

EXCAVATION REPORT FOR PETROLEUM RELEASE SITES

Minnesota Pollution Control Agency
Tanks and Spills Section
April 25, 1990
MPCA HAZARDOUS
WASTE DIVISION

The information below should be completed and submitted to the Minnesota Pollution Control Agency (MPCA) Tanks and Spills Section to document excavation of petroleum contaminated soil. Excavations must be done in accordance with the MPCA document "Excavation of Petroleum Contaminated Soil". Preliminary site investigation reports (if conducted) should be included with this report.

Additional pages may be attached. Please type or print clearly.

I. BACKGROUND

- A. Site: Quality Lincoln Mercury
Ford Leasing Development Co.
Street: 1001 Clover Drive
City, Zip: Bloomington 55420
County: Hennepin
MPCA Site ID#: LEAK0000 2127
- B. Tank Owner/Operator: Quality Lincoln Mercury
Mailing Address: Ford Motorland Corp.
Street/Box: One Parklane Blvd.
City, Zip: Dearborn, MI 48126
Telephone: (313)845-1066
- C. Excavating Contractor:
Belair Excavating
Contact: Mike Murlowski
Telephone: (612)633-1178
Tank Contractor Certification
Number: 0597
- D. Consultant:
Groundwater Technology, Inc.
Contact: Jeffery Pope
Street/Box: 2200 N. Stonington Ave. Ste 16
City, Zip: Hoffman Estates, IL 60195
Telephone: (708)882-8290

- E. Others on-site during site work (e.g., fire marshal, local officials,
MPCA staff, etc.): Fire official from City of Bloomington

Note: If person other than tank owner and/or operator is conducting the cleanup, provide name, address, and relationship to site on a separate attached sheet.

II. DATES

- A. Date release reported to MPCA: No release to notify; Quality Lincoln Mercury, Inc. initiated the investigation to reduce their storage and handling liabilities.
- B. Dates site work performed:

Work Performed	Date
Removal and disposal of five tanks and two dispenser systems	9/6/89 - 9/7/89
Environmental assistance during excavation of soil	11/6/89 - 11/9/89

I. Note

Groundwater Technology, Inc.
2200 N. Stonington Ave., Suite 160
Hoffman Estates, IL 60195

Relationship: Consultant to Ford Leasing Development Company

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III. RELEASE INFORMATION

A. Provide the following information for all tanks which have been removed.

Tank 1: Capacity 1,000 gal. Type Steel Age Unknown

Condition: By inspection, no significant signs of corrosion were evident

Product history: Unleaded gasoline storage

Approximate quantity of petroleum released, if known:

N/A

Cause of release:

N/A

Tank 2: Capacity 2,000 gal. Type Steel Age Unknown

Condition: By inspection, no significant signs of corrosion were evident

Product history: Gasoline Storage

Approximate quantity of petroleum released, if known:

N/A

Cause of release:

N/A

Tank 3: Capacity 1,000 gal. Type Steel Age Unknown

Condition: By inspection, no visible signs of corrosion were evident

Product history: Waste Oil Storage

Approximate quantity of petroleum released, if known:

N/A

Cause of release:

N/A

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III. RELEASE INFORMATION (Cont.)

A. Provide the following information for all tanks which have been removed.

Tank 4: Capacity 500 gal. Type Steel Age Unknown

Condition: By inspection, no visible significant signs of corrosion were evident.

Product history: Virgin Oil

Approximate quantity of petroleum released, if known:
N/A

Cause of release: N/A

Tank 5: Capacity 500 gal. Type Steel Age Unknown

Condition: By inspection, no visible significant signs of corrosion were evident.

Product history:
Virgin Oil

Approximate quantity of petroleum released, if known:
N/A

Cause of release:
N/A

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B. Provide the following information for all existing tanks. No existing tanks

Tank No.	Capacity	Contents	Type	Age
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

C. If the release was associated with the lines or dispensers, briefly describe the problem:

N/A

D. If the release was a surface spill, briefly describe the problem:

N/A

IV. EXCAVATION

Two excavations:

- A. Dimensions of excavation: 2 1000 & 2000 gal. storage tanks: 15 ft x 30 ft x 13 ft
2 2-500 gal. & 1-1000 gal. storage tanks: 30 ft X 30 ft X 13 ft
- B. Original tank backfill material (sand, gravel, etc.): Sand
- C. Native soil type (clay, sand, etc.): Sand
- D. Quantity of contaminated soil removed (cubic yards): Approximately 70 cubic yards
- E. Was ground water encountered or was there evidence of a seasonally high ground water table? At what depth? No groundwater was encountered
- F. If a soil boring was necessary (as indicated in part VI of "Excavation of Petroleum Contaminated Soil" for sand and silty sand native soils) describe the soil analytical and soil vapor headspace results. Attach the boring logs and laboratory results to this report.

N/A

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C. Briefly describe the soil sampling and handling procedures used:

1) Former Storage Tank Areas - Soil samples were collected from beneath the center of each tank, approximately 13 ft. below grade, on September 6, 1990 when the tanks were removed from the ground. Soil samples were again collected on November 7, 1989 during the excavation of soil. The samples were placed in 250 ml glass, Teflon lined containers, packed on ice and shipped to GTEL Environmental Laboratories by overnight carrier.

2) Former Gasoline Dispenser Area - Soil samples were collected from beneath the dispensers during storage system removal on September 6, 1989 and then again on November 9, 1989 approximately 4 feet deep using a hand auger. The same sampling and shipping procedures were followed as described above.

D. List the appropriate soil sample analytical results below (refer to the MPCA document "Soil and Ground Water Analysis at Petroleum Release Sites"). If the petroleum was not gasoline or fuel oil attach a separate table. Code the samples (with sampling depths in parentheses) SS-1 (8'), SS-2 (4'), etc. These should correspond with the codes on the site map in part VI.

