16-SEP-1997 12:27:33

tss074 LEAK REMARKS

L#8146

Leak ID: 8146
Site Name: GOODYEAR
Site City: MAPLEWOOD

1/10/95 MDN: Release reported by Tim McGlennon, GME Consultants. Discovered from the analytical results received from a tank removal. There was no indications of a release at the time of the removal of a 1,000 gal. used oil tank. DRO readings below the tank bottom indicate levels of 5.9 ppm and 130 ppm. Also, constituent found in the VOC analysis.
09/16/97 SENT TO ARCHIVES KL

Jan. 10. 1995 2:18PM MN DIV OF EMERG MGT No. 1421 P. 1/1

To: MPCA SPILL

8146 JAJ

STATE OF MINNESOTA

DEPARTMENT OF PUBLIC SAFETY – DIVISION OF EMERGENCY MANAGEMENT
85 STATE CAPITOL SAINT PAUL 55155-1049

MINNESOTA DUTY OFFICER
HAZARDOUS MATERIAL INCIDENT REPORT: TANKS

REPORT DATE: 1·10·95 TIME: 1120 DUTY OFFICER: Mark RECORD#:

REPORTED BY:
NAME: Tom McAlerman
C/O: GME Consultants
ADDRESS:
CITY: STATE:
PHONE: 559-1859 ZIP:
ALT. PHONE:

SUSPECTED SOURCE/RESPONSIBLE PARTY:
CONTACT: Bruce Ollang
C/O: Goodyear Store
ADDRESS: 1735 Van Dyke Ave
CITY: Maplewood STATE:
PHONE: 338-1113 ZIP:
ALT. PHONE:

DISCOVERY DATE: 1·9·95 TIME:
SITE NAME & LOCATION: Same as source address - Ramsey Co.

LEGAL: SECTION: TOWNSHIP: RANGE:
NUMBER/SIZE OF TANK(S): removed 12-7-94
TANK CONTENTS: used oil tank
NATIVE SOIL TYPE:
PREVIOUSLY REPORTED SITE?: YES / NO / UNKNOWN LEAK #:
CONTAMINATED SOIL EXCAVATED?: YES / NO / UNKNOWN QUANTITY:
GROUND WATER ENCOUNTERED?: YES / NO / UNKNOWN DEPTH TO GW:
FREE PRODUCT FOUND?: YES / NO
STAINED SOIL?: YES / NO -- PETROLEUM ODORS: YES / NO
HIGH VAPOR READINGS: ANALYTICAL RESULTS:

NARRATIVE: Soil samples - results show pet cont after tank removal.

HAS MATERIAL ESCAPED FACILITY PROPERTY?: YES / NO / (UNKNOWN)

**IS THIS A BUSINESS OR GOVERNMENT FACILITY REPORTING IN COMPLIANCE WITH SARA TITLE III, SECTION 304?: YES / NO / UNKNOWN
(IF YES, COMPLETE PAGE TWO: SARA SUPPLEMENT)

DUTY OFFICER NOTIFICATIONS MADE (AGENCY, NAME, TIME)

MPCA - M. Nelson - Conf Call 1123	
MPCA - FAX	
EM I/O. mail.	

QUESTIONS? CONTACT THE MINNESOTA DUTY OFFICER AT 649-5451 OR 1-800-422-0798

MINNESOTA POLLUTION CONTROL AGENCY
TANKS AND SPILLS SECTION
PETROLEUM TANK RELEASE REPORT

Report Taken By: MDN

Date/Time Occurred:

Date/Time Reported: 1/10/95

Date/Time Discovered: 1/09/95

LEAK# 8146 | **PROJECT MANAGER:** JAJ | **USTIS #** 3681

CALLER
Name: Tim McGlennon
Phone: 559-1859
Relationship to site: GME

SITE
Name: Goodyear Store
Street: 1735 Van Dyke Ave
City: Maplewood Zip: 55109
County: Ramsey Region: M/1

TANK OPERATOR
Name:
Street:
City: Zip:
Contact Person:
Phone:

TANK OWNER
Name: Main & Simon
Street: 2900 Norwest Center
City: 90 S Seventh St. Minneapolis St.: Mn Zip: 55402-4133
Contact Person: Bruce Odlaug
Phone: 338-1113

Own tanks/product/property?
Share in profits?
Control over inventory, maintenace and tank decisions?

SITUATION

Material Released/Amount:	Source of Release:	Release Discovery:
USED OIL	UST	REMOVAL

TANK INFORMATION

Contents	Size	Age	Removed	Condition	Registered
used oil	1,000	<10yrs	12/07/94	Good	Y

State or Federal Notification prior to removal:

Excavation Contractor: Consultant:

SOIL

Contaminated soil excavated: no

Was it a total excavation:

Vapor readings: no readings or indications of a release

Soil samples: DRO - 5.9 ppm, 130 ppm VOC - Trichlorotrifluoro - 75ppb

Borings:

Native soil type: silty sand

Stockpiled properly/disposal arranged:

Other:

WATER

Groundwater in excavation: NO

Free product present: –

Depth to groundwater: unknown

City water/wells private/municipal:

Surface water: unknown

VAPORS

Sewers/buildings: no

SITE INFORMATION

Description of area:

Previous release(s):

INSTRUCTION GIVEN	**CONTACTS**
Hire consultant	Local Fire/Police
Submit report	Local Officials
Staff will call	Regional Staff
Contact staff	Other

CONCLUSIONS AND OTHER RELATED INFORMATION

Minnesota Pollution Control Agency

January 24, 2003

Mr. Shawn T. Beattie
Wells Fargo Bank MN, NA
7900 Xerxes Avenue South
Suite 205
Bloomington, MN 55431

Re: Petroleum Storage Tank Release Site Tank Removal Verification
Site: Former Goodyear Facility, Performance Transmission and Machine,
1735 Van Dyke Street, Maplewood
Site ID#: LEAK00008146

Dear Mr. Beattie:

The Minnesota Pollution Control Agency (MPCA) Voluntary Petroleum Investigation and Cleanup (VPIC) Program staff has reviewed the following documents regarding the above-referenced petroleum storage tank release site:

- MPCA leaksite file LEAK00008146 and associated documents.
- The MPCA TALES/tanks database.
-

Based upon our review of the information contained in the above documents, MPCA VPIC staff have concluded that a 500-gallon used oil petroleum storage tank from which the release occurred has been removed from the site.

Due to the fact that the tanks from which the release occurred have been removed, the Commissioner of the MPCA has determined that Wells Fargo Bank MN, NA will not be a responsible person as defined in Minn. Stat. § 115C.021 (2000), for any release from these tanks. The Commissioner is authorized to make this determination under Minn. Stat. § 115C.03, subd. 9 (c) (2000).

This determination extends to the heirs and assigns of the person to which it originally applies, if the heirs and assigns are not otherwise responsible for the release.

This letter represents the views of the MPCA, and is based upon information disclosed to the MPCA as of the date hereof. This letter should not be construed to release persons who are "responsible persons" under Minn. Stat. § 115C.021 (2000) from liability for petroleum storage tank releases, which have originated at the site. Issuance of this letter does not imply that petroleum storage tanks are not present at other locations on the site. Depending on your circumstances, this letter may or may not be construed as releasing any party from liability under state or federal law. If you have questions concerning your particular situation, the MPCA recommends that you discuss your concerns with your legal counsel.

If future development of the site or the surrounding area is planned, it should be assumed that petroleum contamination is present. If contamination is encountered during future development work, the MPCA staff should be notified immediately.

If you would like to obtain information regarding petroleum contamination at the site, please call the Petroleum Remediation and Landfill Section File Request Program at 651/297-8568. The *Leak/Spill and Underground Storage Tank File Request Form* (Fact Sheet #35) must be completed prior to arranging a time for file review.

If you have any questions regarding this letter, please call me at 651/296-7999.

Sincerely,

Mark Koplitz
Project Leader
Petroleum Remediation Program
Petroleum and Landfill Remediation Section
Majors and Remediation Division

MK:tf

Minnesota Pollution Control Agency

520 Lafayette Road North
Saint Paul, Minnesota 55155-4194

November 2001

Voluntary Petroleum Investigation and Cleanup Program
Application/ Request for Assistance Form

Please complete this form to request assistance from the Minnesota Pollution Control Agency (MPCA) staff in the Voluntary Petroleum Investigation and Cleanup (VPIC) Program, pursuant to Minn. Stat. § 115C.03, subd. 9. If you have any questions about the services offered by the VPIC Program or this form, please call 651/296-7999. The MPCA can also be reached toll free at 1-800-657-3864.

Mail the completed form to:

Mark Koplitz
VPIC Program
Petroleum and Landfill Remediation Section
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194
fax: 651/296-9707

RECEIVED

JAN 10 2003

MPCA, MAR
Petroleum & Landfill Remediation Section

Subject Property

Property/Site Name Performance Transmission and Machine
Address 1735 Van Dyke Street
City (or Township) Maplewood State MN Zip Code 55109
Public land survey coordinates:
County Ramsey Twp. _____ Range _____ Sec. _____ Qtr. _____
Property Size 0.703 (in acres)

Lots 2, 17 and 18, Block 2, Meister's Highlands, Ramsey County, Minnesota

Applicant

Name Shawn T. Beattie Title RM/Officer
Organization Wells Fargo Bank MN, NA Phone 612/316-4151 Fax 316-4159
Address 7900 Xerxes Ave S, Suite 205 Email shawn.beattie@wellsfargo.com
City Bloomington State MN Zip Code 55431
State Taxpayer ID# ? Federal Taxpayer ID# ?
Social Security # _____ (if applicant is an individual)

Current property owner *(if different from applicant)*

Name Ken & Jackie Schwartz Title owners via corporation
Organization Ken's machine, Inc. Phone 651/771-0264 Fax _____
Address same as subject property Email _____
City _____ State _____ Zip Code _____

Applicant's Interest in Property

☐ Currently owns property ☐ Considering purchasing property

☐ Renting or leasing property ☒ Mortgagee interest in property

☐ Other (explain)

Description of Applicant's Request

☐ Technical *Expedited review* of a petroleum storage tank release site (e.g., leak site), or petroleum impacted property for which the contamination did not originate from a tank (e.g., petroleum non-tank release site).
☐ Request for closure
MPCA ID# LEAK0000_____

☐ Technical *Review of a development response action plan for a petroleum impacted property.*
MPCA ID# LEAK0000_____

☒ Leak site Tank Removal *Verification* letter. (Minn. Stat. 115C.03, subd. 9C).
MPCA ID# LEAK0000 8146
500 used oil

☐ Leak site File Closure *Confirmation* letter. (Minn. Stat. 115C.03, subd. 9C).
MPCA ID# LEAK0000_____

☐ Off-site Tank Release *Determination* letter. (Minn. Stat. 115C.03, subd. 9C).
Suspected source MPCA ID# LEAK0000_____

☐ General *Liability* letter.

☐ Other technical assistance not specified above (please describe on a separate sheet).

Nature of the problem or suspected problem

Check all that apply:

☒ Soil contamination ☐ Not known

☐ Ground water contamination ☐ Other (explain)

☐ Surface water contamination

Involvement with other regulatory programs

Please indicate all environmental/health related programs or agencies that have been involved with the property in question (note the contact person(s) if known).

None known.

Known or suspected sources

Please check all applicable boxes below regarding the nature of the problem source.

- [x] Underground tank or pipeline release(s)
- [ ] Drums or other storage containers
- [ ] Septic tank or drainfield
- [ ] Surface spillage or discharge
- [ ] Dumping or burial of waste
- [ ] Lagoons
- [ ] Above-ground tank or pipeline release(s)
- [ ] Seepage pit or dry well(s)
- [ ] Industrial accident
- [ ] Adjacent property
- [ ] Not known
- [ ] Other (explain)

Information about attachments to the request form

Please list any reports, maps or other attachments to this form (use separate page if necessary).

- Original soil report performed by GME Consultants when tank was removed in 1995.
- Recent soil report by Development Engineering ordered by current Contract For Deed owner.

Disclosure

- [x] Yes [ ] No Has the release at this site been reported to the State Duty Officer pursuant to Minn. Stat. § 115.061 (Duty to Notify and Avoid Water Pollution)? If so, please indicate notification date. I believe Jan 10, 1995
- [ ] Yes [x] No To your knowledge, have on- or off-site wells been contaminated? If so, attach a separate sheet detailing well location, owner, well number, aquifers, depth and use. A site map showing the well locations would be useful.

Contact persons

Please list the name(s) of your current environmental consultant and legal counsel, if applicable.

Consultant Name _____ Phone _____ Fax _____
Email _____
Address _____
City _____ State _____ Zip Code _____

Attorney Name _____ Phone _____ Fax _____
Email _____
Address _____
City _____ State _____ Zip Code _____

Certification

I certify that I have read and am familiar with the information on this form and all attached documents, and that the submitted information is true, accurate and complete to the best of my knowledge.

I hereby ask the MPCA Commissioner to assist me and the company/organization I represent, as requested by this application. I understand this assistance may include the review of MPCA records and files, and review and approval of investigation plans and reports as well as response action plans and oversight of implementation actions.

I understand that the applicant (or other person signing below) must pay the MPCA Commissioner for the MPCA's costs of providing this assistance under Minn. Stat. § 115C.03 subd. 9. I understand that the MPCA Commissioner will send invoices for these costs and that failure to pay the MPCA's costs in a timely manner may result in the MPCA Commissioner taking appropriate administrative or legal action.

I hereby agree to pay the costs of the MPCA to provide services to the applicant as requested in this application. Furthermore, I hereby certify that I have the authority to submit this application on behalf of the applicant named herein.

Typed/printed name Shawn T. Beattie Title Officer

Signature Shawn T. Beattie Date 1-07-03

Subscribed and sworn to before me this 7th day of January, 2003.

Notary Public Marc E. Saddler

MARC E. SADDLER
NOTARY PUBLIC • MINNESOTA
My Commission Expires Jan. 31, 2005

UNDERGROUND STORAGE TANK CLOSURE REPORT FOR GOODYEAR FACILITY 1735 VAN DYKE AVENUE MAPLEWOOD, MINNESOTA GME PROJECT NO. 4972 MARCH 27, 1995

GME CONSULTANTS, INC.
CONSULTING ENGINEERS
14000 21st Ave. No. / Minneapolis, MN 55447
Phone (612) 559-1859 / Fax (612) 559-0720

March 27, 1995

Mr. Bruce G. Odlaug
Maun & Simon, PLC
2900 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402-4133

GME Project No. 4972

RE: Underground Storage Tank (UST) Closure Report for the Goodyear Facility at 1735 Van Dyke Avenue in Maplewood, Minnesota (MPCA Leak No. 8146)

Dear Mr. Odlaug:

In accordance with your authorization, we have completed our services for this UST closure project. The purposes of this report are to evaluate the results of the field and laboratory work, and to recommend the appropriate subsequent actions.

Based on the field and laboratory results from the tank monitoring and subsequent soil probe, our discussions with the MPCA Project Manager, and the MPCA Petroleum Tank Release Guidance Documents, it is our opinion that no additional work is required at the above referenced site. The action levels used by the MPCA to evaluate whether further environmental work is required are listed in the MPCA Guidance Document enclosed in the Appendix.

This report has been completed in general accordance with the MPCA Guidance Document entitled "Petroleum Tank Release Reports," dated April 18, 1993. Following your review of the report, we will submit a copy to Mr. Jim Joslyn, MPCA Project Manager.

We appreciate this opportunity to be of service to you. If you have questions, please contact us.

Sincerely,

GME CONSULTANTS, INC.

Timothy F. McGlennen
Environmental Biologist
Project Manager

cc: Mr. Neil Hartman - Goodyear Tire and Rubber Company

cc: Mr. C.L. Putzier - Department 824
Goodyear Tire and Rubber Company

TFM:sab/smc
c:\tfm\4972.ust

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UNDERGROUND STORAGE TANK
CLOSURE REPORT
FOR
GOODYEAR FACILITY
1735 VAN DYKE AVENUE
MAPLEWOOD, MINNESOTA
GME PROJECT NO. 4972

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A. Figures
   - Figure 1 Regional Location Diagram
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B. Interpoll Laboratory Report - UST Excavation
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D. KVA Soil Boring Log
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G. GME General Qualifications
H. Site Photographs

EXCAVATION REPORT FOR PETROLEUM RELEASE SITES

Minnesota Pollution Control Agency
Tanks and Spills Section
March 27, 1995

Complete the information below and submit to the Minnesota Pollution Control Agency (MPCA) Tanks and Spills Section to document excavation and treatment of petroleum contaminated soil. Excavations must be done in accordance with "Excavation of Petroleum Contaminated Soil" (Guidance Document 6). Please attach any available preliminary site investigation reports to this excavation report.

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

I. BACKGROUND

A. **Site:** Goodyear Retail Facility (See Figures 1 & 2)
Street: 1735 Van Dyke Avenue
City, Zip: Maplewood, 55109
County: Ramsey
MPCA Site ID#: LEAK00008146
MPCA Project Manager: Mr. Jim Joslyn

B. **Tank Owner/Operator:** Mr. Bruce G. Odlaug
Mailing Address: Maun and Simon
Street/Box: 2900 Norwest Ctr, 90 S Seventh St.
City, Zip: Minneapolis, 55402-4133
Telephone: (612) 338-1113
Contact: Mr. Bruce Odlaug

C. **Excavating Contractor:** Minnesota Petroleum, Inc.
Contact: Mr. Mike D. Dehn
Telephone: (612) 571-8490
Tank Contractor Certification Number: 0604

D. **Consultant:** GME Consultants, Inc.
Contact: Mr. Timothy F. McGlennen
Street/Box: 14000 21st Avenue North
City, Zip: Plymouth, MN 55447
Telephone: 612-559-1859

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

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: January 10, 1995 (laboratory results received via fax on January 9, 1995)

B. Dates site work performed:

Work Performed	Date
Tried to begin tank removal but contractor was not allowed site access	October 23, 1994
Used oil tank removed	December 7, 1994
Performed KVA Soil Probe	January 13, 1995

III. RELEASE INFORMATION

A. Provide the following information for all removed tanks. (SEE FIGURE 2 FOR TANK LOCATION)

Tank 1: **Capacity** 500 gallons **Type** Steel **Age** Unknown

Condition: We observed Tank No. 1 to be in generally fair condition, with some surficial corrosion.

Product history: Tank No. 1 is believed to have stored used oil only.

Approximate quantity of petroleum released, if known: It appears that a minor amount of petroleum has been released from this tank system.

Cause of release: Possible causes of release may include surface spillage, overfills, or leaky pipe fittings.

B. Provide the following information for all existing tanks.

To the best of our knowledge, there are no additional USTs at the site. An above ground used oil tank will be installed inside of the building.

C. If the release was associated with the lines or dispensers, briefly describe the problem: A dispenser was not associated with this UST.

D. If the release was a surface spill, briefly describe the problem: We observed some minor staining on the bituminous pavement surrounding the fill pipe (See Photographs)

IV. EXCAVATION

A. Dimensions of excavation: The maximum dimensions of the excavation were 6 feet by 8 feet in plan, with a maximum depth of 7 feet. The excavation was located on the north side of the building near a tire storage area.

B. Original tank backfill material (sand, gravel, etc.): The backfill around the UST generally consisted of brown silty sand.

C. Native soil type (clay, sand, etc.): Based on our KVA soil probe, soils below the tank basin consist of brown silty sand with trace clay and gravel.

D. Quantity of contaminated soil removed (cubic yards):

[NOTE: If more than 400 cubic yards removed, please attach copy of written approval from MPCA.]
Petroleum impacts were not encountered during the tank removal monitoring; therefore, no soils were excavated.

E. Was ground water encountered or was there evidence of a seasonally high ground water table? At what depth? Groundwater was not encountered in the excavation. Based on our review of a monitoring well construction log and abandonment log for a nearby SuperAmerica Leak Site, groundwater is approximately 27 feet below grade. This SuperAmerica off-site monitoring well is located along the Goodyear property boundary about 125 feet northeast of the tank basin.

F. If a soil boring was necessary (as indicated in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6) 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. During the UST removal, we did not observe evidence of a petroleum release. However, 5.9 and 130 parts per million (ppm) diesel range organics (DRO) were detected in the two soil samples collected from below the tank. Because of these detections, we drilled one soil probe through the tank excavation using a KVA Electric Rotary Hammer with 1 inch sampling equipment.

We collected a soil sample from 12 to 13 feet below grade for headspace analysis using an HNU PI-101 photoionization detector (PID). The headspace analysis did not indicate the presence of organic vapors in the collected sample. We then collected a soil sample from 13 to 14 feet below grade for laboratory analysis of DRO, and volatile organic compounds (VOCs) by Method 465D. We observed no petroleum odors or discolorations from the soil sample which consisted of brown silty sand with trace clay and gravel.

The KVA laboratory report indicates that DRO and VOCs were not detected in the soil sample. The report does indicate the detection of acetone, both in the sample and in the laboratory method blank at similar concentrations. A copy of the laboratory report and the KVA Soil Boring Log are attached in the Appendix.

G. **If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? Specify, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc.** Groundwater was not encountered during our KVA Soil Probe work.

The nearby SA leak site monitoring well (MW-4) was installed on September 1, 1994 and removed on January 22, 1995. The monitoring well was sampled and analyzed for gasoline range organics (GRO) on September 24, 1994, and for GRO, benzene, toluene, ethylbenzene, and total xylenes (BTEX) on October 17, 1994. None of these parameters were detected in the groundwater samples.

We have included a copy of the monitoring well information supplied to us by you in the Appendix.

[NOTE: If free product was observed, contact MPCA staff immediately as outlined in "Petroleum Tank Release Reports" (Guidance Document 2.)

H. **Was bedrock encountered in the excavation? At what depth?** Bedrock was not encountered.

I. **Were there other unique conditions associated with this site? If so, explain.** None.

V. SAMPLING

A. Briefly describe the field methods (including use of a photoionization detector) used to distinguish contaminated from uncontaminated soil: We observed the soils collected from and within the tank excavation basin for the presence of unusual discolorations and petroleum odors. Jar headspace analyses of soil samples collected from the base and sidewalls of the excavations were conducted in the field with an HNU PID which detects certain organic vapors in the ppm range.

B. List soil vapor headspace analysis results. Indicate sampling locations using sample codes (with sampling depths in parentheses), e.g. R-1 (2'), R-2 (10'), etc. "R" stands for "removed." Samples collected at different depths at the same location should be labeled R-1A (2'), R-1B (4'), R-1C (6'), etc. If the sample was collected from the sidewall or bottom after excavation was complete, label it S-1 (for sidewall) or B-1 (for bottom). Be sure the sample codes correspond with the site map required in par VI, below. (See Figure 3)

Sample Code	Soil Type	Reading ppm
Excavation No. 1		
R1A (1')	Sand	0
R1B (2')	Sand	0
B2 (7')	Sand	0
B3 (7')	Sand	0
S-4 (6')	Sand	0
S-5 (6')	Sand	0
S-6 (7')	Sand	0
S-7 (7')	Sand	0

C. Briefly describe the soil sampling and handling procedures used: We collected two excavation bottom samples on December 7, 1994. These two soil samples were analyzed for DRO, and VOCs by Method 465D. The soil sample collected during the KVA Probe Survey also was analyzed for DRO and VOCs.

All of the soil samples were collected in the appropriate jars as supplied by Interpoll. The sample containers were labeled, placed in a cooler with ice, and transported to Interpoll Laboratories, Inc. The Interpoll laboratory reports and sample chain-of-custody forms are included in the Appendix.

D. List below the soil sample analytical results from bottom and sidewall samples (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), etc. Be sure the sample codes correspond to the site map required in part VI. Do not include analyses from the stockpiled soils.
(See Figure 4)

Sample Code	DRO ppm	VOCs ppm
Excavation No. 1		
B-1W (7')	5.9	ND, except for 0.075 1,1,2-Trichlorotrifluoroethane
B-1E (7')	130	ND
KVA1 (13-14')	ND	ND

Definitions: ND=Not Detected DRO=Diesel Range Organics
VOCs=Volatile Organic Compounds by Method 465D

NOTE: COPIES OF LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS MUST BE INCLUDED.

VI. FIGURES (See Appendix)

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; and**
   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**

VII. SUMMARY

Briefly summarize evidence indicating whether additional investigation is necessary at the site, as discussed in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6.). If no further action is recommended, the MPCA staff will review this report following notification of soil treatment.

On December 7, 1994, we monitored the removal of one 500 gallon used oil UST by Minnesota Petroleum at the Goodyear Facility in Maplewood, Minnesota. We also collected soil samples for headspace and laboratory analyses.

During our monitoring, we did not observe evidence, such as elevated headspace readings, petroleum odors, or soil discoloration, to indicate that a release had occurred from the tank. However, the laboratory analysis results indicated that DRO was detected (5.9 and 130 ppm) in the collected soil samples.

On January 13, 1995, we drilled one KVA Soil Probe through the base of the tank basin to collect soil samples for headspace and laboratory analyses. We did not detect organic vapors in the headspace sample, and laboratory analysis did not detect DRO or VOC parameters. Based on a nearby groundwater monitoring well, the groundwater in the area is approximately 27 feet below grade. The area soils generally consist of silty sand.

The MPCA Guidance Document states that additional work is not required if organic vapor readings are below MPCA action levels during initial tank removal soil monitoring, the laboratory analyzed soil samples in sands are below 50 ppm total petroleum hydrocarbons (TPH) (there were no detections in the KVA soil samples), and groundwater is not in contact with impacted soils. Based on the site data meeting these criteria, it is our opinion that no additional testing is necessary at the former tank location and we recommend that the MPCA close the site after their review of this report.

VIII. SOIL TREATMENT INFORMATION

A. Soil treatment method used (thermal, land application, other). If you choose "other", specify treatment method: Not applicable.

B. Location of treatment site/facility: Not applicable.

C. Date MPCA approved soil treatment (if thermal treatmentw a s used after May 1, 1991, indicate date that the MPCA permitted thermal treatment facility agreed to accept soil): Not applicable.

D. Identify the location of any stockpiled contaminated soil:

IX. CONSULTANT (OR OTHER) PREPARING THIS REPORT

Company Name: GME Consultants, Inc.
Street/Box: 14000 21st Avenue North
City/Zip: Plymouth, MN 55447
Telephone: 612-559-1859
Contacts: Mr. Timothy F. McGlennen
Environmental Biologist
Project Manager

Ms. Sandra J. Forrest
Senior Hydrogeologist
Regional Environmental Division Manager

Signature: _____ **Date:** 3/28/95

Signature: _____ **Date:** 3/28/95

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, include this form as a section in the Remedial Investigation/Corrective Action Design report. Excavation reports indicating a remedial investigation (RI) is necessary will not be reviewed by MPCA staff until the RI has been completed.

TFM:sab

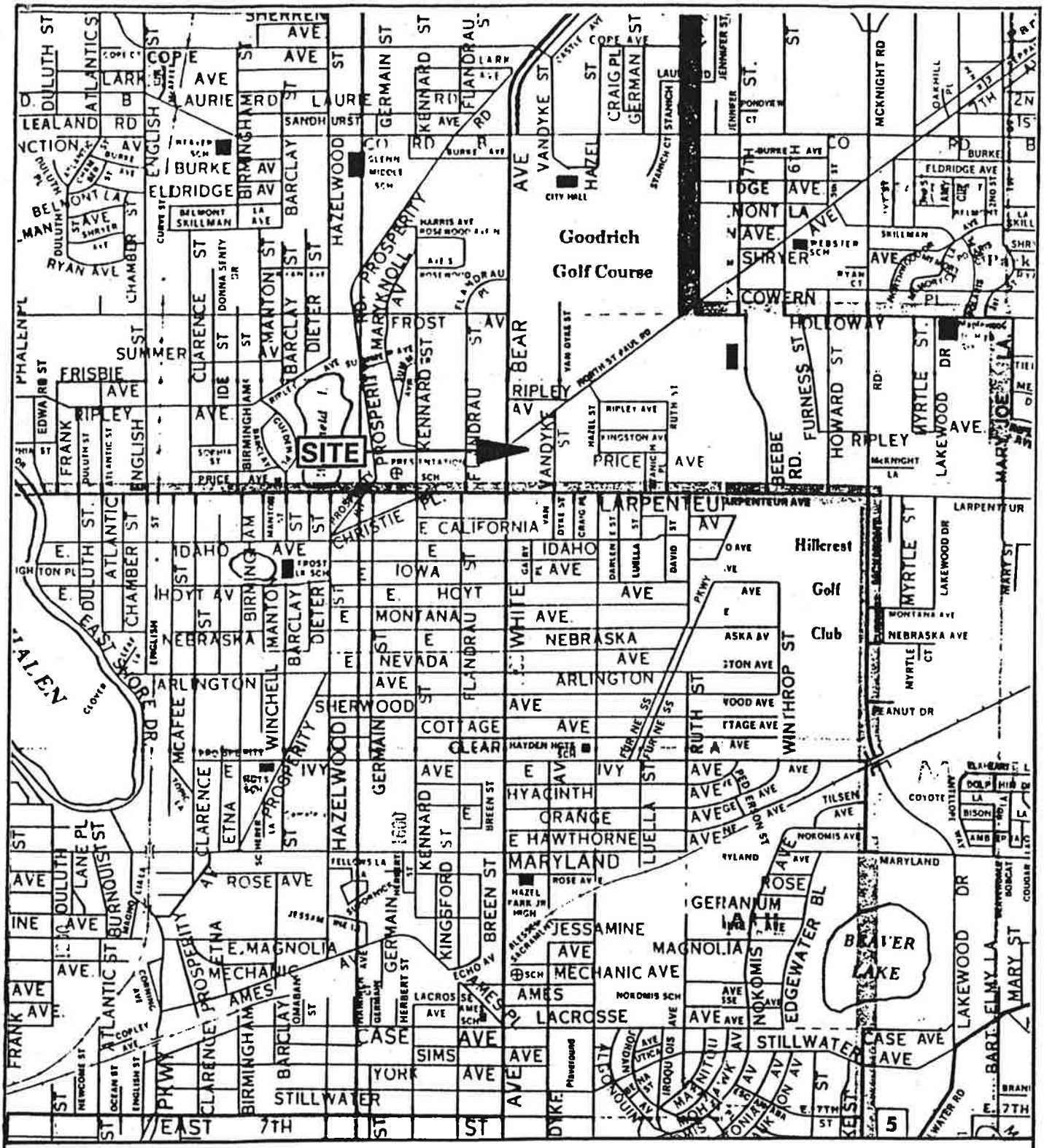
A. FIGURES

FIGURE 1 REGIONAL LOCATION DIAGRAM

FIGURE 2 SITE DIAGRAM

FIGURE 3 HEADSPACE AND LABORATORY SOIL SAMPLE LOCATIONS

FIGURE 4 APPROXIMATE KVA SOIL PROBE LOCATION



SCALE IN MILES

0 1/4 1/2 3/4 1

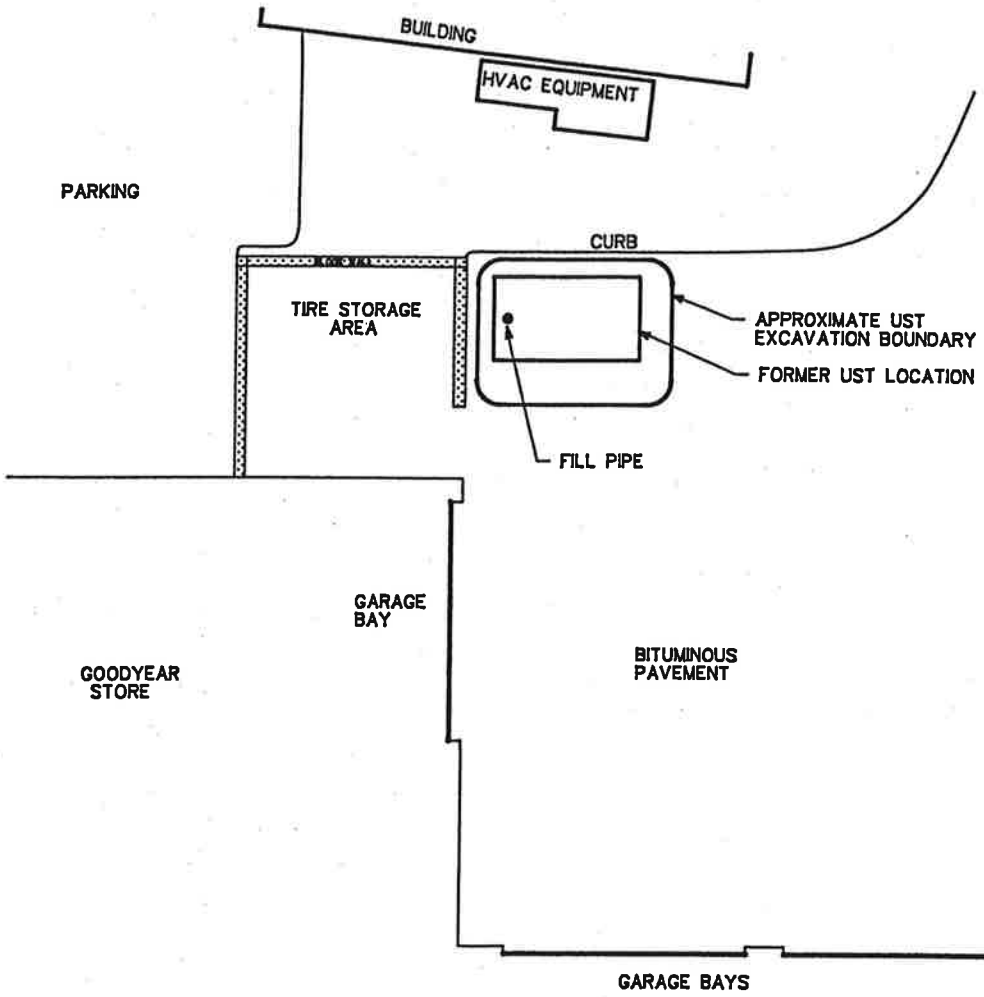
FIGURE 1: REGIONAL LOCATION DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

N

GME CONSULTANTS, INC.
14000 21st Avenue North
Minneapolis, MN 55447

TFM	SJF	3/95	4972

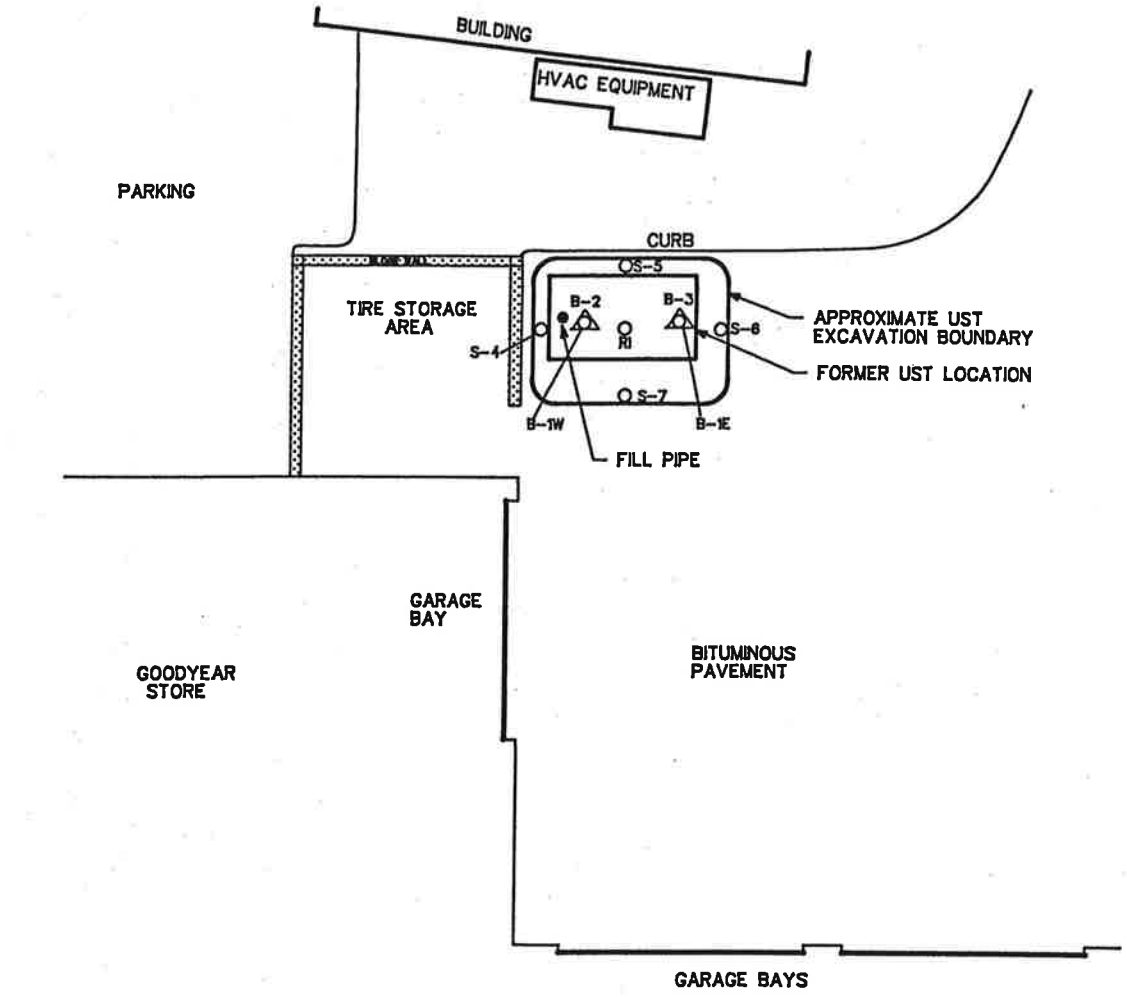


GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 2: SITE DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972



LEGEND

O HEADSPACE SAMPLE LOCATION

△ LABORATORY SAMPLE LOCATION

N

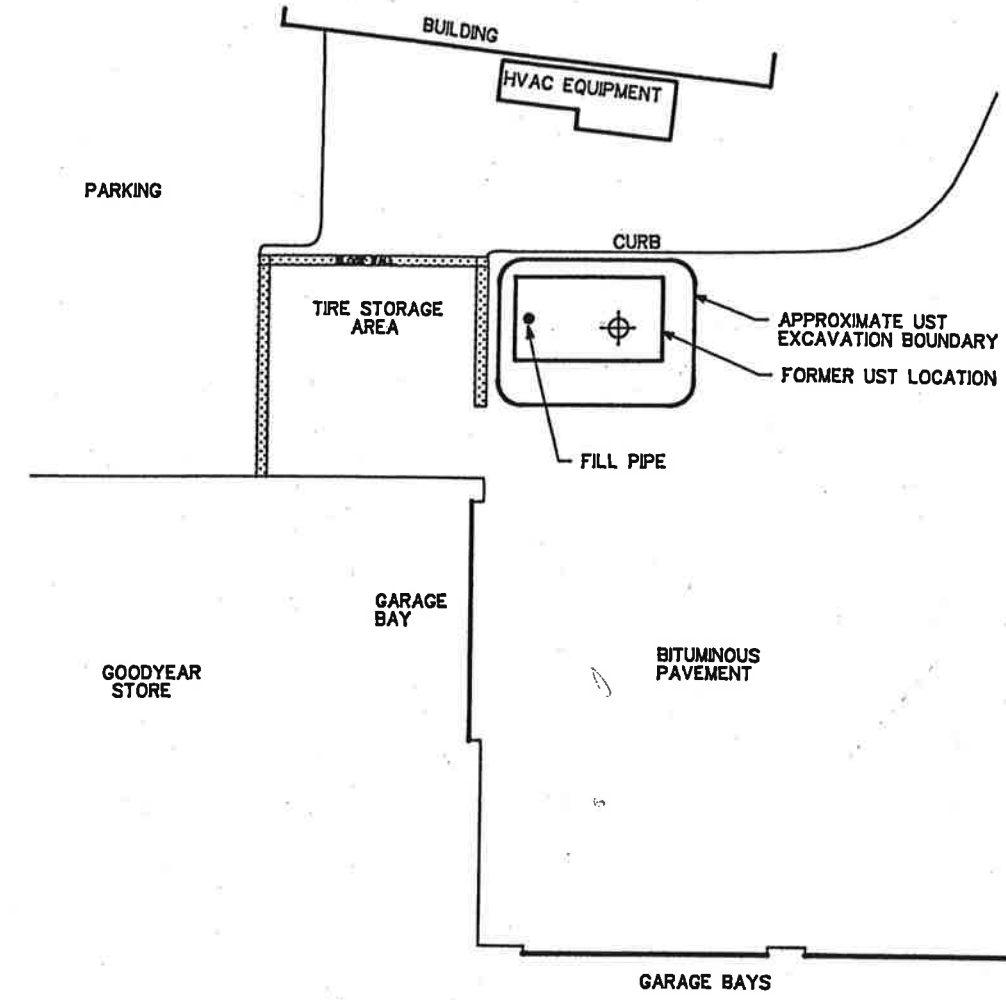
APPROXIMATE SCALE

0' FEET 8'

GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 3: HEADSPACE & LABORATORY SOIL SAMPLE LOCATIONS
GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972



GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 4: APPROXIMATE KVA SOIL PROBE LOCATION

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972

B. INTERPOLL LABORATORY REPORT - UST EXCAVATION

Sample Identification: B-1 E
Sample Type: Soil
Laboratory Log Number: 4516-02

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
1,2-Dichloropropane	0.012	BDL	BDL
2,3-Dichloro-1-propene	0.020	BDL	BDL
Dibromomethane	0.030	BDL	BDL
Bromodichloromethane	0.011	BDL	BDL
trans-1,3-Dichloropropene	0.011	BDL	BDL
cis-1,3-Dichloropropene	0.017	BDL	BDL
2-Chloroethylvinyl ether	0.017	BDL	BDL
1,1,2-Trichloroethane	0.012	BDL	BDL
Tetrachloroethene	0.011	BDL	BDL
1,3-Dichloropropane	0.0093	BDL	BDL
Dibromochloromethane	0.026	BDL	BDL
1,2-Dibromoethane	0.036	BDL	BDL
Chlorobenzene	0.049	BDL	BDL
1,1,1,2-Tetrachloroethane	0.030	BDL	BDL
Bromoform	0.012	BDL	BDL
Bromobenzene	0.0079	BDL	BDL
1,2,3-Trichloropropane	0.011	BDL	BDL
1,1,2,2-Tetrachloroethane	0.0079	BDL	BDL
2-Chlorotoluene	0.019	BDL	BDL
4-Chlorotoluene	0.027	BDL	BDL
1,3-Dichlorobenzene	0.0066	BDL	BDL
1,4-Dichlorobenzene	0.015	BDL	BDL
1,2-Dichlorobenzene	0.020	BDL	BDL
1,2-Dibromo-3-chloropropane	0.021	BDL	BDL
1,2,4-Trichlorobenzene	0.0093	BDL	BDL
Hexachlorobutadiene	0.015	BDL	BDL
1,2,3-Trichlorobenzene	0.021	BDL	BDL
Ethyl ether	0.076	BDL	BDL
Acetone	0.49	BDL	BDL
Tetrahydrofuran	0.96	BDL	BDL
Methyl ethyl ketone	0.37	BDL	BDL
Methyl tertiary butyl ether	0.057	BDL	BDL
Benzene	0.065	BDL	BDL
Methyl isobutyl ketone	0.16	BDL	BDL
Toluene	0.041	BDL	BDL
Ethylbenzene	0.044	BDL	BDL

Sample Identification: B-1 E
Sample Type: Soil
Laboratory Log Number: 4516-02

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
m/p-Xylene	0.040	BDL	BDL
o-Xylene	0.072	BDL	BDL
Styrene	0.036	BDL	BDL
Isopropylbenzene	0.061	BDL	BDL
n-Propylbenzene	0.032	BDL	BDL
1,3,5-Trimethylbenzene	0.031	BDL	BDL
tert-Butylbenzene	0.051	BDL	BDL
1,2,4-Trimethylbenzene	0.022	BDL	BDL
sec-Butylbenzene	0.057	BDL	BDL
p-Isopropyltoluene	0.044	BDL	BDL
n-Butylbenzene	0.051	BDL	BDL
Naphthalene	0.038	BDL	BDL

interpoll

010821

CHAIN-OF-CUSTODY RECORD
Analytical Request

INTERPOLL LABORATORIES, INC.
4500 BALL ROAD N.E.
CIRCLE PINES, MINNESOTA 55014-18
TEL: 612/786-6020
FAX: 612/786-7854

Client: GME
Address: Plymouth
Phone: 559-1859

Route Report To: William L Donahue
Bill To: GME
P.O.
Project Name/No.: 4972 maplewood

SPECIAL HANDLING REQUEST
☐ RUSH
☐ OTHER
☐ QUOTE NO.

