



JOHN ENGLER, Governor  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973  
RUSSELL J. HARDING, Director

REPLY TO:

UNDERGROUND STORAGE TANK DIVISION  
TOWN CENTER  
PO BOX 30157  
LANSING MI 48909-7857

April 10, 1996

CERTIFIED MAIL

Dear Owner/Operator:

## SUBJECT:

Underground Storage Tank System Release  
Facility ID No. 0-009055  
Confirmed Release No. C-214-96  
SHELL SERVICE STATION  
975 S ROCHESTER/AVON  
ROCHESTER, MI 48037

On 04-09-96, the Department of Environmental Quality (DEQ), Underground Storage Tank Division (USTD), was notified that there was a release of a regulated substance from an underground storage tank (UST) system at the above mentioned location. Attached is a copy of the confirmed release report. This letter and attachments are to help your understanding of the following: the need to retain a Qualified UST Consultant (QC); site investigation and cleanup requirements; reporting requirements; forms requirements and penalties for late reports and fraud. Please seek assistance from the USTD SOUTHEAST MICHIGAN DISTRICT OFFICE at (313) 953-0241 for further guidance, if necessary. (A copy of the district offices and boundaries is attached for your reference.)

Qualified UST Consultant (QC)

The requirements for site investigation and cleanup, reporting, penalties, funds to assist cleanup and pollution liability insurance are in the Natural Resources and Environmental Response Act 1994 PA 451, as amended (Act 451). Part 213 of Act 451 requires you to retain a QC to perform the activities required at a LUST site. The USTD has prepared an interim list of QC's. The authority for establishing the QC list is provided under Part 215 of Act 451. Those on the current interim list (attached) are eligible to perform LUST corrective action services. The permanent Qualified UST Consultant list should be available in the Spring of 1996.

Cleanup Requirements

Part 213 specifies actions a UST owner or operator is required to take when a release is discovered. Please refer to Part 213 and the attached flow chart to help guide you through the requirements.

The Qualified Consultant is allowed to proceed with the preparation and implementation of corrective action workplans without prior USTD review or approval. USTD approval is needed for any institutional controls that are a part of the cleanup program. The USTD may audit or oversee all aspects of corrective actions undertaken pursuant to Part 213. To assist the USTD in this capacity, the QC is required to contact our District Office at least 48 hours prior to conducting on-site activities, using the attached form.

Forms and Reports

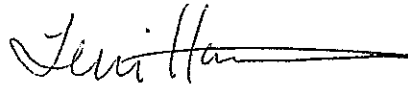
The USTD has created and requires the use of forms to assist in the reporting requirements. The required forms are available from the district office. The QC should submit a LUST report cover sheet with each report (enclosed). In addition, you are required to notify USTD of any changes to your UST system using a registration form (copy attached).

Penalties

Be advised that pursuant to Section 21313a and 21323, the owner or operator is subject to penalties for not preparing and submitting the reports outlined in Part 213. The owner or operator may, by contract, transfer the responsibility for paying these administrative penalties to a consultant retained by the owner or operator. Section 21324 provides that a person who submits or causes to be submitted false or misleading information may be found guilty of fraud.

Please include the Facility ID No. found under "Subject" at the top of this notification with each submittal and on any future correspondence. Should you have questions regarding this notification letter, or need additional information, please contact the USTD SOUTHEAST MICHIGAN DISTRICT OFFICE at (313) 953-0241.

Sincerely,



Terri Harmon  
Enforcement Unit  
Underground Storage Tank Division

Enclosures

cc: SOUTHEAST MICHIGAN DISTRICT OFFICE

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

3. Article Addressed to:

9055  
 Angela Faraci  
 Shell Oil  
 17370 Laurel Park Dr N. Ste 200  
 Livonia MI 48152

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

X B. Long

PS Form 3811, December 1994

Domestic Return Receipt

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address
  2.  Restricted Delivery
- Consult postmaster for fee.

4a. Article Number

9608633912

4b. Service Type

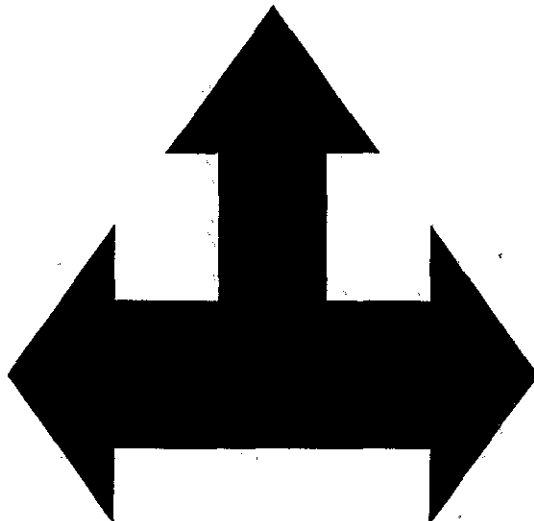
- Registered
- Express Mail
- Return Receipt for Merchandise
- Certified
- Insured
- COD

7. Date of Delivery

04/15/96

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.



P 608 633 912

US Postal Service

**Receipt for Certified Mail**

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
Street & Number	
Post Office, State, & ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>
Postmark or Date	

PS Form 3800, April 1995

Department of Environmental Quality  
Underground Storage Tank Division

96 JUN -5 PM 12:14  
RECEIVED  
MATT JUN 06 1996  
ENVIRONMENTAL QUALITY  
UST DIVISION

INSPECTION REPORT

Type of Inspection Performed: FINAL INSTALLATION INSPECTION

Type of Facility: PUBLIC AUTOMOTIVE SERVICE STATION      Number of Tanks: 3

Site Contact: MATT--LARSON      Site Phone Number: (810) 620-0070  
Owner's Representative: ANGELA FARACI      Representative's Phone: (313) 953-4345

OWNERSHIP OF TANKS

Owner Name: SHELL OIL CO  
Address: 17370 LAUREL PK NORTH  
SUITE 200  
LIVONIA, MI 48152

LOCATION OF TANKS

Name: SHELL SERVICE STATION  
Address: 975 S ROCHESTER/AVON  
ROCHESTER, MI 48037  
County: OAKLAND

THE UST SYSTEM(S) AT THIS FACILITY WERE INSPECTED USING THE MICHIGAN UNDERGROUND STORAGE TANK RULES AND APPLICABLE SECTIONS OF THE 1992 MICHIGAN FLAMMABLE AND COMBUSTIBLE LIQUID RULES. THE FOLLOWING VIOLATIONS, IF ANY, WERE NOTED. THE SITE CONTACT PERSON WAS VERBALLY ADVISED OF THE VIOLATIONS AT THE TIME OF INSPECTION.

NO VIOLATIONS CITED

COMMENTS:

Inspection Status: FACILITY APPROVED

Date of Inspection: 05/31/96      Date Compliance is Required: <not applicable>

Signature:   
DOUGLAS PENTZIEN

AUTHORITY: 1994 PA 451  
1941 PA 207  
COMPLIANCE: Required  
PENALTY: Misdemeanor,  
Civil Penalties

SOUTHEAST MICHIGAN DISTRICT OFFICE  
38980 SEVEN MILE ROAD  
LIVONIA, MI 48152  
Phone: (313) 432-1253  
Fax: (313) 432-1295

REVISED FORM 2/21/96 *sun*

FM-56 (10/92)  
Michigan State Police  
STATE FIRE MARSHAL

INCIDENT # 5-93-96

MAIL TO: Michigan Department of State Police  
FIRE MARSHAL DIVISION  
Hazardous Materials Unit  
7160 Harris Drive  
Lansing, MI 48913

AUTHORITY: 1984 PA 423  
COMPLIANCE: Required  
PENALTY: Misdemeanor

**UNDERGROUND TANK RESTORATION**

**SECTION 1: TANK REPAIR NOTIFICATION**

9055

NAME OF APPLICATOR FIRM <i>Annun Shield of ILLINOIS</i>		DATE OF NOTIFICATION <i>2-21-96</i>			
ADDRESS <i>902 SUAN BURN NEWTON, IL 62448</i>		TELEPHONE NO. <i>618-783-2079</i>			
RELINING MATERIAL TO BE USED <i>TL 300m</i>	MANUFACTURED BY <i>Annun shield</i>	INSURANCE CERTIFICATE <input checked="" type="checkbox"/> AT STATE FM <input type="checkbox"/> ATTACHED			
NAME OF FIRM WHERE TANKS ARE LOCATED <i>SHELL STATION</i>		TELEPHONE NO. <i>810-656-0080</i>			
ADDRESS <i>975 Rochester + AVON Rochester Hills, MI 48063</i>					
COUNTY <i>OAKLAND</i>	FACILITY TYPE <i>SERVICE STATION</i>				
REASON FOR RELINING (Check One)					
	Tank No. 1	Tank No. 2	Tank No. 3	Tank No. 4	
Preventative Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EST. DATE OF EVALUATION <i>2-20-96</i>	EST. DATE OF TANK PREPARATION <i>2-21-96</i>		EST. DATE OF PRODUCT APPLICATION <i>2-21-96</i>		
EST. DATE OF LINING TEST <i>2-23-96</i>	EST. DATE OF TANK CLOSING <i>2-24-96</i>		EST. DATE OVERFILL PROTECTION INSTALLED <i>N/A</i>		
EST. DATE OF REQUIRED TANK TEST <i>2-27-96</i>			EST. DATE OF PROJECT COMPLETION <i>2-27-96</i>		

**SECTION 2: CERTIFICATE OF PERFORMANCE**

RELINING MATERIAL USED <i>TL 300m</i>	MANUFACTURED BY <i>ANNUN SHIELD</i>	COMPLETION DATE <i>3-1-96</i>
TANK 1 CONSTRUCTION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY <i>10,000</i>	YEAR INSTALLED <i>N/A</i>
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input checked="" type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input checked="" type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 2 CONSTRUCTION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY <i>10,000</i>	YEAR INSTALLED <i>N/A</i>
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input checked="" type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input checked="" type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 3 CONSTRUCTION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY <i>6000</i>	YEAR INSTALLED <i>N/A</i>
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input checked="" type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input checked="" type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		

\*IF "RELINED" BOX IS CHECKED, THE TANK PREPARATION AND PRODUCT APPLICATION MUST COMPLY WITH THE SEALANT MANUFACTURER'S SPECIFICATIONS, WHICH MUST BE REGISTERED WITH THE STATE FIRE MARSHAL.