Sample Code	THC as		Ethyl- benzene		Toluene		Xylene		MTBE		Lead	
	gas or FO	ppm	Benzene	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
See Appendix B - Soil Analytical Results												
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

NOTE: ATTACH COPIES OF LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS. See Appendix C for further analytical data.

VI. FIGURES

Attach the following figures to this report:

1. Site location map
2. Site map(s) drawn to scale illustrating the following:
 - a. location (or former location) of all present and former tanks, lines, and dispensers
 - b. location of other structures (buildings, canopies, etc.)
 - c. adjacent city, township, or county roadways
 - d. final extent of excavation
 - e. location of soil vapor analyses (e.g. SV-1), soil samples (e.g. SS-1), and soil borings (e.g. SB-1). Also, attach all boring logs.
 - f. north arrow and map legend

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VII. SUMMARY


Briefly summarize evidence indicating whether or not additional investigation is necessary at the site, as discussed in part VI of the MPCA document "Excavation of Petroleum Contaminated Soil".

The motor and drain oil tank closure identified adsorbed total petroleum hydrocarbons in the soil beneath the drain oil storage at 400 mg/kg and .4 mg/L(ppm) in the extract for TCLP analyses. As requested by Ford, Groundwater Technology excavated approximately 70 cubic yards of soil under the former drain oil storage tank. Following the excavation, the concentration of total petroleum hydrocarbons was 39 mg/kg. Additional analyses performed on the soil samples collected from the excavation resulted in non-detectable concentration levels for all analytes except EP Tox Lead (0.18 mg/L).

The gasoline tank closure identified adsorbed petroleum hydrocarbons beneath the dispenser at 80 mg/kg. An analyzed soil sample collected by hand auger indicated non-detectable levels for all parameters analyzed.

VIII. CONSULTANT (OR OTHER) PREPARING THIS REPORT

Company Name: Groundwater Technology, Inc.
Street/Box: 2200 N. Stonington Ave. #160
City, Zip: Hoffman Estates, IL 60195
Telephone: (708)882-8290
Contact: Jeffery Pope

Signature: 

Date: 10/1/90

If additional investigation is not required at the site, please mail this form and all necessary attachments to:

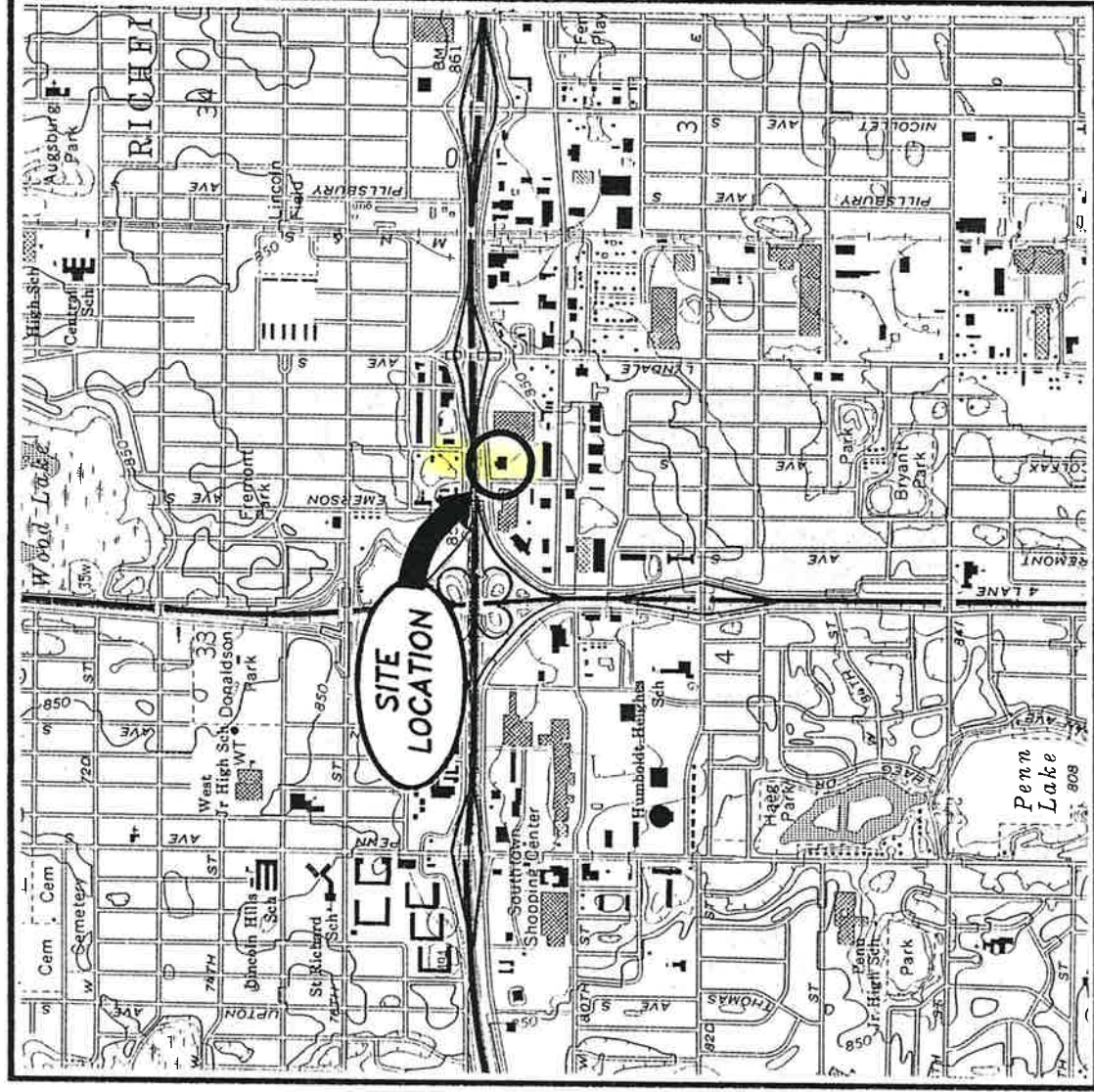
Minnesota Pollution Control Agency
Attention: (Project Manager)
Hazardous Waste Division
Tanks and Spills Section
520 Lafayette Road
St. Paul, Minnesota 55155

If additional investigation is required at the site, this form should be included as a section in the Remedial Investigation/Corrective Action Design report. Excavation reports which indicate that a remedial investigation (RI) is necessary will not be reviewed by MPCA staff until the RI has been completed.