Sampled By (Print): William L Donahue
Sampler Signature: [signature] Date: 12/7/94

Item No.	Sample Description	Date/ Time	Matrix	Interpoll Log No.	Number of Containers of Each — Preservatives: None	HNO_3	H_2SO_4	NaOH	VOC			Total No. Cont.	PID/FID: Ambient	Sample	Analytical Request: VOCs 465D	DRO	DRO/GRO					COMMENTS
1	B-1 W	12/7 Am	Soil	11516.01	4							4			X	X	X					
2	B-1 E	12/7 Am	Soil	02	4							4			X	X	X					

Additional Comments:

Item No.	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
1-2	[signature] /GME	Bob Seay, Interpoll	12/7/94	1330

Laboratory Comments Only:

White – Original/File Copy Yellow – Report Copy Pink – Client Copy

See Reverse Side For Instructions

C. INTERPOLL LABORATORY REPORT - KVA PROBE

K1

Interpoll Laboratories, Inc.
4500 Ball Road N.E.
Circle Pines, Minnesota 55014-1819

TEL: (612) 786-6020
FAX: (612) 786-7854

ANALYTICAL RESULTS
FOR GME CONSULTANTS, INC.
PROJECT: GOODYEAR STORE

Submitted to:

GME Consultants, Inc.
14000 - 21st Avenue N
Plymouth, Minnesota 55447

Attention: Tim McGlennen

Approved By:

Wayne A. Olson, Manager
Organic Chemistry Group

Laboratory Report #4713
January 31, 1995

PROJECT SUMMARY

The following laboratory report contains the analytical results for one soil sample submitted to Interpoll Laboratories, Inc. (ILI) by GME Consultants, Inc. for GME's Goodyear Store Project. The sample was received on January 13, 1995 according to Interpoll Labs documented sample acceptance procedures. The sample was analyzed for the parameters requested on GME's Chain-of-Custody #010814.

Sample Identificaiton	ILI Sample #
KVA1	4713-01

Results are reported on a dry weight basis.

WAO/bj
BDL = below detection limit
Invoice Enclosed

Sample Identification: KVA1
Sample Type: Soil
Laboratory Log Number: 4713-01

Interpoll Laboratories, Inc.
Laboratory Report #4713
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
EPA Method 160.3:			
Preparation Date: 1/23/95			
Analysis Date: 1/23/95			
Total solids, %	0.1	91.4	
Wisconsin DNR Method DRO,			
Preparation Date: 1/19/95			
Analysis Date: 1/20/95			
Diesel range organics	1.1	BDL	BDL
MDH Method 465-D:			
Preparation Date: 1/18/95			
Analysis Date: 1/18/95			
Dichlorodifluoromethane	0.056	BDL	BDL
Chloromethane	0.067	BDL	BDL
Vinyl chloride	0.027	BDL	BDL
Bromomethane	0.037	BDL	BDL
Chloroethane	0.028	BDL	BDL
Dichlorofluoromethane	0.005	BDL	BDL
Trichlorofluoromethane	0.013	BDL	BDL
1,1-Dichloroethene	0.023	BDL	BDL
Allyl chloride	0.0096	BDL	BDL
Methylene chloride	0.49	BDL	BDL
trans-1,2-Dichloroethene	0.054	BDL	BDL
1,1-Dichloroethane	0.024	BDL	BDL
2,2-Dichloropropane	0.034	BDL	BDL
cis-1,2-Dichloroethene	0.027	BDL	BDL
Bromochloromethane	0.0096	BDL	BDL
Chloroform	0.013	BDL	BDL
1,1,2-Trichlorotrifluoroethane	0.026	BDL	BDL
1,1,1-Trichloroethane	0.016	BDL	BDL
Carbon tetrachloride	0.005	BDL	BDL
1,1-Dichloro-1-propene	0.005	BDL	BDL
1,2-Dichloroethane	0.012	BDL	BDL
Trichloroethene	0.012	BDL	BDL
1,2-Dichloropropane	0.012	BDL	BDL
2,3-Dichloro-1-propene	0.021	BDL	BDL

Interpoll Laboratories, Inc.
4500 Ball Road N.E.
Circle Pines, Minnesota 55014-1819

TEL: (612) 786-6020
FAX: (612) 786-7854

ANALYTICAL RESULTS
FOR GME CONSULTANTS, INC.
PROJECT: #4972

Submitted to:

GME Consultants, Inc.
14000 - 21st Avenue N
Plymouth, Minnesota 55447

Attention: William Donahue

Approved By:

Wayne A Olson, Manager
Organic Chemistry Group

Laboratory Report #4516
January 6, 1995

PROJECT SUMMARY

The following laboratory report contains the analytical results for two soil samples submitted to Interpoll Laboratories, Inc. (ILI) by GME Consultants, Inc. for GME's Project #4972. The samples were received on December 7, 1994 according to Interpoll Labs documented sample acceptance procedures. The samples were analyzed for the parameters requested on GME's Chain-of-Custody #010821.

Sample Identificaiton	ILI Sample #
B-1 W	4516-01
B-1 E	4516-02

Results are reported on an a dry weight basis.

Footnote:

[a]Although quantified as diesel range organics as requested, the chromatographic pattern more closely resembles that of motor oil.

[b]Although quantified as diesel range organics as requested, the chromatographic pattern more closely resembles that of motor oil with a minor amount of fuel oil.

[c]Sample extract was diluted as indicated to accommodate the analyte concentration. Reported value represents the concentration in the original undiluted sample, i.e., instrumental result was multiplied by the dilution factor prior to reporting. Achieved detection limit is given. The target detection limit applicable to the sample may be obtained by dividing the achieved detection limit by the dilution factor.

WAO/bj
BDL = below detection limit
Invoice Enclosed

Sample Identification: B-1 W
Sample Type: Soil
Laboratory Log Number: 4516-01

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
EPA Method 160.3:			
Preparation Date: 12/12/94			
Analysis Date: 12/12/94			
Total solids, %	0.1	94.9	
Wisconsin DNR Method DRO,			
Preparation Date: 12/8/94			
Analysis Date: 12/10/94			
Diesel range organics	1.1	5.9 a	BDL
MDH Method 465-D:			
Preparation Date: 12/13/94			
Analysis Date: 12/15/94			
Dichlorodifluoromethane	0.054	BDL	BDL
Chloromethane	0.064	BDL	BDL
Vinyl chloride	0.026	BDL	BDL
Bromomethane	0.036	BDL	BDL
Chloroethane	0.027	BDL	BDL
Dichlorofluoromethane	0.005	BDL	BDL
Trichlorofluoromethane	0.013	BDL	BDL
1,1-Dichloroethene	0.022	BDL	BDL
Allyl chloride	0.0093	BDL	BDL
Methylene chloride	0.47	BDL	BDL
trans-1,2-Dichloroethene	0.052	BDL	BDL
1,1-Dichloroethane	0.023	BDL	BDL
2,2-Dichloropropane	0.033	BDL	BDL
cis-1,2-Dichloroethene	0.026	BDL	BDL
Bromochloromethane	0.0093	BDL	BDL
Chloroform	0.013	BDL	BDL
1,1,2-Trichlorotrifluoroethane	0.025	0.075	BDL
1,1,1-Trichloroethane	0.016	BDL	BDL
Carbon tetrachloride	0.005	BDL	BDL
1,1-Dichloro-1-propene	0.005	BDL	BDL
1,2-Dichloroethane	0.012	BDL	BDL
Trichloroethene	0.012	BDL	BDL

Sample Identification: B-1 W
Sample Type: Soil
Laboratory Log Number: 4516-01

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
1,2-Dichloropropane	0.012	BDL	BDL
2,3-Dichloro-1-propene	0.020	BDL	BDL
Dibromomethane	0.030	BDL	BDL
Bromodichloromethane	0.011	BDL	BDL
trans-1,3-Dichloropropene	0.011	BDL	BDL
cis-1,3-Dichloropropene	0.017	BDL	BDL
2-Chloroethylvinyl ether	0.017	BDL	BDL
1,1,2-Trichloroethane	0.012	BDL	BDL
Tetrachloroethene	0.011	BDL	BDL
1,3-Dichloropropane	0.0093	BDL	BDL
Dibromochloromethane	0.026	BDL	BDL
1,2-Dibromoethane	0.036	BDL	BDL
Chlorobenzene	0.048	BDL	BDL
1,1,1,2-Tetrachloroethane	0.030	BDL	BDL
Bromoform	0.012	BDL	BDL
Bromobenzene	0.0079	BDL	BDL
1,2,3-Trichloropropane	0.011	BDL	BDL
1,1,2,2-Tetrachloroethane	0.0079	BDL	BDL
2-Chlorotoluene	0.019	BDL	BDL
4-Chlorotoluene	0.027	BDL	BDL
1,3-Dichlorobenzene	0.0066	BDL	BDL
1,4-Dichlorobenzene	0.015	BDL	BDL
1,2-Dichlorobenzene	0.020	BDL	BDL
1,2-Dibromo-3-chloropropane	0.021	BDL	BDL
1,2,4-Trichlorobenzene	0.0093	BDL	BDL
Hexachlorobutadiene	0.015	BDL	BDL
1,2,3-Trichlorobenzene	0.021	BDL	BDL
Ethyl ether	0.076	BDL	BDL
Acetone	0.48	BDL	BDL
Tetrahydrofuran	0.96	BDL	BDL
Methyl ethyl ketone	0.37	BDL	BDL
Methyl tertiary butyl ether	0.057	BDL	BDL
Benzene	0.065	BDL	BDL
Methyl isobutyl ketone	0.16	BDL	BDL
Toluene	0.041	BDL	BDL
Ethylbenzene	0.044	BDL	BDL

Sample Identification: B-1 W
Sample Type: Soil
Laboratory Log Number: 4516-01

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
m/p-Xylene	0.040	BDL	BDL
o-Xylene	0.072	BDL	BDL
Styrene	0.036	BDL	BDL
Isopropylbenzene	0.061	BDL	BDL
n-Propylbenzene	0.032	BDL	BDL
1,3,5-Trimethylbenzene	0.031	BDL	BDL
tert-Butylbenzene	0.051	BDL	BDL
1,2,4-Trimethylbenzene	0.022	BDL	BDL
sec-Butylbenzene	0.057	BDL	BDL
p-Isopropyltoluene	0.044	BDL	BDL
n-Butylbenzene	0.051	BDL	BDL
Naphthalene	0.038	BDL	BDL

Sample Identification: B-1 E
Sample Type: Soil
Laboratory Log Number: 4516-02

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
EPA Method 160.3:			
Preparation Date: 12/12/94			
Analysis Date: 12/12/94			
Total solids, %	0.1	94.8	
Wisconsin DNR Method DRO,			
Preparation Date: 12/8/94			
Analysis Date: 12/10/94			
Diesel range organics	5.3	130 [b]	BDL
Dilution Factor		5 [c]	5 [c]
MDH Method 465-D:			
Preparation Date: 12/13/94			
Analysis Date: 12/15/94			
Dichlorodifluoromethane	0.054	BDL	BDL
Chloromethane	0.064	BDL	BDL
Vinyl chloride	0.026	BDL	BDL
Bromomethane	0.036	BDL	BDL
Chloroethane	0.027	BDL	BDL
Dichlorofluoromethane	0.005	BDL	BDL
Trichlorofluoromethane	0.013	BDL	BDL
1,1-Dichloroethene	0.022	BDL	BDL
Allyl chloride	0.0093	BDL	BDL
Methylene chloride	0.47	BDL	BDL
trans-1,2-Dichloroethene	0.052	BDL	BDL
1,1-Dichloroethane	0.023	BDL	BDL
2,2-Dichloropropane	0.033	BDL	BDL
cis-1,2-Dichloroethene	0.026	BDL	BDL
Bromochloromethane	0.0093	BDL	BDL
Chloroform	0.013	BDL	BDL
1,1,2-Trichlorotrifluoroethane	0.025	BDL	BDL
1,1,1-Trichloroethane	0.016	BDL	BDL
Carbon tetrachloride	0.005	BDL	BDL
1,1-Dichloro-1-propene	0.005	BDL	BDL
1,2-Dichloroethane	0.012	BDL	BDL
Trichloroethene	0.012	BDL	BDL

Sample Identification: KVA1
Sample Type: Soil
Laboratory Log Number: 4713-01

Interpoll Laboratories, Inc.
Laboratory Report #4713
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
Dibromomethane	0.031	BDL	BDL
Bromodichloromethane	0.011	BDL	BDL
trans-1,3-Dichloropropene	0.011	BDL	BDL
cis-1,3-Dichloropropene	0.018	BDL	BDL
2-Chloroethylvinyl ether	0.018	BDL	BDL
1,1,2-Trichloroethane	0.012	BDL	BDL
Tetrachloroethene	0.011	BDL	BDL
1,3-Dichloropropane	0.0096	BDL	BDL
Dibromochloromethane	0.027	BDL	BDL
1,2-Dibromoethane	0.037	BDL	BDL
Chlorobenzene	0.050	BDL	BDL
1,1,1,2-Tetrachloroethane	0.031	BDL	BDL
Bromoform	0.012	BDL	BDL
Bromobenzene	0.0082	BDL	BDL
1,2,3-Trichloropropane	0.011	BDL	BDL
1,1,2,2-Tetrachloroethane	0.0082	BDL	BDL
2-Chlorotoluene	0.020	BDL	BDL
4-Chlorotoluene	0.028	BDL	BDL
1,3-Dichlorobenzene	0.0069	BDL	BDL
1,4-Dichlorobenzene	0.015	BDL	BDL
1,2-Dichlorobenzene	0.021	BDL	BDL
1,2-Dibromo-3-chloropropane	0.022	BDL	BDL
1,2,4-Trichlorobenzene	0.0096	BDL	BDL
Hexachlorobutadiene	0.015	BDL	BDL
1,2,3-Trichlorobenzene	0.022	BDL	BDL
Ethyl ether	0.079	BDL	BDL
Acetone	0.50	0.65	0.67
Tetrahydrofuran	1.0	BDL	BDL
Methyl ethyl ketone	0.38	BDL	BDL
Methyl tertiary butyl ether	0.059	BDL	BDL
Benzene	0.068	BDL	BDL
Methyl isobutyl ketone	0.16	BDL	BDL
Toluene	0.043	BDL	BDL
Ethylbenzene	0.046	BDL	BDL
m/p-Xylene	0.042	BDL	BDL
o-Xylene	0.074	BDL	BDL

Sample Identification: KVA1
Sample Type: Soil
Laboratory Log Number: 4713-01

Interpoll Laboratories, Inc.
Laboratory Report #4713
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
Styrene	0.037	BDL	BDL
Isopropylbenzene	0.063	BDL	BDL
n-Propylbenzene	0.033	BDL	BDL
1,3,5-Trimethylbenzene	0.032	BDL	BDL
tert-Butylbenzene	0.053	BDL	BDL
1,2,4-Trimethylbenzene	0.023	BDL	BDL
sec-Butylbenzene	0.059	BDL	BDL
p-Isopropyltoluene	0.046	BDL	BDL
n-Butylbenzene	0.053	BDL	BDL
Naphthalene	0.039	BDL	BDL

interpoll

010814

CHAIN-OF-CUSTODY RECORD
Analytical Request

INTERPOLL LABORATORIES, INC.
4500 BALL ROAD N.E.
CIRCLE PINES, MINNESOTA 55014-1819
TEL: 612/786-6020
FAX: 612/786-7854

Client: GME
Address: 1400 21 55 Ave N
Mpls MN
Phone: 559-1855

Route Report To: Timm McGlivne
Bill To: GME
P.O.
Project Name/No. Goodyear Store

SPECIAL HANDLING REQUEST
☐ RUSH
☒ OTHER 5-day turn
☐ QUOTE NO.

Sampled By (Print): Tom Zachar 11-13-95
Sampler Signature: [signature] Date

Item No.	Sample Description	Date/ Time	Matrix	Interpoll Log No.	None	HNO_3	H_2SO_4	NaOH	VOC			Total No. Cont.	PID/FID Ambient	PID/FID Sample	DRO/BTEX	VOCs 465D	8/RCRA Metals	PCB's					COMMENTS
1	KVA-1	12:00p	Soil	4713-01	✓							4			✓	✓							
																	X	X					
																		X					

Additional Comments:
EXTRACT metals/PCB's Sample
But hold for analysis

ments Only:
... with metals because of ... time.

Item No.	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
1	Tom Zachar / [illegible]	Karen Tollefson	1/13	1:20

Copy Yellow – Report Copy Pink – Client Copy

See Reverse Side For Instructions

D. KVA SOIL BORING LOG

LOG OF BORING KVA-1

PROJECT: UST Closure
SITE: Goodyear Facility, Maplewood, Minnesota
CLIENT: Bruce Odlang
ARCHITECT-ENGINEER:

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL	SPECIAL TEST RESULTS PID READINGS	N-VALUE (BLOWS/FT.)
				SURFACE ELEVATION →		
				Brown SILTY SAND - dry - (SM) (FILL)		
5			7.0			
				Brown SILTY SAND, trace clay, gravel - dry - (SM)		
10						
	1SS				0.2	
	2SS		14.0		0.0	
				End of Probe at 14 feet Probe hole backfilled with bentonite clay		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2} (1, 2, 3, 4, 5)
WATER CONTENT %
STANDARD PENETRATION (BLOWS/FOOT) (10, 20, 30, 40, 50)

WATER LEVEL OBSERVATIONS

W.L.	Groundwater not encountered
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical · Materials · Environmental
14000 21st Avenue North
Minneapolis, Minnesota 55441
(612) 559-1859

BORING STARTED	1/13/95
BORING COMPLETED	1/13/95
RIG: KVA Probe	DRILLER: TZ
DRAWN: TFM	APPROVED: SJF
JOB #: 4972	SHEET: 1 of 1

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

E. SA MONITORING WELL INFORMATION

MAUN & SIMON, PLC

LAWRENCE J. HAYES*
JEROME B. SIMON
JOHN C. JOHANNESON
JAMES W. BREHL*
BRUCE G. ODLAUG
ALBERT A. WOODWARD
GARRETT E. MULROONEY*
WILLIAM J. HASSING*
JAMES A. GALLAGHER
CHARLES BANS
BARRY A. GERSICK
GEOFFREY P. JARPE*
RICHARD M. GAALSWYK
LARRY B. GUTHRIE
SETH M. COLTON
HAROLD LEVANDER, JR.

*ALSO ADMITTED IN WISCONSIN

REPLY TO: Minneapolis

MINNEAPOLIS OFFICE

2900 NORWEST CENTER
90 SOUTH SEVENTH STREET
MINNEAPOLIS, MINNESOTA 55402-4133
TELEPHONE 612-338-1113
TELECOPIER 612-338-2271

SAINT PAUL OFFICE

2300 WORLD TRADE CENTER
30 EAST 7TH STREET
SAINT PAUL, MINNESOTA 55101-4904
TELEPHONE 612-229-2900
TELECOPIER 612-229-2800

J. PATRICK BRINKMAN*
RICHARD C. SALMEN
JOHN J. BOWDEN
PHILIP T. COLTON
RUTH SILSETH MARCOTT
TREVOR R. WALSTEN
JOHN R. LANDIS
MARK R. GLEEMAN
STEPHEN E. YOCH
JENNIFER A. TENENBAUM
JEANNE GLADER KILDOW
DANIEL S. SIMON

OF COUNSEL
JOSEPH M. NEMO, JR.

RETIRED
MERLYN C. GREEN

JOSEPH A. MAUN
1909-1991

February 1, 1995

Timothy F. McGlennen
Environmental Biologist
Project Manager
GME Consultants, Inc.
14000 21st Avenue North
Minneapolis, MN 55447

Re: Goodyear Store
1735 Van Dyke Avenue, Maplewood, MN

Dear Tim:

Enclosed for your information is a copy of the Delta report on the monitoring well which was inadvertently placed on our property. I thought this might be of some help to you in connection with the clean-up of the release from the waste oil tank.

Delta advises that the well was abandoned on January 22, 1995.

Very truly yours,

Bruce G. Odlaug

Bruce G. Odlaug

BGO:jd
Enclosure

cc: Neil R. Hartman

2/01/95, BGO, 38406_1M

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING SEALING RECORD

Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No. H 59986

Minnesota Unique No. or W-series No. (Leave blank if not known) 552035

WELL OR BORING LOCATION

County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction (sm. - lg.)
Maplewood	29N	22W	14	SW¼ SW¼ SW

Date Sealed: 1-22-95

Approximate Date Well or Boring Constructed: 9-9-94

Numerical Street Address or Fire Number and City of Well or Boring Location: 1814 N. St. Paul Road

Depth Before Sealing: 35.0 ft.

Original Depth: 35.0 ft.

Show exact location of well or boring in section grid with "X".

Sketch map of well or boring location, showing property lines, roads, and buildings.

see attached map

N / S / W / E — ¼ mile — 1 mile

Static Water Level: ☐ Accurate ☒ Approximate

☒ Single Aquifer ☐ Multiaquifer

x ft. 27 below ____ above land surface

CASING TYPE

☐ Steel ☒ Plastic ☐ Tile ☐ Other ____

Screen from ~~XXX~~ 25 to 35 ft. Open Hole from ____ to ____

OBSTRUCTION/DEBRIS/FILL

☐ Obstruction ☐ Debris ☐ Fill

Type of debris/obstruction: none

Obstruction/Debris/Fill removed? ☐ Yes ☐ No

PROPERTY OWNER'S NAME

Minn. Health

Mailing Address if different than property address indicated above.

PUMP

☐ Removed ☒ Not Present ☐ Other ____

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
Glacial Drift			0	35

If not known, indicate estimated formation log from nearby well or boring.

CASING

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
2 in.	from 0 to 25 ft.	☒ Yes ☐ No	☒ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:

☒ No Annular Space Exists

☐ Annular space grouted with tremie pipe

☐ Casing Perforation/Removal

____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed

____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed

Type of perforator ____

☐ Other ____

GROUTING MATERIAL

Grouting material	from	to	ft.	yards	bags
cement	0	35			1

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

440-2122
Tremie Grout Shut
MW-4

UNSEALED WELLS AND BORINGS

Other unsealed well or boring on property? ☐ Yes ☒ No

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Boart Longyear — Contractor Business Name

27653 — License or Registration No.

[signature] — Authorized Representative Signature

1-23-95 — Date

Mike Thalacker — Name of Person Sealing Well or Boring

IMPORTANT — FILE WITH PROPERTY PAPERS — WELL OWNER COPY

H 59986

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 *Minneapolis, MN. 55421* *Tel. (612) 572-0425* *Fax (612) 572-0441*

LABORATORY REPORT

Client:	Delta Environmental Consultants, Inc	Date Sampled:	10/17/94
	3900 Northwoods Drive, Suite 200	Date Received:	10/18/94
	St. Paul, MN 55112	Date Analyzed:	10/25/94
	Attn: Jim DeLuca	Physical State:	Aqueous
Project:	SuperAmerica #4022	Report Date:	10/27/94
	Maplewood, MN	Lab P.N.:	1000-212.4
		Client P.N.:	A093-376-1.0001

Quality Assurance / Quality Control Summary

Parameter (Method)	QC Type	Percent Recovery	Acceptable Range	Percent Reproducibility	Acceptable Range
Benzene (MDH 465D)	M	101	120 - 80	105	120 - 80
Toluene (MDH 465D)	M	84	120 - 80	101	120 - 80
Ethylbenzene (MDH 465D)	M	84	120 - 80	101	120 - 80
m,p-Xylenes (MDH 465D)	M	85	120 - 80	100	120 - 80
o-Xylenes (MDH 465D)	M	84	120 - 80	101	120 - 80
1,3,5-Trimethylbenzene (MDH 465D)	M	85	120 - 80	101	120 - 80
1,2,4-Trimethylbenzene (MDH 465D)	M	85	120 - 80	101	120 - 80
GRO (Wis. DNR)	M	89	117 - 85	99	115 - 84

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area of known standards using a Hewlett Packard ChemStation Data System. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 10/17/94
Date Analyzed: 10/25/94
Physical State: Aqueous

Report Date: 10/27/94
Lab P.N.: 1000-212.4
Client P.N.: A093-376-1.0001

Sample I.D.	Benzene µg/l EPA 8020	Toluene µg/l EPA 8020	Ethyl-benzene µg/l EPA 8020	Total, Xylenes µg/l EPA 8020	GRO µg/l Wis. DNR
MW-4	<0.20	<0.50	<0.20	<0.80	<20
MW-5	—	—	—	—	<20
Field Blank	<0.20	<0.50	<0.20	<0.80	<20
MDL, µg/l	0.20	0.50	0.20	0.80	20

—: See MDH 465D results.
MDL: Method Detection Limit
GRO: Gasoline Range Organics
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

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LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 10/17/94
Date Analyzed: 10/25/94
Physical State: Aqueous

Report Date: 10/25/94
Lab P.N.: 1000-212.4
Client P.N.: A093-376-1.0001

MDH 465D

Sample I.D.	MW-5	MDL
Parameter	µg/l	µg/l
Acetone	<30	30
Allyl Chloride	<0.8	0.8
Benzene	<0.2	0.2
Bromobenzene	<0.4	0.4
Bromochloromethane	<0.5	0.5
Bromodichloromethane	<0.6	0.6
Bromoform	<0.2	0.2
Bromomethane	<0.9	0.9
n-Butylbenzene	<0.2	0.2
sec-Butylbenzene	<0.2	0.2
tert-Butylbenzene	<0.2	0.2
Carbon Tetrachloride	<0.5	0.5
Chlorobenzene	<0.2	0.2
Chloroethane	<10	10
Chloroform	<0.5	0.5
Chloromethane	<10	10
2-Chlorotoluene	<0.3	0.3
4-Chlorotoluene	<0.7	0.7
Dibromochloromethane	<0.4	0.4
1,2-Dibromo-3-Chloropropane	<0.3	0.3
1,2-Dibromoethane	<0.6	0.6
Dibromomethane	<0.9	0.9
1,2-Dichlorobenzene	<0.4	0.4
1,3-Dichlorobenzene	<0.3	0.3
1,4-Dichlorobenzene	<0.5	0.5
Dichlorodifluoromethane	<6.0	6.0
1,1-Dichloroethane	<0.4	0.4
1,2-Dichloroethane	<1.1	1.1
1,1-Dichloroethene	<1.2	1.2
cis-1,2-Dichloroethene	<0.1	0.1
trans-1,2-Dichloroethene	<0.5	0.5
Dichlorofluoromethane	<20	20
1,2-Dichloropropane	<0.5	0.5
1,3-Dichloropropane	<0.4	0.4

MDL: Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
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LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 10/17/94
Date Analyzed: 10/25/94
Physical State: Aqueous

Report Date: 10/25/94
Lab P.N.: 1000-212.4
Client P.N.: A093-376-1.0001

MDH 465D

Sample I.D.	MW-5	MDL
Parameter	µg/l	µg/l
*2,2-Dichloropropane	<0.7	0.7
1,1-Dichloropropene	<0.5	0.5
cis-1,3-Dichloropropene	<0.5	0.5
trans-1,3-Dichloropropene	<0.3	0.3
Ethyl Benzene	<0.2	0.2
Ethyl Ether	<5.0	5.0
Hexachlorobutadiene	<0.6	0.6
Isopropyl Benzene	<0.2	0.2
p-Isopropyltoluene	<0.2	0.2
Methyl Ethyl Ketone	<15	15
Methyl Isobutyl Ketone	<60	60
Methyl tert-Butyl Ether	<5.0	5.0
Methylene Chloride	<0.4	0.4
Naphthalene	<0.2	0.2
*n-Propylbenzene	<0.2	0.2
o-Xylene	<0.3	0.3
Styrene	<0.5	0.5
1,1,1,2-Tetrachloroethane	<0.6	0.6
1,1,2,2-Tetrachloroethane	<0.4	0.4
Tetrachloroethene	34	0.5
Tetrahydrofuran	<15	15
Toluene	0.74	0.6
1,2,3-Trichlorobenzene	<1.0	1.0
1,2,4-Trichlorobenzene	<0.3	0.3
1,1,1-Trichloroethane	<1.0	1.0
1,1,2-Trichloroethane	<0.4	0.4
Trichloroethene	<0.6	0.6
Trichlorofluoromethane	<5.0	5.0
1,2,3-Trichloropropane	<0.4	0.4
1,1,2-Trichlorotrifluoroethane	<0.8	0.8
1,2,4-Trimethylbenzene	<0.4	0.4
*1,3,5-Trimethylbenzene	<0.2	0.2
Vinyl Chloride	<5.0	5.0
m,p-Xylenes	<0.5	0.5

*: coeluting compounds
MDL, Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Delta
Environmental Consultants, Inc.
3900 Northwoods Dr., Suite 200
St. Paul, MN 55112

CHAIN-OF-CUSTODY RECORD

DELTA PROJECT NO. HC93-316-1.0001 | INVOICE CODE | PAGE 1 OF 1

PROJECT MANAGER TIM DELUCA

PROJECT NAME UPPER AMERICA #4022

PROJECT LOCATION MAPLEWOOD, MN

SAMPLER'S SIGNATURE Robert J. Andrews

TURN AROUND REQUESTED: ☐ NORMAL ☐ RUSH _____ ☐ OTHER _____

LAB NAME HORIZON

LAB USE ONLY

LABORATORY PROJECT NO. 1000-212.4

SAMPLE ID	SAMPLE LOCATION/DESCRIPTION	DATE/TIME SAMPLED	SAMPLE MATRIX: SOIL(S); AIR(A); BULK(B); AQUEOUS(Q); SLUDGE(L); OTHER(O)	ANALYSIS REQUESTED: MTBE+HSD	BTEX	8260	NUMBER OF CONTAINERS	ACCEPT (A) REJECT (R)	SAMPLE CONDITION AS RECEIVED: ON ICE; CHILLED YES/NO; SEALED YES/NO; SAMPLE CONDITION/ COMMENTS	LABORATORY SAMPLE NUMBER
MW-4		10-17 / 15:45			✓	✓				11791
MW-5		10-17 / 16:10		✓		✓				11792
FIELD BLANK		10-17 15:45			✓	✓				11793

GENERAL COMMENTS: RESULTS TO P.M. JIM DELUCA.

TOTAL NUMBER OF CONTAINERS

	DATE		DATE		DATE
1 RELINQUISHED BY (SIGNATURE) Robert J. Andrews	10-17-97	3 RELINQUISHED BY (SIGNATURE)		5 RELINQUISHED BY (SIGNATURE)	
COMPANY Delta Environmental	TIME 16:00	COMPANY	TIME	COMPANY	TIME
2 RECEIVED BY (SIGNATURE) Bryce Moore	DATE 10-18-97	4 RECEIVED BY (SIGNATURE)	DATE	6 RECEIVED BY (SIGNATURE)	DATE
COMPANY Horizon	TIME 9:45	COMPANY	TIME	COMPANY	TIME

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY REPORT

Client:	Delta Environmental Consultants, Inc	Date Sampled:	09/24/94
	3900 Northwoods Drive, Suite 200	Date Received:	09/26/94
	St. Paul, MN 55112	Date Analyzed:	09/29/94
	Attn: Jim DeLuca	Physical State:	Aqueous
Project:	SuperAmerica #4022	Report Date:	10/03/94
	Maplewood, MN	Lab P.N.:	1000-212.3
		Client P.N.:	A093-376-1.0001

Quality Assurance / Quality Control Summary

Parameter: (Method)	QC Type	Percent Recovery	Acceptable Range	Percent Reproducibility	Acceptable Range
MtBE (MDH 465D)	M	86	120 - 80	104	120 - 80
Benzene (MDH 465D)	M	96	120 - 80	102	120 - 80
Toluene (MDH 465D)	M	93	120 - 80	102	120 - 80
Ethylbenzene (MDH 465D)	M	93	120 - 80	102	120 - 80
m,p-Xylenes (MDH 465D)	M	93	120 - 80	101	120 - 80
o-Xylene (MDH 465D)	M	92	120 - 80	103	120 - 80
Dibromomethane (MDH 465D)	M	101	120 - 80	105	120 - 80
1,2-Dibromo-3-Chloropropane (MDH 465D)	M	111	120 - 80	104	120 - 80
GRO (Wis. DNR)	M	98	117 - 85	103	115 - 84

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area to those of known standards using a Hewlett Packard ChemStation data system. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody Record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

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LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/24/94
Date Analyzed: 09/29/94
Physical State: Aqueous

Report Date: 10/03/94
Lab P.N.: 1000-212.3
Client P.N.: A093-376-1.0001

Sample I.D.	Benzene µg/l EPA 8020	Toluene µg/l EPA 8020	Ethyl-benzene µg/l EPA 8020	Total, Xylenes µg/l EPA 8020	GRO µg/l Wis. DNR
MW-4	—	—	—	—	< 20
MW-5	—	—	—	—	< 20
MW-2	< 0.20	< 0.50	< 0.20	< 0.80	< 20
MW-3	< 0.20	< 0.50	< 0.20	< 0.80	< 20
MW-1	7,500	22,000	2,400	14,000	61,000
MDL, µg/l	0.20	0.50	0.20	0.80	20

—: See MDH 465D results.
MDL; Method Detection Limit for undiluted samples.
GRO; Gasoline Range Organics
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
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5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/24/94
Date Analyzed: 09/29/94
Physical State: Aqueous

Report Date: 10/03/94
Lab P.N.: 1000-212.3
Client P.N.: A093-376-1.0001

MDH 465D

Sample I.D.	MW-4	MW-5	MDL
Parameter	µg/l	µg/l	µg/l
Acetone	<30	<30	30
Allyl Chloride	<0.8	<0.8	0.8
Benzene	<0.3	<0.3	0.3
Bromobenzene	<0.4	<0.4	0.4
Bromochloromethane	<0.5	<0.5	0.5
Bromodichloromethane	<0.6	<0.6	0.6
Bromoform	<0.2	<0.2	0.2
Bromomethane	<0.9	<0.9	0.9
n-Butylbenzene	<0.3	<0.3	0.3
sec-Butylbenzene	<0.2	<0.2	0.2
tert-Butylbenzene	<0.4	<0.4	0.4
Carbon Tetrachloride	<0.5	<0.5	0.5
Chlorobenzene	<0.2	<0.2	0.2
Chloroethane	<10	<10	10
Chloroform	<0.5	<0.5	0.5
Chloromethane	<10	<10	10
2-Chlorotoluene	<0.3	<0.3	0.3
4-Chlorotoluene	<0.7	<0.7	0.7
Dibromochloromethane	<0.4	<0.4	0.4
1,2-Dibromo-3-Chloropropane	<0.3	<0.3	0.3
1,2-Dibromoethane	<0.6	<0.6	0.6
Dibromomethane	<0.9	<0.9	0.9
1,2-Dichlorobenzene	<0.4	<0.4	0.4
1,3-Dichlorobenzene	<0.3	<0.3	0.3
1,4-Dichlorobenzene	<0.5	<0.5	0.5
Dichlorodifluoromethane	<6.0	<6.0	6.0
1,1-Dichloroethane	<0.4	<0.4	0.4
1,2-Dichloroethane	<1.1	<1.1	1.1
1,1-Dichloroethene	<1.2	<1.2	1.2
cis-1,2-Dichloroethene	<0.1	<0.1	0.1
trans-1,2-Dichloroethene	<0.5	<0.5	0.5
Dichlorofluoromethane	<20	<20	20
1,2-Dichloropropane	<0.5	<0.5	0.5
1,3-Dichloropropane	<0.4	<0.4	0.4

MDL; Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/24/94
Date Analyzed: 09/29/94
Physical State: Aqueous

Report Date: 10/03/94
Lab P.N.: 1000-212.3
Client P.N.: A093-376-1.0001

MDH 465D

Sample I.D.	MW-4	MW-5	MDL
Parameter	µg/l	µg/l	µg/l
*2,2-Dichloropropane	<0.7	<0.7	0.7
1,1-Dichloropropene	<0.5	<0.5	0.5
cis-1,3-Dichloropropene	<0.5	<0.5	0.5
trans-1,3-Dichloropropene	<0.3	<0.3	0.3
Ethyl Benzene	<0.2	<0.2	0.2
Ethyl Ether	<5.0	<5.0	5.0
Hexachlorobutadiene	<0.6	<0.6	0.6
Isopropyl Benzene	<0.2	<0.2	0.2
p-Isopropyltoluene	<0.2	<0.2	0.2
Methyl Ethyl Ketone	<15	<15	15
Methyl Isobutyl Ketone	<30	<30	30
Methyl tert-Butyl Ether	<5.0	<5.0	5.0
Methylene Chloride	<0.4	<0.4	0.4
Naphthalene	<0.5	<0.5	0.5
*n-Propylbenzene	<0.2	<0.2	0.2
o-Xylene	<0.2	<0.2	0.2
Styrene	<0.5	<0.5	0.5
1,1,1,2-Tetrachloroethane	<0.6	<0.6	0.6
1,1,2,2-Tetrachloroethane	<0.4	<0.4	0.4
Tetrachloroethene	<0.5	37	0.5
Tetrahydrofuran	<15	<15	15
Toluene	<0.6	<0.6	0.6
1,2,3-Trichlorobenzene	<1.0	<1.0	1.0
1,2,4-Trichlorobenzene	<0.3	<0.3	0.3
1,1,1-Trichloroethane	<1.0	<1.0	1.0
1,1,2-Trichloroethane	<0.4	<0.4	0.4
Trichloroethene	<0.6	<0.6	0.6
Trichlorofluoromethane	<5.0	<5.0	5.0
1,2,3-Trichloropropane	<0.4	<0.4	0.4
1,1,2-Trichlorotrifluoroethane	<0.8	<0.8	0.8
1,2,4-Trimethylbenzene	0.28	<0.2	0.2
*1,3,5-Trimethylbenzene	<0.2	<0.2	0.2
Vinyl Chloride	<5.0	<5.0	5.0
m,p-Xylenes	<0.5	<0.5	0.5

*: coeluting compounds
MDL, Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Delta Environmental Consultants, Inc.
3900 Northwoods Dr., Suite 200
St. Paul, MN 55112

CHAIN–OF–CUSTODY RECORD

DELTA PROJECT NO.	4C93-316-1,0001
INVOICE CODE	
PAGE	1 OF 1
PROJECT MANAGER	Jim Deluca
PROJECT NAME	SuperAmerica #4022
PROJECT LOCATION	Maplewood, MN
SAMPLER'S SIGNATURE	[illegible signature]
TURN AROUND REQUESTED	☒ NORMAL ☐ RUSH ☐ OTHER
LAB NAME	Horizon

LAB USE ONLY

LABORATORY PROJECT NO. 1000-212.3

SAMPLE CONDITION AS RECEIVED: CHILLED (YES) NO; SEALED (YES) NO

SAMPLE ID	SAMPLE LOCATION/DESCRIPTION	DATE/TIME SAMPLED	SAMPLE MATRIX: SOIL(S): AIR(A): BULK(B): AQUEOUS(Q): SLUDGE(L): OTHER(O)	WI Mod-465D	BTEX	GRO			NUMBER OF CONTAINERS	ACCEPT (A) REJECT (R)	SAMPLE CONDITION/ COMMENTS	LABORATORY SAMPLE NUMBER
MW-4		9/24-12:58	Q	X		X			3			11193
MW-5		9/24-13:45	Q	X		X			3			11194
MW-2		9/24-14:10	Q		X	X			3			11195
MW-3		9/24-14:41	Q		X	X			3			11196
MW-1		9/24-15:02	Q		X	X			3			11197

TOTAL NUMBER OF CONTAINERS:

GENERAL COMMENTS:

1 RELINQUISHED BY (SIGNATURE): [illegible signature]	DATE 9/25/92	3 RELINQUISHED BY (SIGNATURE):	DATE
COMPANY: Delta Environmental	TIME 15:50	COMPANY:	TIME
2 RECEIVED BY (SIGNATURE):	DATE	4 RECEIVED BY (SIGNATURE): [illegible signature]	DATE 9/26
COMPANY:	TIME	COMPANY: Horizon Labs	TIME 1635
5 RELINQUISHED BY (SIGNATURE):	DATE	6 RECEIVED BY (SIGNATURE):	DATE
COMPANY:	TIME	COMPANY:	TIME

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY REPORT

Client:	Delta Environmental Consultants, Inc	Date Sampled:	09/01/94
	3900 Northwoods Drive, Suite 200	Date Received:	09/01/94
	St. Paul, MN 55112	Date Analyzed:	09/06/94
	Attn: Jim DeLuca	Physical State:	Soil
Project:	SuperAmerica #4022	Report Date:	09/08/94
	Maplewood, MN	Lab P.N.:	1000-212.2
		Client P.N.:	A093-376

Quality Assurance / Quality Control Summary

Parameter (Method)	QC Type	Percent Recovery	Acceptable Range	Percent Reproducibility	Acceptable Range
Benzene (EPA 8020)	M	104	127 - 76	101	127 - 76
Toluene (EPA 8020)	M	107	125 - 76	101	125 - 76
Ethylbenzene (EPA 8020)	M	110	125 - 76	100	125 - 76
m,p-Xylenes (EPA 8020)	M	115	125 - 76	102	125 - 76
o-Xylenes (EPA 8020)	M	110	125 - 76	101	125 - 76
GRO (Wis. DNR)	M	109	117 - 85	98	115 - 84

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area of known standards using a Hewlett Packard ChemStation Data System. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/01/94
Date Analyzed: 09/06/94
Physical State: Soil

Report Date: 09/08/94
Lab P.N.: 1000-212.2
Client P.N.: A093-376

Sample I.D.	Benzene mg/kg EPA 8020	Toluene mg/kg EPA 8020	Ethyl-benzene mg/kg EPA 8020	Total, Xylenes mg/kg EPA 8020	GRO mg/kg Wis. DNR	% Moisture
MW-4	<0.20	<0.50	<0.20	<0.80	<5.0	10
MW-5	<0.20	<0.50	<0.20	<0.80	<5.0	11
MDL, mg/kg	0.20	0.50	0.20	0.80	5.0	

MDL; Method Detection Limit

GRO; Gasoline Range Organics

All results are in mg/kg which is equal to parts-per-million (ppm) and are based on a "dry weight" basis.

