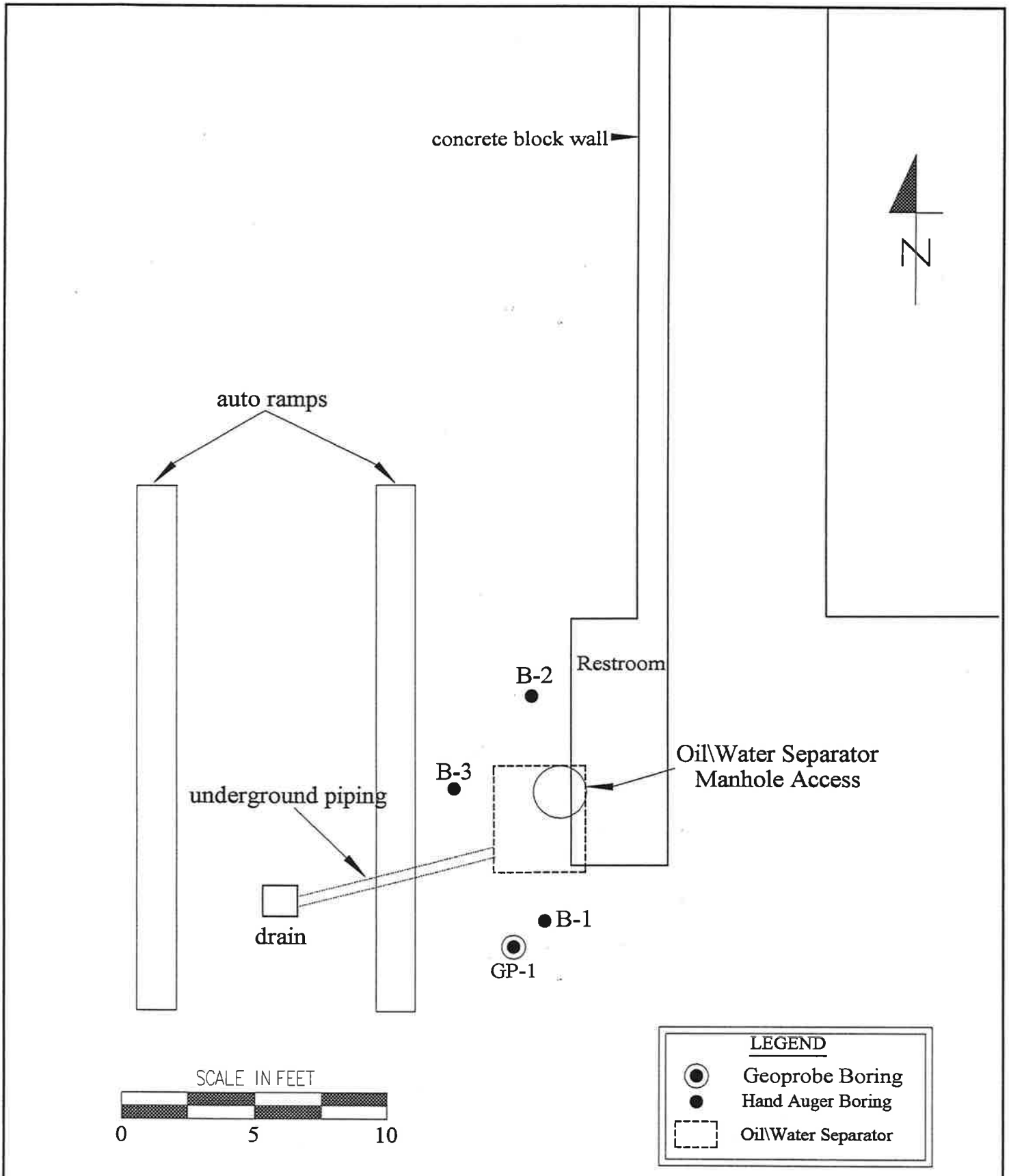
Modified from:
St. Paul West, Minnesota, 1967 (photorevised 1972, photoinspected 1977) and from Minneapolis South, Minnesota 1967(photorevised 1972, photoinspected 1977) 7.5 Minute Series Topographic Maps, United States Geological Survey.

N

Peer Environmental & Engineering Resources, Inc. Minneapolis, Minnesota	Site Location Map 1545 E. Franklin Avenue Minneapolis, MN	March 95 1



Peer Environmental & Engineering Resources, Inc. Minneapolis, Minnesota	Site Diagram 1525 E. Franklin Avenue Minneapolis, Minnesota	Mar. 95 2



Peer Environmental & Engineering Resources, Inc. Minneapolis, Minnesota	Boring Locations 1525 E. Franklin Avenue Minneapolis, Minnesota	Mar. 95 3

TABLE 1 SOIL HEADSPACE RESULTS			
Depth Interval	B-1	B-2	B-3
5.0' - 5.5'	1.6	2.0	2.0
7.0' - 7.5'	1.5	2.0	2.0
8.0' - 9.0'	1.5	2.0	2.0
NOTES: Readings are in parts per million (ppm).			

TABLE 2
ANALYTICAL TESTING RESULTS

Parameter	B-1 (8-9')	B-2 (8-9')	B-3 (8-9')	GP-1 (9-11')	GP-1 (14-16')	GP-1 (19-21')
n-Butylbenzene	0.0011	0.00052	0.00045	NA	NA	NA
sec-Butylbenzene	0.0015	0.0019	0.0013	NA	NA	NA
Ethyl Benzene	0.0012	0.00053	0.00058	ND (0.0003)	ND (0.0003)	NA
Isopropyl Benzene	0.0004	ND (0.0002)	ND (0.0002)	NA	NA	NA
Napthalene	0.00039	0.0013	0.00057	NA	NA	NA
n-Propylbenzene	0.00072	0.00022	0.00022	NA	NA	NA
o-Xylene	0.0033	ND (0.0002)	ND (0.0002)	NA	NA	NA
Toluene	0.0044	ND (0.004)	ND (0.004)	ND (0.0015)	ND (0.0015)	NA
1,2,4 - Trimethylbenzene	0.0028	0.00081	0.00075	NA	1.8	NA
1,3,5 - Trimethylbenzene	0.0015	0.00037	0.00031	ND (0.0008)	ND (0.0008)	NA
m,p-Xylenes	0.0033	0.00068	0.00089	ND (0.0015)	ND (0.0015)	NA
Diesel Range Organics	32	ND (0.6)	ND (0.6)	270	24	ND (0.6)

NOTES: All results reported in units of milligrams per kilogram or parts-per-million.
NA = Not analyzed for specified parameter.
ND ( )= Not detected at or above this detection limit.