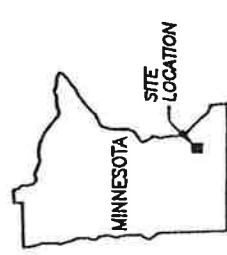
FIGURE 1

SITE LOCATION MAP

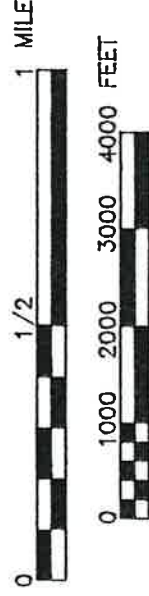
FORD MOTOR LAND CORPORATION
1001 CLOVER DRIVE
BLOOMINGTON, MINNESOTA



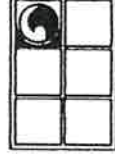
SOURCE: U.S.G.S. BLOOMINGTON, MINN. (1980)



SCALE 1:24000



HENNING COUNTY
T27N, R24W, SEC. 4



GROUNDWATER
TECHNOLOGY, INC.

I N T E R S T A T E

4 9 4

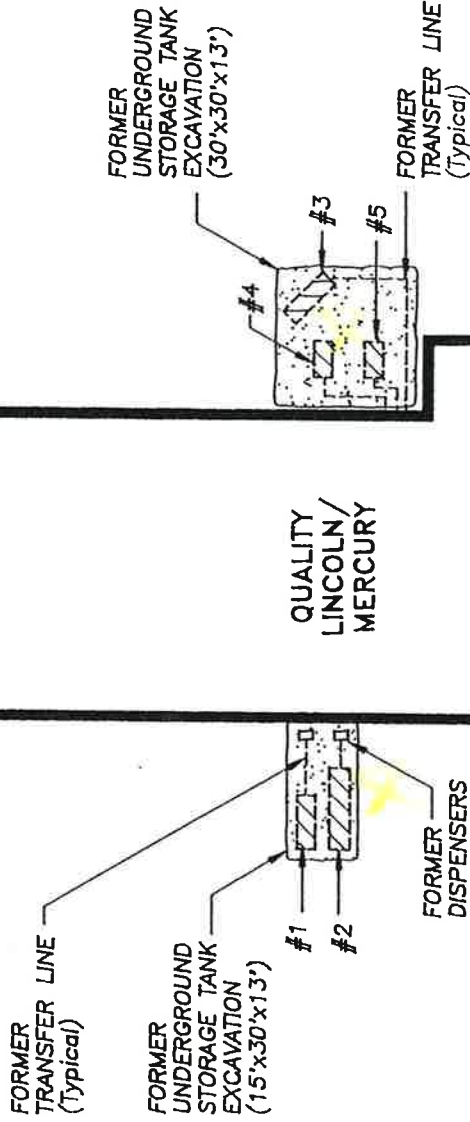
N



Grass

C O O L Y D R I V E

Asphalt
Parking Lot

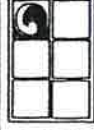


MAP IS NOT TO SCALE

FIGURE 2

TANK (#)	SIZE (gal.)
1	1000
2	2000
3	1000
4	500
5	500

NOTE:
 SAMPLE LOCATIONS AND DEPTHS ARE INCLUDED IN APPENDIX B.



GROUNDWATER TECHNOLOGY, INC.
 2200 Sherington Avenue
 Suite 140
 Hoffman Estates, IL 60195

Project # 04010-0534 Drawing # 0534-01 Date 9-5-91

Detailed

MWS

Checked

RJS

Approved

JLB

SKETCH MAP

Client Location
FORD MOTOR LAND CORPORATION
 QUALITY LINCOLN/MERCURY BLOOMINGTON, MN

APPENDIX A

HEADSPACE SOIL VAPOR ANALYSIS

HEADSPACE SOIL VAPOR ANALYSIS

FORD LEASING DEVELOPMENT COMPANY
QUALITY LINCOLN MERCURY, INC.
1001 CLOVER DRIVE
BLOOMINGTON, MN
MPCA ID#: 00002127

SEPTEMBER 6, 1989

Location	Depth (feet)	PID READING (ppmv)	SCALE (ppmv)
Middle end - Tank #2	10	ND	0 - 20
Bottom west end - Tank #1	10	ND	0 - 20
Between dispensers - #1 and #2	4	ND	0 - 20
Beneath dispenser - #1	4	ND	0 - 20
Beneath dispenser - #2	4	ND	0 - 20
Beneath - Tank #2	10	ND	0 - 20
Beneath - Tank #1	10	ND	0 - 20
Bottom east end - Tank #5	8	ND	0 - 20
Middle east end - Tank #5	8	ND	0 - 20
Bottom - Tank #4	8	ND	0 - 20
Bottom - Tank #5	8	ND	0 - 20
Bottom - Tank #3	8	ND	0 - 20

ND - indicates none detected using the PID.

NOVEMBER 6, 1989

Location	Depth (feet)	FID READING (ppmv)	SCALE (ppmv)
Beneath Tank #3	13	3	0-10
Beneath Tank #4	13	ND	0-10
Beneath Tank #5	13	ND	0-10

ND - indicates none detected using the FID.