The Laboratory Results are only a part of the Laboratory Report.

Delta Environmental Consultants, Inc.
3900 Northwoods Dr., Suite 200
St. Paul, MN 55112

CHAIN-OF-CUSTODY RECORD

DELTA PROJECT NO. A013-376 | INVOICE CODE | PAGE 1 OF 1

PROJECT MANAGER: Jim DeLuca

PROJECT NAME: S.A No. 4022

PROJECT LOCATION: Maplewood, MN

SAMPLER'S SIGNATURE:

TURN AROUND REQUESTED: [X] NORMAL [ ] RUSH _____ [ ] OTHER _____

LAB NAME: Horizon

LAB USE ONLY

LABORATORY PROJECT NO.: 10000-272.2

SAMPLE CONDITION AS RECEIVED: ON ICE; CHILLED YES/NO; SEALED YES/NO

SAMPLE ID	SAMPLE LOCATION/DESCRIPTION	DATE/TIME SAMPLED	SAMPLE MATRIX: SOIL(S): AIR(A): BULK(B): AQUEOUS(Q): SLUDGE(L): OTHER(O)	ANALYSIS REQUESTED: BTEX/GRO	NUMBER OF CONTAINERS	ACCEPT (A) REJECT (R)	SAMPLE CONDITION/ COMMENTS	LABORATORY SAMPLE NUMBER
MW-4		9/1/94 15:20	S	X	2		10717	
MW-5		9/1/94 11:35	S	X	2		10718	

GENERAL COMMENTS: Results to Jim DeLuca

TOTAL NUMBER OF CONTAINERS: 4

1 RELINQUISHED BY (SIGNATURE)	DATE 9/1/94	3 RELINQUISHED BY (SIGNATURE)	DATE	5 RELINQUISHED BY (SIGNATURE)	DATE
COMPANY Delta Environmental Consultants	TIME 16:35	COMPANY	TIME	COMPANY	TIME
2 RECEIVED BY (SIGNATURE) Bruce Hamilton	DATE 9/1/94	4 RECEIVED BY (SIGNATURE)	DATE	6 RECEIVED BY (SIGNATURE)	DATE
COMPANY Horizon	TIME 6:10	COMPANY	TIME	COMPANY	TIME

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy

Delta
Environmental
Consultants, Inc.

Page 1 of 1

WELL CONSTRUCTION LOG

BORING/WELL NO.: MW-4

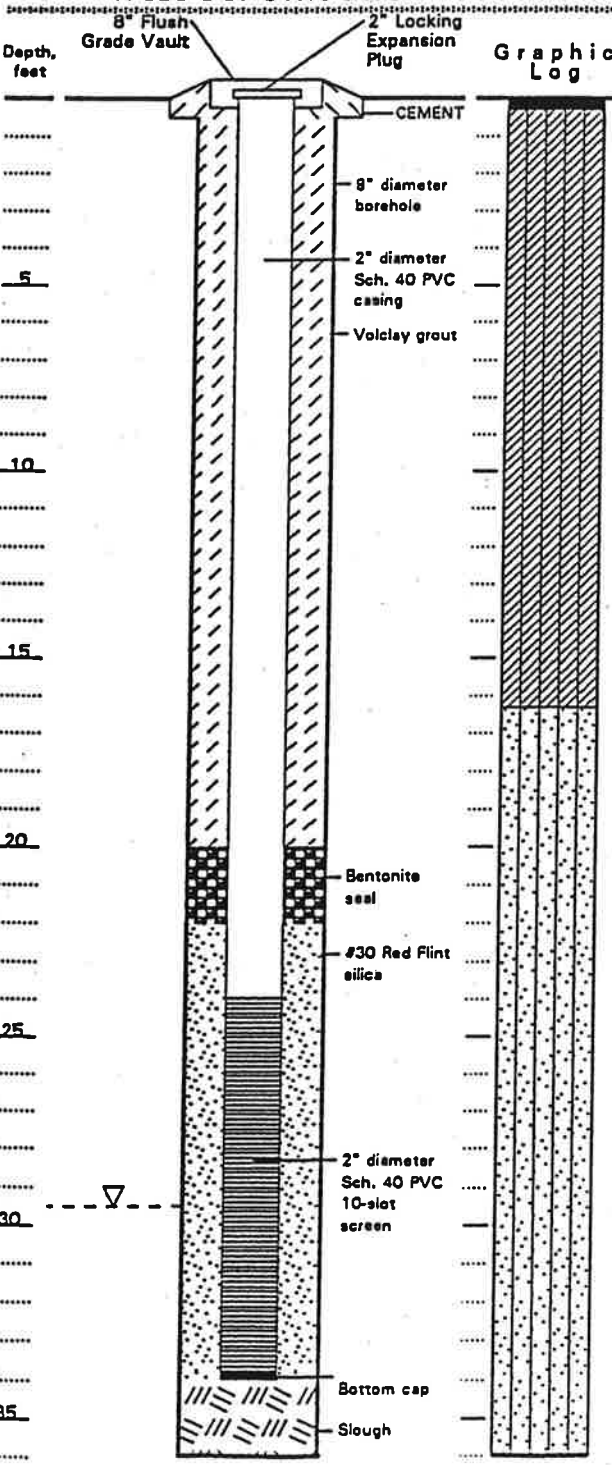
BORING/WELL LOCATION SKETCH MAP

N

PROJECT NO./NAME: A093-376/SuperAmerica No. 4022	LOCATION: 1750 White Bear Ave. Maplewood, Minnesota		
DRILLING CONTRACTOR/DRILLER: WTD/Greg & Jim			
GEOLOGIST/OFFICE: A. Gowan/St. Paul	APPROVED BY:		
DRILLING EQUIPMENT/METHOD: Diedrich D-120/Hollow Stem Auger	SIZE/TYPE OF BIT: 4.25" I.D. Auger	SAMPLING METHOD: SS 2" O.D.	START/FINISH DATE: 9/1/94-9/1/94

WELL INSTALLED? YES ☒ NO ☐	CASING MAT./DIA.: Sch. 40 PVC/2"	SCREEN: TYPE Slotted	MAT. Sch. 40 PVC	LENGTH 10'	DIA. 2"	SLOT SIZE 0.010"
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE: 964.5	TOP OF WELL CASING: 964.49	TOP & BOTTOM SCREEN: /	GW SURFACE: 935.0		DATE

WELL CONSTRUCTION



LITHOLOGY

Depth, feet	Graphic Log	Visual Description
		ASPHALT
		SILT, clayey, brown, with sand and pebbles (till), moist, no odor.
5		-sandier
		-not much sand, very tight
10		
		-pushed a rock
		-as above, but with sandy layers
15		
		SAND, silty, brown, with some clay and pebbles (till), moist, no odor.
20		
25		
		-wet, some sand lenses
30		-saturated
35		

SAMPLING DATA

Sample No. and Interval	OVA Values (ppm)
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0

F. MPCA GUIDANCE DOCUMENT

EXCAVATION OF PETROLEUM CONTAMINATED SOIL
Fact Sheet #13
Minnesota Pollution Control Agency
LUST Cleanup Program
March 1994

Excavation is an appropriate type of corrective action at some petroleum release sites. This is one of several types of corrective actions that may take place at a petroleum tank release site. The purpose of soil excavation is to remove contaminated soil that actually or potentially acts as a source of ground water contamination, or poses other environmental and/or health threats. Often, these site-specific conditions are determined by conducting a remedial investigation.

This document addresses the following topics: planning ahead; excavation; field screening during excavation; soil analytical sampling; storage and treatment of contaminated soil; additional investigation; remedial investigation; and excavation reporting.

The excavation report deadline is 10 months from the date of receipt of the standard letter. A shorter deadline may be established by the Minnesota Pollution Control Agency (MPCA) staff for high priority sites.

I. PLANNING AHEAD

Tank removals must be done by an MPCA-certified contractor. It is in your best interest to obtain at least two bids on the work before you hire a contractor so that, if contaminated soil is encountered, you will have met the Petro Board requirement for bidding. Bid forms and a list of certified contractors are available from the Department of Commerce (call 612/297-1119 or 612/297-4203).

Prior to excavation, soil borings may be useful for estimating the location, extent and magnitude of soil contamination. Pre-excavation soil borings can also determine whether soil remediation is necessary and if so, if excavation is a cost-effective cleanup measure, and whether to consider alternative methods.

Prior to tank removal, plan ahead for storage of contaminated soil during site work (section V), and treatment of contaminated soil (see fact sheets #33, "Thermal Treatment of Petroleum Contaminated Soil," and #34, "Land Treatment of Petroleum Contaminated Soil: Land Treatment Sites"). Remember that offsite storage of contaminated soil requires MPCA staff (and perhaps local) prior approval.

Arrange for an environmental field technician with a photoionization detector (PID), flame ionization detector (FID) or reasonable equivalent to screen soils and select samples for laboratory analysis during the excavation project (see fact sheet #15).

II. EXCAVATION

The following is a guide to be used during excavation. A flow chart is attached to help facilitate decision making in the field (Attachment A). Excavations should not endanger structures, including buildings, roads, utility lines, etc., and should be in compliance with OSHA standards.

Note: If there are vapor impacts, drinking water impacts, the release was a recent spill or there is a potential unstable condition, contact MPCA staff for site specific soil excavation criteria. (An unstable condition may be characterized as any situation where the consultant and/or tank removal contractor feels there is significant potential for the release to produce explosive or toxic vapors in structures or utilities, or impact a potable water supply. It is possible that removal of tanks and contaminated soil could increase the potential for vapor impacts. If you are in doubt, contact MPCA staff for guidance).

A. General excavation procedures. Begin the excavation as close as possible to the source. First remove the most heavily contaminated soil. This includes petroleum saturated soil, soil with obvious petroleum staining, and soil with strong odors. Many times this soil is adjacent to pump islands, distribution lines, or the underground storage tanks. Soil action levels are as follows:

TABLE 13.1

Fuel Type in Soil	Action Level
Gasoline and aviation gasoline	Field screening - 40 parts per million (ppm)
Diesel fuel, fuel oil, used or waste oils, jet fuel, kerosene	Any visual evidence of contamination, or field screening above 10 ppm.

Segregate excavated soil below the action levels from the more contaminated soil. Soils below the action levels may be used to backfill the excavation on this site only. Soil excavation is not necessary if contamination surrounding the tank system is below the action levels, however, soil samples must be collected (see Section IV, Soil Sampling, below, for soil sampling methodology; see also Section VI, Additional Investigation).

1. Excavation when new tanks are being installed. Remove contaminated soil above the action levels up to a volume that will accommodate the new tank installation. This volume can be calculated from Tables 13.2A and 13.2B. If excavation removes all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager. If contamination remains after this excavation, proceed to item 2, below.

TABLE 13.2A		TABLE 13.2B	
NEW TANK SIZE (gal)	FOR EACH TANK TO BE INSTALLED ADD (yds)	OLD TANK SIZE (gal)	FOR EACH TANK TO BE REMOVED SUBTRACT (yds)
550	30	550	3
1,000	40	1,000	5
2,000	70	2,000	10
3,000	90	3,000	15
4,000	110	4,000	20
5,000	130	5,000	25
6,000	140	6,000	30
8,000	170	8,000	40
10,000	210	10,000	50
12,000	240	12,000	60
15,000	260	15,000	75
20,000	320	20,000	100
25,000	400	25,000	125

Note: For new pipe trenching allow one-third (0.33) cubic yard for every one (1) linear foot of contaminated trench.

EXAMPLE: Two 10,000 gallon tanks are to be installed in the old tank basin, where one 4,000 gallon tank and one 6,000 gallon tank will be removed.
(210 + 210) - (20 + 30) = 370
Up to 370 cubic yards of contaminated soil may be removed.

2. Additional excavation when new tanks are being installed. If test pits indicate the amount of contaminated soil remaining is less than 150 cubic yards, and ground water was not encountered, you may attempt to excavate contaminated soil above the action levels up to a total of an additional 150 cubic yards. If the excavation removed all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager. If contamination remains above the action levels, an RI will be required (see Section VI). Contaminated soil should NOT be returned when new tanks will be installed in the same basin.

3. Excavation of soil on sites where new tank installation is not occurring. Initiate test pits in the area of maximum contamination. If test pits indicate that more than 150 cubic yards of contaminated soil remains, or contamination is below the reach of the backhoe, or contamination is in contact with ground water, a remedial investigation (RI) will be necessary (see Section VI, below). If the additional 150 cubic yard excavation removed all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager.

4. Returning soil to excavation basin. When an RI will be required, the contaminated soil removed during digging of the test pits and the additional 150 cubic yards should be returned to the excavation basin. If excavated soil is considered to be petroleum saturated, contact MPCA staff prior to returning soil to the excavation.

5. All projects excavating more than 150 cubic yards must have WRITTEN MPCA approval, except where new tanks are installed (if new tanks are installed, follow Tables 13.2A and 13.2B). MPCA approval for additional excavation is site specific and depends on such factors as the anticipated benefit, expected volume of additional soil, and potential risk to ground water.

Excavation costs may not be fully reimbursable through the Petroleum Tank Release Compensation Board (Petro Board) if excavation exceeds 150 cubic yards without MPCA written approval (or limits in Tables 13.2A and 13.2B when new tanks are installed), or if excavation is carried out beyond the action levels.

If the excavation removed all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager. If contamination remains above the action levels, an RI will be required (see Section VI).

6. Treatment of petroleum contaminated soil. When excavation alone was able to address petroleum contamination, or when soil is removed to accommodate new tank installation, the removed soil must be treated in accordance with an MPCA approved treatment method.

III. FIELD SCREENING DURING EXCAVATION

Conduct field screening in accordance with fact sheet #14, "Field Screening Procedures." Be sure the field instrument is properly calibrated.

During excavation, screen soils frequently enough to verify the need for soil removal (at least one soil vapor analysis for each 10 cubic yards of soil removed). Label these soil samples with the prefix "R", for "removed" (e.g., R-1, R-2, R-3, etc.). The field technician should carefully document successive soil vapor readings vertically below the source of release, indicating the depth and location of each sample.

After excavation is complete, screen soil samples from the bottom and sidewalls of the excavation to document remaining contamination. Soil analytical sampling is required at this stage (see items 6 and 7 in section IV, below).

IV. SOIL ANALYTICAL SAMPLING FOLLOWING EXCAVATION

When excavation is complete, collect soil samples for laboratory analysis to document contamination remaining in place and the contamination removed. Analyze the samples for the parameters indicated in fact sheet #16, "Soil and Ground Water Analyses at Petroleum Release Sites." Collect soil samples as follows:

1. Minimize the possibility of cross-contamination by using dedicated sampling equipment for each sample collected. If dedicated sampling tools are not available, specify the cleaning procedures used. Wear clean, new, disposable sampling gloves at each new sampling point.

2. When sampling excavation sidewalls or floors, remove at least one foot of exposed soil prior to collecting the sample. This will ensure the collection of a fresh sample.

3. Collect soil samples in accordance with appropriate methodology. Soils previously used for soil screening or soil classification may not be used for analytical samples.

   a. TPH/GRO and TPH/DRO samples--Collect total petroleum hydrocarbons (TPH) samples according to the Wisconsin Department of Natural Resources Modified Gas Range Organic (GRO) and Diesel Range Organic (DRO) method. Collect approximately 25 grams of soil in a tared 60 ml vial (a GRO sample vial must contain 25 ml methanol prior to sample collection). Wipe the jar threads and seal with the cap provided.

   b. VOC or BETX samples--For volatile organic compounds (VOC) and benzene, ethylbenzene, toluene, and xylene (BETX) samples, completely fill each sample jar so that no headspace exists. Wipe the jar threads and seal using a cap with a Teflon septum. (If you are submitting samples for GRO analysis, collecting separate samples for BETX analysis may not be necessary.)

4. Label all jars, wrap in aluminum foil, and place in a covered cooler with ice for transport to the laboratory for analysis.

5. Samples not analyzed within the accepted holding time may be considered invalid. Costs related to their collection and analysis may not be considered eligible for reimbursement.

6. Bottom samples. Collect the following samples from the bottom of the excavation when all excavation is complete. Label these samples with the prefix "B", for "Bottom" (e.g., B-1, B-2, B-3, etc.):

TABLE 13.3

One tank	two samples; one from directly below each end of the tank
More than one tank <10,000 gallons	one sample directly below the center of each tank
More than one tank 10,000 gallons or larger	two samples from below each tank; one from directly below each end of the tank
Leaking lines	one sample from below each suspected point of release
Dispensers	one sample from below each dispenser which is removed
Any additional samples needed to adequately characterize the excavation.	

7. Sidewall samples. If contaminated soil above the action levels remains in the sidewalls of the excavation, collect samples to characterize the remaining contaminated soil. Label these samples with the prefix "S" for "sidewall" (e.g., S-1, S-2, S-3, etc.).

8. Ground water in excavation. If ground water occurs in the excavation, collect a water sample; also collect soil samples near the soil/ground water interface to help characterize potential impacts to ground water from remaining contaminated soil. Limit the analytical parameters for this type of ground water sample to benzene, ethyl benzene, toluene, xylene (BETX), and total petroleum hydrocarbons (GRO and/or DRO).

   Do not collect a water sample if free product or a product sheen is present.

9. Sampling the soil piles. Collect soil samples (grab samples) from representative portions of the excavated soil pile, using the method described in items 1-5 above. Label these samples with the prefix "P" for "Pile" (e.g., P-1, P-2, etc.). Base the number of soil samples on Table 13.4:

TABLE 13.4

Cubic Yards of soil in pile	Number of Samples
less than 10	*
10-50	1
51-500	2
501-1,000	3
1,001-2,000	4
2,001-4,000	5
each additional 2,000	one additional sample

*If less than 10 cubic yards of soil is contaminated, soil samples will normally not be required if the soil will be land treated (unless the soil could potentially be considered a hazardous waste).

10. Analyze soil samples using U.S. Environmental Protection Agency approved methodologies in accordance with fact sheet #16, "Soil and Ground Water Analyses at Petroleum Release Sites."

V. STORAGE AND TREATMENT OF CONTAMINATED SOIL

Store excavated contaminated soils on an impermeable surface, covered with plastic. Anchor the plastic covering in place with clean soil or other suitable material. Off-site soil storage requires pre-approval by MPCA staff and local government officials. Storage at land treatment sites must be in accordance with Minn. Rules ch. 7037. Improper storage of contaminated soils may result in additional releases to the environment, and a corresponding reduction in your reimbursement.

Soil must be properly treated. Refer to fact sheets #33 ("Thermal Treatment of Petroleum Contaminated Soil") and #34 ("Land Treatment of Petroleum Contaminated Soil: Land Treatment Sites") for treatment and approval procedures. Fact sheets and application forms for soil treatment are available from the MPCA Tanks and Spills Section at 612/297-8565.

VI. ADDITIONAL INVESTIGATION

Additional investigation is required at sites with sandy or silty sand soil (ASTM/USC) and where the water table is within 25 feet of the ground surface. Advance a soil boring directly through the suspected source area (former UST basins, pump islands, and/or other source areas), in the following situations:

- laboratory analytical results for soils from the suspected source area excavation base are 1-50 mg/kg TPH (GRO/DRO); or

- visual or other evidence of contamination remains in the suspected source area.

Analyze soil samples in accordance with Section IV. If the boring(s) encounters contaminated ground water, an RI is necessary.

VII. REMEDIAL INVESTIGATION

An RI is generally necessary at sites where contamination cannot be addressed by excavation alone, contaminated soil is in contact with ground water, or ground water is suspected to be impacted. An RI will be required if any of the following situations exist:

1. Soil contamination above the action levels (Table 13.1) remains and/or if laboratory analytical results from soil samples taken from the base or sidewalls, or soil returned to the excavation are greater than 50 ppm TPH in sands and gravels or greater than 100 ppm TPH in silts and clays (see Table 13.5).

TABLE 13.5

Soil Type	RI required if:
sand/gravel	a. soil above action level in Table 13.1 remains, or b. soil contamination greater than 50 mg/kg TPH (GRO/DRO) remains.
silt/clay	c. soil above action level in Table 13.1 remains; or d. soil contamination greater than 100 mg/kg TPH (GRO/DRO) remains.

2. Ground water is present in the excavation and has been in contact with either petroleum product or petroleum contaminated soil;

3. Contamination intercepts a seasonally high water table (indicated by mottling on the excavation sidewalls) or bedrock;

4. Other impacts are known or suspected (such as discharge of contaminated water to surface waters or utilities, vapor impacts to buildings or utilities, etc.).

MPCA staff may allow exceptions to these criteria on a site-specific basis.

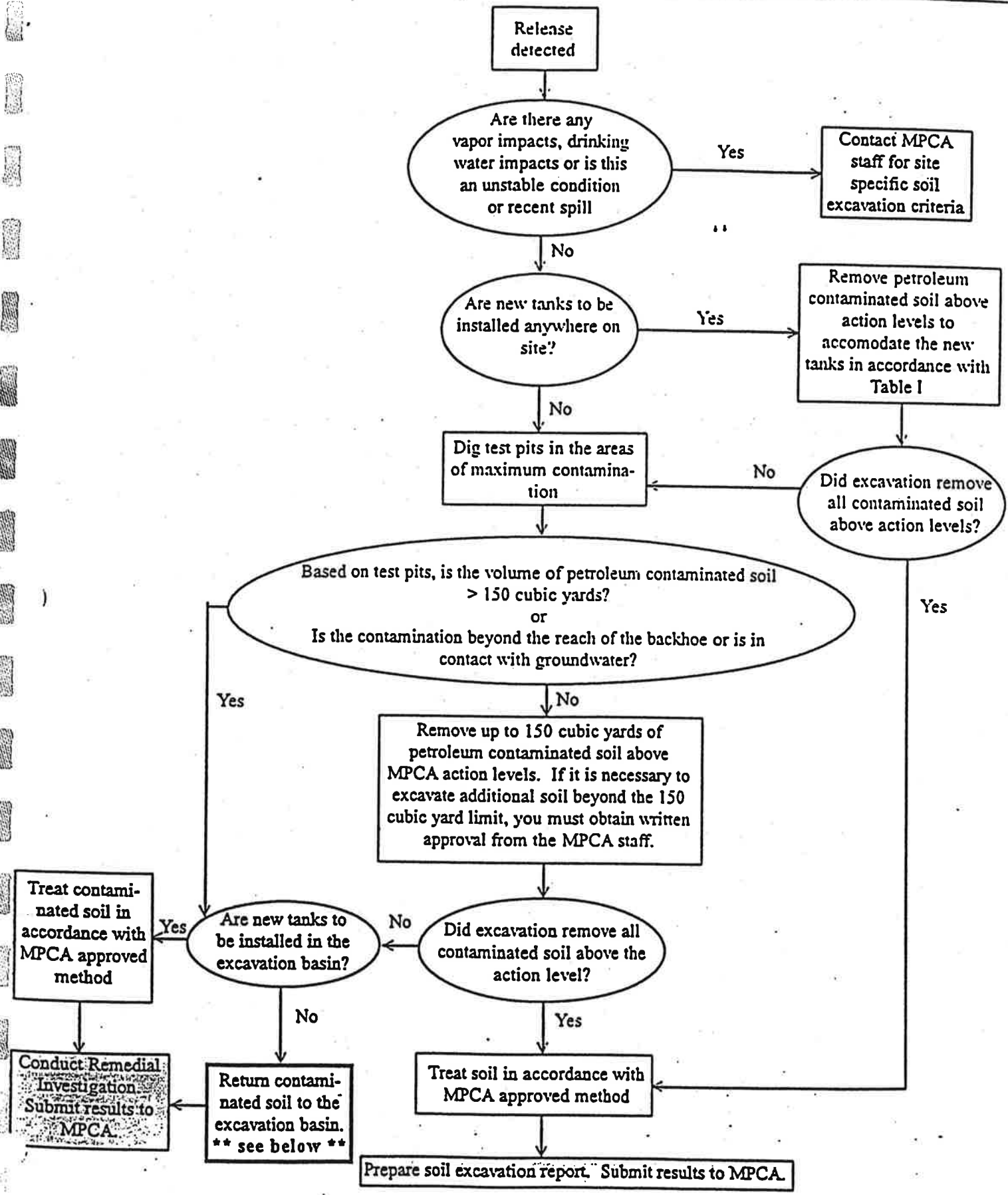
VIII. EXCAVATION REPORT SUBMITTAL

Complete the "Excavation Report Worksheet for Petroleum Release Sites" (fact sheet #4). If an RI is not required, submit the worksheet for MPCA review. Be sure to include all required data and figures. If an RI is required, include the worksheet as an appendix to the Remedial Investigation/Corrective Action Design (RI/CAD) Report. MPCA staff will not review excavation reports indicating an RI is necessary until the RI has been completed.

The excavation report deadline is 10 months from the date of receipt of the standard letter. A shorter deadline may be established by MPCA staff for high priority sites.

Excavation of Petroleum Contaminated Soil

Attachment A



** If you encounter soil that you consider petroleum saturated, call MPCA staff prior to returning soil to the excavation.

G. GME GENERAL QUALIFICATIONS

Mr. Bruce G. Odlaug

March 27, 1995

GME GENERAL QUALIFICATIONS

The environmental assessment and recommendations submitted in this report are based on data we obtained during this study. The scope of this report is limited to the specific project and location described herein. We cannot account for any environmental variations that may occur on portions of the site that were not explored. Conclusions concerning off-site characteristics or future degradation of soils, groundwater or surface water are estimated.

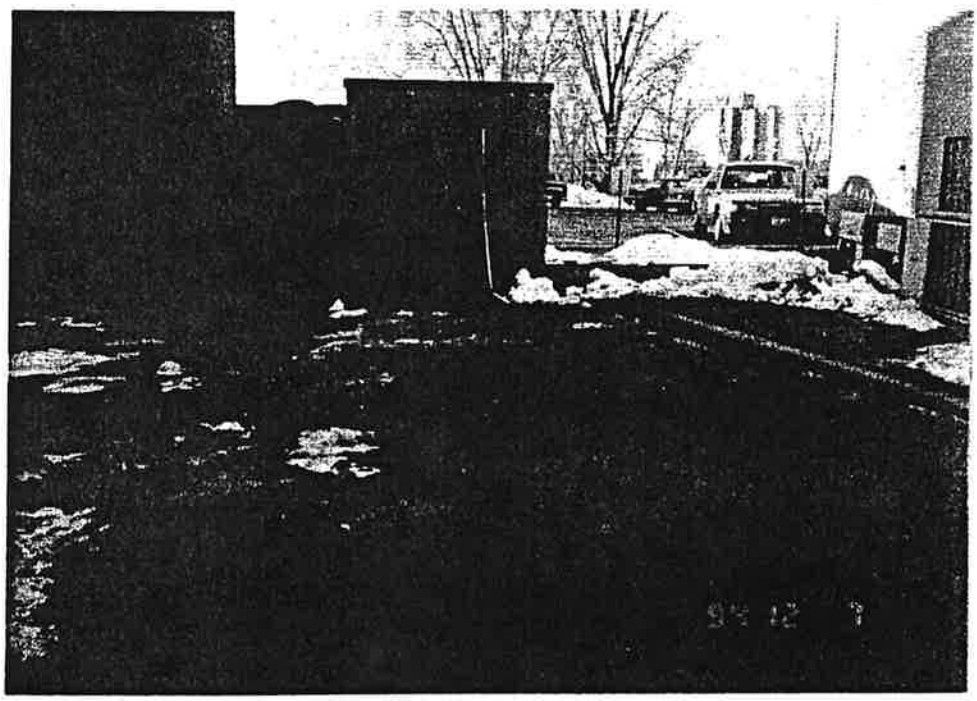
Samples were collected and analyzed under the conditions stated in this report. Analytical data have been reviewed and an interpretation made in the text of this report. We assume that all subcontract laboratory work has been completed correctly. Also, it must be noted that seasonal and annual fluctuations in hydrogeologic characteristics likely will occur.

Our description of this project represents our understanding of significant aspects relative to soil and groundwater conditions. Conclusions in this report represent our engineering judgement. This report has been prepared in accordance with the local standard of practice for our profession, using the normally available sources of information. No warranty, expressed or implied, is presented in this report with respect to the environmental conditions at this site.

GME CONSULTANTS, INC.
PHOTOGRAPHIC RECORD

CLIENT: MR. BRUCE ODLAUG **PROJECT NO.:** 4972

LOCATION: GOODYEAR FACILITY - MAPLEWOOD, MINNESOTA

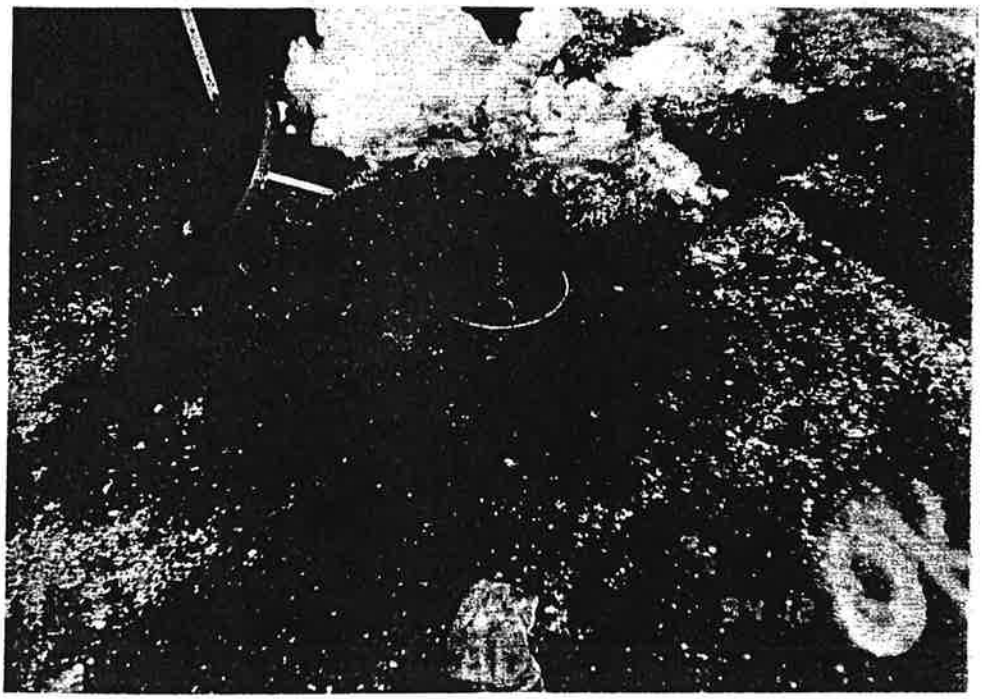


PHOTOGRAPH NO.: 1

DATE: 12/7/94

LENS: 38 mm

COMMENTS: UST location prior to excavation.



PHOTOGRAPH NO.: 2

DATE: 12/7/94

LENS: 38 mm

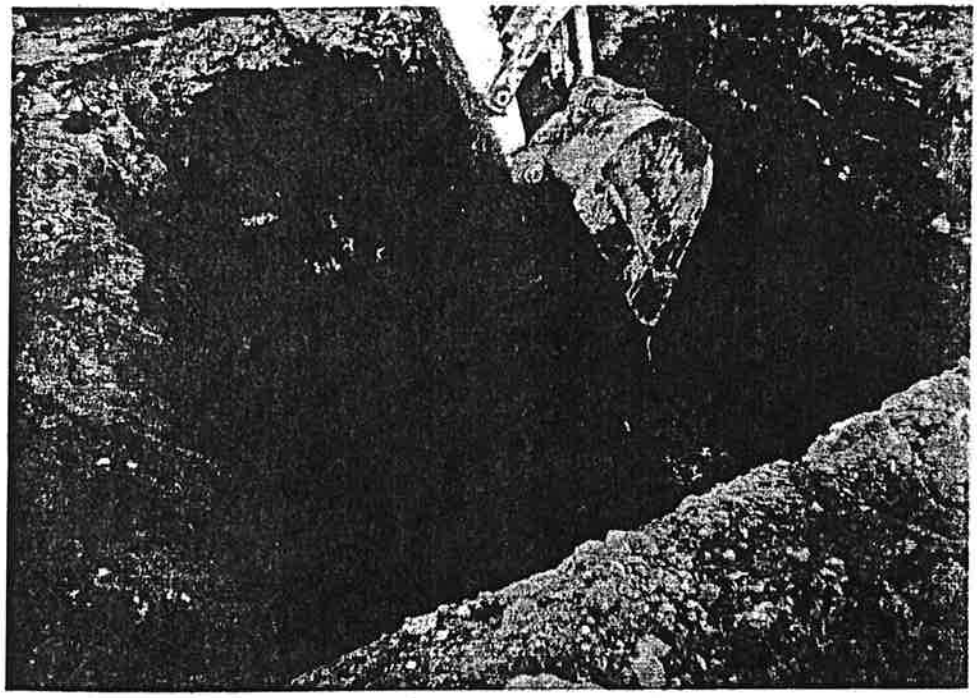
COMMENTS: Close-up of fill pipe in paved surface.

c:\tfm\4972-ust\smc

GME CONSULTANTS, INC.
PHOTOGRAPHIC RECORD

CLIENT: MR. BRUCE ODLAUG **PROJECT NO.:** 4972

LOCATION: GOODYEAR FACILITY - MAPLEWOOD, MINNESOTA

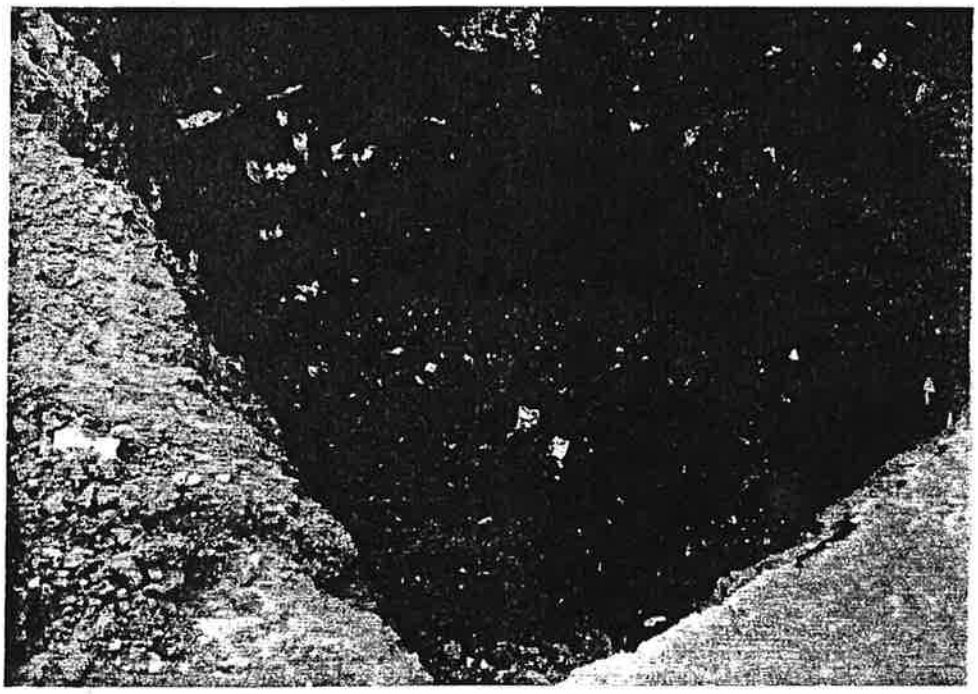


PHOTOGRAPH NO.: 3

DATE: 12/7/94

LENS: 38 mm

COMMENTS: UST in excavation.



PHOTOGRAPH NO.: 4

DATE: 12/7/94

LENS: 38 mm

COMMENTS: Excavation after UST removal.

c:\tfm\4972-ust\smc

Minnesota Pollution Control Agency

January 9, 1996

Mr. Bruce Odlaug
Maun and Simon
2900 Norwest Center
Minneapolis, Minnesota 55402-4133

RE: Petroleum Tank Release Site File Closure
Site: Goodyear Store, 1735 Van Dyke Avenue, Maplewood
Site ID#: LEAK00008146

Dear Mr. Odlaug:

We are pleased to let you know that the Minnesota Pollution Control Agency (MPCA) Tanks and Emergency Response Section (TERS) staff has determined that your investigation and/or cleanup has adequately addressed the petroleum tank release at the site listed above. Based on the information provided, the TERS staff has closed the release site file.

Closure of the file means that the TERS staff does not require any additional investigation and/or cleanup work at this time or in the foreseeable future. Please be aware that file closure does not necessarily mean that all petroleum contamination has been removed from this site. However, the TERS staff has concluded that any remaining contamination, if present, does not appear to pose a threat to public health or the environment.