SIGNATURE OF QUALIFIED APPLICATOR <i>[Signature]</i>	DATE CERTIFICATE SUBMITTED <i>3-4-96</i>
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REVISED Form 2-21-96

new form submitted!

AUTHORITY:	1984 PA 423
COMPLIANCE:	Required
PENALTY:	Misdemeanor

**UNDERGROUND TANK RESTORATION**

**SECTION 1: TANK REPAIR NOTIFICATION**

NAME OF APPLICATOR FIRM <b>ARMOR SHIELD OF ILLINOIS</b>		DATE OF NOTIFICATION <b>2-13-96</b>	
ADDRESS <b>902 S VAN BUREN NEWTON, IL 62448</b>		TELEPHONE NO. <b>618-783-2019</b>	
RELINING MATERIAL TO BE USED <b>TL 300M</b>	MANUFACTURED BY <b>ARMOR SHIELD</b>	INSURANCE CERTIFICATE <input checked="" type="checkbox"/> AT STATE FM <input type="checkbox"/> ATTACHED	
NAME OF FIRM WHERE TANKS ARE LOCATED <b>SHELL STATION</b>		TELEPHONE NO. <b>Ph# 810-656-0080</b>	
ADDRESS <b>975 ROCHESTER &amp; AVON ROCHESTER HILLS, MI 48063</b>			
COUNTY <b>OAKLAND</b>	FACILITY TYPE <b>SERVICE STATION</b>		
REASON FOR RELINING (Check One)	Tank No. 1	Tank No. 2	Tank No. 3
Preventative Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EST. DATE OF EVALUATION <b>2-27-96</b>	EST. DATE OF TANK PREPARATION <b>2-27-96</b>		EST. DATE OF PRODUCT APPLICATION <b>2-28-96</b>
EST. DATE OF LINING TEST <b>2-28-96</b>	EST. DATE OF TANK CLOSING <b>2-28-96</b>		EST. DATE OVERFILL PROTECTION INSTALLED <b>N/A</b>
EST. DATE OF REQUIRED TANK TEST <b>2-28-96</b>			EST. DATE OF PROJECT COMPLETION <b>2-28-96</b>

**SECTION 2: CERTIFICATE OF PERFORMANCE**

RELINING MATERIAL USED	MANUFACTURED BY	COMPLETION DATE
TANK 1 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 2 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 3 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		

\*IF "RELINED" BOX IS CHECKED, THE TANK PREPARATION AND PRODUCT APPLICATION MUST COMPLY WITH THE SEALANT MANUFACTURER'S SPECIFICATIONS, WHICH MUST BE REGISTERED WITH THE STATE FIRE MARSHAL.

SIGNATURE OF QUALIFIED APPLICATOR <b>X</b>	DATE CERTIFICATE SUBMITTED
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REVISED FORM 2/21/96 *SM*

FM-56 (10/92)  
Michigan State Police  
STATE FIRE MARSHAL  
**UNDERGROUND TANK RESTORATION**

*Incident # 5-93-96  
opened 2-26-96*

MAIL TO: Michigan Department of State Police  
FIRE MARSHAL DIVISION  
Hazardous Materials Unit  
7150 Harris Drive  
Lansing, MI 48913

AUTHORITY:	1984 PA 423
COMPLIANCE:	Required
PENALTY:	Misdemeanor

**SECTION 1: TANK REPAIR NOTIFICATION**

*9055*

NAME OF APPLICATOR FIRM <i>ANNON SHIELD OF ILLINOIS</i>		DATE OF NOTIFICATION <i>2-21-96</i>	
ADDRESS <i>902 SUAN BURN NEWTON, IL 62448</i>		TELEPHONE NO. <i>618-783-2019</i>	
RELINING MATERIAL TO BE USED <i>TL 300M</i>	MANUFACTURED BY <i>ANNON SHIELD</i>	INSURANCE CERTIFICATE <input checked="" type="checkbox"/> AT STATE FM <input type="checkbox"/> ATTACHED	
NAME OF FIRM WHERE TANKS ARE LOCATED <i>SHELL STATION</i>		TELEPHONE NO. <i>810-656-0080</i>	
ADDRESS <i>975 Rochester + AVON Rochester Hills, MI 48063</i>			
COUNTY <i>OAKLAND</i>	FACILITY TYPE <i>SERVICE STATION</i>		
REASON FOR RELINING (Check One)	Tank No. 1	Tank No. 2	Tank No. 3
Preventative Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EST. DATE OF EVALUATION <i>2-27-96</i>	EST. DATE OF TANK PREPARATION <i>2-20-96</i>		EST. DATE OF PRODUCT APPLICATION <i>2-23-96</i>
EST. DATE OF LINING TEST <i>2-23-96</i>	EST. DATE OF TANK CLOSING <i>2-24-96</i>		EST. DATE OVERFILL PROTECTION INSTALLED <i>N/A</i>
EST. DATE OF REQUIRED TANK TEST <i>2-27-96</i>		EST. DATE OF PROJECT COMPLETION <i>2-27-96</i>	

**SECTION 2: CERTIFICATE OF PERFORMANCE**

RELINING MATERIAL USED	MANUFACTURED BY	COMPLETION DATE
TANK 1 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 2 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 3 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		

\*IF "RELINED" BOX IS CHECKED, THE TANK PREPARATION AND PRODUCT APPLICATION MUST COMPLY WITH THE SEALANT MANUFACTURER'S SPECIFICATIONS, WHICH MUST BE REGISTERED WITH THE STATE FIRE MARSHAL.

SIGNATURE OF QUALIFIED APPLICATOR <i>X</i>	DATE CERTIFICATE SUBMITTED
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## Armor Shield Of Illinois

902 S. VAN BUREN STREET  
NEWTON, ILLINOIS 62440  
PHONE (618) 783-2019  
FAX # (618) 783-3527

## FAX TRANSMITTAL

Date: 2-21-96  
To: FIRE MARSHAL DIVISION  
Attn: MIKE MADRY  
From: Scott LUSTIG  
Re: REVISED NOTIFICATION

## COMMENTS

MIKE

Please find the revised notification for  
the shell station in Kellaster Hills, MI.

We will be lining (2) additional users  
at this site.

If you have any questions please give  
me a call at 618-783-2019



# Armor Shield Of Illinois

902 S. VAN BUREN STREET  
NEWTON, ILLINOIS 62448  
PHONE (618) 783-2019  
FAX (618) 783-3527

FAX TRANSMITTAL

Date: 2-21-96  
To: FIRE MARSHAL DIVISION  
Attn: MIKE KADRY  
From: Scott Little  
Re: REVISED NOTIFICATION

### COMMENTS

MIKE

Place and the Revised notification for  
the shell station in Lockston Hills, MI.

We will be lining (2) additional users  
at this site.

If you have any questions please give  
me a call at 618-783-2019

REVISED FORM 2/21/96 SWJ

M-59 (1-93)  
Michigan State Police  
STATE FIRE MARSHAL

INCIDENT # 5-93-96

MAIL TO: Michigan Department of State Police  
FIRE MARSHAL DIVISION  
Hazardous Materials Unit  
7150 Harco Drive  
Lansing, MI 48910

AUTHORITY: 1984 PA 423  
COMPLIANCE: Required  
PENALTY: Misdeamorty

UNDERGROUND TANK RESTORATION

SECTION 1: TANK REPAIR NOTIFICATION

NAME OF APPLICATOR FIRM <i>ARMOR Shield of ILLINOIS</i>		DATE OF NOTIFICATION <i>2-21-96</i>	
ADDRESS <i>902 SWAN BURN NEWTON, IL 62448</i>		TELEPHONE NO. <i>618-782-2019</i>	
RELINING MATERIAL TO BE USED <i>TL 300M</i>	MANUFACTURED BY <i>ARMOR Shield</i>	INSURANCE CERTIFICATE <input checked="" type="checkbox"/> AT STATE FM <input type="checkbox"/> ATMA	
NAME OF FIRM WHERE TANKS ARE LOCATED <i>SHELL STATION</i>		TELEPHONE NO. <i>810-656-0780</i>	
ADDRESS <i>975 Rochester + AVON Rochester Hills, MI 48063</i>			
COUNTY <i>OAKLAND</i>	FACILITY TYPE <i>SERVICE STATION</i>		
REASON FOR RELINING (Check One)	Tank No. 1	Tank No. 2	Tank No. 3
Preventative Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EST. DATE OF EVALUATION <i>2-20-96</i>	EST. DATE OF TANK PREPARATION <i>2-21-96</i>		EST. DATE OF PRODUCT APPLICATION <i>2-21-96</i>
EST. DATE OF LINING TEST <i>2-23-96</i>	EST. DATE OF TANK CLOSING <i>2-24-96</i>		EST. DATE OVERFILL PROTECTION INSTALLED <i>N/A</i>
EST. DATE OF REQUIRED TANK TEST <i>2-27-96</i>			EST. DATE OF PROJECT COMPLETION <i>2-27-96</i>

SECTION 2: CERTIFICATE OF PERFORMANCE

RELINING MATERIAL USED	MANUFACTURED BY	COMPLETION DATE
TANK 1 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER	
TANK 2 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER	
TANK 3 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER	
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER	

IF RELINED, OWNER MUST CHECK THE TANK PREPARATION AND PRODUCT APPLICATION MUST COMPLY WITH THE SEVERAL MANUFACTURER'S SPECIFICATIONS, WHICH MUST BE REGISTERED WITH THE STATE FIRE MARSHAL.