APPENDIX B

SUMMARY OF SOIL ANALYTICAL RESULTS

**SOIL ANALYTICAL RESULTS
UNDERGROUND STORAGE TANK REMOVAL**

**FORD LEASING DEVELOPMENT COMPANY
QUALITY LINCOLN MERCURY, INC.
1001 CLOVER DRIVE
BLOOMINGTON, MN
MPCA ID#: 00002127
SEPTEMBER 6, 1989**

Location (Sample Depth in Feet)	benzene (ppm)	toluene (ppm)	ethylbenzene (ppm)	total xylenes (ppm)
Tank #1 (10)	< .03	< .06	< .05	< .10
Tank #2 (10)	< .03	< .06	< .05	< .10
Tank #3 (8)	< .03	< .06	< .05	< .10
Tank #4 (8)	< .03	< .06	< .05	< .10
Tank #5 (8)	< .03	< .06	< .05	< .10
Dispenser #1 (4)	< .03	< .06	< .05	< .10
Dispenser #2 (4)	< .03	< .06	< .05	< .10

Volatile Aromatic Compound Analysis per EPA 8020/8015/5030 Modified

FORD LEASING DEVELOPMENT COMPANY
 QUALITY LINCOLN MERCURY, INC.
 1001 CLOVER DRIVE
 BLOOMINGTON, MN
 MPCA ID#: 00002127

SOIL ANALYTICAL RESULTS
 OIL STORAGE TANK AREA EXCAVATION
 NOVEMBER 7, 1989

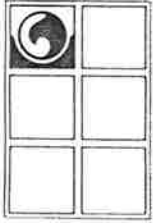
Location (Sample Depth in Feet)	Total Petroleum Hydrocarbons (ppm)	Volatile Organic Compounds (ppm)	PCB (ppm)	Metals (ppm)	
				Cadmium	Chromium
Excavation (10)	39	ND	ND	ND	0.18

ND = none detected
 Total Petroleum Hydrocarbons in Soil by I.R. Modified EPA 3550
 Volatile Organic Compound Analysis per EPA 8010/8020
 PCB Analysis by EPA Method 3550/8080
 Metals Analysis: Cadmium by EPA 1310,7130; Chromium by EPA 1310,7190; and lead by EPA 1310,7420.

SOIL ANALYTICAL RESULTS
 GASOLINE DISPENSER AREA
 NOVEMBER 9, 1989

Location (Sample Depth in Feet)	MTBE (ppm)	benzene (ppm)	toluene (ppm)	ethylbenzene (ppm)	total xylenes (ppm)	TPH as Gasoline (ppm)

ND = none detected
 Volatile Aromatic Compound Analysis per EPA 8020/8015/5030 Modified



GROUNDWATER TECHNOLOGY, INC.

2200 N. Stonington Avenue, Suite 160, Hoffman Estates, IL 60195 (312) 882-8290
Fax (312) 882-8606

708

October 3, 1989

Mr. Paolo Visioni
Ford Leasing Development Company
One Parklane Boulevard
Suite 1500E
Dearborn, MI 48126

Subject: Removal of Underground Storage Tanks at Quality Lincoln
Mercury in Bloomington, Minnesota
GTI Project Number: 403-271-9518

Dear Mr. Visioni:

INTRODUCTION

On September 6, 1989 Groundwater Technology, Inc. provided environmental assistance during the excavation and removal of one, 2,000 gallon, two 1,000 gallon and two 500 gallon underground storage tanks located at Quality Lincoln Mercury Inc., 1001 Clover Drive in Bloomington, Minnesota. The removal of the underground storage tanks was initiated by Quality Lincoln Mercury to reduce their existing storage and handling liabilities. The tanks were visually inspected after being excavated and showed no signs of significant corrosion or visible holes. The tanks were excavated, transported, and disposed of by Belair Excavating of New Brighton, Minnesota.

Soil excavated from the tank areas was monitored using a photoionization detector (PID). The monitored soil removed from the excavation exhibited readings no higher than 10 parts per million (ppm). The soil removed from the area was used as backfill following the removal of the tanks. Clean fill was used for the remainder of the backfilling in order to prepare the excavation for repaving.

A total of seven soil samples were collected from the excavation; one from beneath each of the dispensers and one from beneath each of the tanks. The samples were sent by overnight carrier to GTEL Environmental Laboratories, Inc. (GTEL) to be analyzed for total petroleum hydrocarbons (TPH), using EPA Method 503 B&E and selected volatile organic compounds using modified EPA Method 8020. The samples were iced and proper chain-of-custody forms completed prior to shipment to GTEL.

SCOPE OF WORK

The tank excavation included the following components:

- o Groundwater Technology personnel observed the excavation of one 2,000 gallon, two 1,000 gallon, and two 500 gallon underground storage tanks from the facility.
- o Soil removed from the excavation was continually monitored for volatile organic compounds using a PID.
- o Soil samples were collected from beneath each of the two dispensers and from beneath the center of each storage tank. The samples were analyzed for total petroleum hydrocarbons (TPH), using EPA Method 503 and selected volatile organic compounds using EPA Method 8020. Seven soil samples total were collected and analyzed.
- o A completion report was prepared and includes the results of the soil analysis.

TANK REMOVAL AND PERMITTING

A permit was secured from the City of Bloomington by Belair Excavating prior to removal of the underground storage tanks. A Fire Official from the City of Bloomington was present at the site



during excavation. Photographs were taken during each phase of the tank removals and are included as Appendix A.

TANK REMOVAL PROCEDURES

Tank Preparation and Degassing

Prior to excavation, the supply lines connecting the dispensers to the tanks were drained of product and the tanks were pumped of residual fuels using a vacuum truck. The underground storage tanks were uncovered to expose the top of the tank and piping. The vent, fill and dispenser lines were disconnected from the tanks and removed. Degassing of the gasoline storage tanks was accomplished using carbon dioxide in the form of dry ice.