The MPCA reserves the right to reopen this file and to require additional investigation and/or cleanup work if new information or changing regulatory requirements make additional work necessary. If you or other parties discover additional contamination (either petroleum or nonpetroleum) that was not previously reported to the MPCA, Minnesota law requires that the MPCA be immediately notified.

You should understand that this letter does not release any party from liability for the petroleum contamination under Minn. Stat. ch. 115C (1994) or any other applicable state or federal law. In addition, this letter does not release any party from liability for nonpetroleum contamination, if present, under Minn. Stat. ch. 115B (1994), the Minnesota Superfund Law.

Because you performed the requested work, the state may reimburse you for a major portion of your costs. The Petroleum Tank Release Cleanup Act establishes a fund which may provide partial reimbursement for petroleum tank release cleanup costs. This fund is administered by the Department of Commerce Petro Board. Specific eligibility rules are available from the Petro Board at 612/297-1119 or 612/297-4203.

If future development of this property or the surrounding area is planned, it should be assumed that petroleum contamination may still be present. If petroleum contamination is encountered during future development work, the MPCA staff should be notified immediately.

For specific information regarding petroleum contamination that may remain at this leak site, please call the TERS File Request Program at 612/297-8499. The "Leak/Spill and Underground Storage Tank File Request Form" (TERS Fact Sheet #36) must be completed prior to arranging a time for file review.

Thank you for your response to this petroleum tank release and for your cooperation with the MPCA to protect public health and the environment. If you have any questions regarding this letter, please call me at 612/297-8607.

Sincerely,

James Joslyn
Project Manager
Cleanup Unit II
Tanks and Emergency Response Section

JJ:ms

cc: Timothy McGlennen, GME, Minneapolis

RECEIVED
JAN 26 1995
MPCA, HAZARDOUS
WASTE DIVISION

January 23, 1995

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
Attn: Mr. Jim Joslyn, Project Manager

Re: Petroleum Storage Tank Release Investigation and Corrective Action
Site: Goodyear Store, 1735 Van Dyke Avenue, Maplewood
Site ID# LEAK00008146

Dear Mr. Joslyn:

I am in receipt of your letter dated January 12, 1995 indicating that you have received notification that a release of petroleum has occurred on the above-captioned property. Please be advised that I am one of the owners of the property and that the property has been leased, since approximately 1968, to Goodyear Tire and Rubber Company.

The tank is owned and operated by Goodyear. We do not believe that we are legally responsible for this storage tank release.

We are however, cooperating with Goodyear in removal of the storage tank and the cleaning up of any release. GME Consultants, Inc. was the low bidder for the removal of the tank and the cleanup of any release.

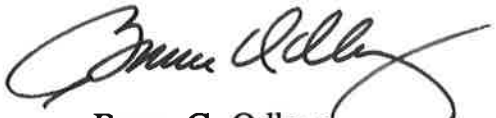
It is my understanding that GME is in the process of determining the extent of the release and will propose a mediation plan.

I am sure that GME will be in touch with your office concerning the release and proposed cleanup. I am confident that GME and Goodyear will appropriately respond and

4 3746

take care of any problem. If you have any questions, please contact the undersigned at (612) 338-1113.

Very truly yours,



Bruce G. Odlaug
2900 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402

BGO:cab

1/23/95,BGO,38131_1M

Minnesota Pollution Control Agency

January 12, 1995

Mr. Bruce Odlaug
Maun and Simon
2900 Norwest Center
Minneapolis, Minnesota 55402-4133

RE: Petroleum Storage Tank Release Investigation and Corrective Action
Site: Goodyear Store, 1735 Van Dyke Avenue, Maplewood
Site ID#: LEAK00008146

Dear Mr. Odlaug:

Notice of Release

The Minnesota Pollution Control Agency (MPCA) has received notification that a release of petroleum has occurred from storage tank facilities which you own and/or operate that has resulted in contamination of soil and/or ground water.

Legal Obligations

Federal and state laws require that persons legally responsible for storage tank releases notify the MPCA of the release, investigate the extent of the release and take actions needed to ensure that the release is cleaned up. A person is considered legally responsible for a tank release if the person owned or operated the tank either during or after the release, unless specifically exempted under the law. See Minn. Stat. § 115C.021 (1992). If you believe that you are not legally responsible for this storage tank release, please submit a written explanation of your position to the MPCA within 30 days.

If you are not legally responsible for the release, but hold legal or equitable title to the property where the release occurred, you may volunteer to take corrective action. Responsible persons and volunteers who take corrective action may be eligible for reimbursement for a major portion of the costs of corrective action. The legislature has established the Petroleum Tank Release Cleanup Account to reimburse responsible persons and volunteers. The account is administered by the Petro Board which is part of the Minnesota Department of Commerce. Final decisions regarding the amount of reimbursement are made by the Petro Board. All questions about eligibility and reimbursement should be directed to the Petro Board at 612/297-1119 or 612/297-4203.

Request to Take Corrective Action

The MPCA staff is requesting you to take the steps necessary to investigate and clean up the release in accordance with the enclosed MPCA fact sheets. The MPCA requires that you conduct a site investigation to define the full extent and magnitude of the soil and/or ground water contamination caused by the release. A report which details the results of the investigation or concludes that excavation was sufficient to address the release for cleanup (Excavation Report and/or Remedial Investigation/Corrective Action Design (RI/CAD)) must be submitted to this office within 10 months of the date of this letter. Please refer to MPCA fact sheets for information pertaining to the degree of investigative work necessary at petroleum release sites.

Sites with free product, drinking water supply impacts, fire or explosion hazards, or ground water impacts which pose a significant threat to public health or the environment, are considered high priority for staff review. If one or more of these situations apply to your site, an RI/CAD report must be submitted within 90 days. In addition, if you know or discover that there is free-floating petroleum in a well, excavation, or borehole, you must notify the MPCA within 24 hours and IMMEDIATELY begin interim free product recovery.

If you have not already done so, the MPCA recommends that you hire a qualified consulting firm registered with the Petro Board that has experience in conducting petroleum release site investigations and in proposing and implementing appropriate corrective actions. A list of registered contractors and consultants is available from the Minnesota Department of Commerce. The MPCA reserves the right to reject proposed corrective actions if the requirements of the site investigation have not been fulfilled. Please note that, under Minn. Rules pt. 2890.0075, subp. 2, you must solicit a minimum of two competitive proposals on a form prescribed by the Petro Board to ensure that the consulting costs are reasonable. Questions about bidding requirements should be directed to Petro Board staff.

Required Response

MPCA staff requests a written or verbal response to this letter within 30 days. In your response, please tell us whether you intend to comply with the above requirements. If you do not respond within this time frame, the MPCA staff will assume that you do not intend to comply, in which case the MPCA Commissioner may order you to take corrective action. If you do not comply with the Commissioner's order, it may be enforced in court or, alternatively, the MPCA could use state funds to clean up the release and then request the Attorney General to recover its costs from you through legal action. Failure to cooperate with the MPCA in a timely manner will also result in reduced reimbursement from the Petro Board. See Minn. Rules pt. 2890.0065, subp. 1, item C.

The enclosed fact sheets will provide you with the information necessary to complete a successful investigation and cleanup.

If you have any questions concerning this letter or need additional information, please contact me at 612/297-8607. Please reference the above LEAK # in all correspondence.

Sincerely,

for Jim Joslyn
Project Manager
Cleanup Unit II
Tanks and Spills Section

JJ:bah

Enclosures

cc: Lucille Aureluis, City Clerk, Maplewood
James Embertson, Fire Chief, Maplewood
Larry Carlson, Ramsey County Official

MINNESOTA POLLUTION CONTROL AGENCY
COMMISSIONER'S SITE REPORT
TO THE PETROLEUM TANK RELEASE
COMPENSATION BOARD

SITE ID#	RELEASE SITE	APPLICANT	DATE OF UST REGISTRATION	REGION
LEAK00007006	Bradley Havemeier	Bradley Havemeier	Exempt	IV
LEAK00006964	Amoco-Eagan	Amoco Oil Co.	May 28, 1986	V
LEAK00007746	Sauk Center School Bus Garage	ISD #743	February 14, 1986	II
LEAK00008146	Goodyear	Goodyear Tire	May 5, 1986	Metro JAS
LEAK00001085	Humboldt Jr. High	ISD #625-St. Paul	May 21, 1986	Metro

1. Eligibility Determination

I hereby determine that the corrective action described in the application was appropriate in terms of protecting public health, welfare, and the environment and that the applicant is eligible for Petrofund reimbursement, pursuant to Minn. Stat. § 115C.09, subd. 2, items (a) and (c) (1992).

2. Compliance with Applicable Requirements: **ADEQUATE**

Information readily available to the Minnesota Pollution Control Agency (MPCA) staff shows that the applicant has complied with the applicable requirements of Minn. Stat. § 115C.09, subd. 3(f)(1992).

The determinations in this report are made solely for the purpose of determining eligibility for reimbursement under Minn. Stat. § 115C.09, subds. 2 and 3 (1992). Nothing in this site report releases any person from liability, and the MPCA does not waive any of its authority to require additional corrective action at the above-referenced site or to enforce other provisions of state law.

Dated: 7/6/95

Mark Schmitt
Supervisor
Tanks and Spills Section

I

8146

MINNESOTA PETROLEUM TANK RELEASE COMPENSATION BOARD
Application for Reimbursement

Back JUN 3 0 1995

PART I APPLICATION PROCESS

(Check One) **Check appropriate Phase and complete the information requested for the Phase checked (See Application Guide).**

[ ] **Phase 1.** MPCA approval of Soil Corrective Action Plan (SCAP).
a) Date of SCAP approval __/__/__. (Attach copy)
b) Date SCAP was submitted to MPCA __/__/__.

Date Received
MAY 18 1995

[ ] **Phase 2.** Submission of Documentation of Soil Treatment
Date Documentation was submitted to MPCA __/__/__.

[ ] **Phase 3.** MPCA approval of Comprehensive Corrective Action Plan (CCAP)
a) Date of CCAP approval __/__/__. (Attach copy)
b) Date CCAP was submitted to MPCA __/__/__.

[ ] **Phase 4.** Submission of CCAP Installation Letter to MPCA
Date of CCAP Installation Letter __/__/__. (Attach copy)

[X] **Ongoing Expenses** Following Phase 4 Reimbursement or MPCA Site Closure or Conditional Closure

PART II APPLICANT INFORMATION

Please be advised that the information used to support this application is subject to audit by the MPCA and MDOC.

1. "Responsible Person" [X] "Volunteer" [ ] or "Non-Responsible Person" [ ]
(check one) (see application guide)

Name: Goodyear Tire and Rubber Company

2. Mailing Address: 1144 East Market Street
Acron, Ohio 55316-0001 Phone:( )

3. Site ID: Leak # 8146

4. The applicant is a: [X] Corporation [ ] Partnership [ ] Individual [ ] Other_____

5. Applicant was the owner or operator of the tank from __/__/__ to 12/07/94.

6. "Volunteer" Applicant owned property from __/__/__ to __/__/__.

7. Has applicant executed any Petrofund assignment agreements? yes____ no X

Name of assignee(s) _____ (attach copy of agreement)

PART III TANK FACILITY

1. Name of "Tank Facility" **(see application guide)** where the petroleum release occurred:

   Goodyear Retail Facility

2. Tank Facility address: 1735 Van Dyke Avenue
   Maplewood, Minnesota

3. Contact Person at Tank Facility: Ken Iverson
   Phone: (612) 777-8379

4. To the best of your knowledge, list all other persons besides the applicant who were owners or operators of the tank during or after the petroleum release:

5. Did any of the persons listed in question 4 incur corrective action costs related to this petroleum release? yes____ no____ If yes, list name and address if known:

6. Date when petroleum release was detected: 01 / 09 /95

   What test was performed to initially establish that a release occurred? Lab analysis

7. Date when petroleum release was reported to the MPCA: 01 / 10/ 95.

8. a. Which tanks (or associated piping) were the source of the release at this tank facility? **(see application guide)**

   500 gallon used oil tank

   b. What was the cause of the release?

   Possibly surface spillage, overfills, or leaky pipe fittings

9. Was this tank(s) used only to store heating oil for consumptive use on the premises where stored (check one) YES [ ] NO [X]

(unknown) for these items. Please do not contact the MPCA for this information.)

A. **Underground Storage Tanks.** Complete the following information to reflect the status of underground storage tanks at the time the release was discovered. Refer to the attachment *Underground Storage Tanks and Piping Requirements Apply to Your Petroleum Tank?"* and *"What Do You Have To Do?/When Do You Have To Act?"* to determine the applicability of registration, leak detection, corrosion protection, and spill/overfill protection.

(Please attach additional sheets if more than five tanks are involved.)

Tank	Petroleum Product	Capacity	Type of Tank	Date Installed	Registered Yes/No/Unk	Date Removed
1	Used Oil	500 gal.	Steel	Unk.	Unk.	12/07/94
2						
3						
4						
5						

	Tanks			Piping		
Tank	Leak Detection (Methods)	Corrosion Protection (Yes/No)	Spill/Overfill Protection (Yes/No)	Type of Piping	Leak Detection (Methods)	Corrosion Protection (Yes/No)
1	Inventory	None	No	Galvanized	None	No
2						
3						
4						
5						

Tank	Tank Tightness Test Dates	Piping Tightness Test Dates
1		
2		
3		
4		
5		

* Was 10-day prior tank removal notice given to MPCA? (YES/NO/UNK) YES .

* Which MPCA office was notified:

St. Paul	X
Duluth	____
Brainerd	____
Detroit Lakes	____
Marshall	____
Rochester	____

* If the tank(s) involved in the release was removed after July 9, 1990, complete the following:

Removal Contractor: Minnesota Petroleum Services, Inc.

MPCA Contractor (NOT Supervisor) Certification Number: 0604

* If the tank(s) involved in the release was installed after July 9, 1990, complete the following:

Installation Contractor: _____

MPCA Contractor (NOT Supervisor) Certification Number: _____

B. **Aboveground Storage Tanks.** Complete the following information to reflect the status of the aboveground tanks involved in the release at the time the release was discovered.

In describing your secondary containment, specify:

* materials used to construct both the base and the walls, including type and thickness of materials (e.g., 6" compacted clay, 30 mil HDPE, reinforced concrete slab floor/concrete block walls, none)

* how material specifications are known (e.g., permeability tests/dates, installation specifications)

* is the volume of the secondary containment area adequate for the contents of the largest tank (Y/N)

Tank	Contents	Capacity	Date Installed	Registered Yes/No/Unk	Description of Secondary Containment			
					Walls	Base	Verification	Vol.
Sample	*unleaded*	*15,000*	*1/1/47*	Y	*Concrete Block*	*6"compact clay/6" gravel fill*	*Perm test on (date)*	N
1								
2								
3								

Are there any special circumstances you would like the persons reviewing your application to be aware of? Please explain: This Goodyear Store is independently owned and operated. However, additional costs to investigate or clean up a release following the tank removal are paid for by Goodyear Tire and Rubber Company.

PART V ELIGIBLE COSTS

1. The Eligible Cost Worksheets attached are for INVESTIGATION costs, CLEAN-UP costs, and CONSULTANT costs. These worksheets must be completed listing each corrective action for which you are requesting reimbursement.

2. Invoices submitted with this application cover the period from 10/23/94 to 04/26/95

3. Are any of the costs listed in the Eligible Cost Worksheets in dispute? yes____ no X
(see application guide)

4. At this time, do you anticipate incurring any Ongoing corrective action costs relative to the petroleum release at this Tank Facility? yes____ no X

   If yes, explain briefly what work will be done and an approximate cost of that work.

   _____

   _____

5. a. Please state the total amount of contaminated soil which was excavated at this site (cubic yards or tons): None

   b. What was the soil contamination concentration (total hydrocarbons) 130 ppm?

6. Has the applicant been eligible to recover cleanup costs arising from this petroleum release under any insurance policy at any time since June 4, 1987? yes_____ no_____

   If yes, provide the following:

Insurance Company	Policy #	Policy Limits	Deductible	Period Covered
				/ /
				/ /

7. Total of all eligible costs as listed in the Eligible Cost Worksheets: $1,523.20

   X 90%

   = $1,370.88

   Insurance Reimbursement (Subtract) - $( )

   Total Reimbursement Request (See application guide) = $1,370.88

PART VI CONTRACTORS CONSULTANTS

1. Complete the following for all contractors, subcontractors, consultants, engineering firms or others who performed corrective actions at this release site. (see application guide) **Failure to provide this information for ALL persons who performed corrective action may result in an action to recover any reimbursement which may be paid.** (Attach additional sheets if necessary.)

Name of individual or firm: GME Consultants, Inc.

Mailing address: 14000 21st Avenue North, Minneapolis, Minnesota 55447

Contact person: Tim McGlennen Phone: (612) 559-1859

Name of individual or firm: Interpoll Laboratories, Inc.

Mailing address: 4500 Ball Road N.E., Circle Pines, Minnesota 55014-1819

Contact person: Gregg Holman Phone: (612) 786-6020

Name of individual or firm: _____

Mailing address: _____

Contact person: _____ Phone: ( ) _____

Name of individual or firm: _____

Mailing address: _____

Contact person: _____ Phone: ( ) _____

Name of individual or firm: _____

Mailing address: _____

Contact person: _____ Phone: ( ) _____

2. Describe below any relationship, financial or otherwise, between the applicant and any contractor who performed work at this site:

_____

_____

_____

PART VII CERTIFICATION (see application guide)

A. "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

"I certify that if I have submitted invoices for costs that I have incurred but that remain unpaid, I will pay these invoices within 30 days or receipt of reimbursement from the board. I understand that if I fail to do so, the board may demand return of all or any portion of reimbursement paid to me and that if I fail to comply with the board's demand, that the board may recover the reimbursement, plus administrative and legal expenses in a civil action in district court. I understand that I may also be subject to a civil penalty."

Signature of Applicant

Witnessed by: D R Tucker
Name

R M Hehir
Name (Please Print)

5/8/95
Date

5/8/95
Date

Every applicant must sign Part A. above. If applicant is a corporation or partnership, the following certification must also be made:

"I further certify that I am authorized to sign and submit this application on behalf of THE GOODYEAR TIRE & RUBBER COMPANY."

Signature

H M Hehir
Name (Please Print)

Vice President
Health/Environmental ~~Affairs~~
Title (See Application Guide, Part VI)

5/8/95
Date

KmA

Please send this application and accompanying documents to:

Petroleum Tank Release Compensation Board
Minnesota Department of Commerce
133 East Seventh Street
St. Paul, Minnesota 55101
(612) 297-4203
(612) 297-1119

PART V ELIGIBLE CO. . WORKSHEET - INVESTIGAT. N AND CLEAN-UP

* Descriptions must be specific as to work performed.
* Invoices must be submitted for each cost listed below.
* Invoices must contain sufficient detail to verify costs and services entered below.
* Duplicate this form if additional worksheets are needed.

A. SOIL BORINGS/MONITORING WELLS - ETC.

Description	Firm Name	Invoice # or date	Total Units	Unit Costs	Sub-total
				TOTAL	

B. LABORATORY TESTS AND ANALYSIS

Description	Firm Name	Invoice # or date	Total Units	Unit Costs	Sub-total
DRO	Interpoll	68962	1	67.50	67.50
VOCs	Interpoll	68962	1	180.00	180.00
Shipping/Handling	GME Consultants, Inc	1-95-166	1	15.00	15.00
				TOTAL	262.50

PART V ELIGIBLE COS WORKSHEET - INVESTIGATIO. AND CLEAN-UP

* Descriptions must be specific as to work performed.
* Invoices must be submitted for each cost listed below.
* Invoices must contain sufficient detail to verify costs and services entered below.
* Duplicate this form if additional worksheets are needed.

H. SITE RESTORATION and CLOSURE

Description	Firm Name	Invoice # or date	Total Units	Unit Costs	Sub-total
				TOTAL	

I. OTHER CLEAN-UP or INVESTIGATION COSTS

Description	Firm Name	Invoice # or date	Total Units	Unit Costs	Sub-total
HNU Meter	GME Consultants, Inc	1-95-166	0.5	125.00	62.50
Transportation	GME Consultants, Inc.	1-95-166	60	0.37	22.20
KVA Probe Equipment	GME Consultants, Inc.	1-95-166	0.5	150.00	75.00
				TOTAL	159.70

PART IV **ELIGIBLE COST WORKSHEET** - **CONSULTANT SERVICES**

- * **Description must be specific as to work performed.**
- * **Invoices must be submitted for each cost listed below.**
- * **Invoices must contain sufficient detail to verify costs and services entered below.**
- * **Duplicate this form if additional sheets are needed.**

J. REPORT PREPARATION; DATA COLLECTION; OPERATION OVERSIGHT AND MAINTENANCE; SYSTEM MONITORING; CORRESPONDENCE; MILEAGE; POSTAGE; PER DIEM

Description	Firm Name	Invoice # or date	Total Units	Unit Costs	Sub-total
Project Mgmt/Coordination	GME Consultants, Inc.	1-95-166	3.5	60	210
Data Collection	GME Consultants, Inc.	1-95-166	6	45	270
Report Preparation	GME Consultants, Inc.	1-95-166	3.0	60	180
Report Preparation	GME Consultants, Inc.	1-95-166	1.5	40	60
Report Preparation	GME Consultants, Inc.	1-95-166	2.0	40	80
Report Preparation	GME Consultants, Inc.	1-95-166	2.0	32	64
Report Preparation	GME Consultants, Inc.	1-95-166	1.0	85	85
Petrofund Application	GME Consultants, Inc.	4-95-50	2.0	60	120
Petrofund Application	GME Consultants, Inc.	4-95-50	1.0	32	32
				TOTAL	1,101.00

Petroleum Tank Release Compliance Checklist

SITE NAME: GOODYEAR LEAK0000 8146

USE THE FOLLOWING GUIDELINES TO DETERMINE IF THE LEAKING TANK IS IN COMPLIANCE

_____UNREGULATED TANKS.....are ASTs/USTs 110 gallons or less, OR heating oil ASTs/USTs 1,100 gallons or less with product consumed on the premises, OR farm/residential ASTs/USTs 1,100 gallons or less containing motor fuel not for resale.

_____STATE REGULATED TANKS.....are heating oil USTs with a capacity more than 1,100 gallons.

__X__FEDERALLY REGULATED TANKS.....are all USTs not specified above.

_____ABOVEGROUND TANKS.....are unregulated if they meet the same criteria as "**Unregulated Tanks**". If ASTs are regulated, use items marked with **.

STATUS OF RESPONSIBLE PARTY: Regular Applicant_____ Limited Use Applicant__X__

UNREGULATED TANKS, STATE TANKS, FEDERAL TANKS

****Release Notification:** Date release discovered: MPCA 1-9-95 Petro App 1-9-95

Date release reported: MPCA 1-10-95 Petro App 1-10-95

When/How was release discovered? Lab Analysis of soil Samples Taken after tank removal

Was there environmental damage due to delay? Yes_____ No__X__

__X__**Adequate** _____**Inadequate** Recommend reduction? Yes_____ No__X__

Comments_____

Tanks Properly Closed: Yes__X__ No_____

Tanks must be removed or properly closed in place within one year of the date they are taken out of service.

__X__**Adequate** _____**Inadequate** Recommend reduction? Yes_____ No__X__

****Cooperation/Due Care Issue:** Yes_____ No_____

If Yes, please prepare a narrative to be appended to the Commissioner's Site Report.

STATE TANKS, FEDERAL TANKS

****Tank Registration:** AST/ UST number: 3681 Registration Date: 5-5-86

Regulated USTs should be registered by 6/1/86. Regulated ASTs should be registered by 6/1/90.
USTs registered by 12/1/87 should be cited as inadequate, but not recommended for reduction.
ASTs registered by 1/1/91 should be cited as inadequate, but not recommended for reduction.
Unregistered tanks removed before compliance dates receive no reduction for being unregistered.

__X__**Adequate** _____**Inadequate** Recommend reduction? Yes_____ No_____

Comments:_____

Certified UST Installer: Yes_____ No_____ N/A__X__ Installation Date(s):_____ Contractor Cert #_____

Applicable after 7/9/90.

_____**Adequate** _____**Inadequate** Recommend reduction? Yes_____ No_____

Certified UST Remover: Yes__X__ No_____ N/A_____ Removal Date(s): 12-7-94 Contractor Cert # 6041

Applicable after 7/9/90.

__X__**Adequate** _____**Inadequate** Recommend reduction? Yes_____ No__X__

STATE TANKS, FEDERAL TANKS (.tinued)

Corrosion Protection: Tanks: Yes_____ No_____ N/A__X__ Piping: Yes_____ No_____ N/A__X__
Applicable for steel piping/steel USTs installed after 8/1/85. Steel piping/steel USTs installed before 8/1/85 require corrosion protection no later than 12/22/98. Heating oil piping/heating oil USTs installed before 8/1/85 don't ever require corrosion protection. Steel piping/USTs installed between 8/1/85 and 6/1/86 should be cited as inadequate, but not recommended for reduction.

__X__ **Adequate** _____ **Inadequate** Recommend reduction? Yes_____ No__X__

****AST Secondary Containment:** Yes_____ No_____ N/A_____
Applicable after 1964 for ASTs > 1,100 gallons or any AST within 500' of surface water.

_____ **Adequate** _____ **Inadequate** Recommend reduction? Yes_____ No_____

Comments:_____

Prior Removal Notice: Yes_____ Date of Notice_____ Date of Proposed Removal_____ No__X__ N/A_____

Date of Tank Removal_____
Applicable after 1/1/91. Applicable for heating oil USTs > 1,100 gallons after 8/1/92.

__X__ **Adequate**

__X__ **Inadequate** For giving no notice__1 day__

For giving less than 10 days prior notice_____ Number of days_____

For failure to renotify when removal date changed by more than 48 hours_____

Recommend reduction? Yes__X__ No_____

FEDERAL TANKS

Spill Prevention: Yes_____ No_____ N/A__X__
Applicable for USTs installed after 12/22/88. USTs installed before 12/22/88 require spill prevention by 12/22/98.

_____ **Adequate** _____ **Inadequate** Recommend reduction? Yes_____ No_____

Overfill Protection: Yes_____ No_____ N/A__X__
Applicable for USTs installed after 12/22/88. USTs installed before 12/22/88 require spill protection by 12/22/98.

_____ **Adequate** _____ **Inadequate** Recommend reduction? Yes_____ No_____

Leak Detection: Tanks: Tank leak detection: Yes__X__ No_____ N/A_____

Tank tightness testing: Yes_____ No__X__ N/A_____

If tank was installed:	Then the leak detection deadline is:
before 1965 or unknown	12/22/89
1965-1969	12/22/90
1970-1974	12/22/91
1975-1979	12/22/92
1980-12/22/88	12/22/93

Tanks installed after 12/22/88 should have leak detection at installation.

Piping: Pipe leak detection: Yes_____ No__X__ N/A_____

Piping tightness testing: Yes_____ No__X__ N/A_____

Applicable for pressurized piping installed after 12/22/88. Pressurized piping installed before 12/22/88 must have leak detection by 12/22/90.

_____ **Adequate** __X__ **Inadequate** Recommend reduction? Yes_____ No____

Comments:_____

Completed by:_____ **Date:**_____ (2/28/95)

Soil Testing Report
Tank Removal Site

Maplewood Tire & Auto, Inc.
1735 Van Dyke St
Maplewood

Ramsey County, Minnesota

PROFESSIONALLY PREPARED BY
Development Engineering, P.A.
1296 Hudson Road
St. Paul, MN 55106
(651) 776-6211

May 23, 2002

237 M – Receipt and Waiver of Mechanics' Lien

RECEIPT AND WAIVER OF MECHANICS' LIEN RIGHTS

N. B. It is important that the following directions be closely followed as otherwise the receipt WILL NOT BE ACCEPTED.

1. This is a LEGAL INSTRUMENT and must be executed accordingly by officers of corporations and by partners of co-partnerships.
2. It is important that ALL the blanks be completed and that the AMOUNT PAID BE SHOWN.
3. If payment is not in full to date, so state. SHOW UNPAID BALANCE, and strike out last three lines.
4. A receipt similar to this or legal waiver of lien rights will be required for all plumbing, heating and plastering material, etc.
5. NO ERASURES OR ALTERATIONS MUST BE MADE.

May 24th, 2002
(DATE)

The undersigned acknowledges having received payment of two thousand four hundred and sixty five and no/100 *DOLLARS* ($ 2465.00)
(Amount Paid)

from Ken Schwartz - Performance Transmission *in full payment of*
(Name of Payor)

all Environmental Work
(Kind of Material or Labor)

by the undersigned delivered or furnished to (or performed at) 1735 Van Dyke Avenue, Maplewood, Minnesota - 55109
(Street Address or Legal Description)

and for value received hereby waives all rights which may have been acquired by the undersigned to file mechanics' liens against said premises for labor, skill or material furnished to said premises prior to the date hereof.

Development Engineering, P.A.

PLUMBING, HEATING and PLASTERING
contractors must sign statement on reverse hereof

By Alan Mueller
Vice President
(TITLE)
Address 1296 Hudson Rd

Development Engineering, P.A.
1296 Hudson Road
St Paul, MN 55106

Invoice

Date	Invoice #
5/24/2002	2002.018.4

PAID

Bill To	
Performance Transmission, Inc. Ken Schwartz 1201 Frost Avenue Maplewood, MN 55109	/ke Av MN

P.O. No.	Terms	Project

Description	Qty	Rate	Amount
Baseline Phase I Environmental		1,800.00	1,800.00
Labratory Fees		465.00	465.00
Analysis and Report for Soil Samples	1	125.00	125.00
Grubbing/Technician/Travel obtaining Samples	1	75.00	75.00

Total	$2,465.00
Payments/Credits	$-2,465.00
Balance Due	$0.00

If you wish to pay by credit card please fill out the following:

Type: _____
Credit Card No: _____ _____ _____ _____ Exp. Date ____/____
Signature: _____

Scope of Work

Development Engineering, P.A. was hired by Ken Schwartz to take two soil samples at the site of 500 gallon tank removal at 1735 Van Dyke Avenue in the City of Maplewood. The samples were to be Analyzed for VOC's and DRO's.

Site Description

The 500 gallon storage tank was located on the west side of the building located at 1735 Van Dyke Avenue in the City of Maplewood. As surficial water and subsurface water generally runs west and south one sample was taken at a depth of about 7' to 8' approximately 2' to the northwest of the excavated area. A second sample was taken at a depth of about 6' to 7' approximately 2' to the south west of the excavated area.

Sampling

Development Engineering, P.A. was on site at approximately 11:00 a.m. on May 6, 2002.

Inspection of the soils showed no discoloration. The soils likewise showed no signs of leakage or smell of petroleum products. Two samples were taken from the bottom of each hole to determine the presence of Diesel or Petroleum Based Products.

Those samples were taken to Legend Technical Services, Inc. where a chain of custody letter was filled and the samples were tested for DRO and VOC. Their report was returned on May 10, 2002.

Conclusions / Recommendations

It does not appear by the record or the interviews that a higher degree of investigation is warranted regarding this site. All samples appeared to be below the defined limits as shown on the report. A copy of the Chain-of-Custody Record and results of the tests are attached to this report.

Standard of Care

Services performed by Development Engineering, P.A. for this project have been conducted in a manner consistent with the level of care and skill ordinarily exercised by member so the profession currently practicing in this are under similar budge and time constraints. The analysis and recommendations presented in this report are based upon research of available information from the sources listed in the bibliography section of this report. No warranties, expressed or implied, are made. The material contained in this report is to be considered confidential. Distribution, sale or publication of this report of any part thereof without the expressed written consent of Development Engineering, P.A. is prohibited. Additional copies of this report may be obtained by contacting Development Engineering, P.A. at (651) 776-6211.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Registered Engineer under the laws of the State of Minnesota.

Date: May 23, 2002

by:
Jonathan Faraci, PE
Mn Reg 16464
President, Development Engineering, P.A

Date: May 23, 2002

Reviewed by:
Alan F. Musielewicz, Atty
Mn Atty Reg 207895

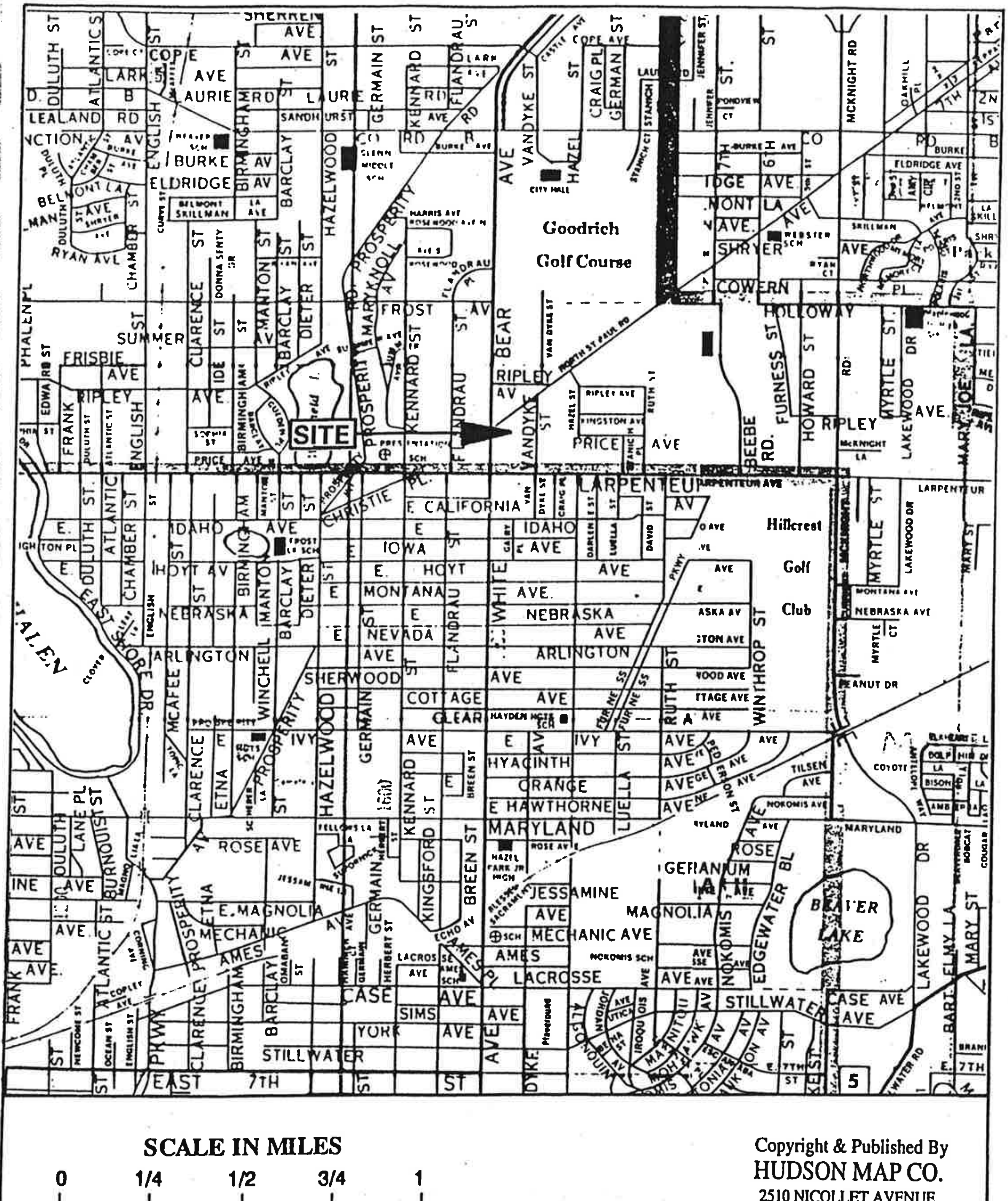


FIGURE 1: REGIONAL LOCATION DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

GME CONSULTANTS, INC.
14000 21st Avenue North
Minneapolis, MN 55447

TFM	SJF	3/95	4972

GME CONSULTANTS, INC.
CONSULTING ENGINEERS
14000 21st Ave. No. / Minneapolis, MN 55447
Phone (612) 559-1859 / Fax (612) 559-0720

March 27, 1995

Mr. Bruce G. Odlaug
Maun & Simon, PLC
2900 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402-4133

GME Project No. 4972

RE: Underground Storage Tank (UST) Closure Report for the Goodyear Facility at 1735 Van Dyke Avenue in Maplewood, Minnesota (MPCA Leak No. 8146)

Dear Mr. Odlaug:

In accordance with your authorization, we have completed our services for this UST closure project. The purposes of this report are to evaluate the results of the field and laboratory work, and to recommend the appropriate subsequent actions.

Based on the field and laboratory results from the tank monitoring and subsequent soil probe, our discussions with the MPCA Project Manager, and the MPCA Petroleum Tank Release Guidance Documents, it is our opinion that no additional work is required at the above referenced site. The action levels used by the MPCA to evaluate whether further environmental work is required are listed in the MPCA Guidance Document enclosed in the Appendix.

This report has been completed in general accordance with the MPCA Guidance Document entitled "Petroleum Tank Release Reports," dated April 18, 1993. Following your review of the report, we will submit a copy to Mr. Jim Joslyn, MPCA Project Manager.

We appreciate this opportunity to be of service to you. If you have questions, please contact us.

Sincerely,

GME CONSULTANTS, INC.

Timothy F. McGlennen
Environmental Biologist
Project Manager

cc: Mr. Neil Hartman - Goodyear Tire and Rubber Company

cc: Mr. C.L. Putzier - Department 824
Goodyear Tire and Rubber Company

TFM:sab/smc
c:\tfm\4972.ust

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UNDERGROUND STORAGE TANK
CLOSURE REPORT
FOR
GOODYEAR FACILITY
1735 VAN DYKE AVENUE
MAPLEWOOD, MINNESOTA
GME PROJECT NO. 4972

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UNDERGROUND STORAGE TANK
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FOR
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1735 VAN DYKE AVENUE
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F. MPCA Guidance Document
G. GME General Qualifications
H. Site Photographs

EXCAVATION REPORT FOR PETROLEUM RELEASE SITES

Minnesota Pollution Control Agency
Tanks and Spills Section
March 27, 1995

Complete the information below and submit to the Minnesota Pollution Control Agency (MPCA) Tanks and Spills Section to document excavation and treatment of petroleum contaminated soil. Excavations must be done in accordance with "Excavation of Petroleum Contaminated Soil" (Guidance Document 6). Please attach any available preliminary site investigation reports to this excavation report.

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

I. BACKGROUND

A. **Site:** Goodyear Retail Facility (See Figures 1 & 2)
Street: 1735 Van Dyke Avenue
City, Zip: Maplewood, 55109
County: Ramsey
MPCA Site ID#: LEAK00008146
MPCA Project Manager: Mr. Jim Joslyn

B. **Tank Owner/Operator:** Mr. Bruce G. Odlaug
Mailing Address: Maun and Simon
Street/Box: 2900 Norwest Ctr, 90 S Seventh St.
City, Zip: Minneapolis, 55402-4133
Telephone: (612) 338-1113
Contact: Mr. Bruce Odlaug

C. **Excavating Contractor:** Minnesota Petroleum, Inc.
Contact: Mr. Mike D. Dehn
Telephone: (612) 571-8490
Tank Contractor Certification Number: 0604

D. **Consultant:** GME Consultants, Inc.
Contact: Mr. Timothy F. McGlennen
Street/Box: 14000 21st Avenue North
City, Zip: Plymouth, MN 55447
Telephone: 612-559-1859

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

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: January 10, 1995 (laboratory results received via fax on January 9, 1995)

B. Dates site work performed:

Work Performed	Date
Tried to begin tank removal but contractor was not allowed site access	October 23, 1994
Used oil tank removed	December 7, 1994
Performed KVA Soil Probe	January 13, 1995

III. RELEASE INFORMATION

A. Provide the following information for all removed tanks. (SEE FIGURE 2 FOR TANK LOCATION).

Tank 1: **Capacity** 500 gallons **Type** Steel **Age** Unknown

Condition: We observed Tank No. 1 to be in generally fair condition, with some surficial corrosion.

Product history: Tank No. 1 is believed to have stored used oil only.

Approximate quantity of petroleum released, if known: It appears that a minor amount of petroleum has been released from this tank system.

Cause of release: Possible causes of release may include surface spillage, overfills, or leaky pipe fittings.

B. Provide the following information for all existing tanks.

To the best of our knowledge, there are no additional USTs at the site. An above ground used oil tank will be installed inside of the building.

C. If the release was associated with the lines or dispensers, briefly describe the problem: A dispenser was not associated with this UST.

D. If the release was a surface spill, briefly describe the problem: We observed some minor staining on the bituminous pavement surrounding the fill pipe (See Photographs)

IV. EXCAVATION

A. **Dimensions of excavation:** The maximum dimensions of the excavation were 6 feet by 8 feet in plan, with a maximum depth of 7 feet. The excavation was located on the north side of the building near a tire storage area.

B. **Original tank backfill material (sand, gravel, etc.):** The backfill around the UST generally consisted of brown silty sand.

C. **Native soil type (clay, sand, etc.):** Based on our KVA soil probe, soils below the tank basin consist of brown silty sand with trace clay and gravel.

D. **Quantity of contaminated soil removed (cubic yards):**

[NOTE: If more than 400 cubic yards removed, please attach copy of written approval from MPCA.]
Petroleum impacts were not encountered during the tank removal monitoring; therefore, no soils were excavated.