SIGNATURE OF QUALIFIED APPLICATOR: *X* DATE CERTIFICATE SUBMITTED: \_\_\_\_\_

REVISED FORM 2/21/96 SW

FM-96 (10/92)  
Michigan State Police  
STATE FIRE MARSHAL  
UNDERGROUND TANK RESTORATION

INCIDENT # 5-93-96

Michigan Department of State Police  
FIRE MARSHAL DIVISION  
Richardson "Motorists Inn"  
7150 State Drive  
Lansing, MI 48913

AUTHORITY:	1984 PA 423
COMPLIANCE:	Reg. 66
PENALTY:	Misdemeanor

SECTION 1: TANK REPAIR NOTIFICATION

NAME OF APPLICATOR FIRM <i>Annun Shield of ILINOIS</i>		DATE OF NOTIFICATION <i>2-21-96</i>	
ADDRESS <i>902 SWAN GARDEN NEWTON, IL 62449</i>		TELEPHONE NO. <i>618-763-2019</i>	
RELINING MATERIAL TO BE USED <i>72 300m</i>	MANUFACTURED BY <i>ANNUN SHIELD</i>	INSURANCE CERTIFICATE <input type="checkbox"/> AT STATE FIA <input type="checkbox"/> OTHER	
NAME OF FIRM WHERE TANKS ARE LOCATED <i>SHELL STATION</i>		TELEPHONE NO. <i>810-656-0000</i>	
ADDRESS <i>975 Rochester &amp; AUNN Rochester Hills, MI 48316</i>			
COUNTY <i>OAKLAND</i>	FACILITY TYPE <i>SERVICE STATION</i>		
REASON FOR RELINING (Check One)	Tank No. 1	Tank No. 2	Tank No. 3
Preventative Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EST. DATE OF EVALUATION <i>2-20-96</i>	EST. DATE OF TANK PREPARATION <i>2-21-96</i>	EST. DATE OF PROJECT COMPLETION <i>2-21-96</i>	
EST. DATE OF LEAK TEST <i>2-23-96</i>	EST. DATE OF TANK CLOSING <i>2-24-96</i>	EST. DATE OVERFILL PROTECTION <i>N/A</i>	
EST. DATE OF REQUIRED TANK TEST <i>2-27-96</i>	EST. DATE OF PROJECT COMPLETION <i>2-27-96</i>		

SECTION 2: CERTIFICATE OF PERFORMANCE

RELINING MATERIAL USED	MANUFACTURED BY	COMPLETION DATE
TANK 1 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY	
TANK 2 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY	
TANK 3 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY	
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER	TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY	

\*IF "RELINED" BOX IS CHECKED, THE TANK PREPARATION AND PRODUCT APPLICATOR MUST COMPLY WITH THE SEWER MANUFACTURER'S SPECIFICATIONS AND BE REGISTERED WITH THE STATE FIRE MARSHAL.

SIGNATURE OF QUALIFIED APPLICATOR <i>X</i>	DATE CERTIFICATE SIGNED
---	-------------------------

FM-65 (10/93)  
Michigan State Police  
STATE FIRE MARSHAL  
UNDERGROUND TANK RESTORATION

*Javel*  
2-14-96 *LD*

Michigan Department of State Police  
FIRE MARSHAL DIVISION  
Hazardous Materials Unit  
7150 Harris Drive  
Lansing, MI 48919

AUTHORITY:	1984 PA 423
COMPLIANCE:	Approved
PENALTY:	Miscellaneous

SECTION 1: TANK REPAIR NOTIFICATION

NAME OF APPLICATOR FIRM <b>ARMOR SHIELD OF ILLINOIS</b>		DATE OF NOTIFICATION <b>2-13-96</b>	
ADDRESS <b>902 S VAN BUREN NEWTON, IL 62448</b>		TELEPHONE NO. <b>618-703-2019</b>	
RELINING MATERIAL TO BE USED <b>TL 300 M</b>	MANUFACTURED BY <b>ARMOR SHIELD</b>	INSURANCE CERTIFICATE <input checked="" type="checkbox"/> AT STATION <input type="checkbox"/> OTHER	
NAME OF FIRM WHERE TANKS ARE LOCATED <b>SHELL STATION</b>		TELEPHONE NO. <b>PH 810-656-0080</b>	
ADDRESS <b>975 ROCHESTER &amp; AVON ROCHESTER HILLS, MI 48063</b>			
COUNTY <b>OAKLAND</b>	FACILITY TYPE <b>SERVICE STATION</b>		
REASON FOR RELINING (Check One)	Tank No. 1	Tank No. 2	Tank No. 3
Preventative Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EST. DATE OF EVALUATION <b>2-27-96</b>	EST. DATE OF TANK PREPARATION <b>2-27-96</b>		EST. DATE OF PRODUCT APPLICATION <b>2-28-96</b>
EST. DATE OF LINING TEST <b>2-28-96</b>	EST. DATE OF TANK CLOSING <b>2-28-96</b>		EST. DATE OVERFILL PROTECTION <b>N/A</b>
EST. DATE OF REQUIRED TANK TEST <b>2-28-96</b>			EST. DATE OF PROJECT COMPLETION <b>2-28-96</b>

SECTION 2: CERTIFICATE OF PERFORMANCE

RELINING MATERIAL USED	MANUFACTURED BY	COMPLETION DATE
TANK 1 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED		
TANK 2 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED		
TANK 3 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED		
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED		

\*IF "RELINED" BOX IS CHECKED, THE TANK PREPARATION AND PRODUCT APPLICATION MUST COMPLY WITH THE REFINER'S MANUFACTURER'S SPECIFICATIONS, WHICH MUST BE REGISTERED WITH THE STATE FIRE MARSHAL

SIGNATURE OF QUALIFIED APPLICATOR: **X** DATE CERTIFICATE ISSUED:

*faxed*  
*2-23-96 JJ*

AUTHORITY:	1984 PA 423
COMPLIANCE:	Required
PENALTY:	Misdemeanor

**UNDERGROUND TANK RESTORATION**

**SECTION 1: TANK REPAIR NOTIFICATION**

NAME OF APPLICATOR FIRM <b>ARMOR SHIELD OF ILLINOIS</b>		DATE OF NOTIFICATION <b>2-13-96</b>	
ADDRESS <b>902 S VAN BUREN NEWTON, IL 62448</b>		TELEPHONE NO. <b>618-783-2019</b>	
RELINING MATERIAL TO BE USED <b>TL 300M</b>	MANUFACTURED BY <b>ARMOR SHIELD</b>	INSURANCE CERTIFICATE <input checked="" type="checkbox"/> AT STATE FM <input type="checkbox"/> ATTACHED	
NAME OF FIRM WHERE TANKS ARE LOCATED <b>SHELL STATION</b>		TELEPHONE NO. <b>PH 810-656-0080</b>	
ADDRESS <b>975 ROCHESTER &amp; AVON ROCHESTER HILLS, MI 48063</b>			
COUNTY <b>OAKLAND</b>	FACILITY TYPE <b>SERVICE STATION</b>		
REASON FOR RELINING (Check One)	Tank No. 1	Tank No. 2	Tank No. 3
Preventative Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repair Leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EST. DATE OF EVALUATION <b>2-27-96</b>	EST. DATE OF TANK PREPARATION <b>2-27-96</b>		EST. DATE OF PRODUCT APPLICATION <b>2-28-96</b>
EST. DATE OF LINING TEST <b>2-28-96</b>	EST. DATE OF TANK CLOSING <b>2-28-96</b>		EST. DATE OVERFILL PROTECTION INSTALLED <b>N/A</b>
EST. DATE OF REQUIRED TANK TEST <b>2-28-96</b>			EST. DATE OF PROJECT COMPLETION <b>2-28-96</b>

**SECTION 2: CERTIFICATE OF PERFORMANCE**

RELINING MATERIAL USED	MANUFACTURED BY	COMPLETION DATE
TANK 1 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 2 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 3 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		
TANK 4 CONSTRUCTION <input type="checkbox"/> STEEL <input type="checkbox"/> NONMETALLIC	CAPACITY	YEAR INSTALLED
PRODUCT TO BE STORED <input type="checkbox"/> GASOLINE W/LEAD <input type="checkbox"/> GASOLINE W/O LEAD <input type="checkbox"/> GASOLINE W/ALCOHOL <input type="checkbox"/> FUEL OIL/DIESEL <input type="checkbox"/> OTHER		
TANK STATUS <input type="checkbox"/> REPAIRED <input type="checkbox"/> RELINED* <input type="checkbox"/> ABANDONED <input type="checkbox"/> REMOVED <input type="checkbox"/> OVERFILL PROTECTION INSTALLED <input type="checkbox"/> WORK CANCELLED BY OWNER		

\*IF "RELINED" BOX IS CHECKED, THE TANK PREPARATION AND PRODUCT APPLICATION MUST COMPLY WITH THE SEALANT MANUFACTURER'S SPECIFICATIONS, WHICH MUST BE REGISTERED WITH THE STATE FIRE MARSHAL.