Tank Removal and Disposal

The cleaned tanks were removed from the excavation and placed on their sides in order to conduct a visual inspection. Following inspection, the tanks were placed on trailers with the vent holes positioned at the top. The tanks were then removed from the site and transported by Belair Excavators to a proper facility for processing and disposal.

SOIL EXCAVATION

Soil Monitoring and Stockpiling

The soil removed during excavation from the tanks consisted of sands. Soil removed from the excavation was monitored using a PID to determine the relative volatile organic compound concentration in the soil. Additionally, all soils associated with virgin oil or waste oil tanks were visually inspected for signs of contamination. All monitored soils were stockpiled nearby.



Soil Sampling and Analysis

Soil samples were collected from beneath the dispensers and from beneath the center of each tank. The samples were collected and placed in 250 ml glass containers, with teflon lined covers placed on ice and shipped by overnight carrier to GTEL. Each sample was analyzed for TPH using EPA Method 503 B&E and for selected volatile organic compounds using modified EPA Method 8020.

BACKFILLING

Soil excavated from the tank area was used to backfill the excavation. The soil was compacted and the tank void was made up with a clean sand backfill compacted to 6" below grade. The excavated area remains unpaved pending the results from the soil analysis.

RESULTS

Tank Removal and Visual Inspection

The tanks removed from the Quality Lincoln Mercury facility were one 2,000 gallon, two 1,000 gallon, and two 500 gallon steel tanks. The tanks were used to store gasoline, virgin oil, and waste oil. A visual inspection of the tanks revealed no signs of significant corrosion or holes.

Excavated Material

Soil removed from the excavation was continually monitored with a PID and visually inspected. The monitored soils exhibited readings no higher than 10 ppm for volatile hydrocarbon constituents using the PID and no visual signs of contamination. Based on this information the soil was subsequently used to backfill the excavation.



Tank Identification

The serial numbers were obtained for three of the five tanks. The two 500 gallon storage tanks had no identification tags. The serial numbers for the tanks are as follows:

<u>Tank No.</u>	<u>(Gal) Size</u>	<u>Fuel Stored</u>	<u>Serial No.</u>
Tank #1	1,000	Gasoline	63205
Tank #2	2,000	Gasoline	J-020111
Tank #3	1,000	Waste Oil	B-436784
Tank #4	500	Virgin Oil	---
Tank #5	500	Virgin Oil	---

Soil Analysis

Seven soil samples were taken from the excavation, two from beneath each of the two dispensers and one from beneath each of the storage tanks. The results of the soil analyses are summarized in the table below.

<u>IDENTIFICATION</u>	<u>TOTAL BTEX * (ppm)</u>	<u>TPH (ppm)</u>
Tank #1	< .24	6
Tank #2	< .24	11
Tank #3	< .24	400
Tank #4	< .24	< 5
Tank #5	< .24	< 5
Dispenser #1	< .24	81
Dispenser #2	< .24	26

* Benzene, Toluene, Ethylbenzene and Xylenes

The laboratory analytical reports are included in Appendix B.



GROUNDWATER
TECHNOLOGY, INC.

CONCLUSIONS


This document describes in detail all actions undertaken by Groundwater Technology, Inc. at the Quality Lincoln Mercury, Inc. facility located in Bloomington, Minnesota.

A visual inspection of the tanks revealed no signs of significant corrosion or holes in the bottom of the tanks. The soil samples taken from beneath the dispensers and tanks were below detection limits for selected volatile organic compounds using Modified EPA Method 8020. The TPH analysis for tanks 1, 2 and 3 and both dispensers were elevated. The TPH concentration for Tank 3 was the highest at 400 parts per million (ppm).

Groundwater Technology, Inc. appreciates this opportunity to provide technical services to Ford Leasing Development Company. If you have any questions or comments concerning the enclosed data, please feel free to contact our office.

Sincerely,

Groundwater Technology, Inc.