E. **Was ground water encountered or was there evidence of a seasonally high ground water table? At what depth?** Groundwater was not encountered in the excavation. Based on our review of a monitoring well construction log and abandonment log for a nearby SuperAmerica Leak Site, groundwater is approximately 27 feet below grade. This SuperAmerica off-site monitoring well is located along the Goodyear property boundary about 125 feet northeast of the tank basin.

F. **If a soil boring was necessary (as indicated in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6) 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.** During the UST removal, we did not observe evidence of a petroleum release. However, 5.9 and 130 parts per million (ppm) diesel range organics (DRO) were detected in the two soil samples collected from below the tank. Because of these detections, we drilled one soil probe through the tank excavation using a KVA Electric Rotary Hammer with 1 inch sampling equipment.

We collected a soil sample from 12 to 13 feet below grade for headspace analysis using an HNU PI-101 photoionization detector (PID). The headspace analysis did not indicate the presence of organic vapors in the collected sample. We then collected a soil sample from 13 to 14 feet below grade for laboratory analysis of DRO, and volatile organic compounds (VOCs) by Method 465D. We observed no petroleum odors or discolorations from the soil sample which consisted of brown silty sand with trace clay and gravel.

The KVA laboratory report indicates that DRO and VOCs were not detected in the soil sample. The report does indicate the detection of acetone, both in the sample and in the laboratory method blank at similar concentrations. A copy of the laboratory report and the KVA Soil Boring Log are attached in the Appendix.

G. **If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? Specify, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc.** Groundwater was not encountered during our KVA Soil Probe work.

The nearby SA leak site monitoring well (MW-4) was installed on September 1, 1994 and removed on January 22, 1995. The monitoring well was sampled and analyzed for gasoline range organics (GRO) on September 24, 1994, and for GRO, benzene, toluene, ethylbenzene, and total xylenes (BTEX) on October 17, 1994. None of these parameters were detected in the groundwater samples.

We have included a copy of the monitoring well information supplied to us by you in the Appendix.

[NOTE: If free product was observed, contact MPCA staff immediately as outlined in "Petroleum Tank Release Reports" (Guidance Document 2.)

H. **Was bedrock encountered in the excavation? At what depth?** Bedrock was not encountered.

I. **Were there other unique conditions associated with this site? If so, explain.** None.

V. SAMPLING

A. **Briefly describe the field methods (including use of a photoionization detector) used to distinguish contaminated from uncontaminated soil:** We observed the soils collected from and within the tank excavation basin for the presence of unusual discolorations and petroleum odors. Jar headspace analyses of soil samples collected from the base and sidewalls of the excavations were conducted in the field with an HNU PID which detects certain organic vapors in the ppm range.

B. **List soil vapor headspace analysis results. Indicate sampling locations using sample codes (with sampling depths in parentheses), e.g. R-1 (2'), R-2 (10'), etc. "R" stands for "removed." Samples collected at different depths at the same location should be labeled R-1A (2'), R-1B (4'), R-1C (6'), etc. If the sample was collected from the sidewall or bottom after excavation was complete, label it S-1 (for sidewall) or B-1 (for bottom). Be sure the sample codes correspond with the site map required in par VI, below.** (See Figure 3)

Sample Code	Soil Type	Reading ppm
Excavation No. 1		
R1A (1')	Sand	0
R1B (2')	Sand	0
B2 (7')	Sand	0
B3 (7')	Sand	0
S-4 (6')	Sand	0
S-5 (6')	Sand	0
S-6 (7')	Sand	0
S-7 (7')	Sand	0

C. **Briefly describe the soil sampling and handling procedures used:** We collected two excavation bottom samples on December 7, 1994. These two soil samples were analyzed for DRO, and VOCs by Method 465D. The soil sample collected during the KVA Probe Survey also was analyzed for DRO and VOCs.

All of the soil samples were collected in the appropriate jars as supplied by Interpoll. The sample containers were labeled, placed in a cooler with ice, and transported to Interpoll Laboratories, Inc. The Interpoll laboratory reports and sample chain-of-custody forms are included in the Appendix.

D. **List below the soil sample analytical results from bottom and sidewall samples (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), etc. Be sure the sample codes correspond to the site map required in part VI. Do not include analyses from the stockpiled soils.**
(See Figure 4)

Sample Code	DRO ppm	VOCs ppm
Excavation No. 1		
B-1W (7′)	5.9	ND, except for 0.075 1,1,2-Trichlorotrifluoroethane
B-1E (7′)	130	ND
KVA1 (13-14′)	ND	ND

Definitions: **ND=Not Detected DRO=Diesel Range Organics**
VOCs=Volatile Organic Compounds by Method 465D

NOTE: COPIES OF LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS MUST BE INCLUDED.

VI. FIGURES (See Appendix)

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; and
   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

VII. SUMMARY

Briefly summarize evidence indicating whether additional investigation is necessary at the site, as discussed in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6.). If no further action is recommended, the MPCA staff will review this report following notification of soil treatment.

On December 7, 1994, we monitored the removal of one 500 gallon used oil UST by Minnesota Petroleum at the Goodyear Facility in Maplewood, Minnesota. We also collected soil samples for headspace and laboratory analyses.

During our monitoring, we did not observe evidence, such as elevated headspace readings, petroleum odors, or soil discoloration, to indicate that a release had occurred from the tank. However, the laboratory analysis results indicated that DRO was detected (5.9 and 130 ppm) in the collected soil samples.

On January 13, 1995, we drilled one KVA Soil Probe through the base of the tank basin to collect soil samples for headspace and laboratory analyses. We did not detect organic vapors in the headspace sample, and laboratory analysis did not detect DRO or VOC parameters. Based on a nearby groundwater monitoring well, the groundwater in the area is approximately 27 feet below grade. The area soils generally consist of silty sand.

The MPCA Guidance Document states that additional work is not required if organic vapor readings are below MPCA action levels during initial tank removal soil monitoring, the laboratory analyzed soil samples in sands are below 50 ppm total petroleum hydrocarbons (TPH) (there were no detections in the KVA soil samples), and groundwater is not in contact with impacted soils. Based on the site data meeting these criteria, it is our opinion that no additional testing is necessary at the former tank location and we recommend that the MPCA close the site after their review of this report.

VIII. SOIL TREATMENT INFORMATION

A. Soil treatment method used (thermal, land application, other). If you choose "other", specify treatment method: Not applicable.

B. Location of treatment site/facility: Not applicable.

C. Date MPCA approved soil treatment (if thermal treatmentw a s used after May 1, 1991, indicate date that the MPCA permitted thermal treatment facility agreed to accept soil): Not applicable.

D. Identify the location of any stockpiled contaminated soil:

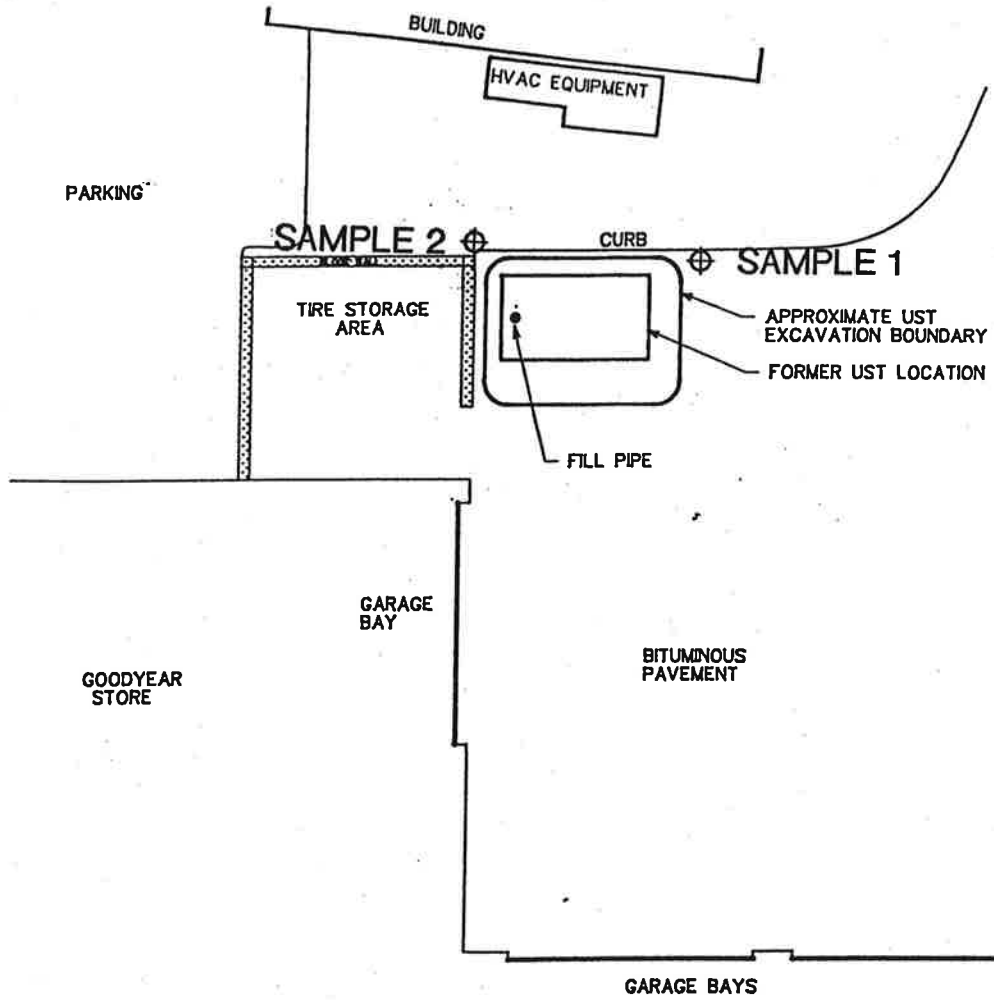
IX. CONSULTANT (OR OTHER) PREPARING THIS REPORT

Company Name: GME Consultants, Inc.
Street/Box: 14000 21st Avenue North
City/Zip: Plymouth, MN 55447
Telephone: 612-559-1859
Contacts: Mr. Timothy F. McGlennen
Environmental Biologist
Project Manager

Ms. Sandra J. Forrest
Senior Hydrogeologist
Regional Environmental Division Manager

Signature: Timothy F. McGlennen Date: 3/28/95

Signature: Sandra J. Forrest Date: 3/28/95



APPROXIMATE SCALE

0' FEET 8'

GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 2: SITE DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972

Page 1 of 1

LEGEND TECHNICAL SERVICES, INC.

775 Vandalia Street, St. Paul, MN 55114 – Telephone: 651/642-1150 Fax: 651/642-1239

15237

CHAIN-OF-CUSTODY RECORD

Development Engineering, P.A.

Company: Development Engineering, P.A.	Bill To: Dev. Eng. PA	Legend Tech Project No.: 2002 05 0145	Analysis # of Containers:
Report To: Alan F Musielewicz	Project Description: GOODYEAR FACILITY	Turnaround Time:	
Address: 1296 Hudson Rd St. Paul MN 55106	Address: 1735 Van Dyke Maplewood, MN 55109	☐ Normal Date Needed:	
Phone No.: 651-776-6211	PO#: 2002.051,1	☒ Rush Date Needed: 5-8-02	
Fax No.: 651-776-6711	Project #: 2002.051	Condition Received: ☐ Received on Ice	
		☐ Field Sheet From field	

Item No.	Field ID No.	Sample Description	Collection Date	Collection Time	Sample Matrix	Lab ID No.	PID FIELD READINGS	Moisture	VOC	DRO		
1	S1	N- Clays : Composite	5-6-02	11:15				X	X	X		
2	S2	SW Sands . Composite.	5-6-02	11:30				X	X	X		
3		Trip Blank							X			
4												
5												
6												
7												
8												
9												
10												

Transfer No.	Item No.	Relinquished By	Accepted By	Date	Time	Comments
1		Alan F Musielewicz	Roberta Prescott	5-6-02	12:25	
2						

FORM FLD-007 (10/00)

PLEASE REVIEW TERMS AND CONDITIONS BEFORE SIGNING THIS LEGAL DOCUMENT

White Copy – Original Accompanies Shipment to Lab Yellow Copy –Lab Pink Copy - Customer or Field Copy

LEGEND
Technical Services, Inc.

05/10/02

Mr. Alan Musielewicz
Development Engineering
1296 Hudson Road
St. Paul MN
55106

Subject: 2002.051 Goodyear Facility
Legend No: 2002050145

LEGEND TECHNICAL SERVICES, INC. (LEGEND) received the following sample(s).

Matrix	Samples	Date Sampled	Date Received	Comments
Soil	2	05/06/02	05/06/02	From field

* The associated batch quality assurance / quality control criteria were met with satisfaction.

* All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other instructions are received from the client.

* Minnesota Laboratory Certification # 027-123-295.

Prepared by,
LEGEND TECHNICAL SERVICES, INC

Chris Bremer
Laboratory Director

Roberta Provost
Project Manager

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Legend Sample ID:**	1
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/2002
Client ID:	North Clays	**Percent Solids**	86%

DRO/8015B SOIL

North Clays

Extraction Date: 05/07/02
Analysis Method: Wisc DRO
Analysis Date: 05/08/02

Compound	Sample Results	Units	RL	MDL
Diesel range organics	<8.0 W	mg/kg	8.0	1.1
C-30 (Surrogate)	86.8	%	--	--

W=The sample was weighed out in the laboratory.

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Legend Sample ID:**	2
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/2002
Client ID:	Southwest Sands	**Percent Solids**	92%

DRO/8015B SOIL

Southwest Sands

Extraction Date: 05/07/02
Analysis Method: Wisc DRO
Analysis Date: 05/08/02

Compound	Sample Results	Units	RL	MDL
Diesel range organics	<8.0 W	mg/kg	8.0	1.1
C-30 (Surrogate)	83.0	%	--	--

W=The sample was weighed out in the laboratory.

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Legend Sample ID:**	4
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/2002
Client ID:	Method Blank		

DRO/8015B SOIL

Method Blank

Extraction Date: 05/07/02
Analysis Method: Wisc DRO
Analysis Date: 05/07/02

Compound	Sample Results	Units	RL	MDL
Diesel range organics	<8.0	mg/kg	8.0	1.1
C-30 (Surrogate)	96.1	%	--	--

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	1
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	North Clays		

VOC MDH 466C

Extraction Date: --
Analysis Method: MNDH 466C
Analysis Date: 05/07/02
Client ID: North Clays

Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11
2-Butanone	<2.0	mg/kg	2.0	0.83
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016
Acetone	<2.0	mg/kg	2.0	0.376
Allyl chloride	<0.25	mg/kg	0.25	0.041
Benzene	<0.25	mg/kg	0.25	0.010
Bromobenzene	<0.25	mg/kg	0.25	0.019
Bromochloromethane	<0.25	mg/kg	0.25	0.11
Bromodichloromethane	<0.25	mg/kg	0.25	0.021
Bromoform	<0.25	mg/kg	0.25	0.019
Bromomethane	<0.25	mg/kg	0.25	0.040
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013
Chlorobenzene	<0.25	mg/kg	0.25	0.011
Chloroethane	<0.25	mg/kg	0.25	0.10
Chloroform	<0.25	mg/kg	0.25	0.0090
Chloromethane	<0.25	mg/kg	0.25	0.0087
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15
cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
Dibromochloromethane	<0.25	mg/kg	0.25	0.022
Dibromomethane	<0.25	mg/kg	0.25	0.019
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
Ethyl benzene	<0.25	mg/kg	0.25	0.012
Ethyl ether	<0.25	mg/kg	0.25	0.030
Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
Isopropyl benzene	<0.25	mg/kg	0.25	0.019
Methyl Isobutyl ketone	<0.25	mg/kg	0.25	0.067
Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
Methylene chloride	<1.5	mg/kg	1.5	0.040
n-Butyl benzene	<0.25	mg/kg	0.25	0.016
n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
Naphthalene	<0.25	mg/kg	0.25	0.016
o-Xylene	<0.25	mg/kg	0.25	0.016
p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
p/m-Xylene	<0.25	mg/kg	0.25	0.022
sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
Styrene	<0.25	mg/kg	0.25	0.020
tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
Tetrachloroethene	<0.25	mg/kg	0.25	0.012
Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
Toluene	<0.25	mg/kg	0.25	0.025
trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Trichloroethene	<0.25	mg/kg	0.25	0.011
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Vinyl chloride	<0.25	mg/kg	0.25	0.013
Fluorobenzene (Surrogate)	111 % G	%	--	--

G=The initial sample weight exceeded 35 grams.

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	2
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	Southwest Sands		

VOC MDH 466C

Extraction Date: --
Analysis Method: MNDH 466C
Analysis Date: 05/07/02
Client ID: Southwest Sands

Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11
2-Butanone	<2.0	mg/kg	2.0	0.83
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016
Acetone	<2.0	mg/kg	2.0	0.376
Allyl chloride	<0.25	mg/kg	0.25	0.041
Benzene	<0.25	mg/kg	0.25	0.010
Bromobenzene	<0.25	mg/kg	0.25	0.019
Bromochloromethane	<0.25	mg/kg	0.25	0.11
Bromodichloromethane	<0.25	mg/kg	0.25	0.021
Bromoform	<0.25	mg/kg	0.25	0.019
Bromomethane	<0.25	mg/kg	0.25	0.040
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013
Chlorobenzene	<0.25	mg/kg	0.25	0.011
Chloroethane	<0.25	mg/kg	0.25	0.10
Chloroform	<0.25	mg/kg	0.25	0.0090
Chloromethane	<0.25	mg/kg	0.25	0.0087
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15

Compound	Sample Results	Units	RL	MDL
cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
Dibromochloromethane	<0.25	mg/kg	0.25	0.022
Dibromomethane	<0.25	mg/kg	0.25	0.019
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
Ethyl benzene	<0.25	mg/kg	0.25	0.012
Ethyl ether	<0.25	mg/kg	0.25	0.030
Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
Isopropyl benzene	<0.25	mg/kg	0.25	0.019
Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
Methylene chloride	<1.5	mg/kg	1.5	0.040
n-Butyl benzene	<0.25	mg/kg	0.25	0.016
n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
Naphthalene	<0.25	mg/kg	0.25	0.016
o-Xylene	<0.25	mg/kg	0.25	0.016
p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
p/m-Xylene	<0.25	mg/kg	0.25	0.022
sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
Styrene	<0.25	mg/kg	0.25	0.020
tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
Tetrachloroethene	<0.25	mg/kg	0.25	0.012
Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
Toluene	<0.25	mg/kg	0.25	0.025
trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Trichloroethene	<0.25	mg/kg	0.25	0.011
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Vinyl chloride	<0.25	mg/kg	0.25	0.013
Fluorobenzene (Surrogate)	112 % G	%	--	--

G=The initial sample weight exceeded 35 grams.

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	3
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	Trip Blank		

VOC MDH 466C

Extraction Date: –
Analysis Method: MNDH 466C
Analysis Date: 05/08/02
Client ID: Trip Blank

Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11
2-Butanone	<2.0	mg/kg	2.0	0.83
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016
Acetone	<2.0	mg/kg	2.0	0.376
Allyl chloride	<0.25	mg/kg	0.25	0.041
Benzene	<0.25	mg/kg	0.25	0.010
Bromobenzene	<0.25	mg/kg	0.25	0.019
Bromochloromethane	<0.25	mg/kg	0.25	0.11
Bromodichloromethane	<0.25	mg/kg	0.25	0.021
Bromoform	<0.25	mg/kg	0.25	0.019
Bromomethane	<0.25	mg/kg	0.25	0.040
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013
Chlorobenzene	<0.25	mg/kg	0.25	0.011
Chloroethane	<0.25	mg/kg	0.25	0.10
Chloroform	<0.25	mg/kg	0.25	0.0090
Chloromethane	<0.25	mg/kg	0.25	0.0087
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15
cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
Dibromochloromethane	<0.25	mg/kg	0.25	0.022
Dibromomethane	<0.25	mg/kg	0.25	0.019
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
Ethyl benzene	<0.25	mg/kg	0.25	0.012
Ethyl ether	<0.25	mg/kg	0.25	0.030
Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
Isopropyl benzene	<0.25	mg/kg	0.25	0.019
Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
Methylene chloride	<1.5	mg/kg	1.5	0.040
n-Butyl benzene	<0.25	mg/kg	0.25	0.016
n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
Naphthalene	<0.25	mg/kg	0.25	0.016
o-Xylene	<0.25	mg/kg	0.25	0.016
p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
p/m-Xylene	<0.25	mg/kg	0.25	0.022
sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
Styrene	<0.25	mg/kg	0.25	0.020
tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
Tetrachloroethene	<0.25	mg/kg	0.25	0.012
Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
Toluene	<0.25	mg/kg	0.25	0.025
trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Trichloroethene	<0.25	mg/kg	0.25	0.011
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Vinyl chloride	<0.25	mg/kg	0.25	0.013
Fluorobenzene (Surrogate)	106	%	–	–

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	4
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	Method Blank		

VOC MDH 466C

Extraction Date: --
Client ID: Method Blank
Analysis Method: MNDH 466C
Analysis Date: 05/07/02

Compound	Sample Results	Units	RL	MDL	Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018	cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016	Dibromochloromethane	<0.25	mg/kg	0.25	0.022
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016	Dibromomethane	<0.25	mg/kg	0.25	0.019
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012	Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022	Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030	Ethyl benzene	<0.25	mg/kg	0.25	0.012
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033	Ethyl ether	<0.25	mg/kg	0.25	0.030
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013	Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011	Isopropyl benzene	<0.25	mg/kg	0.25	0.019
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020	Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020	Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012	Methylene chloride	<1.5	mg/kg	1.5	0.040
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031	n-Butyl benzene	<0.25	mg/kg	0.25	0.016
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020	n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015	Naphthalene	<0.25	mg/kg	0.25	0.016
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010	o-Xylene	<0.25	mg/kg	0.25	0.016
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021	p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010	p/m-Xylene	<0.25	mg/kg	0.25	0.022
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012	sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017	Styrene	<0.25	mg/kg	0.25	0.020
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013	tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11	Tetrachloroethene	<0.25	mg/kg	0.25	0.012
2-Butanone	<2.0	mg/kg	2.0	0.83	Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012	Toluene	<0.25	mg/kg	0.25	0.025
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016	trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
Acetone	<2.0	mg/kg	2.0	0.376	trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Allyl chloride	<0.25	mg/kg	0.25	0.041	Trichloroethene	<0.25	mg/kg	0.25	0.011
Benzene	<0.25	mg/kg	0.25	0.010	Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Bromobenzene	<0.25	mg/kg	0.25	0.019	Vinyl chloride	<0.25	mg/kg	0.25	0.013
Bromochloromethane	<0.25	mg/kg	0.25	0.11	Fluorobenzene (Surrogate)	105	%	--	--
Bromodichloromethane	<0.25	mg/kg	0.25	0.021					
Bromoform	<0.25	mg/kg	0.25	0.019					
Bromomethane	<0.25	mg/kg	0.25	0.040					
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013					
Chlorobenzene	<0.25	mg/kg	0.25	0.011					
Chloroethane	<0.25	mg/kg	0.25	0.10					
Chloroform	<0.25	mg/kg	0.25	0.0090					
Chloromethane	<0.25	mg/kg	0.25	0.0087					
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15					

LOCATION OF FORMER STORAGE TANK

UNDERGROUND STORAGE TANK CLOSURE REPORT FOR GOODYEAR FACILITY 1735 VAN DYKE AVENUE MAPLEWOOD, MINNESOTA GME PROJECT NO. 4972 MARCH 27, 1995

GME CONSULTANTS, INC.
CONSULTING ENGINEERS
10000 21st Ave. No., Minneapolis, MN 55447
Phone (612) 559-1859 Fax (612) 559-0720

March 27, 1995

Mr. Bruce G. Odlaug
Maun & Simon, PLC
2900 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402-4133

GME Project No. 4972

RE: Underground Storage Tank (UST) Closure Report for the Goodyear Facility at 1735 Van Dyke Avenue in Maplewood, Minnesota (MPCA Leak No. 8146)

Dear Mr. Odlaug:

In accordance with your authorization, we have completed our services for this UST closure project. The purposes of this report are to evaluate the results of the field and laboratory work, and to recommend the appropriate subsequent actions.

Based on the field and laboratory results from the tank monitoring and subsequent soil probe, our discussions with the MPCA Project Manager, and the MPCA Petroleum Tank Release Guidance Documents, it is our opinion that no additional work is required at the above referenced site. The action levels used by the MPCA to evaluate whether further environmental work is required are listed in the MPCA Guidance Document enclosed in the Appendix.

This report has been completed in general accordance with the MPCA Guidance Document entitled "Petroleum Tank Release Reports," dated April 18, 1993. Following your review of the report, we will submit a copy to Mr. Jim Joslyn, MPCA Project Manager.

We appreciate this opportunity to be of service to you. If you have questions, please contact us.

Sincerely,

GME CONSULTANTS, INC.

Timothy F. McGlennen
Environmental Biologist
Project Manager

cc: Mr. Neil Hartman - Goodyear Tire and Rubber Company

cc: Mr. C.L. Putzier - Department 824
Goodyear Tire and Rubber Company

TFM:sab/smc
c:\tfm\4972.ust

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UNDERGROUND STORAGE TANK
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FOR
GOODYEAR FACILITY
1735 VAN DYKE AVENUE
MAPLEWOOD, MINNESOTA
GME PROJECT NO. 4972

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EXCAVATION REPORT FOR PETROLEUM RELEASE SITES

Minnesota Pollution Control Agency
Tanks and Spills Section
March 27, 1995

Complete the information below and submit to the Minnesota Pollution Control Agency (MPCA) Tanks and Spills Section to document excavation and treatment of petroleum contaminated soil. Excavations must be done in accordance with "Excavation of Petroleum Contaminated Soil" (Guidance Document 6). Please attach any available preliminary site investigation reports to this excavation report.

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

I. BACKGROUND

A. **Site:** Goodyear Retail Facility (See Figures 1 & 2)
Street: 1735 Van Dyke Avenue
City, Zip: Maplewood, 55109
County: Ramsey
MPCA Site ID#: **LEAK00008146**
MPCA Project Manager: Mr. Jim Joslyn

B. **Tank Owner/Operator:** Mr. Bruce G. Odlaug
Mailing Address: Maun and Simon
Street/Box: 2900 Norwest Ctr, 90 S Seventh St.
City, Zip: Minneapolis, 55402-4133
Telephone: (612) 338-1113
Contact: Mr. Bruce Odlaug

C. **Excavating Contractor:** Minnesota Petroleum, Inc.
Contact: Mr. Mike D. Dehn
Telephone: (612) 571-8490
Tank Contractor Certification Number: 0604

D. **Consultant:** GME Consultants, Inc.
Contact: Mr. Timothy F. McGlennen
Street/Box: 14000 21st Avenue North
City, Zip: Plymouth, MN 55447
Telephone: 612-559-1859

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

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: January 10, 1995 (laboratory results received via fax on January 9, 1995)

B. Dates site work performed:

Work Performed	Date
Tried to begin tank removal but contractor was not allowed site access	October 23, 1994
Used oil tank removed	December 7, 1994
Performed KVA Soil Probe	January 13, 1995

III. RELEASE INFORMATION

A. Provide the following information for all removed tanks. (SEE FIGURE 2 FOR TANK LOCATION)

Tank 1: **Capacity** 500 gallons **Type** Steel **Age** Unknown

Condition: We observed Tank No. 1 to be in generally fair condition, with some surficial corrosion.

Product history: Tank No. 1 is believed to have stored used oil only.

Approximate quantity of petroleum released, if known: It appears that a minor amount of petroleum has been released from this tank system.

Cause of release: Possible causes of release may include surface spillage, overfills, or leaky pipe fittings.

B. Provide the following information for all existing tanks.

To the best of our knowledge, there are no additional USTs at the site. An above ground used oil tank will be installed inside of the building.

C. If the release was associated with the lines or dispensers, briefly describe the problem: A dispenser was not associated with this UST.

D. If the release was a surface spill, briefly describe the problem: We observed some minor staining on the bituminous pavement surrounding the fill pipe (See Photographs)

IV. EXCAVATION

A. **Dimensions of excavation:** The maximum dimensions of the excavation were 6 feet by 8 feet in plan, with a maximum depth of 7 feet. The excavation was located on the north side of the building near a tire storage area.

B. **Original tank backfill material (sand, gravel, etc.):** The backfill around the UST generally consisted of brown silty sand.

C. **Native soil type (clay, sand, etc.):** Based on our KVA soil probe, soils below the tank basin consist of brown silty sand with trace clay and gravel.

D. **Quantity of contaminated soil removed (cubic yards):**

[NOTE: If more than 400 cubic yards removed, please attach copy of written approval from MPCA.]
Petroleum impacts were not encountered during the tank removal monitoring; therefore, no soils were excavated.

E. **Was ground water encountered or was there evidence of a seasonally high ground water table? At what depth?** Groundwater was not encountered in the excavation. Based on our review of a monitoring well construction log and abandonment log for a nearby SuperAmerica Leak Site, groundwater is approximately 27 feet below grade. This SuperAmerica off-site monitoring well is located along the Goodyear property boundary about 125 feet northeast of the tank basin.

F. **If a soil boring was necessary (as indicated in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6) 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.** During the UST removal, we did not observe evidence of a petroleum release. However, 5.9 and 130 parts per million (ppm) diesel range organics (DRO) were detected in the two soil samples collected from below the tank. Because of these detections, we drilled one soil probe through the tank excavation using a KVA Electric Rotary Hammer with 1 inch sampling equipment.

We collected a soil sample from 12 to 13 feet below grade for headspace analysis using an HNU PI-101 photoionization detector (PID). The headspace analysis did not indicate the presence of organic vapors in the collected sample. We then collected a soil sample from 13 to 14 feet below grade for laboratory analysis of DRO, and volatile organic compounds (VOCs) by Method 465D. We observed no petroleum odors or discolorations from the soil sample which consisted of brown silty sand with trace clay and gravel.

The KVA laboratory report indicates that DRO and VOCs were not detected in the soil sample. The report does indicate the detection of acetone, both in the sample and in the laboratory method blank at similar concentrations. A copy of the laboratory report and the KVA Soil Boring Log are attached in the Appendix.

G. **If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? Specify, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc.** Groundwater was not encountered during our KVA Soil Probe work.

The nearby SA leak site monitoring well (MW-4) was installed on September 1, 1994 and removed on January 22, 1995. The monitoring well was sampled and analyzed for gasoline range organics (GRO) on September 24, 1994, and for GRO, benzene, toluene, ethylbenzene, and total xylenes (BTEX) on October 17, 1994. None of these parameters were detected in the groundwater samples.

We have included a copy of the monitoring well information supplied to us by you in the Appendix.

[NOTE: If free product was observed, contact MPCA staff immediately as outlined in "Petroleum Tank Release Reports" (Guidance Document 2.)

H. **Was bedrock encountered in the excavation? At what depth?** Bedrock was not encountered.

I. **Were there other unique conditions associated with this site? If so, explain.** None.

V. SAMPLING

A. Briefly describe the field methods (including use of a photoionization detector) used to distinguish contaminated from uncontaminated soil: We observed the soils collected from and within the tank excavation basin for the presence of unusual discolorations and petroleum odors. Jar headspace analyses of soil samples collected from the base and sidewalls of the excavations were conducted in the field with an HNU PID which detects certain organic vapors in the ppm range.

B. List soil vapor headspace analysis results. Indicate sampling locations using sample codes (with sampling depths in parentheses), e.g. R-1 (2'), R-2 (10'), etc. "R" stands for "removed." Samples collected at different depths at the same location should be labeled R-1A (2'), R-1B (4'), R-1C (6'), etc. If the sample was collected from the sidewall or bottom after excavation was complete, label it S-1 (for sidewall) or B-1 (for bottom). Be sure the sample codes correspond with the site map required in par VI, below. (See Figure 3)

Sample Code	Soil Type	Reading ppm
Excavation No. 1		
R1A (1')	Sand	0
R1B (2')	Sand	0
B2 (7')	Sand	0
B3 (7')	Sand	0
S-4 (6')	Sand	0
S-5 (6')	Sand	0
S-6 (7')	Sand	0
S-7 (7')	Sand	0

C. **Briefly describe the soil sampling and handling procedures used:** We collected two excavation bottom samples on December 7, 1994. These two soil samples were analyzed for DRO, and VOCs by Method 465D. The soil sample collected during the KVA Probe Survey also was analyzed for DRO and VOCs.

All of the soil samples were collected in the appropriate jars as supplied by Interpoll. The sample containers were labeled, placed in a cooler with ice, and transported to Interpoll Laboratories, Inc. The Interpoll laboratory reports and sample chain-of-custody forms are included in the Appendix.

D. **List below the soil sample analytical results from bottom and sidewall samples (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), etc. Be sure the sample codes correspond to the site map required in part VI. Do not include analyses from the stockpiled soils.**
(See Figure 4)

Sample Code	DRO ppm	VOCs ppm
Excavation No. 1		
B-1W (7')	5.9	ND, except for 0.075 1,1,2-Trichlorotrifluoroethane
B-1E (7')	130	ND
KVA1 (13-14')	ND	ND

Definitions: **ND=Not Detected DRO=Diesel Range Organics**
VOCs=Volatile Organic Compounds by Method 465D

NOTE: COPIES OF LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS MUST BE INCLUDED.

VI. FIGURES (See Appendix)

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; and**
   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**

VII. SUMMARY

Briefly summarize evidence indicating whether additional investigation is necessary at the site, as discussed in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6.). If no further action is recommended, the MPCA staff will review this report following notification of soil treatment.

On December 7, 1994, we monitored the removal of one 500 gallon used oil UST by Minnesota Petroleum at the Goodyear Facility in Maplewood, Minnesota. We also collected soil samples for headspace and laboratory analyses.

During our monitoring, we did not observe evidence, such as elevated headspace readings, petroleum odors, or soil discoloration, to indicate that a release had occurred from the tank. However, the laboratory analysis results indicated that DRO was detected (5.9 and 130 ppm) in the collected soil samples.

On January 13, 1995, we drilled one KVA Soil Probe through the base of the tank basin to collect soil samples for headspace and laboratory analyses. We did not detect organic vapors in the headspace sample, and laboratory analysis did not detect DRO or VOC parameters. Based on a nearby groundwater monitoring well, the groundwater in the area is approximately 27 feet below grade. The area soils generally consist of silty sand.

The MPCA Guidance Document states that additional work is not required if organic vapor readings are below MPCA action levels during initial tank removal soil monitoring, the laboratory analyzed soil samples in sands are below 50 ppm total petroleum hydrocarbons (TPH) (there were no detections in the KVA soil samples), and groundwater is not in contact with impacted soils. Based on the site data meeting these criteria, it is our opinion that no additional testing is necessary at the former tank location and we recommend that the MPCA close the site after their review of this report.

VIII. SOIL TREATMENT INFORMATION

A. Soil treatment method used (thermal, land application, other). If you choose "other", specify treatment method: Not applicable.

B. Location of treatment site/facility: Not applicable.

C. Date MPCA approved soil treatment (if thermal treatment was used after May 1, 1991, indicate date that the MPCA permitted thermal treatment facility agreed to accept soil): Not applicable.

D. Identify the location of any stockpiled contaminated soil:

IX. CONSULTANT (OR OTHER) PREPARING THIS REPORT

Company Name: GME Consultants, Inc.
Street/Box: 14000 21st Avenue North
City/Zip: Plymouth, MN 55447
Telephone: 612-559-1859
Contacts: Mr. Timothy F. McGlennen
Environmental Biologist
Project Manager

Ms. Sandra J. Forrest
Senior Hydrogeologist
Regional Environmental Division Manager

Signature: Timothy J. McGlennen Date: 3/27/95

Signature: Sandra J. Forrest Date: 3/27/95

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, include this form as a section in the Remedial Investigation/Corrective Action Design report. Excavation reports indicating a remedial investigation (RI) is necessary will not be reviewed by MPCA staff until the RI has been completed.