SIGNATURE OF QUALIFIED APPLICATOR <b>X</b>	DATE CERTIFICATE SUBMITTED
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STATE OF MICHIGAN  
LICENSING AND REGULATORY AFFAIRS  
BUREAU OF FIRE SERVICES STORAGE TANK DIVISION

## FACILITY INSPECTION REPORT

Owner Name & Address:

Safeway Acquisitions Group LLC  
8700 Brandt  
Dearborn, MI 48126

Location of Tanks:

Express 100 Inc  
975 S Rochester Rd  
Rochester, MI 48037  
County - Oakland  
Facility ID - 00009055

ATTENTION: Steve Saad

A Reinspection was conducted on September 13, 2016, for the above-referenced facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Michigan Underground Storage Tank Rules (MUSTR), 2008 AACS R 29.2101 et seq.; and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2014 AACS R 29.5601 et seq. The inspection showed that the tank(s) was tagged.

- 1 Interstitial or monthly monitoring shall be conducted in accordance with Section 280.44 (C).  
Section 280.44(C)

Special Attention : NOTE: Tanks installed after July 2008 where required to be double-wall and interstitial monitored.

The existing compartment (diesel/premium) tank has been RED TAGGED for failure to modify existing system so the double-wall tank and double-wall piping is interstitially monitored as required.

Inspector requested and received PASSING line leak detectors, pressure fuel lines, and impact valves test results for the diesel & gasoline systems performed on 3/12/16 by Daniel Jaber.

The inspection and violations (if any) were discussed with Khalil Saad at the time of the inspection.

If you have additional questions concerning this matter, please contact me.

*Jerry Arnold*

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9/13/16

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Jerry Arnold  
Hazardous Materials Storage Inspector  
Region 1  
PO Box 30033  
Lansing, MI 48909  
Phone: (734) 891-1523  
Fax: (517) 332-1428  
Email: [arnoldj@michigan.gov](mailto:arnoldj@michigan.gov)

Date

**Konadu, Stella (LARA)**

0009055

**To:** Arnold, Jerry (LARA)  
**Subject:** RE: FID#9055 - 975 S. Rochester Rd., Rochester, MI

**ENTERED (SMK)**

**SEP 20 2016**

Hello,

I have updated tank numbers 5 and 6 piping and tank information for facility (0009055).

Thanks  
Stella

---

**From:** Arnold, Jerry (LARA)  
**Sent:** Tuesday, September 20, 2016 11:17 AM  
**To:** Konadu, Stella (LARA) <KONADUS@michigan.gov>  
**Subject:** FID#9055 - 975 S. Rochester Rd., Rochester, MI

Stella please make the following changes to tank #5

Tank release detection	ONLY	Automatic tank gauging & inventory control
Piping material	CHANGE	single-wall fiberglass
Tank Construction	CHANGE	Fiberglass

Please make the following changes to tank #6:

Tank release detection	ADD	Inventory Control
Piping Material	CHANGE	Single-wall fiberglass & double-wall flexible
Tank Construction	ADD	Composite



MAR 03 2015

(C)

Department of Licensing and Regulatory Affairs, Bureau of Fire Services, Storage Tank Division

REGISTRATION OF UNDERGROUND STORAGE TANKS

The information in this form is required under "Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended." Any owner who knowingly fails to notify or submits false information shall be subject to a misdemeanor and/or civil penalties not to exceed \$5,000 per day for each tank for which notification is not given or for which false information is submitted.

<input type="checkbox"/> NEW REGISTRATION	If sending payment and form, mail to: LARA, Cashiers Office UST/AST, P.O. Box 30033, Lansing, MI 48909	FACILITY ID NUMBER (if known)  00009055
<input checked="" type="checkbox"/> AMENDED INFORMATION (for Registered USTs Only)	If sending payment and form OVERNIGHT: LARA, Cashiers Office UST/AST, 525 West Allegan, Lansing, MI 48909	
	If sending the FORM ONLY, mail to: LARA, Bureau of Fire Services, Storage Tank Division, P.O. Box 30033, Lansing, MI 48909	
NUMBER OF TANKS AT FACILITY: 2	NUMBER OF CONTINUATION SHEETS ATTACHED: 1	

OWNERSHIP OF TANKS			LOCATION OF TANKS		
IF THIS IS A NEW OWNER'S ADDRESS, PLEASE CHECK <input checked="" type="checkbox"/>			IF INFORMATION IS THE SAME AS SECTION I, PLEASE CHECK <input checked="" type="checkbox"/>		
OWNER NAME (Corporation/Individual, etc.) KHALIL SAAD Rochester			FACILITY NAME OR SITE IDENTIFIER KJB minimart		
MAILING ADDRESS 975 S. ROCHESTER			STREET ADDRESS (P.O. Box Not Acceptable)		
CITY ROCHESTER HILLS	STATE MI	ZIP 48307	CITY	STATE	ZIP
COUNTRY (Please Specify) <input type="checkbox"/> USA <input type="checkbox"/> OTHER			COUNTY Oakland		
AREA CODE & PHONE NUMBER (248) 601-0050			AREA CODE & PHONE NUMBER		
TAX PAYER ID OR SOCIAL SECURITY NUMBER			<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>RECEIVED</b>  FEB 27 2015  BUREAU OF FIRE SERVICES </div>		
LATITUDE AND LONGITUDE of facility (if known) LATITUDE (North):					

TYPE OF TANK

FEDERAL  COMMERCIAL  STATE GOVERNMENT  PRIVATE  LOCAL GOVERNMENT

ARE TANKS LOCATED ON LAND WITHIN A RESERVATION?  YES  NO

IF TANKS ARE LOCATED WITHIN A RESERVATION, DOES A NATIVE AMERICAN TRIBE OWN TANKS?  YES  NO

IF TANKS ARE OWNED BY A TRIBE, NAME OF TRIBE: \_\_\_\_\_

USE OF TANK

<input checked="" type="checkbox"/> PUBLIC GAS STATION	<input type="checkbox"/> LOCAL GOVERNMENT	<input type="checkbox"/> CONTRACTOR
<input type="checkbox"/> PRIVATE GAS STATION	<input type="checkbox"/> STATE GOVERNMENT	<input type="checkbox"/> TRUCKING/TRANSPORT
<input type="checkbox"/> MARINE GAS STATION	<input type="checkbox"/> FEDERAL/NON-MILITARY	<input type="checkbox"/> UTILITIES
<input type="checkbox"/> PETROLEUM DISTRIBUTOR	<input type="checkbox"/> FEDERAL-MILITARY	<input type="checkbox"/> RESIDENTIAL
<input type="checkbox"/> AIRLINE AND/OR AIRCRAFT OWNER	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> FARM
<input type="checkbox"/> AUTO DEALERSHIP	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> OTHER (Explain) _____
<input type="checkbox"/> RAILROAD	<input type="checkbox"/> HOSPITAL	

Name: KHALIL SAAD	Job Title: president	Area Code & Phone No.: (248) 601-0050
Class A operator: Name: Morné Jansen Van Vuren	Company: B.W. Larson	Area Code & Phone No.: 248-549-3610
Class B operator: Name: Ryan Clontz	Company: B.W. Larson	Area Code & Phone No.: 248-549-3610

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS FORM AND ALL ATTACHED DOCUMENTS AND THAT I HAVE VERIFIED THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

NAME AND OFFICIAL TITLE OF OWNER OR OWNERS' AUTHORIZED REPRESENTATIVE Khalil Saad	SIGNATURE Khalil Saad	DATE 2/16/2015
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COMMENTS AND/OR CLARIFICATIONS:

amended for purpose of A & B Operator designation only...no other changes have been made



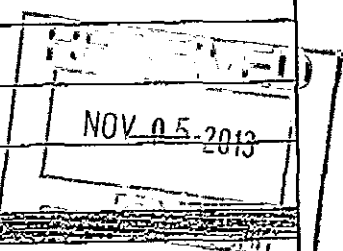
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION DIVISION

REGISTRATION OF UNDERGROUND STORAGE TANKS

The information in this form is required under Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Any owner who knowingly fails to notify or submits false information shall be subject to a misdemeanor and/or civil penalties not to exceed \$5,000 per day for each tank for which notification is not given or for which false information is submitted.

<input type="checkbox"/> NEW REGISTRATION <input checked="" type="checkbox"/> AMENDED INFORMATION (for Registered USTs Only)	If sending payment and form, mail to: Cashiers Office, DEQ P.O. Box 30657, Lansing, MI 48909-8157	FACILITY ID NUMBER (4-20-001) 9055
	If sending payment and form OVERNIGHT, mail to: Cashiers Office, DEQ, 525 West Allegan, 6 <sup>th</sup> Floor South, Lansing, MI 48933	
	If sending FORM ONLY, mail to: Storage Tanks & Contacts Unit, Remediation Division, DEQ, P.O. Box 30426, Lansing, MI 48909-7926	

NUMBER OF TANKS AT FACILITY: 2      NUMBER OF CONTINUATION SHEETS ATTACHED: 0

OWNERSHIP OF TANKS				LOCATION OF TANKS		
IF THIS IS A NEW OWNER'S ADDRESS, PLEASE CHECK <input type="checkbox"/>				IF INFORMATION IS THE SAME AS SECTION I, PLEASE CHECK <input type="checkbox"/>		
OWNER NAME (Corporation/Individual, etc.) <u>K &amp; B Mini Mart</u>				FACILITY NAME OR SITE IDENTIFIER		
MAILING ADDRESS <u>975 Rochester</u>				STREET ADDRESS (P.O. Box Not Acceptable)		
CITY <u>Rochester hills</u>	STATE <u>MI</u>	ZIP <u>48307</u>	CITY	STATE <u>MI</u>	ZIP	
COUNTRY (Please Specify) <input checked="" type="checkbox"/> USA <input type="checkbox"/> OTHER				COUNTY		
AREA CODE & PHONE NUMBER <u>(313) 481-0050</u>				AREA CODE & PHONE NUMBER		
LONGITUDE (West):						