Robert J. Smith
Engineer


Daniel A. Sieben
Territory Engineer

RS/DS/ke

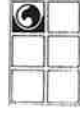
FORDMIN.SEP
REF #403-271-9518



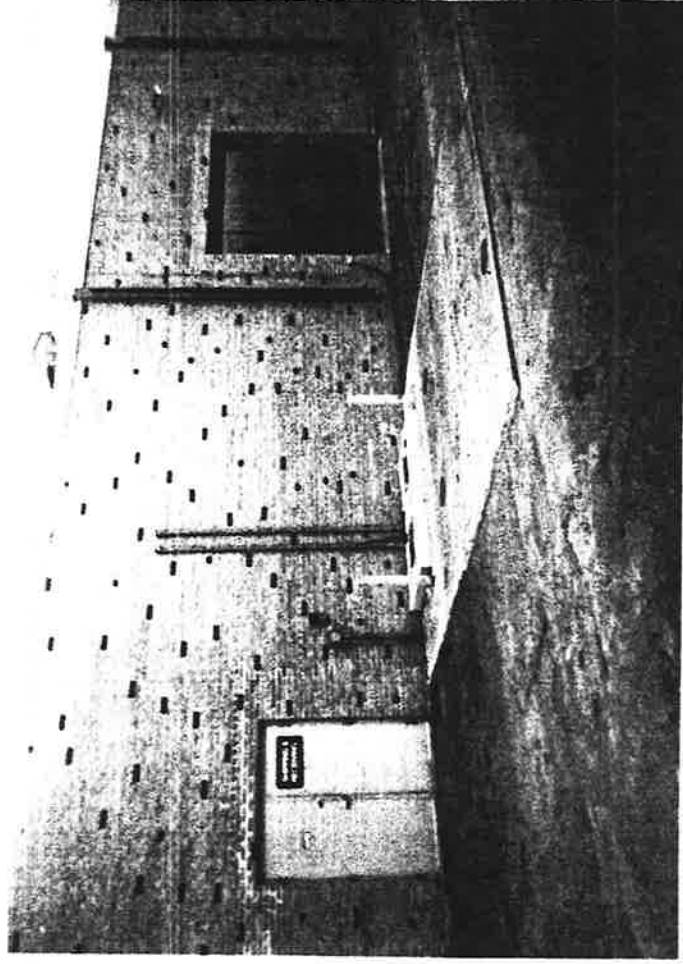
APPENDIX A

PHOTO DOCUMENTATION

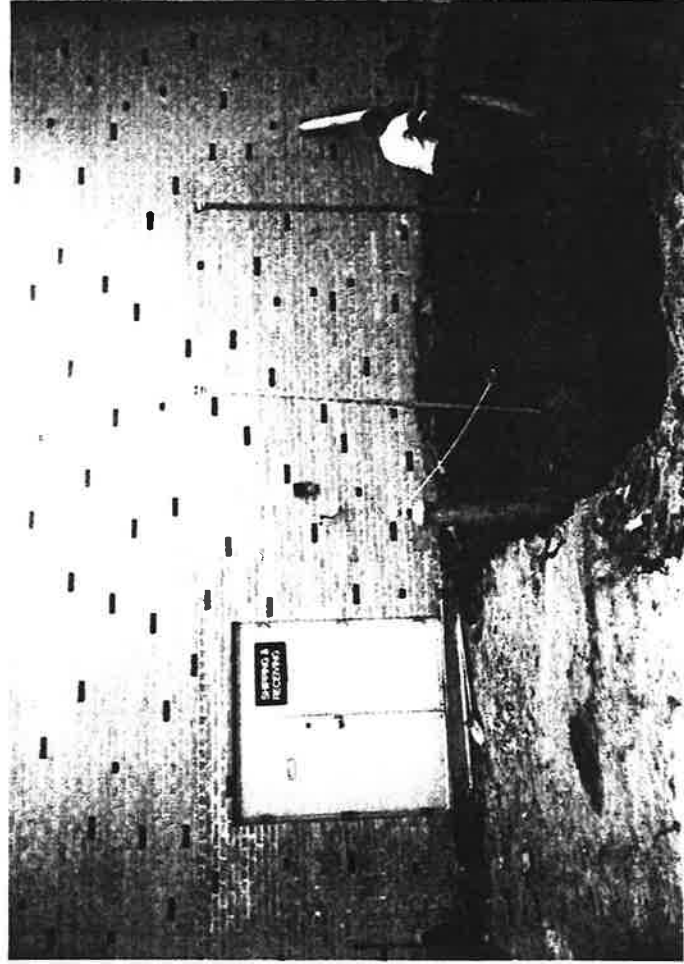
QUALITY LINCOLN MERCURY
BLOOMINGTON, MINNESOTA



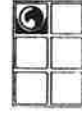
GROUNDWATER
TECHNOLOGY, INC.

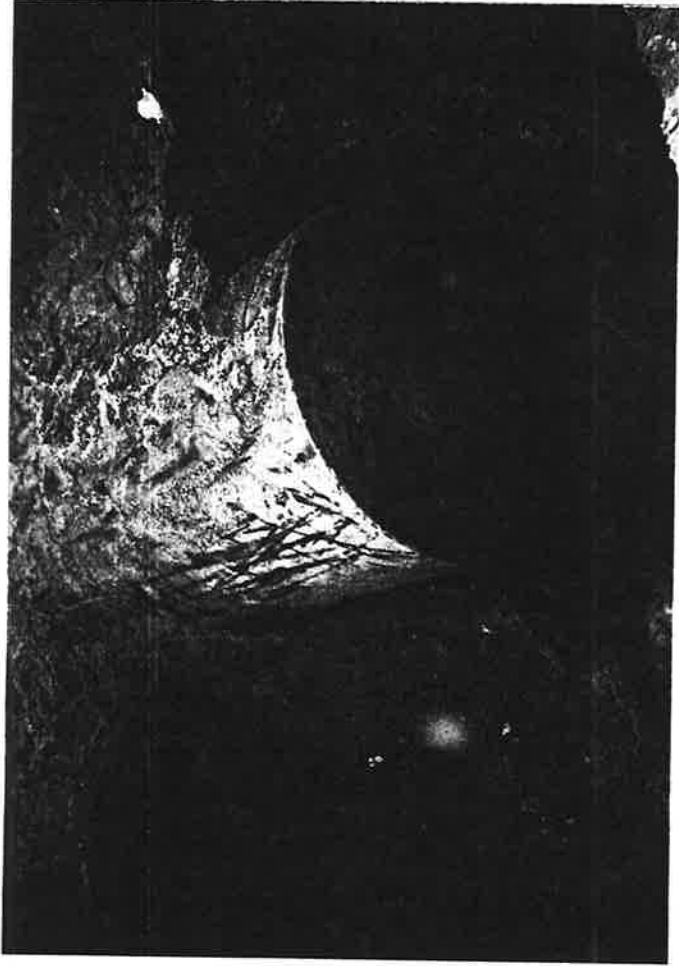


Gasoline Storage Tank Area Prior To Excavation



Purging of Gasoline Storage Tanks

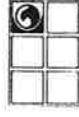




View of Tank #1 and #2 Partially Uncovered



View of Excavation After Removal of Gasoline Storage Tanks



GROUNDWATER
TECHNOLOGY, INC.