TFM:sab

A. FIGURES

FIGURE 1 REGIONAL LOCATION DIAGRAM

FIGURE 2 SITE DIAGRAM

FIGURE 3 HEADSPACE AND LABORATORY SOIL SAMPLE LOCATIONS

FIGURE 4 APPROXIMATE KVA SOIL PROBE LOCATION

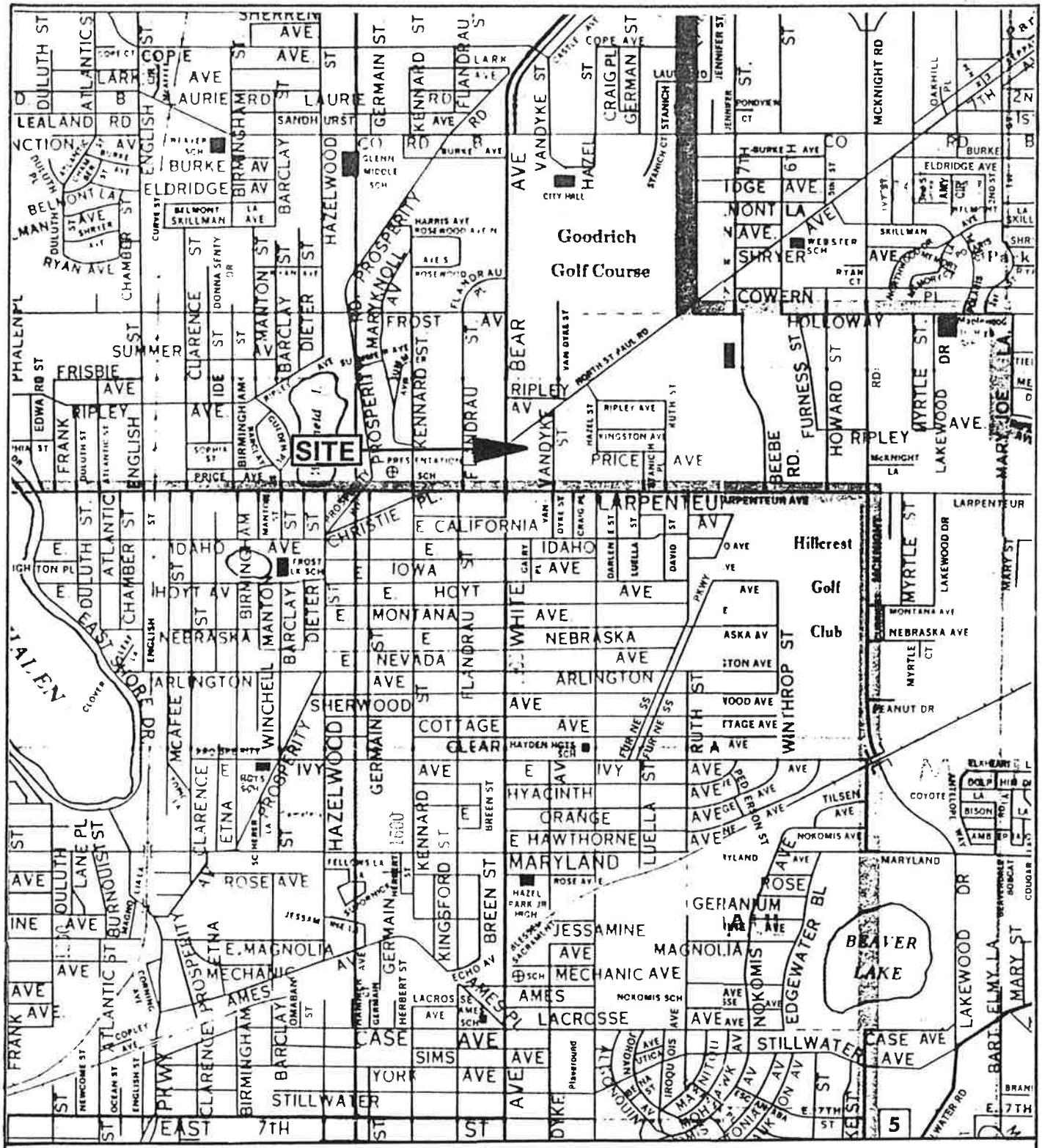


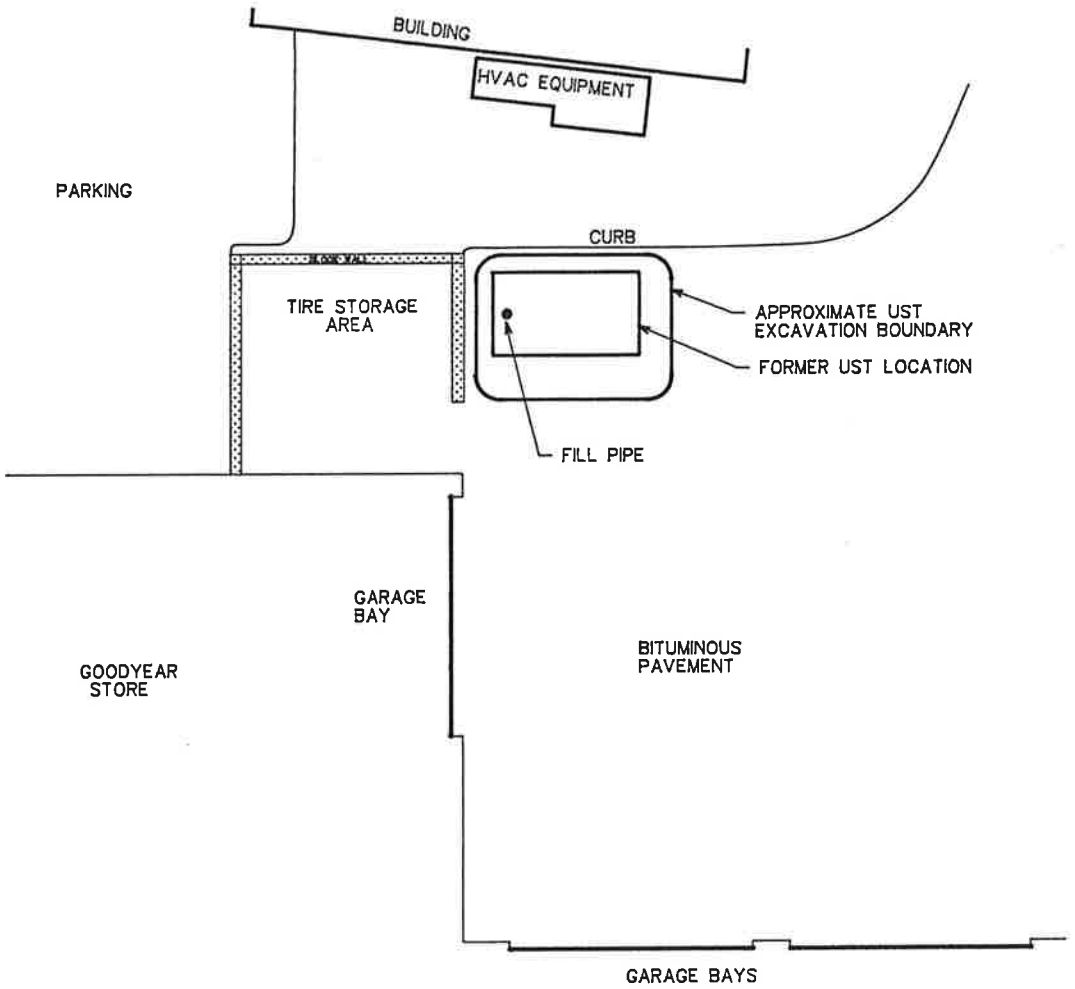
FIGURE 1: REGIONAL LOCATION DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

N

GME CONSULTANTS, INC.
14000 21st Avenue North
Minneapolis, MN 55447

TFM	SJF	3/95	4972



APPROXIMATE SCALE

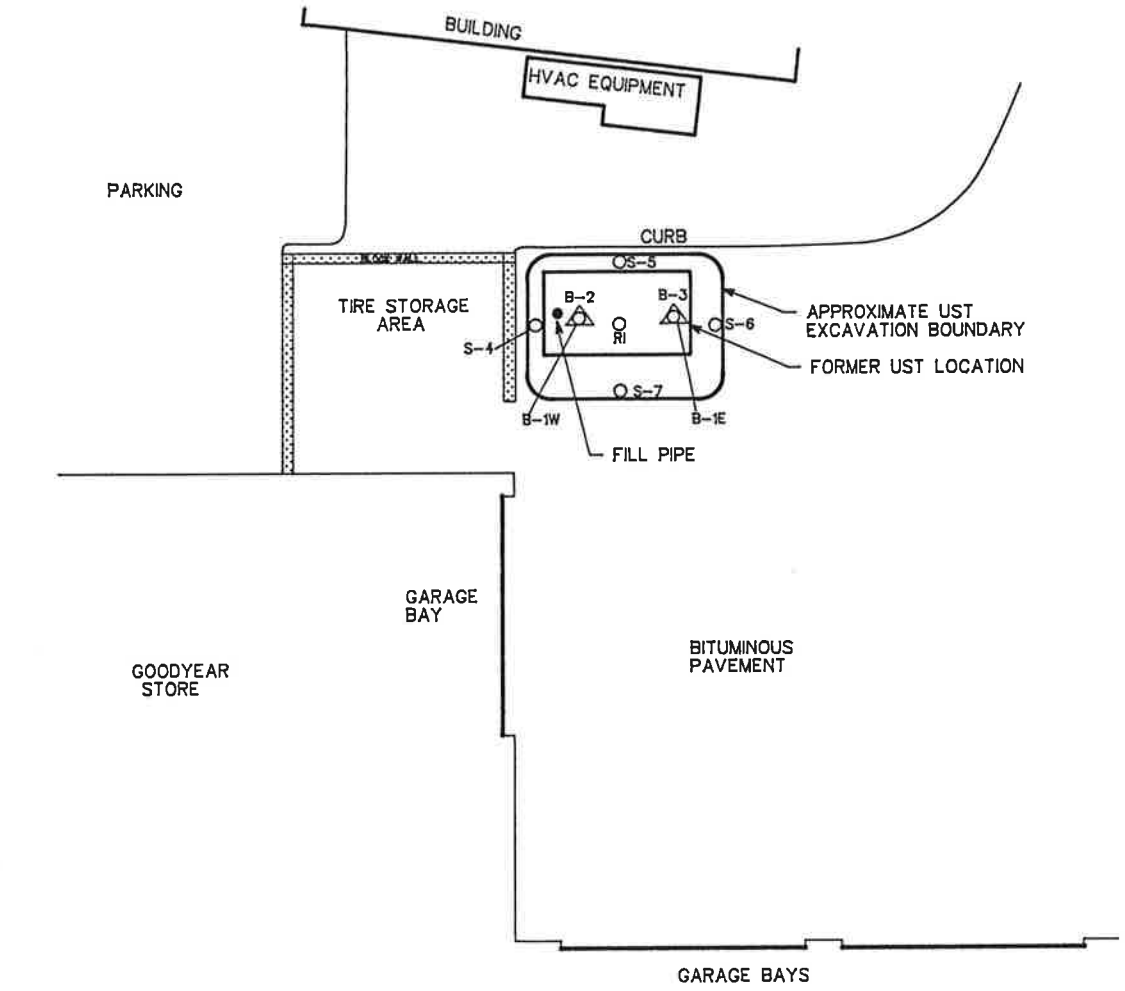
0' FEET 8'

GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 2: SITE DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972



LEGEND

○ HEADSPACE SAMPLE LOCATION

△ LABORATORY SAMPLE LOCATION

N

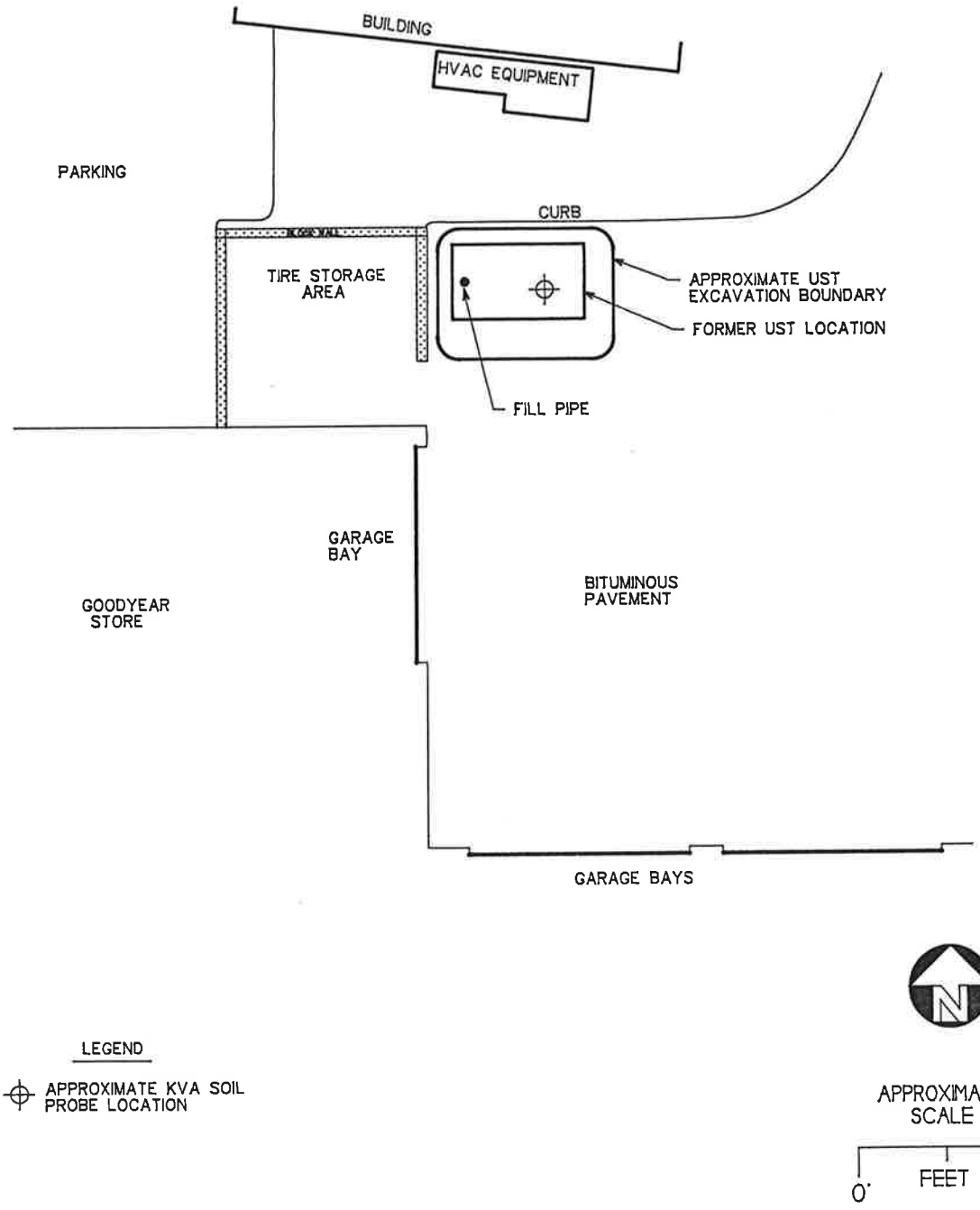
APPROXIMATE SCALE

0' FEET 8'

GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 3: HEADSPACE & LABORATORY SOIL SAMPLE LOCATIONS
GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972



GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 4: APPROXIMATE KVA SOIL PROBE LOCATION

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972

B. INTERPOLL LABORATORY REPORT - UST EXCAVATION

Interpoll Laboratories, Inc.
4500 Ball Road N.E.
Circle Pines, Minnesota 55014-1819

TEL: (612) 786-6020
FAX: (612) 786-7854

ANALYTICAL RESULTS
FOR GME CONSULTANTS, INC.
PROJECT: #4972

Submitted to:

GME Consultants, Inc.
14000 - 21st Avenue N
Plymouth, Minnesota 55447

Attention: William Donahue

Approved By:

Wayne A Olson, Manager
Organic Chemistry Group

Laboratory Report #4516
January 6, 1995

PROJECT SUMMARY

The following laboratory report contains the analytical results for two soil samples submitted to Interpoll Laboratories, Inc. (ILI) by GME Consultants, Inc. for GME's Project #4972. The samples were received on December 7, 1994 according to Interpoll Labs documented sample acceptance procedures. The samples were analyzed for the parameters requested on GME's Chain-of-Custody #010821.

Sample Identificaiton	ILI Sample #
B-1 W	4516-01
B-1 E	4516-02

Results are reported on an a dry weight basis.

Footnote:

[a]Although quantified as diesel range organics as requested, the chromatographic pattern more closely resembles that of motor oil.

[b]Although quantified as diesel range organics as requested, the chromatographic pattern more closely resembles that of motor oil with a minor amount of fuel oil.

[c]Sample extract was diluted as indicated to accommodate the analyte concentration. Reported value represents the concentration in the original undiluted sample, i.e., instrumental result was multiplied by the dilution factor prior to reporting. Achieved detection limit is given. The target detection limit applicable to the sample may be obtained by dividing the achieved detection limit by the dilution factor.

WAO/bj
BDL = below detection limit
Invoice Enclosed

Sample Identification: B-1 W
Sample Type: Soil
Laboratory Log Number: 4516-01

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
EPA Method 160.3:			
Preparation Date: 12/12/94			
Analysis Date: 12/12/94			
Total solids, %	0.1	94.9	
Wisconsin DNR Method DRO,			
Preparation Date: 12/8/94			
Analysis Date: 12/10/94			
Diesel range organics	1.1	5.9 [a]	BDL
MDH Method 465-D:			
Preparation Date: 12/13/94			
Analysis Date: 12/15/94			
Dichlorodifluoromethane	0.054	BDL	BDL
Chloromethane	0.064	BDL	BDL
Vinyl chloride	0.026	BDL	BDL
Bromomethane	0.036	BDL	BDL
Chloroethane	0.027	BDL	BDL
Dichlorofluoromethane	0.005	BDL	BDL
Trichlorofluoromethane	0.013	BDL	BDL
1,1-Dichloroethene	0.022	BDL	BDL
Allyl chloride	0.0093	BDL	BDL
Methylene chloride	0.47	BDL	BDL
trans-1,2-Dichloroethene	0.052	BDL	BDL
1,1-Dichloroethane	0.023	BDL	BDL
2,2-Dichloropropane	0.033	BDL	BDL
cis-1,2-Dichloroethene	0.026	BDL	BDL
Bromochloromethane	0.0093	BDL	BDL
Chloroform	0.013	BDL	BDL
1,1,2-Trichlorotrifluoroethane	0.025	0.075	BDL
1,1,1-Trichloroethane	0.016	BDL	BDL
Carbon tetrachloride	0.005	BDL	BDL
1,1-Dichloro-1-propene	0.005	BDL	BDL
1,2-Dichloroethane	0.012	BDL	BDL
Trichloroethene	0.012	BDL	BDL

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
m/p-Xylene	0.040	BDL	BDL
o-Xylene	0.072	BDL	BDL
Styrene	0.036	BDL	BDL
Isopropylbenzene	0.061	BDL	BDL
n-Propylbenzene	0.032	BDL	BDL
1,3,5-Trimethylbenzene	0.031	BDL	BDL
tert-Butylbenzene	0.051	BDL	BDL
1,2,4-Trimethylbenzene	0.022	BDL	BDL
sec-Butylbenzene	0.057	BDL	BDL
p-Isopropyltoluene	0.044	BDL	BDL
n-Butylbenzene	0.051	BDL	BDL
Naphthalene	0.038	BDL	BDL

Sample Identification: B-1 E
Sample Type: Soil
Laboratory Log Number: 4516-02

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
EPA Method 160.3:			
Preparation Date: 12/12/94			
Analysis Date: 12/12/94			
Total solids, %	0.1	94.8	
Wisconsin DNR Method DRO,			
Preparation Date: 12/8/94			
Analysis Date: 12/10/94			
Diesel range organics	5.3	130 [b]	BDL
Dilution Factor		5 [c]	5 [c]
MDH Method 465-D:			
Preparation Date: 12/13/94			
Analysis Date: 12/15/94			
Dichlorodifluoromethane	0.054	BDL	BDL
Chloromethane	0.064	BDL	BDL
Vinyl chloride	0.026	BDL	BDL
Bromomethane	0.036	BDL	BDL
Chloroethane	0.027	BDL	BDL
Dichlorofluoromethane	0.005	BDL	BDL
Trichlorofluoromethane	0.013	BDL	BDL
1,1-Dichloroethene	0.022	BDL	BDL
Allyl chloride	0.0093	BDL	BDL
Methylene chloride	0.47	BDL	BDL
trans-1,2-Dichloroethene	0.052	BDL	BDL
1,1-Dichloroethane	0.023	BDL	BDL
2,2-Dichloropropane	0.033	BDL	BDL
cis-1,2-Dichloroethene	0.026	BDL	BDL
Bromochloromethane	0.0093	BDL	BDL
Chloroform	0.013	BDL	BDL
1,1,2-Trichlorotrifluoroethane	0.025	BDL	BDL
1,1,1-Trichloroethane	0.016	BDL	BDL
Carbon tetrachloride	0.005	BDL	BDL
1,1-Dichloro-1-propene	0.005	BDL	BDL
1,2-Dichloroethane	0.012	BDL	BDL
Trichloroethene	0.012	BDL	BDL

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
1,2-Dichloropropane	0.012	BDL	BDL
2,3-Dichloro-1-propene	0.020	BDL	BDL
Dibromomethane	0.030	BDL	BDL
Bromodichloromethane	0.011	BDL	BDL
trans-1,3-Dichloropropene	0.011	BDL	BDL
cis-1,3-Dichloropropene	0.017	BDL	BDL
2-Chloroethylvinyl ether	0.017	BDL	BDL
1,1,2-Trichloroethane	0.012	BDL	BDL
Tetrachloroethene	0.011	BDL	BDL
1,3-Dichloropropane	0.0093	BDL	BDL
Dibromochloromethane	0.026	BDL	BDL
1,2-Dibromoethane	0.036	BDL	BDL
Chlorobenzene	0.049	BDL	BDL
1,1,1,2-Tetrachloroethane	0.030	BDL	BDL
Bromoform	0.012	BDL	BDL
Bromobenzene	0.0079	BDL	BDL
1,2,3-Trichloropropane	0.011	BDL	BDL
1,1,2,2-Tetrachloroethane	0.0079	BDL	BDL
2-Chlorotoluene	0.019	BDL	BDL
4-Chlorotoluene	0.027	BDL	BDL
1,3-Dichlorobenzene	0.0066	BDL	BDL
1,4-Dichlorobenzene	0.015	BDL	BDL
1,2-Dichlorobenzene	0.020	BDL	BDL
1,2-Dibromo-3-chloropropane	0.021	BDL	BDL
1,2,4-Trichlorobenzene	0.0093	BDL	BDL
Hexachlorobutadiene	0.015	BDL	BDL
1,2,3-Trichlorobenzene	0.021	BDL	BDL
Ethyl ether	0.076	BDL	BDL
Acetone	0.49	BDL	BDL
Tetrahydrofuran	0.96	BDL	BDL
Methyl ethyl ketone	0.37	BDL	BDL
Methyl tertiary butyl ether	0.057	BDL	BDL
Benzene	0.065	BDL	BDL
Methyl isobutyl ketone	0.16	BDL	BDL
Toluene	0.041	BDL	BDL
Ethylbenzene	0.044	BDL	BDL

Sample Identification: B-1 E
Sample Type: Soil
Laboratory Log Number: 4516-02

Interpoll Laboratories, Inc.
Laboratory Report #4516
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
m/p-Xylene	0.040	BDL	BDL
o-Xylene	0.072	BDL	BDL
Styrene	0.036	BDL	BDL
Isopropylbenzene	0.061	BDL	BDL
n-Propylbenzene	0.032	BDL	BDL
1,3,5-Trimethylbenzene	0.031	BDL	BDL
tert-Butylbenzene	0.051	BDL	BDL
1,2,4-Trimethylbenzene	0.022	BDL	BDL
sec-Butylbenzene	0.057	BDL	BDL
p-Isopropyltoluene	0.044	BDL	BDL
n-Butylbenzene	0.051	BDL	BDL
Naphthalene	0.038	BDL	BDL

interpoll

010821

CHAIN-OF-CUSTODY RECORD
Analytical Request

INTERPOLL LABORATORIES, INC.
4500 BALL ROAD N.E.
CIRCLE PINES, MINNESOTA 55014-18
TEL: 612/786-6020
FAX: 612/786-7854

Client: GME
Address: Plymouth
Phone: 559-1859

Route Report To: William L Donahue
Bill To: GME
P.O.:
Project Name/No.: 4972 maplewood

SPECIAL HANDLING REQUEST
☐ RUSH
☐ OTHER
☐ QUOTE NO.

Sampled By (Print): William L Donahue
Sampler Signature: [signature] Date: 12/7/94

Item No.	Sample Description	Date/ Time	Matrix	Interpoll Log No.	Number of Containers of Each Preservatives: None	HNO_3	H_2SO_4	NaOH	VOC			Total No. Cont.	PID/FID: Ambient	Sample	Analytical Request: VOC's 465D	DRO	DRO w/o Acid					COMMENTS
1	B-1 W	12/7 Am	Soil	11516-01	4							4			X	X	X					
2	B-1 E	12/7 Am	Soil	-02	4							4			X	X	X					

Additional Comments:

Laboratory Comments Only:

Item No.	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
1-2	[signature] /GME	B.A. Sang, Interpoll	12/7/94	1230

White – Original/File Copy Yellow – Report Copy Pink – Client Copy

See Reverse Side For Instructions

LCI-117

C. INTERPOLL LABORATORY REPORT - KVA PROBE

Interpoll Laboratories, Inc.
4500 Ball Road N.E.
Circle Pines, Minnesota 55014-1819

TEL: (612) 786-6020
FAX: (612) 786-7854

ANALYTICAL RESULTS
FOR GME CONSULTANTS, INC.
PROJECT: GOODYEAR STORE

Submitted to:

GME Consultants, Inc.
14000 - 21st Avenue N
Plymouth, Minnesota 55447

Attention: Tim McGlennen

Approved By:

Wayne A. Olson, Manager
Organic Chemistry Group

Laboratory Report #4713
January 31, 1995

PROJECT SUMMARY

The following laboratory report contains the analytical results for one soil sample submitted to Interpoll Laboratories, Inc. (ILI) by GME Consultants, Inc. for GME's Goodyear Store Project. The sample was received on January 13, 1995 according to Interpoll Labs documented sample acceptance procedures. The sample was analyzed for the parameters requested on GME's Chain-of-Custody #010814.

Sample Identificaiton	ILI Sample #
KVA1	4713-01

Results are reported on a dry weight basis.

WAO/bj
BDL = below detection limit
Invoice Enclosed

Sample Identification: KVA1
Sample Type: Soil
Laboratory Log Number: 4713-01

Interpoll Laboratories, Inc.
Laboratory Report #4713
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
EPA Method 160.3:			
Preparation Date: 1/23/95			
Analysis Date: 1/23/95			
Total solids, %	0.1	91.4	
Wisconsin DNR Method DRO,			
Preparation Date: 1/19/95			
Analysis Date: 1/20/95			
Diesel range organics	1.1	BDL	BDL
MDH Method 465-D:			
Preparation Date: 1/18/95			
Analysis Date: 1/18/95			
Dichlorodifluoromethane	0.056	BDL	BDL
Chloromethane	0.067	BDL	BDL
Vinyl chloride	0.027	BDL	BDL
Bromomethane	0.037	BDL	BDL
Chloroethane	0.028	BDL	BDL
Dichlorofluoromethane	0.005	BDL	BDL
Trichlorofluoromethane	0.013	BDL	BDL
1,1-Dichloroethene	0.023	BDL	BDL
Allyl chloride	0.0096	BDL	BDL
Methylene chloride	0.49	BDL	BDL
trans-1,2-Dichloroethene	0.054	BDL	BDL
1,1-Dichloroethane	0.024	BDL	BDL
2,2-Dichloropropane	0.034	BDL	BDL
cis-1,2-Dichloroethene	0.027	BDL	BDL
Bromochloromethane	0.0096	BDL	BDL
Chloroform	0.013	BDL	BDL
1,1,2-Trichlorotrifluoroethane	0.026	BDL	BDL
1,1,1-Trichloroethane	0.016	BDL	BDL
Carbon tetrachloride	0.005	BDL	BDL
1,1-Dichloro-1-propene	0.005	BDL	BDL
1,2-Dichloroethane	0.012	BDL	BDL
Trichloroethene	0.012	BDL	BDL
1,2-Dichloropropane	0.012	BDL	BDL
2,3-Dichloro-1-propene	0.021	BDL	BDL

Sample Identification: KVA1
Sample Type: Soil
Laboratory Log Number: 4713-01

Interpoll Laboratories, Inc.
Laboratory Report #4713
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
Dibromomethane	0.031	BDL	BDL
Bromodichloromethane	0.011	BDL	BDL
trans-1,3-Dichloropropene	0.011	BDL	BDL
cis-1,3-Dichloropropene	0.018	BDL	BDL
2-Chloroethylvinyl ether	0.018	BDL	BDL
1,1,2-Trichloroethane	0.012	BDL	BDL
Tetrachloroethene	0.011	BDL	BDL
1,3-Dichloropropane	0.0096	BDL	BDL
Dibromochloromethane	0.027	BDL	BDL
1,2-Dibromoethane	0.037	BDL	BDL
Chlorobenzene	0.050	BDL	BDL
1,1,1,2-Tetrachloroethane	0.031	BDL	BDL
Bromoform	0.012	BDL	BDL
Bromobenzene	0.0082	BDL	BDL
1,2,3-Trichloropropane	0.011	BDL	BDL
1,1,2,2-Tetrachloroethane	0.0082	BDL	BDL
2-Chlorotoluene	0.020	BDL	BDL
4-Chlorotoluene	0.028	BDL	BDL
1,3-Dichlorobenzene	0.0069	BDL	BDL
1,4-Dichlorobenzene	0.015	BDL	BDL
1,2-Dichlorobenzene	0.021	BDL	BDL
1,2-Dibromo-3-chloropropane	0.022	BDL	BDL
1,2,4-Trichlorobenzene	0.0096	BDL	BDL
Hexachlorobutadiene	0.015	BDL	BDL
1,2,3-Trichlorobenzene	0.022	BDL	BDL
Ethyl ether	0.079	BDL	BDL
Acetone	0.50	0.65	0.67
Tetrahydrofuran	1.0	BDL	BDL
Methyl ethyl ketone	0.38	BDL	BDL
Methyl tertiary butyl ether	0.059	BDL	BDL
Benzene	0.068	BDL	BDL
Methyl isobutyl ketone	0.16	BDL	BDL
Toluene	0.043	BDL	BDL
Ethylbenzene	0.046	BDL	BDL
m/p-Xylene	0.042	BDL	BDL
o-Xylene	0.074	BDL	BDL

Sample Identification: KVA1
Sample Type: Soil
Laboratory Log Number: 4713-01

Interpoll Laboratories, Inc.
Laboratory Report #4713
GME Consultants, Inc.

	Achieved Detection Limit (mg/Kg)	Analytical Result (mg/Kg)	Equivalent Method Blank
MDH Method 465-D (continued):			
Styrene	0.037	BDL	BDL
Isopropylbenzene	0.063	BDL	BDL
n-Propylbenzene	0.033	BDL	BDL
1,3,5-Trimethylbenzene	0.032	BDL	BDL
tert-Butylbenzene	0.053	BDL	BDL
1,2,4-Trimethylbenzene	0.023	BDL	BDL
sec-Butylbenzene	0.059	BDL	BDL
p-Isopropyltoluene	0.046	BDL	BDL
n-Butylbenzene	0.053	BDL	BDL
Naphthalene	0.039	BDL	BDL

interpoll

010814

CHAIN-OF-CUSTODY RECORD
Analytical Request

INTERPOLL LABORATORIES, INC.
4500 BALL ROAD N.E.
CIRCLE PINES, MINNESOTA 55014-1819
TEL: 612/786-6020
FAX: 612/786-7854

Client: Gme
Address: 14000 21st Ave N, Mpls MN
Phone: 559-1855

Route Report To: Tim McGlasson
Bill To: Gme
P.O.
Project Name/No. Goodyear Store

SPECIAL HANDLING REQUEST
☐ RUSH
☒ OTHER 5-day turn
☐ QUOTE NO.

Sampled By (Print): Tom Zanhar 11-13-95
Sampler Signature: [signature] Date

Item No.	Sample Description	Date/Time	Matrix	Interpoll Log No.	None	HNO_3	H_2SO_4	NaOH	VOC.			Total No. Cont.	Ambient	Sample	DRO/BTEX	VOCs 465	RCRA Metals	PCBs				COMMENTS
1	KVA-1c	12:06	Soil	4713-01	✓							4			X	X						
[illegible]	[illegible]	↓	[illegible]													x	X	X				
[illegible]	[illegible]	↓	[illegible]															X				

Additional Comments:
EXTRACT metals/PCBs sample
But hold for analysis

ments Only:
[illegible] with metals because of [illegible] time.

Item No.	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
1	Tom Zanhar / [illegible]	Karen Tollefson	1/13	1:20

Copy   Yellow – Report Copy   Pink – Client Copy

See Reverse Side For Instructions

LCI-117

LOG OF BORING KVA-1

PROJECT UST Closure	SITE Goodyear Facility Maplewood, Minnesota
CLIENT Bruce Odlang	ARCHITECT-ENGINEER

DEPTH, FEET	SAMPLE NUMBER AND TYPE	WATER LEVEL	STRATA CHANGE, FEET	DESCRIPTION OF MATERIAL SURFACE ELEVATION →	SPECIAL TEST RESULTS PID READINGS	N-VALUE (BLOWS/FT.)
				Brown SILTY SAND - dry - (SM) (FILL)		
5			7.0			
				Brown SILTY SAND, trace clay, gravel - dry - (SM)		
10						
	1SS				0.2	
	2SS		14.0		0.0	
				End of Probe at 14 feet Probe hole backfilled with bentonite clay		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
1 2 3 4 5

WATER CONTENT %

STANDARD PENETRATION (BLOWS/FOOT)
10 20 30 40 50

WATER LEVEL OBSERVATIONS	
W.L.	Groundwater not encountered
W.L.	
W.L.	

GME CONSULTANTS, INC.
Geotechnical · Materials · Environmental
14000 21st Avenue North
Minneapolis, Minnesota 55441
(612) 559-1859

BORING STARTED	1/13/95
BORING COMPLETED	1/13/95
RIG KVA Probe	DRILLER TZ
DRAWN TFM	APPROVED SJF
JOB # 4972	SHEET 1 of 1

The stratification lines represent approximate boundaries between soil types; insitu the transition may be gradual.

E. SA MONITORING WELL INFORMATION

MAUN & SIMON, PLC

LAWRENCE J. HAYES*
JEROME B. SIMON
JOHN C. JOHANNESON
JAMES W. BREHL*
BRUCE G. ODLAUG
ALBERT A. WOODWARD
GARRETT E. MULROONEY*
WILLIAM J. HASSING*
JAMES A. GALLAGHER
CHARLES BANS
BARRY A. GERSICK
GEOFFREY P. JARPE*
RICHARD M. GAALSWYK
LARRY B. GUTHRIE
SETH M. COLTON
HAROLD LEVANDER, JR.

*ALSO ADMITTED IN WISCONSIN

REPLY TO: Minneapolis

MINNEAPOLIS OFFICE

2900 NORWEST CENTER
90 SOUTH SEVENTH STREET
MINNEAPOLIS, MINNESOTA 55402-4133
TELEPHONE 612-338-1113
TELECOPIER 612-338-2271

SAINT PAUL OFFICE

2300 WORLD TRADE CENTER
30 EAST 7TH STREET
SAINT PAUL, MINNESOTA 55101-4904
TELEPHONE 612-229-2900
TELECOPIER 612-229-2800

J. PATRICK BRINKMAN*
RICHARD C. SALMEN
JOHN J. BOWDEN
PHILIP T. COLTON
RUTH SILSETH MARCOTT
TREVOR R. WALSTEN
JOHN R. LANDIS
MARK R. GLEEMAN
STEPHEN E. YOCH
JENNIFER A. TENENBAUM
JEANNE GLADER KILDOW
DANIEL S. SIMON

OF COUNSEL
JOSEPH M. NEMO, JR.

RETIRED
MERLYN C. GREEN

JOSEPH A. MAUN
1909-1991

February 1, 1995

Timothy F. McGlennen
Environmental Biologist
Project Manager
GME Consultants, Inc.
14000 21st Avenue North
Minneapolis, MN 55447

Re: Goodyear Store
1735 Van Dyke Avenue, Maplewood, MN

Dear Tim:

Enclosed for your information is a copy of the Delta report on the monitoring well which was inadvertently placed on our property. I thought this might be of some help to you in connection with the clean-up of the release from the waste oil tank.

Delta advises that the well was abandoned on January 22, 1995.

Very truly yours,

Bruce G. Odlaug

Bruce G. Odlaug

BGØ:jd
Enclosure

cc: Neil R. Hartman

2/01/95,BGO,38406_1M

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING SEALING RECORD

Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No. H 59986

Minnesota Unique No. or W-series No. (Leave blank if not known) 552035

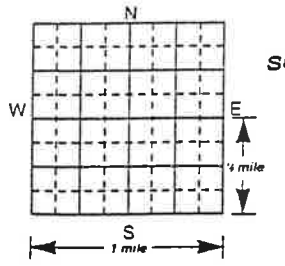
WELL OR BORING LOCATION

County Name: Ramsey

Township Name	Township No.	Range No.	Section No.	Fraction (sm., lg.)
Maplewood	29N	22W	14	SW¼ SW¼ SW¼

Numerical Street Address or Fire Number and City of Well or Boring Location: 1814 N. St. Paul Road

Show exact location of well or boring in section grid with "X".



Sketch map of well or boring location, showing property lines, roads, and buildings.

see attached map

PROPERTY OWNER'S NAME

Minn. Health

Mailing Address if different than property address indicated above.

GEOLOGICAL MATERIAL	COLOR	HARDNESS OF FORMATION	FROM	TO
If not known, indicate estimated formation log from nearby well or boring.				
Glacial Drift			0	35

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

440-2122
Tremie Grout Shut
MW-4

Date Sealed: 1-22-95

Approximate Date Well or Boring Constructed: 9-9-94

Depth Before Sealing: 35.0 ft.

Original Depth: 35.0 ft.

☒ Single Aquifer ☐ Multiaquifer

Static Water Level ☐ Accurate ☒ Approximate: X ft. 27 below ____ above land surface

CASING TYPE

☐ Steel ☒ Plastic ☐ Tile ☐ Other

Screen from ~~X~~ 25 to 35 ft. Open Hole from ____ to ____ ft.

OBSTRUCTION/DEBRIS/FILL

☐ Obstruction ☐ Debris ☐ Fill

Type of debris/obstruction: none

Obstruction/Debris/Fill removed? ☐ Yes ☐ No

PUMP

☐ Removed ☒ Not Present ☐ Other

CASING

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
2 in.	from 0 to 25 ft.	☒ Yes ☐ No	☒ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown
____ in.	from ____ to ____ ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:

☒ No Annular Space Exists

☐ Annular space grouted with tremie pipe

☐ Casing Perforation/Removal

____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed

____ in. from ____ to ____ ft. ☐ Perforated ☐ Removed

Type of perforator: ____

☐ Other ____

GROUTING MATERIAL

Grouting material: cement from 0 to 35 ft. ____ yards 1 bags

____ from ____ to ____ ft. ____ yards ____ bags

____ from ____ to ____ ft. ____ yards ____ bags

____ from ____ to ____ ft. ____ yards ____ bags

UNSEALED WELLS AND BORINGS

Other unsealed well or boring on property? ☐ Yes ☒ No

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Boart Longyear — *Contractor Business Name*

27653 — *License or Registration No.*

Mark Thalacker — *Authorized Representative Signature*

1-23-95 — *Date*

Mike Thalacker — *Name of Person Sealing Well or Boring*

IMPORTANT — FILE WITH PROPERTY PAPERS — WELL OWNER COPY

H 59986

HE-01434-01

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY REPORT

Client:	Delta Environmental Consultants, Inc	Date Sampled:	10/17/94
	3900 Northwoods Drive, Suite 200	Date Received:	10/18/94
	St. Paul, MN 55112	Date Analyzed:	10/25/94
	Attn: Jim DeLuca	Physical State:	Aqueous
Project:	SuperAmerica #4022	Report Date:	10/27/94
	Maplewood, MN	Lab P.N.:	1000-212.4
		Client P.N.:	A093-376-1.0001

Quality Assurance / Quality Control Summary

Parameter (Method)	QC Type	Percent Recovery	Acceptable Range	Percent Reproducibility	Acceptable Range
Benzene (MDH 465D)	M	101	120 - 80	105	120 - 80
Toluene (MDH 465D)	M	84	120 - 80	101	120 - 80
Ethylbenzene (MDH 465D)	M	84	120 - 80	101	120 - 80
m,p-Xylenes (MDH 465D)	M	85	120 - 80	100	120 - 80
o-Xylenes (MDH 465D)	M	84	120 - 80	101	120 - 80
1,3,5-Trimethylbenzene (MDH 465D)	M	85	120 - 80	101	120 - 80
1,2,4-Trimethylbenzene (MDH 465D)	M	85	120 - 80	101	120 - 80
GRO (Wis. DNR)	M	89	117 - 85	99	115 - 84

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area of known standards using a Hewlett Packard ChemStation Data System. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 10/17/94
Date Analyzed: 10/25/94
Physical State: Aqueous

Report Date: 10/27/94
Lab P.N.: 1000-212.4
Client P.N.: A093-376-1.0001

Sample I.D.	Benzene µg/l EPA 8020	Toluene µg/l EPA 8020	Ethyl-benzene µg/l EPA 8020	Total, Xylenes µg/l EPA 8020	GRO µg/l Wis. DNR
MW-4	<0.20	<0.50	<0.20	<0.80	<20
MW-5	---	---	---	---	<20
Field Blank	<0.20	<0.50	<0.20	<0.80	<20
MDL, µg/l	0.20	0.50	0.20	0.80	20

---, See MDH 465D results.
MDL, Method Detection Limit
GRO; Gasoline Range Organics
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client:	Delta Environmental Consultants, Inc 3900 Northwoods Drive, Suite 200 St. Paul, MN 55112 Attn: Jim DeLuca	Date Sampled: Date Analyzed: Physical State:	10/17/94 10/25/94 Aqueous
Project:	SuperAmerica #4022 Maplewood, MN	Report Date: Lab P.N.: Client P.N.:	10/25/94 1000-212.4 A093-376-1.0001

MDH 465D

Sample I.D.	MW-5	MDL
Parameter	µg/l	µg/l
Acetone	<30	30
Allyl Chloride	<0.8	0.8
Benzene	<0.2	0.2
Bromobenzene	<0.4	0.4
Bromochloromethane	<0.5	0.5
Bromodichloromethane	<0.6	0.6
Bromoform	<0.2	0.2
Bromomethane	<0.9	0.9
n-Butylbenzene	<0.2	0.2
sec-Butylbenzene	<0.2	0.2
tert-Butylbenzene	<0.2	0.2
Carbon Tetrachloride	<0.5	0.5
Chlorobenzene	<0.2	0.2
Chloroethane	<10	10
Chloroform	<0.5	0.5
Chloromethane	<10	10
2-Chlorotoluene	<0.3	0.3
4-Chlorotoluene	<0.7	0.7
Dibromochloromethane	<0.4	0.4
1,2-Dibromo-3-Chloropropane	<0.3	0.3
1,2-Dibromoethane	<0.6	0.6
Dibromomethane	<0.9	0.9
1,2-Dichlorobenzene	<0.4	0.4
1,3-Dichlorobenzene	<0.3	0.3
1,4-Dichlorobenzene	<0.5	0.5
Dichlorodifluoromethane	<6.0	6.0
1,1-Dichloroethane	<0.4	0.4
1,2-Dichloroethane	<1.1	1.1
1,1-Dichloroethene	<1.2	1.2
cis-1,2-Dichloroethene	<0.1	0.1
trans-1,2-Dichloroethene	<0.5	0.5
Dichlorofluoromethane	<20	20
1,2-Dichloropropane	<0.5	0.5
1,3-Dichloropropane	<0.4	0.4

MDL: Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Date Sampled: 10/17/94
Date Analyzed: 10/25/94
Physical State: Aqueous

Project: SuperAmerica #4022
Maplewood, MN

Report Date: 10/25/94
Lab P.N.: 1000-212.4
Client P.N.: A093-376-1.0001

MDH 465D

Sample I.D.	MW-5	MDL
Parameter	µg/l	µg/l
*2,2-Dichloropropane	<0.7	0.7
1,1-Dichloropropene	<0.5	0.5
cis-1,3-Dichloropropene	<0.5	0.5
trans-1,3-Dichloropropene	<0.3	0.3
Ethyl Benzene	<0.2	0.2
Ethyl Ether	<5.0	5.0
Hexachlorobutadiene	<0.6	0.6
Isopropyl Benzene	<0.2	0.2
p-Isopropyltoluene	<0.2	0.2
Methyl Ethyl Ketone	<15	15
Methyl Isobutyl Ketone	<60	60
Methyl tert-Butyl Ether	<5.0	5.0
Methylene Chloride	<0.4	0.4
Naphthalene	<0.2	0.2
*n-Propylbenzene	<0.2	0.2
o-Xylene	<0.3	0.3
Styrene	<0.5	0.5
1,1,1,2-Tetrachloroethane	<0.6	0.6
1,1,2,2-Tetrachloroethane	<0.4	0.4
Tetrachloroethene	34	0.5
Tetrahydrofuran	<15	15
Toluene	0.74	0.6
1,2,3-Trichlorobenzene	<1.0	1.0
1,2,4-Trichlorobenzene	<0.3	0.3
1,1,1-Trichloroethane	<1.0	1.0
1,1,2-Trichloroethane	<0.4	0.4
Trichloroethene	<0.6	0.6
Trichlorofluoromethane	<5.0	5.0
1,2,3-Trichloropropane	<0.4	0.4
1,1,2-Trichlorotrifluoroethane	<0.8	0.8
1,2,4-Trimethylbenzene	<0.4	0.4
*1,3,5-Trimethylbenzene	<0.2	0.2
Vinyl Chloride	<5.0	5.0
m,p-Xylenes	<0.5	0.5

*: coeluting compounds
MDL: Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Delta
Environmental
Consultants, Inc.
3900 Northwoods Dr., Suite 200
St. Paul, MN 55112

CHAIN–OF–CUSTODY RECORD

DELTA PROJECT NO. HC93-316-1.0001 | INVOICE CODE | PAGE 1 OF 1

PROJECT MANAGER: TIM DELUCA

PROJECT NAME: LIPPE AMERICA #4022

PROJECT LOCATION: MAPLEWOOD, MN

SAMPLER'S SIGNATURE: Allen F. Erickson

TURN AROUND REQUESTED: ☐ NORMAL ☐ RUSH _____ ☐ OTHER _____

LAB NAME: HORIZON

LAB USE ONLY

LABORATORY PROJECT NO.: 1000-212.4

SAMPLE ID	SAMPLE LOCATION/DESCRIPTION	DATE/TIME SAMPLED	SAMPLE MATRIX: SOIL(S): AIR(A): BULK(B): AQUEOUS(Q): SLUDGE(L): OTHER(O)	ANALYSIS REQUESTED: MOTOR OIL 418.1	ANALYSIS REQUESTED: BTEX 8020	NUMBER OF CONTAINERS	ACCEPT (A) REJECT (R)	SAMPLE CONDITION AS RECEIVED: ON ICE; CHILLED YES/NO; SEALED YES/NO; SAMPLE CONDITION/ COMMENTS	LABORATORY SAMPLE NUMBER
MW-4		10-17 / 15:45			✓ ✓				11791
MW-5		10-17 / 16:10		✓	✓				11792
FIELD BLANK		10-17 15:45			✓ ✓				11793

GENERAL COMMENTS: RESULTS TO P.M. JIM DELUCA.