TYPE OF OWNER

FEDERAL       COMMERCIAL  
 STATE GOVERNMENT       PRIVATE  
 LOCAL GOVERNMENT      ARE TANKS LOCATED ON LAND WITHIN A RESERVATION?  YES  NO  
 IF TANKS ARE LOCATED WITHIN A RESERVATION, DOES A NATIVE AMERICAN TRIBE OWN TANKS?  YES  NO  
 IF TANKS ARE OWNED BY A TRIBE, NAME OF TRIBE: \_\_\_\_\_

TYPE OF FACILITY

<input checked="" type="checkbox"/> PUBLIC GAS STATION	<input type="checkbox"/> LOCAL GOVERNMENT	<input type="checkbox"/> CONTRACTOR
<input type="checkbox"/> PRIVATE GAS STATION	<input type="checkbox"/> STATE GOVERNMENT	<input type="checkbox"/> TRUCKING/TRANSPORT
<input type="checkbox"/> MARINE GAS STATION	<input type="checkbox"/> FEDERAL/NON-MILITARY	<input type="checkbox"/> UTILITIES
<input type="checkbox"/> PETROLEUM DISTRIBUTOR	<input type="checkbox"/> FEDERAL-MILITARY	<input type="checkbox"/> RESIDENTIAL
<input type="checkbox"/> AIRLINE AND/OR AIRCRAFT OWNER	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> FARM
<input type="checkbox"/> AUTO DEALERSHIP	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> OTHER (Explain) _____
<input type="checkbox"/> RAILROAD	<input type="checkbox"/> HOSPITAL	

CONTACT PERSONS

Name: <u>Mohamad Ajrouche</u>	Job Title	Area Code & Phone No. <u>313</u>
Class A operator Name: <u>Mohamad Ajrouche</u>	Company	Area Code & Phone No. <u>313</u>
Class B operator Name: <u>Mohamad Ajrouche</u>	Company	Area Code & Phone No. <u>313</u>
Alternate Class B operator (if applicable):	Company	Area Code & Phone No.

CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS FORM AND ALL ATTACHED DOCUMENTS AND THAT I HAVE VERIFIED THAT THE INFORMATION IS TRUE, ACCURATE, AND COMPLETE.

NAME AND OFFICIAL TITLE OF OWNER OR OWNERS' AUTHORIZED REPRESENTATIVE <u>Safeway Acquisitions</u>	SIGNATURE <u>Younes Beydoun</u>	DATE <u>10-10-2013</u>
--	------------------------------------	---------------------------



STATE OF MICHIGAN

LICENSING AND REGULATORY AFFAIRS  
BUREAU OF FIRE SERVICES STORAGE TANK DIVISION

**FACILITY INSPECTION REPORT**

Owner Name & Address:

Safeway Acquisitions Group LLC  
8700 Brandt  
Dearborn, MI 48126

Location of Tanks:

K & B Mini Mart Inc.  
975 S Rochester Rd  
Rochester, MI 48037  
County - Oakland  
Facility ID - 00009055

ATTENTION: Khalil Saad

A Reinspection was conducted on June 18, 2013, for the above-referenced facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Michigan Underground Storage Tank Rules (MUSTR), 2008 AACS R 29.2101 et seq.; and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that the facility is temporarily approved.

- 1 Every facility having 1 or more UST systems subject to MUSTR shall have a class A and class B operator.  
UST 280.13

Special Attention : Provide this office with documentation showing that the new operator training requirement has been met.

- 2 Dispenser shall be in clear view of attendant and be able to communicate.  
UST 280.10(J) (FL/CL Part3, Section 9.4.5)

Special Attention : Provide a working intercom system so the Attendant can communicate with Customers.

Inspector was shown copy of Buck's oil invoice#50170 dated 6/21/13 for 250 gallons of wastewater/gas mixture.

Inspector provide facility with a invoice in the amount of \$600 for past tank registration fees (\$100/yr/tank) in regards to the 8,000 gallon DW PermaTank compartment (diesel/premium) UST believe to have been installed in August 2008.

Inspector received PASSING line leak detectors, pressure fuel lines, and impact valves test results on the diesel & gasoline systems performed on 6/16/13 by Daniel Jaber w/Dan's Service.

Inspector received copy of tank monitor printout showing PASS test results for (3) tanks on 6/16/13.

If you have additional questions concerning this matter, please contact me.



Jerry Arnold  
Hazardous Materials Storage Inspector  
SE Michigan District Office  
27700 Donald Court  
Warren, MI 48092-2793  
Phone: (586) 753-3848  
Fax: (586) 753-3831  
Email: [arnoldj@michigan.gov](mailto:arnoldj@michigan.gov)

6/24/13

Date



STATE OF MICHIGAN  
LICENSING AND REGULATORY AFFAIRS  
BUREAU OF FIRE SERVICES STORAGE TANK DIVISION  
**FACILITY INSPECTION REPORT**

Owner Name & Address:

Safeway Acquisitions Group LLC  
8700 Brandt  
Dearborn, MI 48126

Location of Tanks:

Express 100 Inc  
975 S Rochester Rd  
Rochester, MI 48037  
County - Oakland  
Facility ID - 00009055

ATTENTION: Khalil Saad

A Reinspection was conducted on August 9, 2013, for the above-referenced facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Michigan Underground Storage Tank Rules (MUSTR), 2008 AACS R 29.2101 et seq.; and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that the facility is disapproved.

- 1 Every facility having 1 or more UST systems subject to MUSTR shall have a class A and class B operator.  
UST 280.13

Special Attention : Provide this office with documentation showing that the new operator training requirement has been met.


- 2 Dispenser shall be in clear view of attendant and be able to communicate.  
UST 280.10(J) (FL/CL Part3, Section 9.4.5)

Special Attention : Provide a working intercom system so the Attendant can communicate with Customers.

Inspector provide facility with a invoice in the amount of \$600 for past tank registration fees (\$100/yr/tank) in regards to the 8,000 gallon DW PermaTank compartment (diesel/premium) UST believe to have been installed in August 2008.

Documentation shall be furnished to the district office identified below verifying that the violation(s), cited in this inspection report have been corrected. The documentation shall be provided by September 16, 2013. If the cited violation(s) are not corrected and/or certification of compliance is not provided by the date specified, a reinspection will be conducted. The owner or operator of this facility will be subject to civil and criminal provisions pursuant to Part 211 of Act 451, including and not limited to placement of tags to the tank(s) prohibiting delivery of product if the stated violations have not been corrected.

If you have additional questions concerning this matter, please contact me.



Jerry Arnold  
Hazardous Materials Storage Inspector  
SE Michigan District Office  
27700 Donald Court  
Warren, MI 48092-2793  
Phone: (586) 753-3848  
Fax: (586) 753-3831  
Email: [arnoldj@michigan.gov](mailto:arnoldj@michigan.gov)

8/12/13

Date

MICHIGAN DEPARTMENT OF AGRICULTURE (MDA)  
RECORDS





GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF AGRICULTURE  
AND RURAL DEVELOPMENT

GARY MCDOWELL  
DIRECTOR

August 16, 2019

PM Environmental  
Attn: Josephine Hamilton  
4080 West Eleven Mile Road  
Berkley, Michigan 48072

Dear Ms. Hamilton:

Your request for records dated August 14, 2019 under the Freedom of Information Act was received in our office on August 14, 2019. You requested LMD Test and Inspection reports for USTs, ASTs or pump islands for the following site: 975 South Rochester Road, Rochester Hills.

Your request is granted and enclosed are the existing, non-exempt records responsive to your request.

Even though the Freedom of Information Act permits us to charge you for our costs in copying and mailing this information, we are sending it free of charge due to the limited number of pages.

For your information, the Department's Freedom of Information Act written summary, procedures, and guidelines can be found at [www.michigan.gov/mdard-foia](http://www.michigan.gov/mdard-foia).

Sincerely

A handwritten signature in blue ink that reads "Debby Cheresko".

Debby Cheresko  
Associate FOIA Coordinator

MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT  
 LABORATORY DIVISION  
 WEIGHTS AND MEASURES PROGRAM | MOTOR FUEL QUALITY PROGRAM  
 (517) 655 - 8202  
 michigan.gov/wminfo | michigan.gov/mfq

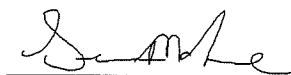
Device Grid Test Mailing Summary

**Insp Date:** 4/16/2019    **Business ID:** 37462  
**Business:** K & B MINI MART INC  
 975 S ROCHESTER RD  
 ROCHESTER, MI 48307

**Inspection:** SM002073  
**Store ID:**  
**Phone:** 248-601-0050  
**Inspector:** 019 Sean McGuire  
**Reason:** FIELD AUDIT

Class	Actv	Sea	Not	App	Not	C-R	C-X	Pos
Liquid Measuring Device	20	20						
Pump Business	1			1				
UST	3			3				

Make	Model	Subtype	Serial #		Location	Seal #	Failed Attribs	Test	Error	Results	Prod Used	Notes
Station	N/a		37462			N/A				Approved	0.000	
WAYNE	1/V590D4/GQ	16	37462P1	Regular		IBB		Normal Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P1	Midgrade89		N/A		Slow Flow	4	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P1	Premium93		IBB		Normal Flow	4	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P2	Regular		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P2	Midgrade89		N/A		Slow Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P2	Premium93		OWL		Normal Flow	-1	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P3	Regular		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P3	Midgrade89		N/A		Slow Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P3	Premium93		OWL		Normal Flow	-1	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P4	Regular		OWL		Normal Flow	4	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P4	Midgrade89		N/A		Slow Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P4	Premium93		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P5	Regular		OWL		Normal Flow	2	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P5	Midgrade89		N/A		Slow Flow	4	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P5	Premium93		OWL		Normal Flow	2	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P6	Regular		OWL		Normal Flow	2	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P6	Midgrade89		N/A		Slow Flow	2	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P6	Premium93		OWL		Normal Flow	1	Sealed	5.000	
WAYNE	1/V590D4/GQ	10	37462P7	Diesel		IBB		Normal Flow	2	Sealed	5.000	
WAYNE	1/V590D4/GQ	10	37462P8	Diesel		IBB		Normal Flow	1	Sealed	5.000	

  
 Inspector

  
 Acknowledged Receipt : STEVE SAAD/ MANAGER

Device Grid Test Mailing Summary

Make	Model	Subtype	Serial #	Location	Seal #	Failed Attribs	Test	Error	Results	Prod Used	Notes
Tank	N/A		37462REG		N/A				Approved	0.000	
Tank	N/A		37462PRE		N/A				Approved	0.000	
Tank	NA		37462DIESEL		N/A				Approved	0.000	

Device Product Used: 100. Insp Product Used: . Tot Product Used: 100.