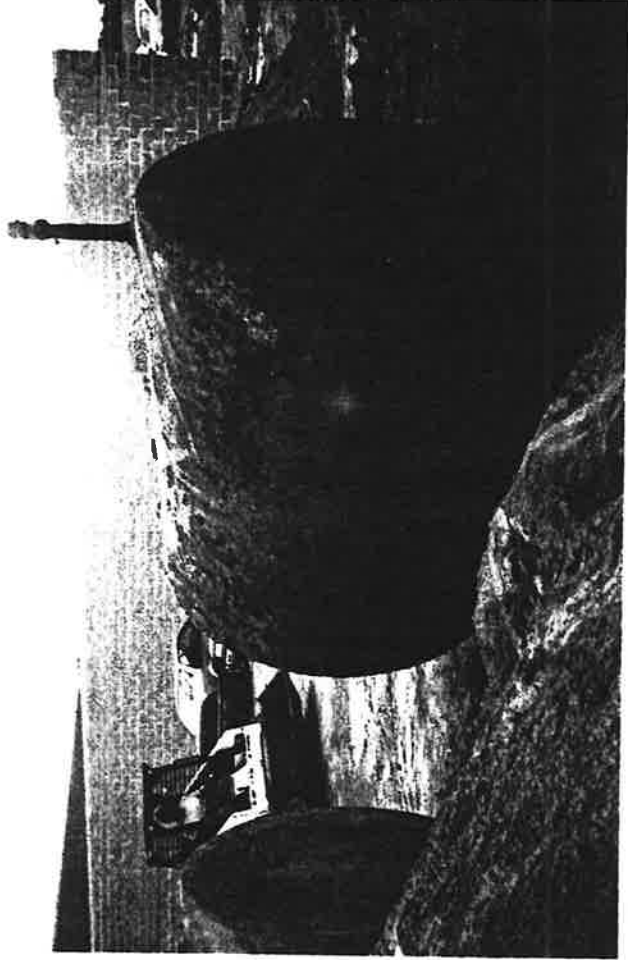


Oil Storage Tank Area Prior to Excavating



Oil Storage Tank Excavation After Removal of Tanks

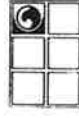




Tank #4 and Tank #5



Bottom View of Tank #3



APPENDIX B

LABORATORY ANALYTICAL REPORTS

QUALITY LINCOLN MERCURY
BLOOMINGTON, MINNESOTA



GROUNDWATER
TECHNOLOGY, INC.

GTEL

ENVIRONMENTAL
LABORATORIES, INC.

Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936

CLIENT: Groundwater Technology, Inc.
2200 N. Stonington Ave., #160
Hoffman Estates, IL 60195

ATTN: Robert Smith
DATE RCVD: 09-08-89
DATE RPTD: 09-26-89
LAB NUMBER: W9-09-092
ANALYZED BY: J. Sattler

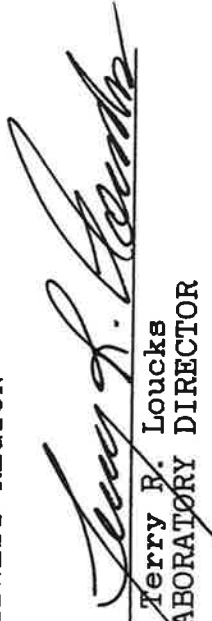
SAMPLE SUBMITTED: Seven 250-mL glass jars of soil
Ford-Bloomington (#403-P-1564)

<u>SAMPLE I.D.</u>	<u>TOTAL PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION & UNITS</u>	<u>METHOD</u>
Tank #1	6	mg/Kg	*
Tank #2	11	mg/Kg	*
Tank #3	400	mg/Kg	*
Tank #4	< 5	mg/Kg	*
Tank #5	< 5	mg/Kg	*
Dispenser #1	81	mg/Kg	*
Dispenser #2	26	mg/Kg	*

*EPA 3550, Std. Mtds. 15thEd., 503 B&E

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.
MIDWEST REGION


Terry R. Loucks
LABORATORY DIRECTOR



Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936

CLIENT: Groundwater Technology, Inc.
2200 N. Stonington Ave., #160
Hoffman Estates, IL 60195

ATTN: Dan Sieben
SAMPLER: Robert Smith
DATE SAMPLED: 09-06-89
DATE RCVD: 09-08-89
DATE ANALYZED: 09-14-89
DATE RPTD: 09-20-89
LAB NUMBER: W9-09-091-01
ANALYZED BY: M. Belluomo

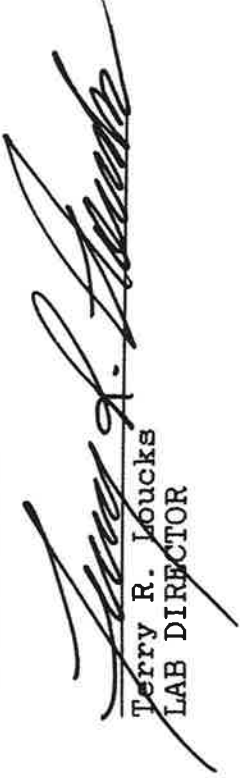
SAMPLE SUBMITTED: One 250-mL jar of soil from: Tank #1
Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
per EPA 8020/8015/5030 Modified

<u>ANALYTE</u>	<u>mg/Kg</u>
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.
MIDWEST REGION


Terry R. Loucks
LAB DIRECTOR

GTEL

ENVIRONMENTAL
LABORATORIES, INC.

Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936

CLIENT: Groundwater Technology, Inc.
2200 N. Stonington Ave., #160
Hoffman Estates, IL 60195

ATTN: Dan Sieben
SAMPLER: Robert Smith
DATE SAMPLED: 09-06-89
DATE RCVD: 09-08-89
DATE ANALYZED: 09-14-89
DATE RPTD: 09-20-89
LAB NUMBER: W9-09-091-02
ANALYZED BY: M. Belluomo

SAMPLE SUBMITTED: One 250-mL jar of soil from: Tank #2
Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
per EPA 8020/8015/5030 Modified

ANALYTE	mg/Kg
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.
MIDWEST REGION


Terry R. Loucks
LAB DIRECTOR



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CLIENT: Groundwater Technology, Inc.
2200 N. Stonington Ave., #160
Hoffman Estates, IL 60195

ATTN: Dan Sieben
SAMPLER: Robert Smith
DATE SAMPLED: 09-06-89
DATE RCVD: 09-08-89
DATE ANALYZED: 09-14-89
DATE RPTD: 09-20-89
LAB NUMBER: W9-09-091-03
ANALYZED BY: M. Belluomo

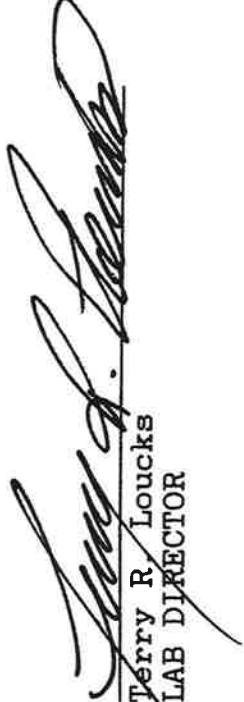
SAMPLE SUBMITTED: One 250-mL jar of soil from: Tank #3
Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
per EPA 8020/8015/5030 Modified

<u>ANALYTE</u>	<u>mg/Kg</u>
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.
MIDWEST REGION


Terry R. Loucks
LAB DIRECTOR

GTEL

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LABORATORIES, INC.**

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(800) 633-7936

CLIENT: Groundwater Technology, Inc.
2200 N. Stonington Ave., #160
Hoffman Estates, IL 60195

ATTN: Dan Sieben
SAMPLER: Robert Smith
DATE SAMPLED: 09-06-89
DATE RCVD: 09-08-89
DATE ANALYZED: 09-14-89
DATE RPTD: 09-20-89
LAB NUMBER: W9-09-091-04
ANALYZED BY: M. Belluomo


SAMPLE SUBMITTED: One 250-mL jar of soil from: Tank #4
Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
per EPA 8020/8015/5030 Modified

<u>ANALYTE</u>	<u>mg/Kg</u>
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

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MIDWEST REGION


Terry R. Loucks
LAB DIRECTOR



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CLIENT: Groundwater Technology, Inc.
 2200 N. Stonington Ave., #160
 Hoffman Estates, IL 60195

ATTN: Dan Sieben
 SAMPLER: Robert Smith
 DATE SAMPLED: 09-06-89
 DATE RCVD: 09-08-89
 DATE ANALYZED: 09-14-89
 DATE RPTD: 09-20-89
 LAB NUMBER: W9-09-091-05
 ANALYZED BY: M. Belluomo

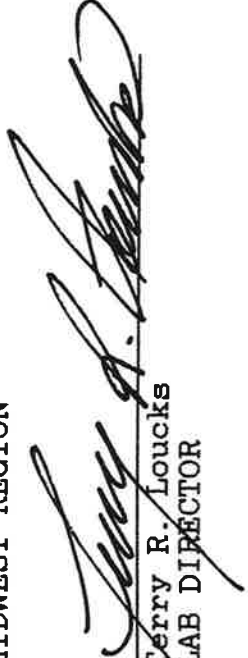
SAMPLE SUBMITTED: One 250-mL jar of soil from: Tank #5
 Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
 per EPA 8020/8015/5030 Modified

ANALYTE	mg/Kg
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.
 MIDWEST REGION


 Terry R. Loucks
 LAB DIRECTOR



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CLIENT: Groundwater Technology, Inc.
 2200 N. Stonington Ave., #160
 Hoffman Estates, IL 60195

ATTN: Dan Sieben
SAMPLER: Robert Smith
DATE SAMPLED: 09-06-89
DATE RCVD: 09-08-89
DATE ANALYZED: 09-14-89
DATE RPTD: 09-20-89
LAB NUMBER: W9-09-091-06
ANALYZED BY: M. Belluomo

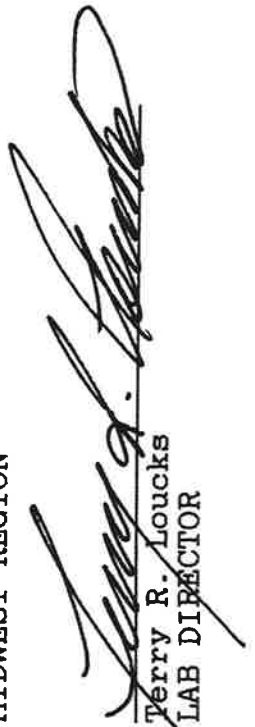
SAMPLE SUBMITTED: One 250-mL jar of soil from: Dispenser #1
 Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
 per EPA 8020/8015/5030 Modified

<u>ANALYTE</u>	<u>mg/Kg</u>
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

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 Terry R. Loucks
 LAB DIRECTOR

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(800) 633-7936

CLIENT: Groundwater Technology, Inc.
2200 N. Stonington Ave., #160
Hoffman Estates, IL 60195

ATTN: Dan Sieben
SAMPLER: Robert Smith
DATE SAMPLED: 09-06-89
DATE RCVD: 09-08-89
DATE ANALYZED: 09-14-89
DATE RPTD: 09-20-89
LAB NUMBER: W9-09-091-07
ANALYZED BY: M. Belluomo

SAMPLE SUBMITTED: One 250-mL jar of soil from: Dispenser #2
Ford-Bloomington (#403-P-1564)

TYPE OF ANALYSIS: Volatile Aromatic Compound Analysis
per EPA 8020/8015/5030 Modified

<u>ANALYTE</u>	<u>mg/Kg</u>
Benzene.....	< .03
Toluene.....	< .06
Ethylbenzene.....	< .05
Total Xylenes.....	< .10

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.
MIDWEST REGION


Terry R. Loucks
LAB DIRECTOR