TOTAL NUMBER OF CONTAINERS

1 RELINQUISHED BY (SIGNATURE)	DATE	TIME	3 RELINQUISHED BY (SIGNATURE)	DATE	TIME	5 RELINQUISHED BY (SIGNATURE)	DATE	TIME
Allen F. Erickson	10-17-99	16:00						
COMPANY: F.L.A. Environmental			COMPANY			COMPANY		
2 RECEIVED BY (SIGNATURE): Bryce Moore	DATE: 10-18-99		4 RECEIVED BY (SIGNATURE)			6 RECEIVED BY (SIGNATURE)		
COMPANY: Horizon	TIME: 9:45		COMPANY			COMPANY		

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Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY REPORT

Client:	Delta Environmental Consultants, Inc	Date Sampled:	09/24/94
	3900 Northwoods Drive, Suite 200	Date Received:	09/26/94
	St. Paul, MN 55112	Date Analyzed:	09/29/94
	Attn: Jim DeLuca	Physical State:	Aqueous
Project:	SuperAmerica #4022 Maplewood, MN	Report Date:	10/03/94
		Lab P.N.:	1000-212.3
		Client P.N.:	A093-376-1.0001

Quality Assurance / Quality Control Summary

Parameter: (Method)	QC Type	Percent Recovery	Acceptable Range	Percent Reproducibility	Acceptable Range
MtBE (MDH 465D)	M	86	120 - 80	104	120 - 80
Benzene (MDH 465D)	M	96	120 - 80	102	120 - 80
Toluene (MDH 465D)	M	93	120 - 80	102	120 - 80
Ethylbenzene (MDH 465D)	M	93	120 - 80	102	120 - 80
m,p-Xylenes (MDH 465D)	M	93	120 - 80	101	120 - 80
o-Xylene (MDH 465D)	M	92	120 - 80	103	120 - 80
Dibromomethane (MDH 465D)	M	101	120 - 80	105	120 - 80
1,2-Dibromo-3-Chloropropane (MDH 465D)	M	111	120 - 80	104	120 - 80
GRO (Wis. DNR)	M	98	117 - 85	103	115 - 84

M = Matrix Spike / Matrix Spike Duplicate L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area to those of known standards using a Hewlett Packard ChemStation data system. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody Record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/24/94
Date Analyzed: 09/29/94
Physical State: Aqueous

Report Date: 10/03/94
Lab P.N.: 1000-212.3
Client P.N.: A093-376-1.0001

Sample I.D.	Benzene µg/l EPA 8020	Toluene µg/l EPA 8020	Ethyl-benzene µg/l EPA 8020	Total, Xylenes µg/l EPA 8020	GRO µg/l Wis. DNR
MW-4	—	—	—	—	< 20
MW-5	—	—	—	—	< 20
MW-2	< 0.20	< 0.50	< 0.20	< 0.80	< 20
MW-3	< 0.20	< 0.50	< 0.20	< 0.80	< 20
MW-1	7,500	22,000	2,400	14,000	61,000
MDL, µg/l	0.20	0.50	0.20	0.80	20

—; See MDH 465D results.

MDL; Method Detection Limit for undiluted samples.

GRO; Gasoline Range Organics

All results are in µg/l which is equal to parts-per-billion (ppb).

The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client:	Delta Environmental Consultants, Inc 3900 Northwoods Drive, Suite 200 St. Paul, MN 55112 Attn: Jim DeLuca	Date Sampled: Date Analyzed: Physical State:	09/24/94 09/29/94 Aqueous
Project:	SuperAmerica #4022 Maplewood, MN	Report Date: Lab P.N.: Client P.N.:	10/03/94 1000-212.3 A093-376-1.0001

MDH 465D

Sample I.D.	MW-4	MW-5	MDL
Parameter	µg/l	µg/l	µg/l
Acetone	<30	<30	30
Allyl Chloride	<0.8	<0.8	0.8
Benzene	<0.3	<0.3	0.3
Bromobenzene	<0.4	<0.4	0.4
Bromochloromethane	<0.5	<0.5	0.5
Bromodichloromethane	<0.6	<0.6	0.6
Bromoform	<0.2	<0.2	0.2
Bromomethane	<0.9	<0.9	0.9
n-Butylbenzene	<0.3	<0.3	0.3
sec-Butylbenzene	<0.2	<0.2	0.2
tert-Butylbenzene	<0.4	<0.4	0.4
Carbon Tetrachloride	<0.5	<0.5	0.5
Chlorobenzene	<0.2	<0.2	0.2
Chloroethane	<10	<10	10
Chloroform	<0.5	<0.5	0.5
Chloromethane	<10	<10	10
2-Chlorotoluene	<0.3	<0.3	0.3
4-Chlorotoluene	<0.7	<0.7	0.7
Dibromochloromethane	<0.4	<0.4	0.4
1,2-Dibromo-3-Chloropropane	<0.3	<0.3	0.3
1,2-Dibromoethane	<0.6	<0.6	0.6
Dibromomethane	<0.9	<0.9	0.9
1,2-Dichlorobenzene	<0.4	<0.4	0.4
1,3-Dichlorobenzene	<0.3	<0.3	0.3
1,4-Dichlorobenzene	<0.5	<0.5	0.5
Dichlorodifluoromethane	<6.0	<6.0	6.0
1,1-Dichloroethane	<0.4	<0.4	0.4
1,2-Dichloroethane	<1.1	<1.1	1.1
1,1-Dichloroethene	<1.2	<1.2	1.2
cis-1,2-Dichloroethene	<0.1	<0.1	0.1
trans-1,2-Dichloroethene	<0.5	<0.5	0.5
Dichlorofluoromethane	<20	<20	20
1,2-Dichloropropane	<0.5	<0.5	0.5
1,3-Dichloropropane	<0.4	<0.4	0.4

MDL: Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/24/94
Date Analyzed: 09/29/94
Physical State: Aqueous

Report Date: 10/03/94
Lab P.N.: 1000-212.3
Client P.N.: A093-376-1.0001

MDH 465D

Sample I.D.	MW-4	MW-5	MDL
Parameter	µg/l	µg/l	µg/l
*2,2-Dichloropropane	<0.7	<0.7	0.7
1,1-Dichloropropene	<0.5	<0.5	0.5
cis-1,3-Dichloropropene	<0.5	<0.5	0.5
trans-1,3-Dichloropropene	<0.3	<0.3	0.3
Ethyl Benzene	<0.2	<0.2	0.2
Ethyl Ether	<5.0	<5.0	5.0
Hexachlorobutadiene	<0.6	<0.6	0.6
Isopropyl Benzene	<0.2	<0.2	0.2
p-Isopropyltoluene	<0.2	<0.2	0.2
Methyl Ethyl Ketone	<15	<15	15
Methyl Isobutyl Ketone	<30	<30	30
Methyl tert-Butyl Ether	<5.0	<5.0	5.0
Methylene Chloride	<0.4	<0.4	0.4
Naphthalene	<0.5	<0.5	0.5
*n-Propylbenzene	<0.2	<0.2	0.2
o-Xylene	<0.2	<0.2	0.2
Styrene	<0.5	<0.5	0.5
1,1,1,2-Tetrachloroethane	<0.6	<0.6	0.6
1,1,2,2-Tetrachloroethane	<0.4	<0.4	0.4
Tetrachloroethene	<0.5	37	0.5
Tetrahydrofuran	<15	<15	15
Toluene	<0.6	<0.6	0.6
1,2,3-Trichlorobenzene	<1.0	<1.0	1.0
1,2,4-Trichlorobenzene	<0.3	<0.3	0.3
1,1,1-Trichloroethane	<1.0	<1.0	1.0
1,1,2-Trichloroethane	<0.4	<0.4	0.4
Trichloroethene	<0.6	<0.6	0.6
Trichlorofluoromethane	<5.0	<5.0	5.0
1,2,3-Trichloropropane	<0.4	<0.4	0.4
1,1,2-Trichlorotrifluoroethane	<0.8	<0.8	0.8
1,2,4-Trimethylbenzene	0.28	<0.2	0.2
*1,3,5-Trimethylbenzene	<0.2	<0.2	0.2
Vinyl Chloride	<5.0	<5.0	5.0
m,p-Xylenes	<0.5	<0.5	0.5

*: coeluting compounds
MDL, Method Detection Limit
All results are in µg/l which is equal to parts-per-billion (ppb).
The Laboratory Results are only a part of the Laboratory Report.

Delta Environmental Consultants, Inc.
3900 Northwoods Dr., Suite 200
St. Paul, MN 55112

CHAIN-OF-CUSTODY RECORD

DELTA PROJECT NO.: 1093-316-1,0001 INVOICE CODE:

PROJECT MANAGER: JIM DELUCA

PROJECT NAME: SUPERAMERICA #4022

PROJECT LOCATION: MAPLEWOOD, MN

SAMPLER'S SIGNATURE: [illegible]

PAGE 1 OF 1

TURN AROUND REQUESTED: ☒ NORMAL ☐ RUSH ☐ OTHER

LAB NAME: Horizon

LAB USE ONLY

LABORATORY PROJECT NO.: 1000-2123

SAMPLE CONDITION AS RECEIVED: CHILLED (YES)/NO SEALED (YES)/NO

SAMPLE MATRIX: SOIL(S): AIR(A): BULK(B): AQUEOUS(Q): SLUDGE(L): OTHER(O)

SAMPLE ID	SAMPLE LOCATION/DESCRIPTION	DATE/TIME SAMPLED	SAMPLE MATRIX	MDH-465D	BTEX	GRO				NUMBER OF CONTAINERS	ACCEPT (A) REJECT (R)	SAMPLE CONDITION/ COMMENTS	LABORATORY SAMPLE NUMBER
MW-4		9/24-12:58	Q	X		X				3			11193
MW-5		9/24-13:45	Q	X		X				3			11194
MW-2		9/24-14:10	Q		X	X				3			11195
MW-3		9/24-14:41	Q		X	X				3			11196
MW-1		9/24-15:02	Q		X	X				3			11197

GENERAL COMMENTS:

TOTAL NUMBER OF CONTAINERS:

1 RELINQUISHED BY (SIGNATURE): [illegible]	DATE: 9/25/98	3 RELINQUISHED BY (SIGNATURE):	DATE:
COMPANY: Delta Environmental	TIME: 1530	COMPANY:	TIME:
2 RECEIVED BY (SIGNATURE):	DATE:	4 RECEIVED BY (SIGNATURE): [illegible]	DATE: 9/26
COMPANY:	TIME:	COMPANY: Horizon Labs	TIME: 1635
5 RELINQUISHED BY (SIGNATURE):	DATE:	6 RECEIVED BY (SIGNATURE):	DATE:
COMPANY:	TIME:	COMPANY:	TIME:

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Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY REPORT

Client:	Delta Environmental Consultants, Inc	Date Sampled:	09/01/94
	3900 Northwoods Drive, Suite 200	Date Received:	09/01/94
	St. Paul, MN 55112	Date Analyzed:	09/06/94
	Attn: Jim DeLuca	Physical State:	Soil
Project:	SuperAmerica #4022	Report Date:	09/08/94
	Maplewood, MN	Lab P.N.:	1000-212.2
		Client P.N.:	A093-376

Quality Assurance / Quality Control Summary

Parameter (Method)	QC Type	Percent Recovery	Acceptable Range	Percent Reproducibility	Acceptable Range
Benzene (EPA 8020)	M	104	127 - 76	101	127 - 76
Toluene (EPA 8020)	M	107	125 - 76	101	125 - 76
Ethylbenzene (EPA 8020)	M	110	125 - 76	100	125 - 76
m,p-Xylenes (EPA 8020)	M	115	125 - 76	102	125 - 76
o-Xylenes (EPA 8020)	M	110	125 - 76	101	125 - 76
GRO (Wis. DNR)	M	109	117 - 85	98	115 - 84

M = Matrix Spike / Matrix Spike Duplicate

L = Laboratory Control Sample

Reviewed

Approved

Compounds were identified by column retention time and quantified by peak area of known standards using a Hewlett Packard ChemStation Data System. The samples were received by HORIZON LABORATORIES, INC. and accompanied by the Chain-of-Custody record. The Laboratory Report is the sole property of the client to whom it is addressed. The Laboratory Results are only a part of the Laboratory Report.

Horizon
Laboratories, Inc.

5155 East River Road, Suite #416 Minneapolis, MN. 55421 Tel. (612) 572-0425 Fax (612) 572-0441

LABORATORY RESULTS

Client: Delta Environmental Consultants, Inc
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
Attn: Jim DeLuca

Project: SuperAmerica #4022
Maplewood, MN

Date Sampled: 09/01/94
Date Analyzed: 09/06/94
Physical State: Soil

Report Date: 09/08/94
Lab P.N.: 1000-212.2
Client P.N.: A093-376

Sample I.D.	Benzene mg/kg EPA 8020	Toluene mg/kg EPA 8020	Ethyl-benzene mg/kg EPA 8020	Total, Xylenes mg/kg EPA 8020	GRO mg/kg Wis. DNR	% Moisture
MW-4	<0.20	<0.50	<0.20	<0.80	<5.0	10
MW-5	<0.20	<0.50	<0.20	<0.80	<5.0	11
MDL, mg/kg	0.20	0.50	0.20	0.80	5.0	

MDL; Method Detection Limit

GRO; Gasoline Range Organics

All results are in mg/kg which is equal to parts-per-million (ppm) and are based on a "dry weight" basis.

The Laboratory Results are only a part of the Laboratory Report.

Delta
Environmental
Consultants, Inc.
3900 Northwoods Dr., Suite 200
St. Paul, MN 55112

CHAIN-OF-CUSTODY RECORD

DELTA PROJECT NO. AC13-376	INVOICE CODE	PAGE 1 OF 1	LAB NAME Horizon
PROJECT MANAGER Jim DeLuca		TURN AROUND REQUESTED: ☒ NORMAL ☐ RUSH ☐ OTHER	LAB USE ONLY
PROJECT NAME S.A No. 4077			LABORATORY PROJECT NO. 10000-22.2
PROJECT LOCATION Maplewood, MN			SAMPLE CONDITION AS RECEIVED: ON ICE CHILLED YES/NO SEALED YES/NO
SAMPLER'S SIGNATURE			

SAMPLE ID	SAMPLE LOCATION/DESCRIPTION	DATE/TIME SAMPLED	SAMPLE MATRIX: SOIL(S): AIR(A): BULK(B): AQUEOUS(Q): SLUDGE(L): OTHER(O)	ANALYSIS REQUESTED: BTEX/6120	NUMBER OF CONTAINERS	ACCEPT (A) REJECT (R)	SAMPLE CONDITION/ COMMENTS	LABORATORY SAMPLE NUMBER
MW-4		9/1/94 15:20	S	X	2		10717	
MW-5		9/1/94 11:35	S	X	2		10718	

GENERAL COMMENTS: Results to Jim DeLuca

4 ◀ TOTAL NUMBER OF CONTAINERS

	DATE		DATE		DATE
1 RELINQUISHED BY (SIGNATURE)	9/1/94	3 RELINQUISHED BY (SIGNATURE)		5 RELINQUISHED BY (SIGNATURE)	
COMPANY Delta Environmental Consultants	TIME 16:35	COMPANY	TIME	COMPANY	TIME
2 RECEIVED BY (SIGNATURE)	DATE 9/1/94	4 RECEIVED BY (SIGNATURE)	DATE	6 RECEIVED BY (SIGNATURE)	DATE
COMPANY Horizon	TIME 6:10	COMPANY	TIME	COMPANY	TIME

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Delta Environmental Consultants, Inc.

Page 1 of 1

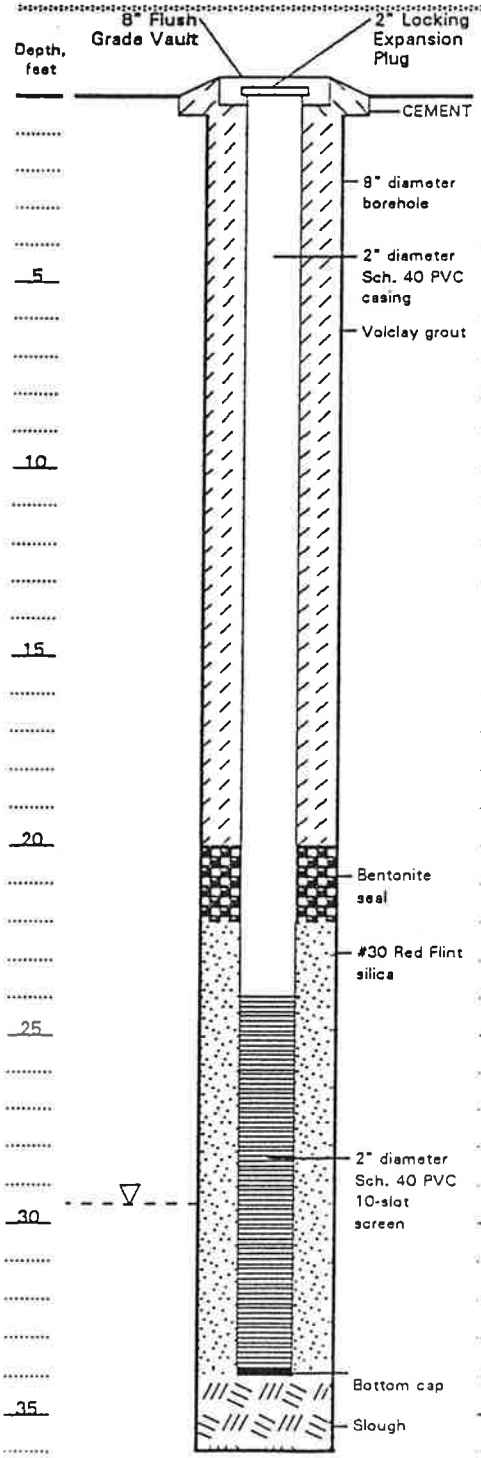
WELL CONSTRUCTION LOG

BORING/WELL LOCATION SKETCH MAP

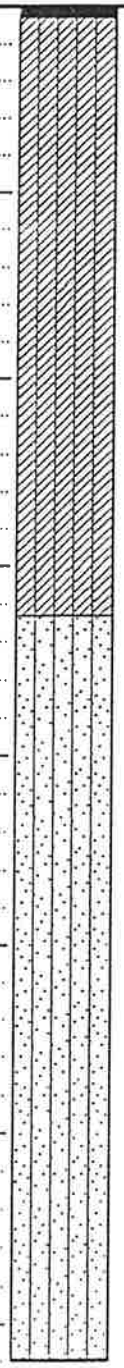
N

BORING/WELL NO.	MW-4
PROJECT NO./NAME	A093-376/SuperAmerica No. 4022
LOCATION	1750 White Bear Ave. Maplewood, Minnesota
DRILLING CONTRACTOR/DRILLER	WTD/Greg & Jim
GEOLOGIST/OFFICE	A. Gowan/St. Paul
APPROVED BY	
DRILLING EQUIPMENT/METHOD	Diedrich D-120/Hollow Stem Auger
SIZE/TYPE OF BIT	4.25" I.D. Auger
SAMPLING METHOD	SS 2" O.D.
START/FINISH DATE	9/1/94-9/1/94
WELL INSTALLED?	YES ☒ NO ☐
CASING MAT./DIA.	Sch. 40 PVC/2"
SCREEN:	TYPE Slotted MAT. Sch. 40 PVC LENGTH 10' DIA. 2" SLOT SIZE 0.010"
ELEVATION OF: (FT. ABOVE M.S.L.)	GROUND SURFACE 964.5; TOP OF WELL CASING 964.49; TOP & BOTTOM SCREEN /; GW SURFACE 935.0; DATE

WELL CONSTRUCTION

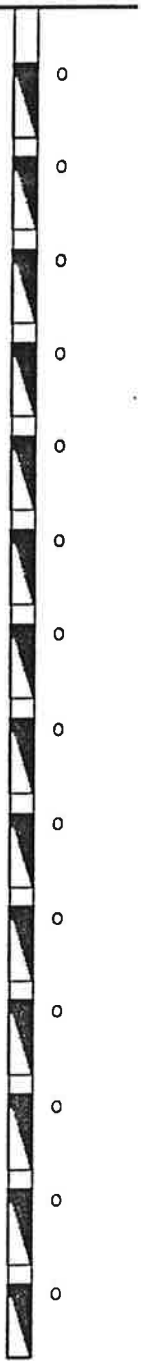


LITHOLOGY



Depth, feet	Visual Description
	ASPHALT
	SILT, clayey, brown, with sand and pebbles (till), moist, no odor.
5	-sandier
	-not much sand, very tight
10	
	-pushed a rock
	-as above, but with sandy layers
15	
	SAND, silty, brown, with some clay and pebbles (till), moist, no odor.
20	
25	
	-wet, some sand lenses
30	-saturated
35	

SAMPLING DATA



Sample No. and Interval	OVA Values (ppm)
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0

EXCAVATION OF PETROLEUM CONTAMINATED SOIL
Fact Sheet #13
Minnesota Pollution Control Agency
LUST Cleanup Program
March 1994

Excavation is an appropriate type of corrective action at some petroleum release sites. This is one of several types of corrective actions that may take place at a petroleum tank release site. The purpose of soil excavation is to remove contaminated soil that actually or potentially acts as a source of ground water contamination, or poses other environmental and/or health threats. Often, these site-specific conditions are determined by conducting a remedial investigation.

This document addresses the following topics: planning ahead; excavation; field screening during excavation; soil analytical sampling; storage and treatment of contaminated soil; additional investigation; remedial investigation; and excavation reporting.

The excavation report deadline is 10 months from the date of receipt of the standard letter. A shorter deadline may be established by the Minnesota Pollution Control Agency (MPCA) staff for high priority sites.

I. PLANNING AHEAD

Tank removals must be done by an MPCA-certified contractor. It is in your best interest to obtain at least two bids on the work before you hire a contractor so that, if contaminated soil is encountered, you will have met the Petro Board requirement for bidding. Bid forms and a list of certified contractors are available from the Department of Commerce (call 612/297-1119 or 612/297-4203).

Prior to excavation, soil borings may be useful for estimating the location, extent and magnitude of soil contamination. Pre-excavation soil borings can also determine whether soil remediation is necessary and if so, if excavation is a cost-effective cleanup measure, and whether to consider alternative methods.

Prior to tank removal, plan ahead for storage of contaminated soil during site work (section V), and treatment of contaminated soil (see fact sheets #33, "Thermal Treatment of Petroleum Contaminated Soil," and #34, "Land Treatment of Petroleum Contaminated Soil: Land Treatment Sites"). Remember that offsite storage of contaminated soil requires MPCA staff (and perhaps local) prior approval.

Arrange for an environmental field technician with a photoionization detector (PID), flame ionization detector (FID) or reasonable equivalent to screen soils and select samples for laboratory analysis during the excavation project (see fact sheet #15).

II. EXCAVATION

The following is a guide to be used during excavation. A flow chart is attached to help facilitate decision making in the field (Attachment A). Excavations should not endanger structures, including buildings, roads, utility lines, etc., and should be in compliance with OSHA standards.

Note: If there are vapor impacts, drinking water impacts, the release was a recent spill or there is a potential unstable condition, contact MPCA staff for site specific soil excavation criteria. (An unstable condition may be characterized as any situation where the consultant and/or tank removal contractor feels there is significant potential for the release to produce explosive or toxic vapors in structures or utilities, or impact a potable water supply. It is possible that removal of tanks and contaminated soil could increase the potential for vapor impacts. If you are in doubt, contact MPCA staff for guidance).

A. General excavation procedures. Begin the excavation as close as possible to the source. First remove the most heavily contaminated soil. This includes petroleum saturated soil, soil with obvious petroleum staining, and soil with strong odors. Many times this soil is adjacent to pump islands, distribution lines, or the underground storage tanks. Soil action levels are as follows:

TABLE 13.1

Fuel Type in Soil	Action Level
Gasoline and aviation gasoline	Field screening - 40 parts per million (ppm)
Diesel fuel, fuel oil, used or waste oils, jet fuel, kerosene	Any visual evidence of contamination, or field screening above 10 ppm.

Segregate excavated soil below the action levels from the more contaminated soil. Soils below the action levels may be used to backfill the excavation on this site only. Soil excavation is not necessary if contamination surrounding the tank system is below the action levels, however, soil samples must be collected (see Section IV, Soil Sampling, below, for soil sampling methodology; see also Section VI, Additional Investigation).

1. Excavation when new tanks are being installed. Remove contaminated soil above the action levels up to a volume that will accommodate the new tank installation. This volume can be calculated from Tables 13.2A and 13.2B. If excavation removes all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager. If contamination remains after this excavation, proceed to item 2, below.

TABLE 13.2A		TABLE 13.2B	
NEW TANK SIZE (gal)	FOR EACH TANK TO BE INSTALLED ADD (yds)	OLD TANK SIZE (gal)	FOR EACH TANK TO BE REMOVED SUBTRACT (yds)
550	30	550	3
1,000	40	1,000	5
2,000	70	2,000	10
3,000	90	3,000	15
4,000	110	4,000	20
5,000	130	5,000	25
6,000	140	6,000	30
8,000	170	8,000	40
10,000	210	10,000	50
12,000	240	12,000	60
15,000	260	15,000	75
20,000	320	20,000	100
25,000	400	25,000	125

Note: For new pipe trenching allow one-third (0.33) cubic yard for every one (1) linear foot of contaminated trench.

EXAMPLE: Two 10,000 gallon tanks are to be installed in the old tank basin, where one 4,000 gallon tank and one 6,000 gallon tank will be removed.
(210 + 210) - (20 + 30) = 370
Up to 370 cubic yards of contaminated soil may be removed.

2. Additional excavation when new tanks are being installed. If test pits indicate the amount of contaminated soil remaining is less than 150 cubic yards, and ground water was not encountered, you may attempt to excavate contaminated soil above the action levels up to a total of an additional 150 cubic yards. If the excavation removed all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager. If contamination remains above the action levels, an RI will be required (see Section VI). Contaminated soil should NOT be returned when new tanks will be installed in the same basin.

3. Excavation of soil on sites where new tank installation is not occurring. Initiate test pits in the area of maximum contamination. If test pits indicate that more than 150 cubic yards of contaminated soil remains, or contamination is below the reach of the backhoe, or contamination is in contact with ground water, a remedial investigation (RI) will be necessary (see Section VI, below). If the additional 150 cubic yard excavation removed all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager.

4. Returning soil to excavation basin. When an RI will be required, the contaminated soil removed during digging of the test pits and the additional 150 cubic yards should be returned to the excavation basin. If excavated soil is considered to be petroleum saturated, contact MPCA staff prior to returning soil to the excavation.

5. All projects excavating more than 150 cubic yards must have WRITTEN MPCA approval, except where new tanks are installed (if new tanks are installed, follow Tables 13.2A and 13.2B). MPCA approval for additional excavation is site specific and depends on such factors as the anticipated benefit, expected volume of additional soil, and potential risk to ground water.

Excavation costs may not be fully reimbursable through the Petroleum Tank Release Compensation Board (Petro Board) if excavation exceeds 150 cubic yards without MPCA written approval (or limits in Tables 13.2A and 13.2B when new tanks are installed), or if excavation is carried out beyond the action levels.

If the excavation removed all contamination above the action levels, prepare an Excavation Report and submit to the MPCA project manager. If contamination remains above the action levels, an RI will be required (see Section VI).

6. Treatment of petroleum contaminated soil. When excavation alone was able to address petroleum contamination, or when soil is removed to accommodate new tank installation, the removed soil must be treated in accordance with an MPCA approved treatment method.

III. FIELD SCREENING DURING EXCAVATION

Conduct field screening in accordance with fact sheet #14, "Field Screening Procedures." Be sure the field instrument is properly calibrated.

During excavation, screen soils frequently enough to verify the need for soil removal (at least one soil vapor analysis for each 10 cubic yards of soil removed). Label these soil samples with the prefix "R", for "removed" (e.g., R-1, R-2, R-3, etc.). The field technician should carefully document successive soil vapor readings vertically below the source of release, indicating the depth and location of each sample.

After excavation is complete, screen soil samples from the bottom and sidewalls of the excavation to document remaining contamination. Soil analytical sampling is required at this stage (see items 6 and 7 in section IV, below).

IV. SOIL ANALYTICAL SAMPLING FOLLOWING EXCAVATION

When excavation is complete, collect soil samples for laboratory analysis to document contamination remaining in place and the contamination removed. Analyze the samples for the parameters indicated in fact sheet #16, "Soil and Ground Water Analyses at Petroleum Release Sites." Collect soil samples as follows:

1. Minimize the possibility of cross-contamination by using dedicated sampling equipment for each sample collected. If dedicated sampling tools are not available, specify the cleaning procedures used. Wear clean, new, disposable sampling gloves at each new sampling point.

2. When sampling excavation sidewalls or floors, remove at least one foot of exposed soil prior to collecting the sample. This will ensure the collection of a fresh sample.

3. Collect soil samples in accordance with appropriate methodology. Soils previously used for soil screening or soil classification may not be used for analytical samples.

   a. TPH/GRO and TPH/DRO samples--Collect total petroleum hydrocarbons (TPH) samples according to the Wisconsin Department of Natural Resources Modified Gas Range Organic (GRO) and Diesel Range Organic (DRO) method. Collect approximately 25 grams of soil in a tared 60 ml vial (a GRO sample vial must contain 25 ml methanol prior to sample collection). Wipe the jar threads and seal with the cap provided.

   b. VOC or BETX samples--For volatile organic compounds (VOC) and benzene, ethylbenzene, toluene, and xylene (BETX) samples, completely fill each sample jar so that no headspace exists. Wipe the jar threads and seal using a cap with a Teflon septum. (If you are submitting samples for GRO analysis, collecting separate samples for BETX analysis may not be necessary.)

4. Label all jars, wrap in aluminum foil, and place in a covered cooler with ice for transport to the laboratory for analysis.

5. Samples not analyzed within the accepted holding time may be considered invalid. Costs related to their collection and analysis may not be considered eligible for reimbursement.

6. Bottom samples. Collect the following samples from the bottom of the excavation when all excavation is complete. Label these samples with the prefix "B", for "Bottom" (e.g., B-1, B-2, B-3, etc.):

TABLE 13.3

One tank	two samples; one from directly below each end of the tank
More than one tank <10,000 gallons	one sample directly below the center of each tank
More than one tank 10,000 gallons or larger	two samples from below each tank; one from directly below each end of the tank
Leaking lines	one sample from below each suspected point of release
Dispensers	one sample from below each dispenser which is removed
Any additional samples needed to adequately characterize the excavation.	

7. Sidewall samples. If contaminated soil above the action levels remains in the sidewalls of the excavation, collect samples to characterize the remaining contaminated soil. Label these samples with the prefix "S" for "sidewall" (e.g., S-1, S-2, S-3, etc.).

8. Ground water in excavation. If ground water occurs in the excavation, collect a water sample; also collect soil samples near the soil/ground water interface to help characterize potential impacts to ground water from remaining contaminated soil. Limit the analytical parameters for this type of ground water sample to benzene, ethyl benzene, toluene, xylene (BETX), and total petroleum hydrocarbons (GRO and/or DRO).

   Do not collect a water sample if free product or a product sheen is present.

9. Sampling the soil piles. Collect soil samples (grab samples) from representative portions of the excavated soil pile, using the method described in items 1-5 above. Label these samples with the prefix "P" for "Pile" (e.g., P-1, P-2, etc.). Base the number of soil samples on Table 13.4:

TABLE 13.4

Cubic Yards of soil in pile	Number of Samples
less than 10	*
10-50	1
51-500	2
501-1,000	3
1,001-2,000	4
2,001-4,000	5
each additional 2,000	one additional sample

*If less than 10 cubic yards of soil is contaminated, soil samples will normally not be required if the soil will be land treated (unless the soil could potentially be considered a hazardous waste).

10. Analyze soil samples using U.S. Environmental Protection Agency approved methodologies in accordance with fact sheet #16, "Soil and Ground Water Analyses at Petroleum Release Sites."

V. STORAGE AND TREATMENT OF CONTAMINATED SOIL

Store excavated contaminated soils on an impermeable surface, covered with plastic. Anchor the plastic covering in place with clean soil or other suitable material. Off-site soil storage requires pre-approval by MPCA staff and local government officials. Storage at land treatment sites must be in accordance with Minn. Rules ch. 7037. Improper storage of contaminated soils may result in additional releases to the environment, and a corresponding reduction in your reimbursement.

Soil must be properly treated. Refer to fact sheets #33 ("Thermal Treatment of Petroleum Contaminated Soil") and #34 ("Land Treatment of Petroleum Contaminated Soil: Land Treatment Sites") for treatment and approval procedures. Fact sheets and application forms for soil treatment are available from the MPCA Tanks and Spills Section at 612/297-8565.

VI. ADDITIONAL INVESTIGATION

Additional investigation is required at sites with sandy or silty sand soil (ASTM/USC) and where the water table is within 25 feet of the ground surface. Advance a soil boring directly through the suspected source area (former UST basins, pump islands, and/or other source areas), in the following situations:

- laboratory analytical results for soils from the suspected source area excavation base are 1-50 mg/kg TPH (GRO/DRO); or

- visual or other evidence of contamination remains in the suspected source area.

Analyze soil samples in accordance with Section IV. If the boring(s) encounters contaminated ground water, an RI is necessary.

VII. REMEDIAL INVESTIGATION

An RI is generally necessary at sites where contamination cannot be addressed by excavation alone, contaminated soil is in contact with ground water, or ground water is suspected to be impacted. An RI will be required if any of the following situations exist:

1. Soil contamination above the action levels (Table 13.1) remains and/or if laboratory analytical results from soil samples taken from the base or sidewalls, or soil returned to the excavation are greater than 50 ppm TPH in sands and gravels or greater than 100 ppm TPH in silts and clays (see Table 13.5).

TABLE 13.5

Soil Type	RI required if:
sand/gravel	a. soil above action level in Table 13.1 remains, or b. soil contamination greater than 50 mg/kg TPH (GRO/DRO) remains.
silt/clay	c. soil above action level in Table 13.1 remains; or d. soil contamination greater than 100 mg/kg TPH (GRO/DRO) remains.

2. Ground water is present in the excavation and has been in contact with either petroleum product or petroleum contaminated soil;

3. Contamination intercepts a seasonally high water table (indicated by mottling on the excavation sidewalls) or bedrock;

4. Other impacts are known or suspected (such as discharge of contaminated water to surface waters or utilities, vapor impacts to buildings or utilities, etc.).

MPCA staff may allow exceptions to these criteria on a site-specific basis.

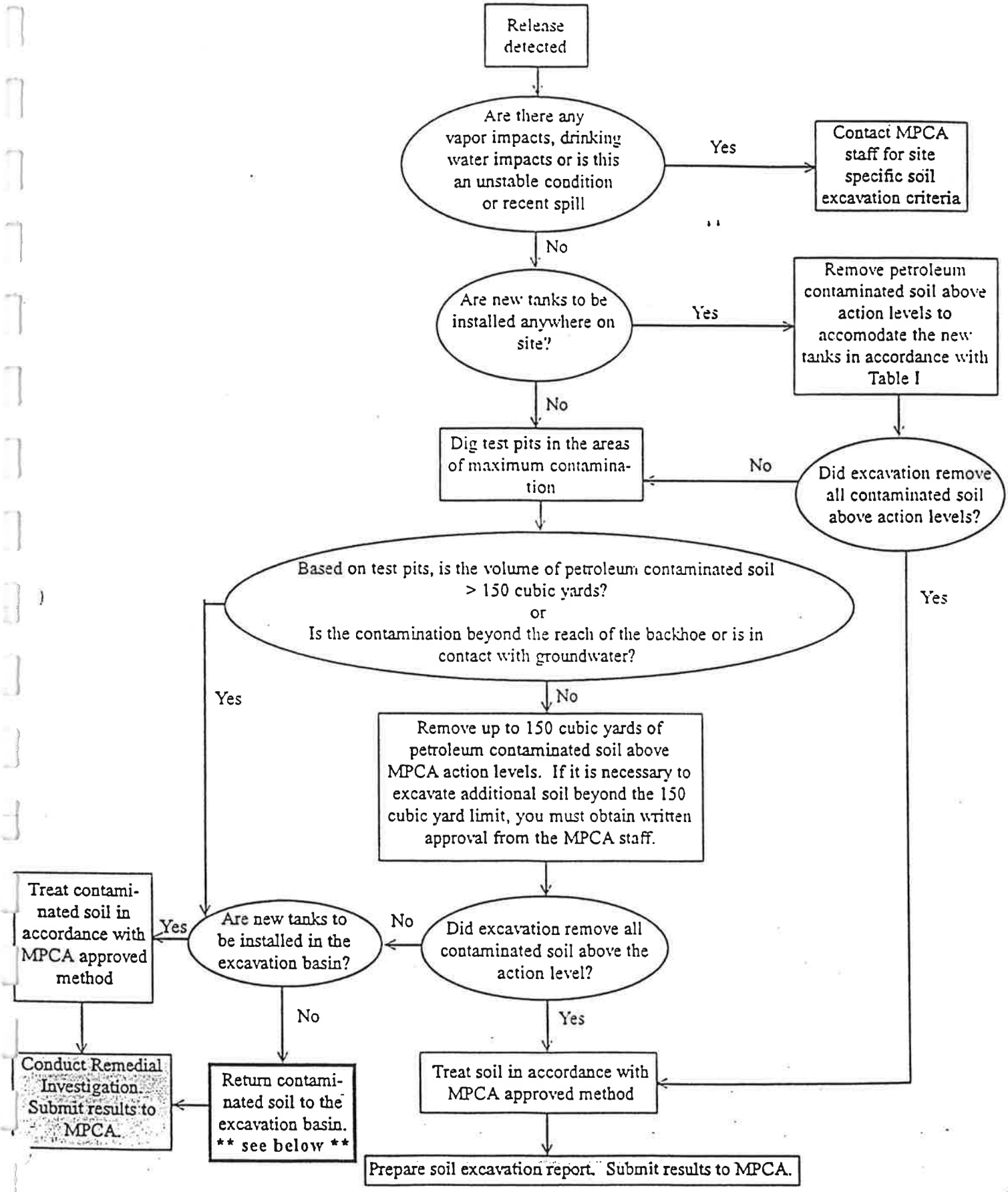
VIII. EXCAVATION REPORT SUBMITTAL

Complete the "Excavation Report Worksheet for Petroleum Release Sites" (fact sheet #4). If an RI is not required, submit the worksheet for MPCA review. Be sure to include all required data and figures. If an RI is required, include the worksheet as an appendix to the Remedial Investigation/Corrective Action Design (RI/CAD) Report. MPCA staff will not review excavation reports indicating an RI is necessary until the RI has been completed.

The excavation report deadline is 10 months from the date of receipt of the standard letter. A shorter deadline may be established by MPCA staff for high priority sites.

Excavation of Petroleum Contaminated Soil

Attachment A



** If you encounter soil that you consider petroleum saturated, call MPCA staff prior to returning soil to the excavation.

G. GME GENERAL QUALIFICATIONS

Scope of Work

Development Engineering, P.A. was hired by Ken Schwartz to take two soil samples at the site of 500 gallon tank removal at 1735 Van Dyke Avenue in the City of Maplewood. The samples were to be Analyzed for VOC's and DRO's.