Grade	Prod Used
Diesel	10.00
Midgrade89	30.00
Premium93	30.00
Regular	30.00

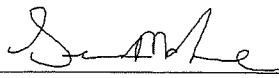
Mailing Address: K & B MINI MART INC  
 975 S ROCHESTER RD  
 ROCHESTER, MI 48307

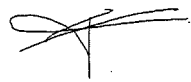
Notes:

Document review conducted. All fuel returned to underground storage tanks. Card readers visually inspected. Establishment is using pressure sensitive tape to secure dispensers.

Establishment uses Oscar W. Larson and IBB Petroleum Services for repairs.

**IMPORTANT: INCORRECT equipment violations must be corrected within 5 days**

  
 Inspector

  
 Acknowledged Receipt : STEVE SAAD/ MANAGER

MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT  
 LABORATORY DIVISION  
 WEIGHTS AND MEASURES PROGRAM | MOTOR FUEL QUALITY PROGRAM  
 (517) 655 - 8202  
 michigan.gov/wminfo | michigan.gov/mfq

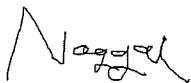
Device Grid Test Mailing Summary

Insp Date: 5/22/2017 Business ID: 37462  
 Business: K & B MINI MART INC  
 975 S ROCHESTER RD  
 ROCHESTER, MI 48307

Inspection: DN001504  
 Store ID:  
 Phone: 248-601-0050  
 Inspector: 155 DIANNE NAGGAR  
 Reason: FIELD AUDIT

Class	Actv	Sea	Not	App	Not	C-R	C-X	Pos
Liquid Measuring Device	20	20						
Pump Business	1			1				
UST	3			3				

Make	Model	Subtype	Serial #		Location	Seal #	Failed Attribs	Test	Error	Results	Prod Used	Notes
Station	N/a		37462			NA				Approved	0.000	
WAYNE	1V590D4/GQ	16	37462P1	Regular		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P1	Midgrade89		NA		Slow Flow	2	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P1	Premium93		OWL		Normal Flow	5	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P2	Regular		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P2	Midgrade89		NA		Slow Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P2	Premium93		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P3	Regular		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P3	Midgrade89		NA		Slow Flow	3	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P3	Premium93		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P4	Regular		OWL		Normal Flow	4	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P4	Midgrade89		NA		Slow Flow	3	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P4	Premium93		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P5	Regular		OWL		Normal Flow	4	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P5	Midgrade89		NA		Slow Flow	4	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P5	Premium93		OWL		Normal Flow	4	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P6	Regular		OWL		Normal Flow	3	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P6	Midgrade89		NA		Slow Flow	3	Sealed	5.000	
WAYNE	1V590D4/GQ	16	37462P6	Premium93		OWL		Normal Flow	2	Sealed	5.000	
WAYNE	1V590D4/GQ	10	37462P7	Diesel		OWL		Normal Flow	3	Sealed	5.000	
WAYNE	1V590D4/GQ	10	37462P8	Diesel		OWL		Normal Flow	3	Sealed	5.000	



Inspector



Acknowledged Receipt : Mohamed Saad

Device Grid Test Mailing Summary

Make	Model	Subtype	Serial #	Location	Seal #	Failed Attribs	Test	Error	Results	Prod Used	Notes
Tank	N/A		37462REG		NA				Approved	0.000	
Tank	N/A		37462PRE		NA				Approved	0.000	
Tank	NA		37462DIESEL		NA				Approved	0.000	

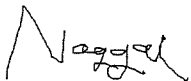
Device Product Used: 100. Insp Product Used: . Tot Product Used: 100.

Grade	Prod Used
Diesel	10.00
Midgrade89	30.00
Premium93	30.00
Regular	30.00

Mailing Address: K & B MINI MART INC  
 975 S ROCHESTER RD  
 ROCHESTER, MI 48307

Notes:  
 FIELD AUDIT.  
 Performed a weights and measure test on all pumps 1 through 8. All results were positive and all pumps are approved.  
 All dispensed gas returned to appropriate underground storage tanks. Repair service is O.W.Larson.  
 Card reader system visually inspected for pumps 1 through pump 8.

**IMPORTANT: INCORRECT equipment violations must be corrected within 5 days**



Inspector



Acknowledged Receipt : Mohamed Saad

MICHIGAN DEPT OF AGRICULTURE & RURAL DEVELOPMENT  
 LABORATORY DIVISION  
 WEIGHTS AND MEASURES PROGRAM | MOTOR FUEL QUALITY PROGRAM  
 (517) 655 - 8202  
 michigan.gov/wminfo | michigan.gov/mfq

Device Grid Test Mailing Summary

**Insp Date:** 9/16/2014    **Business ID:** 37462  
**Business:** K & B MINI MART INC  
 975 S ROCHESTER RD  
 ROCHESTER, MI 48307

**Inspection:** JW000706  
**Store ID:**  
**Phone:** 248-601-0050  
**Inspector:** 016 John Willer  
**Reason:** FIELD AUDIT

Class	Actv	Sea	Not	App	Not	C-R	C-X	Pos
Liquid Measuring Device	19	19						
Pump Business	1			1				
UST	3			3				

Make	Model	Subtype	Serial #		Location	Seal #	Failed Attribs	Test	Error	Results	Prod Used	Notes
Station	N/a		37462			NA				Approved	0.000	
WAYNE	1/V590D4/GQ	16	37462P1	Regular		OWL		Normal Flow	1	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P1	Midgrade89		NA		Slow Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P1	Premium93		OWL		Normal Flow	6	Sealed	10.000	
WAYNE	1/V590D4/GQ	16	37462P2	Regular		OWL		Normal Flow	1	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P2	Midgrade89		NA		Slow Flow	1	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P2	Premium93		OWL		Normal Flow	2	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P3	Regular		OWL		Normal Flow	-1	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P3	Midgrade89		NA		Slow Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P3	Premium93		OWL		Normal Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P4	Regular		OWL		Normal Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P4	Midgrade89		NA		Slow Flow	4	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P4	Premium93		OWL		Normal Flow	0	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P5	Regular		OWL		Normal Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P5	Midgrade89		NA		Slow Flow	5	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P5	Premium93		OWL		Normal Flow	5	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P6	Regular		OWL		Normal Flow	3	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P6	Midgrade89		NA		Slow Flow	4	Sealed	5.000	
WAYNE	1/V590D4/GQ	16	37462P6	Premium93		OWL		Normal Flow	5	Sealed	5.000	
WAYNE	1/V590D4/GQ	10	37462P7	Diesel		OWL		Normal Flow	2	Sealed	5.000	

  
 Inspector

  
 Acknowledged Receipt : Mohammed Saad

### Device Grid Test Mailing Summary

Make	Model	Subtype	Serial #	Location	Seal #	Failed Attribs	Test	Error	Results	Prod Used	Notes
Tank	N/A		37462REG		NA				Approved	0.000	
Tank	N/A		37462PRE		NA				Approved	0.000	
Tank	NA		37462DIESEL		NA				Approved	0.000	

Device Product Used: 100. Insp Product Used: . Tot Product Used: 100.

Grade	Prod Used
Diesel	5.00
Midgrade89	30.00
Premium93	35.00
Regular	30.00

Mailing Address: K & B MINI MART INC  
 975 S ROCHESTER RD  
 ROCHESTER, MI 48307


**Notes:**

Document review conducted. All fuels were returned to underground storage tanks.

Pump #08 Diesel was bagged out of service prior to arrival. The interior of the dispenser was checked for seals and leaks.

Location uses O.W.Larson and Sun93 for service work. No service company paperwork on location for review.

**IMPORTANT: INCORRECT equipment violations must be corrected within 5 days**



Inspector



Acknowledged Receipt : Mohammed Saad

# Appendix C





## PREVIOUS SITE INVESTIGATION



## LEAKING UNDERGROUND STORAGE TANK FINAL ASSESSMENT REPORT

APR 10 1997

UNDERGROUND STORAGE TANK  
MIDNR-SEMI  
DISTRICT OFFICE

**INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY.** The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit a report within the stated time period may result in Administrative Penalties as provided for in Part 213, Section 21321 of Act 451, P. A. 1994 as amended.