Site Description

The 500 gallon storage tank was located on the west side of the building located at 1735 Van Dyke Avenue in the City of Maplewood. As surficial water and subsurface water generally runs west and south one sample was taken at a depth of about 7' to 8' approximately 2' to the northwest of the excavated area. A second sample was taken at a depth of about 6' to 7' approximately 2' to the south west of the excavated area.

Sampling

Development Engineering, P.A. was on site at approximately 11:00 a.m. on May 6, 2002.

Inspection of the soils showed no discoloration. The soils likewise showed no signs of leakage or smell of petroleum products. Two samples were taken from the bottom of each hole to determine the presence of Diesel or Petroleum Based Products.

Those samples were taken to Legend Technical Services, Inc. where a chain of custody letter was filled and the samples were tested for DRO and VOC. Their report was returned on May 10, 2002.

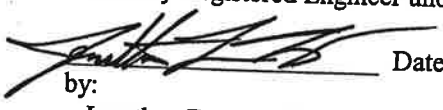
Conclusions / Recommendations

It does not appear by the record or the interviews that a higher degree of investigation is warranted regarding this site. All samples appeared to be below the defined limits as shown on the report. A copy of the Chain-of-Custody Record and results of the tests are attached to this report.

Standard of Care

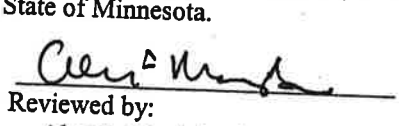
Services performed by Development Engineering, P.A. for this project have been conducted in a manner consistent with the level of care and skill ordinarily exercised by member so the profession currently practicing in this are under similar budge and time constraints. The analysis and recommendations presented in this report are based upon research of available information from the sources listed in the bibliography section of this report. No warranties, expressed or implied, are made. The material contained in this report is to be considered confidential. Distribution, sale or publication of this report of any part thereof without the expressed written consent of Development Engineering, P.A. is prohibited. Additional copies of this report may be obtained by contacting Development Engineering, P.A. at (651) 776-6211.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Registered Engineer under the laws of the State of Minnesota.



Date: May 23, 2002

by:
Jonathan Faraci, PE
Mn Reg 16464
President, Development Engineering, P.A



Date: May 23, 2002

Reviewed by:
Alan F. Musielewicz, Atty
Mn Atty Reg 207895

UNDERGROUND STORAGE TANK
CLOSURE REPORT
FOR
GOODYEAR FACILITY
1735 VAN DYKE AVENUE
MAPLEWOOD, MINNESOTA
GME PROJECT NO. 4972
MARCH 27, 1995

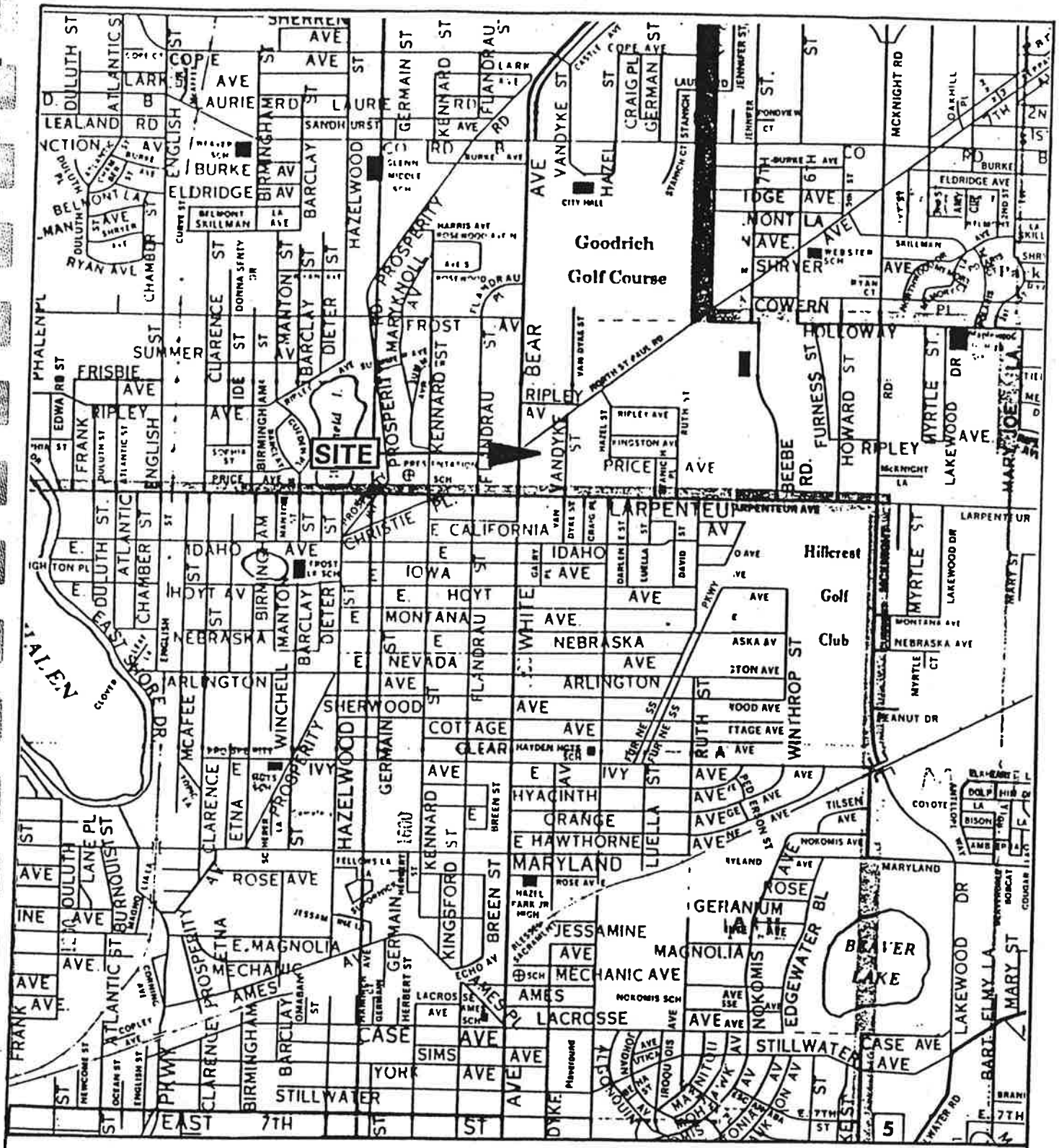


FIGURE 1: REGIONAL LOCATION DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

GME CONSULTANTS, INC.
14000 21st Avenue North
Minneapolis, MN 55447

TFM	SJF	3/95	4972

GME CONSULTANTS, INC.
CONSULTING ENGINEERS
14000 21st Ave. No. / Minneapolis, MN 55447
Phone (612) 559-1859 / Fax (612) 559-0720

March 27, 1995

Mr. Bruce G. Odlaug
Maun & Simon, PLC
2900 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402-4133

GME Project No. 4972

RE: Underground Storage Tank (UST) Closure Report for the Goodyear Facility at 1735 Van Dyke Avenue in Maplewood, Minnesota (MPCA Leak No. 8146)

Dear Mr. Odlaug:

In accordance with your authorization, we have completed our services for this UST closure project. The purposes of this report are to evaluate the results of the field and laboratory work, and to recommend the appropriate subsequent actions.

Based on the field and laboratory results from the tank monitoring and subsequent soil probe, our discussions with the MPCA Project Manager, and the MPCA Petroleum Tank Release Guidance Documents, it is our opinion that no additional work is required at the above referenced site. The action levels used by the MPCA to evaluate whether further environmental work is required are listed in the MPCA Guidance Document enclosed in the Appendix.

This report has been completed in general accordance with the MPCA Guidance Document entitled "Petroleum Tank Release Reports," dated April 18, 1993. Following your review of the report, we will submit a copy to Mr. Jim Joslyn, MPCA Project Manager.

We appreciate this opportunity to be of service to you. If you have questions, please contact us.

Sincerely,

GME CONSULTANTS, INC.

Timothy F. McGlennen
Environmental Biologist
Project Manager

cc: Mr. Neil Hartman - Goodyear Tire and Rubber Company

cc: Mr. C.L. Putzier - Department 824
Goodyear Tire and Rubber Company

TFM:sab/smc
c:\tfm\4972.ust

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CLOSURE REPORT
FOR
GOODYEAR FACILITY
1735 VAN DYKE AVENUE
MAPLEWOOD, MINNESOTA
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EXCAVATION REPORT FOR PETROLEUM RELEASE SITES

Minnesota Pollution Control Agency
Tanks and Spills Section
March 27, 1995

Complete the information below and submit to the Minnesota Pollution Control Agency (MPCA) Tanks and Spills Section to document excavation and treatment of petroleum contaminated soil. Excavations must be done in accordance with "Excavation of Petroleum Contaminated Soil" (Guidance Document 6). Please attach any available preliminary site investigation reports to this excavation report.

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

I. BACKGROUND

A. **Site:** Goodyear Retail Facility (See Figures 1 & 2)
Street: 1735 Van Dyke Avenue
City, Zip: Maplewood, 55109
County: Ramsey
MPCA Site ID#: LEAK00008146
MPCA Project Manager: Mr. Jim Joslyn

B. **Tank Owner/Operator:** Mr. Bruce G. Odlaug
Mailing Address: Maun and Simon
Street/Box: 2900 Norwest Ctr, 90 S Seventh St.
City, Zip: Minneapolis, 55402-4133
Telephone: (612) 338-1113
Contact: Mr. Bruce Odlaug

C. **Excavating Contractor:** Minnesota Petroleum, Inc.
Contact: Mr. Mike D. Dehn
Telephone: (612) 571-8490
Tank Contractor Certification Number: 0604

D. **Consultant:** GME Consultants, Inc.
Contact: Mr. Timothy F. McGlennen
Street/Box: 14000 21st Avenue North
City, Zip: Plymouth, MN 55447
Telephone: 612-559-1859

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

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: January 10, 1995 (laboratory results received via fax on January 9, 1995)

B. Dates site work performed:

Work Performed	Date
Tried to begin tank removal but contractor was not allowed site access	October 23, 1994
Used oil tank removed	December 7, 1994
Performed KVA Soil Probe	January 13, 1995

III. RELEASE INFORMATION

A. Provide the following information for all removed tanks. (SEE FIGURE 2 FOR TANK LOCATION).

Tank 1: **Capacity** 500 gallons **Type** Steel **Age** Unknown

Condition: We observed Tank No. 1 to be in generally fair condition, with some surficial corrosion.

Product history: Tank No. 1 is believed to have stored used oil only.

Approximate quantity of petroleum released, if known: It appears that a minor amount of petroleum has been released from this tank system.

Cause of release: Possible causes of release may include surface spillage, overfills, or leaky pipe fittings.

B. Provide the following information for all existing tanks.

To the best of our knowledge, there are no additional USTs at the site. An above ground used oil tank will be installed inside of the building.

C. If the release was associated with the lines or dispensers, briefly describe the problem: A dispenser was not associated with this UST.

D. If the release was a surface spill, briefly describe the problem: We observed some minor staining on the bituminous pavement surrounding the fill pipe (See Photographs)

IV. EXCAVATION

A. **Dimensions of excavation:** The maximum dimensions of the excavation were 6 feet by 8 feet in plan, with a maximum depth of 7 feet. The excavation was located on the north side of the building near a tire storage area.

B. **Original tank backfill material (sand, gravel, etc.):** The backfill around the UST generally consisted of brown silty sand.

C. **Native soil type (clay, sand, etc.):** Based on our KVA soil probe, soils below the tank basin consist of brown silty sand with trace clay and gravel.

D. **Quantity of contaminated soil removed (cubic yards):**

[NOTE: If more than 400 cubic yards removed, please attach copy of written approval from MPCA.]
Petroleum impacts were not encountered during the tank removal monitoring; therefore, no soils were excavated.

E. **Was ground water encountered or was there evidence of a seasonally high ground water table? At what depth?** Groundwater was not encountered in the excavation. Based on our review of a monitoring well construction log and abandonment log for a nearby SuperAmerica Leak Site, groundwater is approximately 27 feet below grade. This SuperAmerica off-site monitoring well is located along the Goodyear property boundary about 125 feet northeast of the tank basin.

F. **If a soil boring was necessary (as indicated in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6) 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.** During the UST removal, we did not observe evidence of a petroleum release. However, 5.9 and 130 parts per million (ppm) diesel range organics (DRO) were detected in the two soil samples collected from below the tank. Because of these detections, we drilled one soil probe through the tank excavation using a KVA Electric Rotary Hammer with 1 inch sampling equipment.

We collected a soil sample from 12 to 13 feet below grade for headspace analysis using an HNU PI-101 photoionization detector (PID). The headspace analysis did not indicate the presence of organic vapors in the collected sample. We then collected a soil sample from 13 to 14 feet below grade for laboratory analysis of DRO, and volatile organic compounds (VOCs) by Method 465D. We observed no petroleum odors or discolorations from the soil sample which consisted of brown silty sand with trace clay and gravel.

The KVA laboratory report indicates that DRO and VOCs were not detected in the soil sample. The report does indicate the detection of acetone, both in the sample and in the laboratory method blank at similar concentrations. A copy of the laboratory report and the KVA Soil Boring Log are attached in the Appendix.

G. **If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? Specify, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc.** Groundwater was not encountered during our KVA Soil Probe work.

The nearby SA leak site monitoring well (MW-4) was installed on September 1, 1994 and removed on January 22, 1995. The monitoring well was sampled and analyzed for gasoline range organics (GRO) on September 24, 1994, and for GRO, benzene, toluene, ethylbenzene, and total xylenes (BTEX) on October 17, 1994. None of these parameters were detected in the groundwater samples.

We have included a copy of the monitoring well information supplied to us by you in the Appendix.

[NOTE: If free product was observed, contact MPCA staff immediately as outlined in "Petroleum Tank Release Reports" (Guidance Document 2.)

H. **Was bedrock encountered in the excavation? At what depth?** Bedrock was not encountered.

I. **Were there other unique conditions associated with this site? If so, explain.** None.

V. SAMPLING

A. **Briefly describe the field methods (including use of a photoionization detector) used to distinguish contaminated from uncontaminated soil:** We observed the soils collected from and within the tank excavation basin for the presence of unusual discolorations and petroleum odors. Jar headspace analyses of soil samples collected from the base and sidewalls of the excavations were conducted in the field with an HNU PID which detects certain organic vapors in the ppm range.

B. **List soil vapor headspace analysis results. Indicate sampling locations using sample codes (with sampling depths in parentheses), e.g. R-1 (2'), R-2 (10'), etc. "R" stands for "removed." Samples collected at different depths at the same location should be labeled R-1A (2'), R-1B (4'), R-1C (6'), etc. If the sample was collected from the sidewall or bottom after excavation was complete, label it S-1 (for sidewall) or B-1 (for bottom). Be sure the sample codes correspond with the site map required in par VI, below.** (See Figure 3)

Sample Code	Soil Type	Reading ppm
Excavation No. 1		
R1A (1')	Sand	0
R1B (2')	Sand	0
B2 (7')	Sand	0
B3 (7')	Sand	0
S-4 (6')	Sand	0
S-5 (6')	Sand	0
S-6 (7')	Sand	0
S-7 (7')	Sand	0

C. **Briefly describe the soil sampling and handling procedures used:** We collected two excavation bottom samples on December 7, 1994. These two soil samples were analyzed for DRO, and VOCs by Method 465D. The soil sample collected during the KVA Probe Survey also was analyzed for DRO and VOCs.

All of the soil samples were collected in the appropriate jars as supplied by Interpoll. The sample containers were labeled, placed in a cooler with ice, and transported to Interpoll Laboratories, Inc. The Interpoll laboratory reports and sample chain-of-custody forms are included in the Appendix.

D. **List below the soil sample analytical results from bottom and sidewall samples (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), etc. Be sure the sample codes correspond to the site map required in part VI. Do not include analyses from the stockpiled soils.**
(See Figure 4)

Sample Code	DRO ppm	VOCs ppm
Excavation No. 1		
B-1W (7′)	5.9	ND, except for 0.075 1,1,2-Trichlorotrifluoroethane
B-1E (7′)	130	ND
KVA1 (13-14′)	ND	ND

Definitions: **ND=Not Detected DRO=Diesel Range Organics**
VOCs=Volatile Organic Compounds by Method 465D

NOTE: COPIES OF LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS MUST BE INCLUDED.

VI. FIGURES (See Appendix)

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; and
   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

VII. SUMMARY

Briefly summarize evidence indicating whether additional investigation is necessary at the site, as discussed in part VI of "Excavation of Petroleum Contaminated Soil" (Guidance Document 6.). If no further action is recommended, the MPCA staff will review this report following notification of soil treatment.

On December 7, 1994, we monitored the removal of one 500 gallon used oil UST by Minnesota Petroleum at the Goodyear Facility in Maplewood, Minnesota. We also collected soil samples for headspace and laboratory analyses.

During our monitoring, we did not observe evidence, such as elevated headspace readings, petroleum odors, or soil discoloration, to indicate that a release had occurred from the tank. However, the laboratory analysis results indicated that DRO was detected (5.9 and 130 ppm) in the collected soil samples.

On January 13, 1995, we drilled one KVA Soil Probe through the base of the tank basin to collect soil samples for headspace and laboratory analyses. We did not detect organic vapors in the headspace sample, and laboratory analysis did not detect DRO or VOC parameters. Based on a nearby groundwater monitoring well, the groundwater in the area is approximately 27 feet below grade. The area soils generally consist of silty sand.

The MPCA Guidance Document states that additional work is not required if organic vapor readings are below MPCA action levels during initial tank removal soil monitoring, the laboratory analyzed soil samples in sands are below 50 ppm total petroleum hydrocarbons (TPH) (there were no detections in the KVA soil samples), and groundwater is not in contact with impacted soils. Based on the site data meeting these criteria, it is our opinion that no additional testing is necessary at the former tank location and we recommend that the MPCA close the site after their review of this report.

VIII. SOIL TREATMENT INFORMATION

A. Soil treatment method used (thermal, land application, other). If you choose "other", specify treatment method: Not applicable.

B. Location of treatment site/facility: Not applicable.

C. Date MPCA approved soil treatment (if thermal treatment was used after May 1, 1991, indicate date that the MPCA permitted thermal treatment facility agreed to accept soil): Not applicable.

D. Identify the location of any stockpiled contaminated soil:

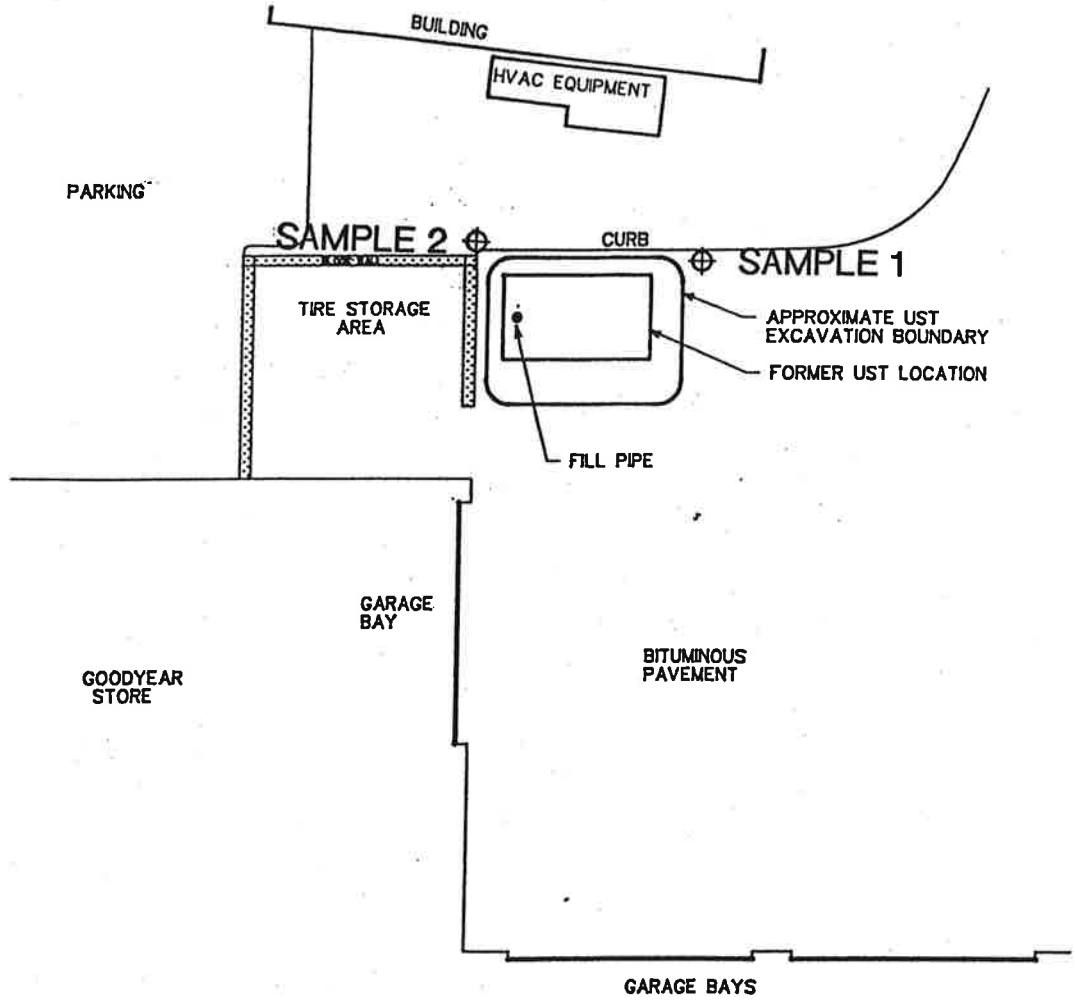
IX. CONSULTANT (OR OTHER) PREPARING THIS REPORT

Company Name: GME Consultants, Inc.
Street/Box: 14000 21st Avenue North
City/Zip: Plymouth, MN 55447
Telephone: 612-559-1859
Contacts: Mr. Timothy F. McGlennen
Environmental Biologist
Project Manager

Ms. Sandra J. Forrest
Senior Hydrogeologist
Regional Environmental Division Manager

Signature: _____ Date: 3/28/95

Signature: _____ Date: 3/28/95



GME CONSULTANTS, INC.
Geotechnical • Materials • Environmental
14000 21st Avenue N.
Minneapolis, Minnesota 55447
(612) 559-1859

FIGURE 2: SITE DIAGRAM

GOODYEAR FACILITY
MAPLEWOOD, MINNESOTA

JLH	TFM	MARCH 95	GME Project No. 4972

Page 1 of 1

LEGEND TECHNICAL SERVICES, INC.

775 Vandalia Street, St. Paul, MN 55114 – Telephone: 651/642-1150 Fax: 651/642-1239

15237

CHAIN-OF-CUSTODY RECORD

Development Engineering, P.A.

Company: Development Engineering, P.A.	Bill To: Dev. Eng. PA	Legend Tech Project No.: 2002 05 0145	Analysis # of Containers:
Report To: Alan F Musielewicz	Project Description: GOODYEAR FACILITY	Turnaround Time:	
Address: 1296 Hudson Rd St. Paul MN 55106	Address: 1735 Van Dyke Maplewood, MN 55109	☐ Normal Date Needed:	
Phone No.: 651-776-6211	PO#: 2002.051,1	☒ Rush Date Needed: 5-8-02	
Fax No.: 651-776-6711	Project #: 2002.051	Condition Received: ☐ Received on Ice	
		☐ Field Sheet From field	

Item No.	Field ID No.	Sample Description	Collection Date	Collection Time	Sample Matrix	Lab ID No.	PID FIELD READINGS	Moisture	VOC	DRO		
1	S1	N- Clays : Composite	5-6-02	11:15				X	X	X		
2	S2	SW Sands. Composite.	5-6-02	11:30				X	X	X		
3		Trip Blank							X			
4												
5												
6												
7												
8												
9												
10												

Transfer No.	Item No.	Relinquished By	Accepted By	Date	Time	Comments
1		Alan F Musielewicz	Roberta Prescott	5-6-02	12:25	
2						

FORM FLD-007 (10/00)

PLEASE REVIEW TERMS AND CONDITIONS BEFORE SIGNING THIS LEGAL DOCUMENT

White Copy – Original Accompanies Shipment to Lab Yellow Copy –Lab Pink Copy - Customer or Field Copy

LEGEND
Technical Services, Inc.

05/10/02

Mr. Alan Musielewicz
Development Engineering
1296 Hudson Road
St. Paul MN
55106

Subject: 2002.051 Goodyear Facility
Legend No: 2002050145

LEGEND TECHNICAL SERVICES, INC. (LEGEND) received the following sample(s).

Matrix	Samples	Date Sampled	Date Received	Comments
Soil	2	05/06/02	05/06/02	From field

* The associated batch quality assurance / quality control criteria were met with satisfaction.

* All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other instructions are received from the client.

* Minnesota Laboratory Certification # 027-123-295.

Prepared by,
LEGEND TECHNICAL SERVICES, INC

Chris Bremer
Laboratory Director

Roberta Provost
Project Manager

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Legend Sample ID:**	1
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/2002
Client ID:	North Clays	**Percent Solids**	86%

DRO/8015B SOIL

North Clays

Extraction Date:	05/07/02
Analysis Method:	Wisc DRO
Analysis Date:	05/08/02

Compound	Sample Results	Units	RL	MDL
Diesel range organics	<8.0 W	mg/kg	8.0	1.1
C-30 (Surrogate)	86.8	%	--	--

W=The sample was weighed out in the laboratory.

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Legend Sample ID:**	2
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/2002
Client ID:	Southwest Sands	**Percent Solids**	92%

DRO/8015B SOIL

Southwest Sands

Extraction Date:	05/07/02
Analysis Method:	Wisc DRO
Analysis Date:	05/08/02

Compound	Sample Results	Units	RL	MDL
Diesel range organics	<8.0 W	mg/kg	8.0	1.1
C-30 (Surrogate)	83.0	%	--	--

W=The sample was weighed out in the laboratory.

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Legend Sample ID:**	4
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/2002
Client ID:	Method Blank		

DRO/8015B SOIL

Method Blank

Extraction Date:	05/07/02
Analysis Method:	Wisc DRO
Analysis Date:	05/07/02

Compound	Sample Results	Units	RL	MDL
Diesel range organics	<8.0	mg/kg	8.0	1.1
C-30 (Surrogate)	96.1	%	--	--

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	1
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	North Clays		

VOC MDH 466C

Extraction Date: --
Analysis Method: MNDH 466C
Analysis Date: 05/07/02
Client ID: North Clays

Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11
2-Butanone	<2.0	mg/kg	2.0	0.83
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016
Acetone	<2.0	mg/kg	2.0	0.376
Allyl chloride	<0.25	mg/kg	0.25	0.041
Benzene	<0.25	mg/kg	0.25	0.010
Bromobenzene	<0.25	mg/kg	0.25	0.019
Bromochloromethane	<0.25	mg/kg	0.25	0.11
Bromodichloromethane	<0.25	mg/kg	0.25	0.021
Bromoform	<0.25	mg/kg	0.25	0.019
Bromomethane	<0.25	mg/kg	0.25	0.040
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013
Chlorobenzene	<0.25	mg/kg	0.25	0.011
Chloroethane	<0.25	mg/kg	0.25	0.10
Chloroform	<0.25	mg/kg	0.25	0.0090
Chloromethane	<0.25	mg/kg	0.25	0.0087
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15
cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
Dibromochloromethane	<0.25	mg/kg	0.25	0.022
Dibromomethane	<0.25	mg/kg	0.25	0.019
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
Ethyl benzene	<0.25	mg/kg	0.25	0.012
Ethyl ether	<0.25	mg/kg	0.25	0.030
Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
Isopropyl benzene	<0.25	mg/kg	0.25	0.019
Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
Methylene chloride	<1.5	mg/kg	1.5	0.040
n-Butyl benzene	<0.25	mg/kg	0.25	0.016
n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
Naphthalene	<0.25	mg/kg	0.25	0.016
o-Xylene	<0.25	mg/kg	0.25	0.016
p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
p/m-Xylene	<0.25	mg/kg	0.25	0.022
sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
Styrene	<0.25	mg/kg	0.25	0.020
tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
Tetrachloroethene	<0.25	mg/kg	0.25	0.012
Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
Toluene	<0.25	mg/kg	0.25	0.025
trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Trichloroethene	<0.25	mg/kg	0.25	0.011
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Vinyl chloride	<0.25	mg/kg	0.25	0.013
Fluorobenzene (Surrogate)	111 % G	%	--	--

G=The initial sample weight exceeded 35 grams.

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	2
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	Southwest Sands		

VOC MDH 466C

Extraction Date: –
Analysis Method: MNDH 466C
Analysis Date: 05/07/02
Client ID: Southwest Sands

Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11
2-Butanone	<2.0	mg/kg	2.0	0.83
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016
Acetone	<2.0	mg/kg	2.0	0.376
Allyl chloride	<0.25	mg/kg	0.25	0.041
Benzene	<0.25	mg/kg	0.25	0.010
Bromobenzene	<0.25	mg/kg	0.25	0.019
Bromochloromethane	<0.25	mg/kg	0.25	0.11
Bromodichloromethane	<0.25	mg/kg	0.25	0.021
Bromoform	<0.25	mg/kg	0.25	0.019
Bromomethane	<0.25	mg/kg	0.25	0.040
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013
Chlorobenzene	<0.25	mg/kg	0.25	0.011
Chloroethane	<0.25	mg/kg	0.25	0.10
Chloroform	<0.25	mg/kg	0.25	0.0090
Chloromethane	<0.25	mg/kg	0.25	0.0087
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15

Compound	Sample Results	Units	RL	MDL
cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
Dibromochloromethane	<0.25	mg/kg	0.25	0.022
Dibromomethane	<0.25	mg/kg	0.25	0.019
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
Ethyl benzene	<0.25	mg/kg	0.25	0.012
Ethyl ether	<0.25	mg/kg	0.25	0.030
Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
Isopropyl benzene	<0.25	mg/kg	0.25	0.019
Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
Methylene chloride	<1.5	mg/kg	1.5	0.040
n-Butyl benzene	<0.25	mg/kg	0.25	0.016
n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
Naphthalene	<0.25	mg/kg	0.25	0.016
o-Xylene	<0.25	mg/kg	0.25	0.016
p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
p/m-Xylene	<0.25	mg/kg	0.25	0.022
sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
Styrene	<0.25	mg/kg	0.25	0.020
tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
Tetrachloroethene	<0.25	mg/kg	0.25	0.012
Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
Toluene	<0.25	mg/kg	0.25	0.025
trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Trichloroethene	<0.25	mg/kg	0.25	0.011
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Vinyl chloride	<0.25	mg/kg	0.25	0.013
Fluorobenzene (Surrogate)	112 % G	%	--	--

G=The initial sample weight exceeded 35 grams.

Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	3
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	Trip Blank		

VOC MDH 466C

Extraction Date: --
Analysis Method: MNDH 466C
Analysis Date: 05/08/02
Client ID: Trip Blank

Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11
2-Butanone	<2.0	mg/kg	2.0	0.83
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016
Acetone	<2.0	mg/kg	2.0	0.376
Allyl chloride	<0.25	mg/kg	0.25	0.041
Benzene	<0.25	mg/kg	0.25	0.010
Bromobenzene	<0.25	mg/kg	0.25	0.019
Bromochloromethane	<0.25	mg/kg	0.25	0.11
Bromodichloromethane	<0.25	mg/kg	0.25	0.021
Bromoform	<0.25	mg/kg	0.25	0.019
Bromomethane	<0.25	mg/kg	0.25	0.040
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013
Chlorobenzene	<0.25	mg/kg	0.25	0.011
Chloroethane	<0.25	mg/kg	0.25	0.10
Chloroform	<0.25	mg/kg	0.25	0.0090
Chloromethane	<0.25	mg/kg	0.25	0.0087
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15
cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
Dibromochloromethane	<0.25	mg/kg	0.25	0.022
Dibromomethane	<0.25	mg/kg	0.25	0.019
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
Ethyl benzene	<0.25	mg/kg	0.25	0.012
Ethyl ether	<0.25	mg/kg	0.25	0.030
Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
Isopropyl benzene	<0.25	mg/kg	0.25	0.019
Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
Methylene chloride	<1.5	mg/kg	1.5	0.040
n-Butyl benzene	<0.25	mg/kg	0.25	0.016
n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
Naphthalene	<0.25	mg/kg	0.25	0.016
o-Xylene	<0.25	mg/kg	0.25	0.016
p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
p/m-Xylene	<0.25	mg/kg	0.25	0.022
sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
Styrene	<0.25	mg/kg	0.25	0.020
tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
Tetrachloroethene	<0.25	mg/kg	0.25	0.012
Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
Toluene	<0.25	mg/kg	0.25	0.025
trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Trichloroethene	<0.25	mg/kg	0.25	0.011
Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Vinyl chloride	<0.25	mg/kg	0.25	0.013
Fluorobenzene (Surrogate)	106	%	--	--

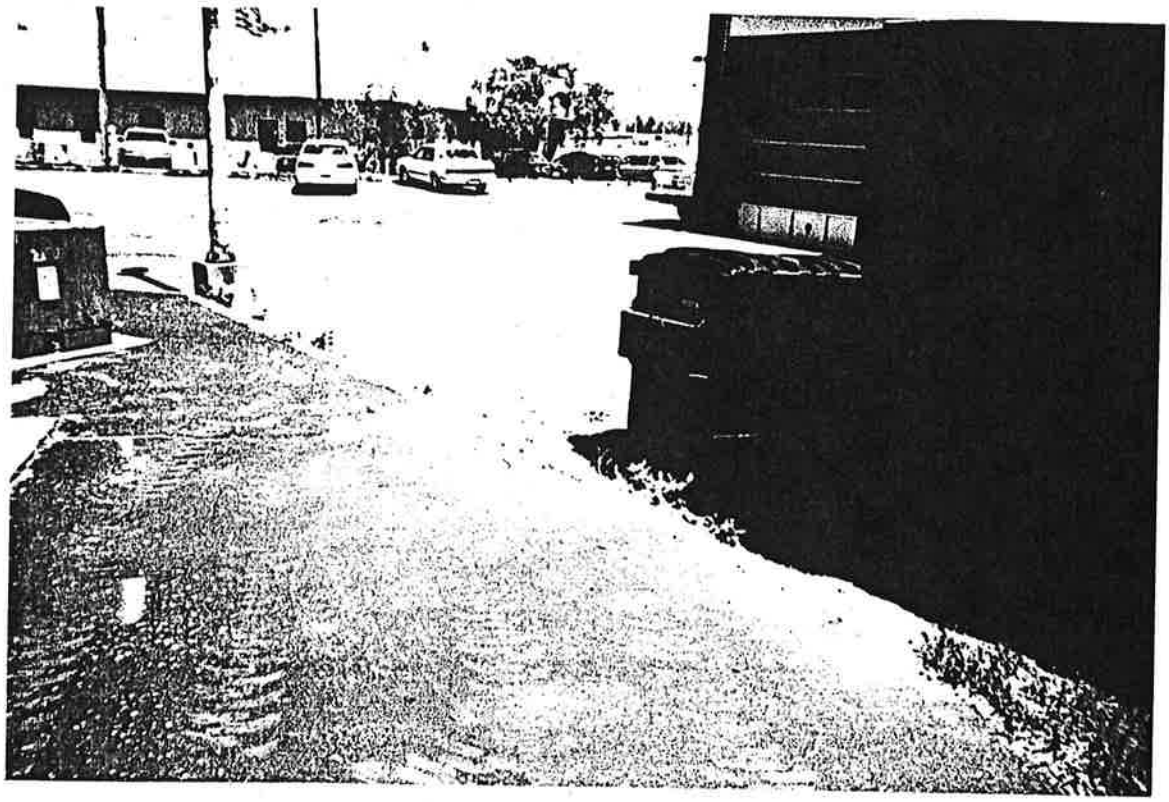
Legend Technical Services

Client Name:	Development Engineering	**Legend Project #:**	2002050145
Client Project Number:	2002.051	**Sample #:**	4
Client Project Name:	Goodyear Facility	**Matrix:**	Soil
Date Sampled:	05/06/02	**Date Received:**	05/06/02
Client Sample ID:	Method Blank		

VOC MDH 466C

Extraction Date: --
Analysis Method: MNDH 466C
Analysis Date: 05/07/02
Client ID: Method Blank

Compound	Sample Results	Units	RL	MDL	Compound	Sample Results	Units	RL	MDL
1,1,1,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.018	cis-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.020
1,1,1-Trichloroethane	<0.25	mg/kg	0.25	0.016	Dibromochloromethane	<0.25	mg/kg	0.25	0.022
1,1,2,2-Tetrachloroethane	<0.25	mg/kg	0.25	0.016	Dibromomethane	<0.25	mg/kg	0.25	0.019
1,1,2-Trichloroethane	<0.25	mg/kg	0.25	0.012	Dichlorofluoromethane	<0.25	mg/kg	0.25	0.23
1,1,2-Trichlorotrifluoroethane	<0.25	mg/kg	0.25	0.022	Dichlorofluoromethane	<0.25	mg/kg	0.25	0.020
1,1-Dichloroethane	<0.25	mg/kg	0.25	0.030	Ethyl benzene	<0.25	mg/kg	0.25	0.012
1,1-Dichloroethene	<0.25	mg/kg	0.25	0.033	Ethyl ether	<0.25	mg/kg	0.25	0.030
1,1-Dichloropropene	<0.25	mg/kg	0.25	0.013	Hexachlorobutadiene	<0.25	mg/kg	0.25	0.042
1,2,3-Trichlorobenzene	<0.25	mg/kg	0.25	0.011	Isopropyl benzene	<0.25	mg/kg	0.25	0.019
1,2,3-Trichloropropane	<0.25	mg/kg	0.25	0.020	Methyl isobutyl ketone	<0.25	mg/kg	0.25	0.067
1,2,4-Trichlorobenzene	<0.25	mg/kg	0.25	0.020	Methyl-tert-butyl ether	<0.25	mg/kg	0.25	0.020
1,2,4-Trimethylbenzene	<0.25	mg/kg	0.25	0.012	Methylene chloride	<1.5	mg/kg	1.5	0.040
1,2-Dibromo-3-chloropropane	<0.25	mg/kg	0.25	0.031	n-Butyl benzene	<0.25	mg/kg	0.25	0.016
1,2-Dibromoethane	<0.25	mg/kg	0.25	0.020	n-Propyl benzene	<0.25	mg/kg	0.25	0.0070
1,2-Dichlorobenzene	<0.25	mg/kg	0.25	0.015	Naphthalene	<0.25	mg/kg	0.25	0.016
1,2-Dichloroethane	<0.25	mg/kg	0.25	0.010	o-Xylene	<0.25	mg/kg	0.25	0.016
1,2-Dichloropropane	<0.25	mg/kg	0.25	0.021	p-Isopropyltoluene	<0.25	mg/kg	0.25	0.014
1,3,5-Trimethylbenzene	<0.25	mg/kg	0.25	0.010	p/m-Xylene	<0.25	mg/kg	0.25	0.022
1,3-Dichlorobenzene	<0.25	mg/kg	0.25	0.012	sec-butyl benzene	<0.25	mg/kg	0.25	0.0094
1,3-Dichloropropane	<0.25	mg/kg	0.25	0.017	Styrene	<0.25	mg/kg	0.25	0.020
1,4-Dichlorobenzene	<0.25	mg/kg	0.25	0.013	tert-Butyl benzene	<0.25	mg/kg	0.25	0.019
2,2-Dichloropropane	<0.25	mg/kg	0.25	0.11	Tetrachloroethene	<0.25	mg/kg	0.25	0.012
2-Butanone	<2.0	mg/kg	2.0	0.83	Tetrahydrofuran	<2.0	mg/kg	2.0	0.061
2-Chlorotoluene	<0.25	mg/kg	0.25	0.012	Toluene	<0.25	mg/kg	0.25	0.025
4-Chlorotoluene	<0.25	mg/kg	0.25	0.016	trans-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.027
Acetone	<2.0	mg/kg	2.0	0.376	trans-1,3-Dichloropropene	<0.25	mg/kg	0.25	0.015
Allyl chloride	<0.25	mg/kg	0.25	0.041	Trichloroethene	<0.25	mg/kg	0.25	0.011
Benzene	<0.25	mg/kg	0.25	0.010	Trichlorofluoromethane	<0.25	mg/kg	0.25	0.14
Bromobenzene	<0.25	mg/kg	0.25	0.019	Vinyl chloride	<0.25	mg/kg	0.25	0.013
Bromochloromethane	<0.25	mg/kg	0.25	0.11	Fluorobenzene (Surrogate)	105	%	--	--
Bromodichloromethane	<0.25	mg/kg	0.25	0.021					
Bromoform	<0.25	mg/kg	0.25	0.019					
Bromomethane	<0.25	mg/kg	0.25	0.040					
Carbon tetrachloride	<0.25	mg/kg	0.25	0.013					
Chlorobenzene	<0.25	mg/kg	0.25	0.011					
Chloroethane	<0.25	mg/kg	0.25	0.10					
Chloroform	<0.25	mg/kg	0.25	0.0090					
Chloromethane	<0.25	mg/kg	0.25	0.0087					
cis-1,2-Dichloroethene	<0.25	mg/kg	0.25	0.15					



LOCATION OF FORMER STORAGE TANK