FACILITY NAME: Shell Service Station	FACILITY ID NUMBER: 0-009055
ADDRESS: 975 Rochester Road, Rochester, Michigan COUNTY: Oakland	NERA SITE ID NUMBER:
DATE(S) RELEASE DISCOVERED: 4/8/96 (waste oil) 4/24/96 (gasoline)	CONFIRMED RELEASE NUMBER(S): C-214-96 (waste oil) C-252-96 (gasoline)
O/O NAME: Shell Oil Products Company	MUSTFA CLAIM NUMBER: NA
O/O ADDRESS: 17370 Laurel Park Drive N., Suite 200, Livonia, MI 48152	
CONTACT PERSON: Ms. Angela Porter	PHONE NUMBER: (313) 953-4300

**ANSWER ALL QUESTIONS (DO NOT LEAVE BLANKS):**

1. Has the UST been emptied?  Yes (waste oil)  No (gasoline)  
(If no, explain why): Gasoline release was from the steel gasoline product lines which were removed and replaced with fiberglass lines; therefore, the gasoline USTs were not emptied in response to the release.

2. Free product present: a. Currently?  YES  NO If YES, total gallons recovered since last report:  
b. Previously?  YES  NO If YES, total gallons recovered to date:

3. Have vapors been identified in any confined spaces (basement, sewers)?  YES  NO

4. State the number of homes where drinking water is or was affected as a result of a release from this facility: None known

5. Estimated distance and direction from point of release to nearest:  
a. Private well: 150 feet south      b. Municipal well: >0.5 mile      c. Surface water/wetland: >0.5 mile

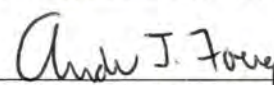
6. Since last report: a. cubic yards of soil remediated: 0      b. gallons of groundwater remediated: 0

7. Totals to date: a. cubic yards of soil remediated: 40      b. gallons of groundwater remediated: 0

8. Michigan RBCA Site Classification (1-4): 4

**CERTIFICATION OF REPORT COMPLETION**

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate and complete. I certify that it was submitted to the USTD on April 8, 1997.  
(date submitted-REQUIRED)

 CP Original Signature - Required	<u>4-8-97</u> Date	<u>Darryl D. Barricklow</u> PRINT QC Project Manager's Name
<u>Andrew J. Foerg, P.G.</u> PRINT CP's Name	<u>EnecoTech Midwest, Inc.</u> Consultant	
<u>39255 Country Club Drive, Suite B40, Farmington Hills, MI 48331</u> Address	<u>(810) 489-0809</u> Phone Number	<u>(810) 489-4184</u> Fax Number

**PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE USTD DISTRICT OFFICE LISTED ON THE BACK OF THIS PAGE.**

## UNDERGROUND STORAGE TANK DIVISION OFFICES AND LOCATIONS

Determine in which county the UST release occurred. Return all completed forms and associated reports to the USTD office listed next to that county in the following table. Addresses for the USTD offices are listed below.

COUNTY	USTD OFFICE	COUNTY	USTD OFFICE	COUNTY	USTD OFFICE	COUNTY	USTD OFFICE
Alcona	Grayling	Dickinson	Marquette	Lake	Grayling	Oceana	Grand Rapids
Alger	Marquette	Eaton	Shiawassee	Lapeer	Shiawassee	Ogemaw	Grayling
Allegan	Plainwell	Emmet	Grayling	Leelanau	Grayling	Ontonagon	Marquette
Alpena	Grayling	Genesee	Shiawassee	Lenawee	Jackson	Osceola	Grayling
Antrim	Grayling	Gladwin	Grayling	Livingston	Shiawassee	Oscoda	Grayling
Arenac	Grayling	Gogebic	Marquette	Luce	Marquette	Otsego	Grayling
Baraga	Marquette	Grand Traverse	Grayling	Mackinac	Marquette	Ottawa	Grand Rapids
Barry	Plainwell	Gratiot	Shiawassee	Macomb	SE Michigan	Presque Isle	Grayling
Bay	Saginaw-Bay	Hillsdale	Jackson	Manistee	Grayling	Roscommon	Grayling
Benzie	Grayling	Houghton	Marquette	Marquette	Marquette	Saginaw	Saginaw-Bay
Berrien	Plainwell	Huron	Saginaw-Bay	Mason	Grayling	Sanilac	Saginaw-Bay
Branch	Jackson	Ingham	Shiawassee	Mecosta	Grand Rapids	Schoolcraft	Marquette
Calhoun	Jackson	Ionia	Grand Rapids	Menominee	Marquette	Shiawassee	Shiawassee
Cass	Plainwell	Iosco	Grayling	Midland	Saginaw-Bay	St Clair	SE Michigan
Charlevoix	Grayling	Iron	Marquette	Missaukee	Grayling	St Joseph	Plainwell
Cheboygan	Grayling	Isabella	Saginaw-Bay	Monroe	SE Michigan	Tuscola	Saginaw-Bay
Chippewa	Marquette	Jackson	Jackson	Montcalm	Grand Rapids	Van Buren	Plainwell
Clare	Grayling	Kalamazoo	Plainwell	Montmorency	Grayling	Washtenaw	Jackson
Clinton	Shiawassee	Kalkaska	Grayling	Muskegon	Grand Rapids	Wayne	SE Michigan
Crawford	Grayling	Kent	Grand Rapids	Newaygo	Grand Rapids	Wexford	Grayling
Delta	Marquette	Keweenaw	Marquette	Oakland	SE Michigan		

<p style="text-align: center;"><b><u>CADILLAC OFFICE</u></b></p> <p>ROUTE #1 8015 MACKINAW TRAIL CADILLAC MI 49601</p> <p>616-775-9727 (PHONE) 616-775-9671 (FAX)</p>	<p style="text-align: center;"><b><u>JACKSON OFFICE</u></b></p> <p>301 E LOUIS GLICK HIGHWAY JACKSON MI 49201</p> <p>517-780-7900 (PHONE) 517-780-7855 (FAX)</p>	<p style="text-align: center;"><b><u>SAGINAW BAY OFFICE</u></b></p> <p>503 N EUCLID AVE SUITE 9 BAY CITY MI 48706</p> <p>517-684-9141 (PHONE) 517-684-9799 (FAX)</p>
<p style="text-align: center;"><b><u>GAYLORD OFFICE</u></b></p> <p>P0 BOX 667 GAYLORD MI 49735</p> <p>517-732-3541 (PHONE) 517-732-0794 (FAX)</p>	<p style="text-align: center;"><b><u>MARQUETTE OFFICE</u></b></p> <p>1990 US 41 SOUTH MARQUETTE MI 49855</p> <p>906-228-6561 (PHONE) 906-228-5245 (FAX)</p>	<p style="text-align: center;"><b><u>SHIAWASSEE OFFICE</u></b></p> <p>10650 BENNETT DR MORRICE MI 48857-9792</p> <p>517-625-4600 (PHONE) 517-625-5000 (FAX)</p>
<p style="text-align: center;"><b><u>GRAND RAPIDS OFFICE</u></b></p> <p>350 OTTAWA ST NW GRAND RAPIDS MI 49503</p> <p>616-456-5071 (PHONE) 616-456-1239 (FAX)</p>	<p style="text-align: center;"><b><u>PLAINWELL OFFICE</u></b></p> <p>1342 SR-89 SUITE B PLAINWELL MI 49080-1915</p> <p>616-692-2120 (PHONE) 616-692-3050 (FAX)</p>	<p style="text-align: center;"><b><u>SE MICHIGAN OFFICE</u></b></p> <p>38980 SEVEN MILE RD LIVONIA MI 48152</p> <p>313-953-0241 (PHONE) 313-953-0243 (FAX)</p>
<p style="text-align: center;"><b><u>GRAYLING OFFICE</u></b></p> <p>1955 NORTH I-75 BL GRAYLING MI 49738</p> <p>517-348-6371 (PHONE) 517-348-8825 (FAX)</p>		

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## LIST OF ATTACHMENTS

*(Include as Required and Check Box if Attached)*

*Attachments 1, 2, 6-12, 16-18, and 22-28 are to be submitted if applicable.*

*Attachments 3-5, 13-15, and 19-21 are found in the back of this document and should be completed and submitted when necessary.*

<b>ATTACHMENT NUMBER</b>	<b>DESCRIPTION</b>
1 <input type="checkbox"/>	Site Map Showing Extent of Remaining Free Product
2 <input type="checkbox"/>	Free Product Recovery System Schematic
3 <input checked="" type="checkbox"/>	Field Screening Results Table for Soils
4 <input checked="" type="checkbox"/>	Laboratory Results Table for Soils
5 <input checked="" type="checkbox"/>	Tier I RBSL / Tier II or Tier III SSTL Comparison Table for Soils
6 <input checked="" type="checkbox"/>	Site Map Showing Soil Sampling Locations, Maximum Contaminant Concentrations, and Sampling Depths
7 <input type="checkbox"/>	Site Map(s) Showing Vertical and Horizontal Distribution of Contaminants in Soil
8 <input checked="" type="checkbox"/>	Cross Sections
9 <input checked="" type="checkbox"/>	Soil Boring Logs
10 <input checked="" type="checkbox"/>	Well Construction Diagrams
11 <input checked="" type="checkbox"/>	Groundwater Flow Map Showing Water Level Measurement Locations
12 <input type="checkbox"/>	Description of Hydrogeologic Factors That Could Influence Groundwater Flow
13 <input type="checkbox"/>	Field Screening Results Table for Groundwater
14 <input checked="" type="checkbox"/>	Laboratory Results Table for Groundwater
15 <input checked="" type="checkbox"/>	Tier I RBSL / Tier II or Tier III SSTL Comparison Table for Groundwater
16 <input checked="" type="checkbox"/>	Site Map Showing Groundwater Sampling Locations, Maximum Contaminant Concentrations, and Location of Contaminant Plume
17 <input type="checkbox"/>	Cross Sections
18 <input type="checkbox"/>	Presentation of Time Series Groundwater Results
19 <input type="checkbox"/>	Field Screening Results Tables for Other Media
20 <input type="checkbox"/>	Laboratory Results Tables for Other Media
21 <input type="checkbox"/>	Tier I RBSL / Tier II or Tier III SSTL Comparison Tables for Other Media
22 <input type="checkbox"/>	Site Map Showing Sampling Locations and Maximum Contaminant Concentrations for Other Media
23 <input type="checkbox"/>	Calculations Supporting the Development of the Tier I and Tier II or Tier III SSTLs
24 <input type="checkbox"/>	Schematic of the Remedial System to Be Employed
25 <input type="checkbox"/>	Maps Depicting Capture Zones, System Layout and Anticipated System Rates
26 <input checked="" type="checkbox"/>	Performance Monitoring Plan
27 <input checked="" type="checkbox"/>	Implementation Schedule for the Corrective Action
28 <input type="checkbox"/>	Map Locating the Individuals and Population Segments Provided Public Notice

**1.0 REPORTING AND RESPONSE TO RELEASES INVOLVING FREE PRODUCT**

A. Has free product been encountered subsequent to submission of the Initial Assessment Report?  Yes  No

If "No", skip to Section 2.0. If "Yes", continue with question "B" below.

B. Date and Time Free Product Was Discovered:

C. Date and Time Free Product Fax Transmittal Sheet Submitted:

D. Has there ever been free product in the on-site or off-site soils?  Yes  No

E. Is there currently free product in the on-site or off-site soils?  Yes  No

F. Is there currently free product in or around buried underground utilities?  Yes  No

G. Has there ever been free product on/in the groundwater?  Yes  No

H. Is there currently free product on/in the groundwater?  Yes  No

I. What initial response actions were performed at this site to address the presence of free product?

PURPOSE OF INITIAL RESPONSE ACTIONS	WERE ACTIONS TAKEN? (Yes/Date or No)	IF "Yes", DESCRIBE THE ACTIONS TAKEN AND THEIR RESULTS IF "No", INDICATE WHY NOT
To identify the presence of free product [324.21307(2)(c)]		
To recover free product in a manner that minimizes the spread of contamination into previously uncontaminated zones [324.21307(2)(c)(i)]		
To utilize recovery and disposal techniques appropriate to site conditions [324.21307(2)(c)(i)]		
To properly treat recovery by-products as required by law (identify the type of treatment applied and the expected effluent quality) [324.21307(2)(c)(i)]		

PURPOSE OF INITIAL RESPONSE ACTIONS	WERE ACTIONS TAKEN? (Yes/Date or No)	IF "Yes", DESCRIBE THE ACTIONS TAKEN AND THEIR RESULTS. IF "No", INDICATE WHY NOT
To properly dispose of recovery by-products as required by law [324.21307(2)(c)(i)]		
To handle any flammable products in a safe and competent manner to prevent fires and explosions [324.21307(2)(c)(iii)]		

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
 FINAL ASSESSMENT REPORT (Continued)

J. Complete the following table relating to free product recovery:

LOCATION OF OBSERVED FREE PRODUCT (Specify ID No.)	THICKNESS OF FREE PRODUCT OBSERVED (nearest 1/8")	TYPE OF FREE PRODUCT OBSERVED	LNAPL OR DNAPL*?	QUANTITY OF FREE PRODUCT RECOVERED (gallons)
<b>IN WELLS</b>				
<b>IN BOREHOLES</b>				
<b>IN EXCAVATIONS</b>				
<b>OTHER LOCATIONS (Specify)</b>				
<b>TOTAL FREE PRODUCT RECOVERED TO DATE</b>				

\*LNAPL = Light Non-Aqueous Phase Liquid; DNAPL = Dense Non-Aqueous Phase Liquid

K. Has the extent of free product been defined?  Yes  No

L. If "Yes", include the extent of free product on the site map included as Attachment No. 1.

M. Describe the free product recovery system that was or is being used  or is proposed   
 (include a schematic as Attachment No. 2, if appropriate):

N. If the free product recovery system is currently "proposed", provide the planned installation date:

O. Has the recovered free product been properly disposed?  Yes  No

P. If "No", specify:

Q. Provide the name of the person or persons responsible for implementing the free product removal measures:

Company Name

Company Address

Company Telephone No.

Contact Person

Contact Telephone No.



## 2.0 DELINEATION OF THE EXTENT OF CONTAMINATION

A. Were additional site assessment activities conducted subsequent to the submission of the Initial Assessment Report?  Yes  No

B. If "Yes", what environmental media were further investigated?  
(Check all that apply):

Soil  Groundwater  Air  Surface Water

Sediments  Biota  Other (Specify): \_\_\_\_\_

C. Was the Work Plan implemented as outlined in the Initial Assessment Report?  Yes  No

D. If "No", describe the changes made to the sampling and analysis plan in detail and provide justification for why they were made (attach additional sheets, as needed):

## 2.1 SITE AND AREA MAPS

*Area and site map(s), drawn to scale, may be used to effectively present a variety of information required to be included in this Final Assessment Report. It may not be possible to include all required information on one map. Multiple maps may be attached, with each highlighting a different type of information. However, use of multiple maps should be minimized. Placement of information on the site map(s) should be done in a clear and legible manner. The area map should show the location of the site boundaries in relation to the nearest major roads.*

*The base site map on which to display information required for the Final Assessment Report should include the following, as appropriate:*

- *Location of each underground storage tank and associated piping in the leaking underground storage tank system (prior to excavation if tanks have been removed)*
- *Location of the release and the component of the underground storage tank system from which the release occurred*
- *Location of any other existing and former underground storage tanks at the site*
- *Approximate location of fill ports, dispensers, and other pertinent system components*
- *Location of nearby buildings, roadways, paved areas, or other structures*
- *Location of nearby surface waters or wetlands*
  
- *Location and depth of nearby underground sewers and utility lines*
- *Location of all wells within 100 feet of the property boundary*

## 2.2 SOIL CONDITIONS AND CHARACTERISTICS

A. Is soil contamination present?  Yes  No

**NOTE: If "Yes", complete questions "B" through "H". If "No", skip to Section 2.3.**

B. Total volume of soil remediated or disposed to date: 40 yds<sup>3</sup>

C. Describe any soil remediation or disposal activities performed to date: To date, soils associated with limited excavation activities that occurred during the waste oil UST removal, gasoline UST replacement, product line replacement activities, and site assessment activities were disposed of at Browning-Ferris Industries, Arbor Hills Landfill located in Northville, Michigan.

D. Attach Field Screening Results (See Attachment No. 3) and Laboratory Results (See Attachment No. 4) tables showing the results of all soil sampling performed to date for the listed parameters. (NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC

E. Provide in the Comparison Table for Soils (See Attachment No. 5) the maximum contaminant concentrations detected to date in the remaining soils for each listed parameter. (NOTE: Enter "ND" with the appropriate method detection limit when the parameter was not detected, and enter "NA" when the chemical was not analyzed. In areas where remediation has occurred, do not include sample results for areas where the soil has been subsequently removed or the characteristics of the soil left in place have been altered due to the remediation.)

F. Show the maximum concentrations, sample depths, and horizontal extent of soil contamination in relation to the soil sampling locations on a site map. (See Attachment No. 6.)

G. Describe the vertical extent and distribution of the soil contaminants using depth-coded site maps (See Attachment No. 6), cross sections (Attachment No. 8), and/or boring logs (See Attachment No. 9):  
In general, site lithology consists of fill material to two feet below ground surface (bgs). Underlying the fill material is a silty clay to approximately four feet bgs. The silty clay is underlain by silty sands and clayey silts ranging from four to ten feet bgs. A silty clay was identified at the maximum depth explored of twelve feet bgs. Petroleum hydrocarbon impacts appear to be isolated to soils between zero and ten feet bgs.

Based upon review of potable well log records from the surrounding area, the lithology beneath the site is comprised of clays to approximately sixty feet bgs, where a sand unit of approximately two to ten feet is found. Beneath the sand are various layers of hardpan, gravel, and clays to one hundred forty feet bgs or more. Area potable water wells are screened beneath this clay, ranging from about 140 to 190 feet bgs.

H. Was any on-site soil contamination not related to the release discovered during the site characterization activities performed subsequent to the submission of the Initial Assessment Report?  
 Yes  No

**If "Yes", answer question "I"; otherwise, skip to Section 2.3.**

I. Provide the following information:

ON-SITE CONTAMINANTS NOT RELATED TO THE RELEASE	SOURCE OF THIS CONTAMINATION (If Known)	LOCATION OF THIS CONTAMINATION

2.3 **GROUNDWATER CONDITIONS AND CHARACTERISTICS**

A. Has groundwater been encountered at the site?  Yes  No

B. If "No", provide the total depth investigated and the date of investigation:

Depth of Investigation: \_\_\_\_\_ ft BGS

Date of Investigation: \_\_\_\_/\_\_\_\_/\_\_\_\_

If "No", skip to Section 2.4; otherwise, continue with Section 2.3.

C. Is the groundwater potable?  Yes  No

D. Is the groundwater currently a source of drinking water?  Yes  No

E. Is groundwater being used for a purpose other than potable drinking use?  Yes  No

F. Is more than one groundwater unit present beneath the site?  Yes  No

Unknown

Hydrogeologic Characteristics (*if appropriate*):

G. Average depth to groundwater (as measured in site well(s)): ~3.0 ft BGS

H. Depth to bottom of water-bearing layer: ~8.0 ft BGS

I. Depth to a potable groundwater unit: ~68\* ft BGS

\* Water was indicated in some area well logs at approximately 70 feet however, the potable water wells are set in water bearing units > 140 feet bgs.

J. Attach copies of boring logs (See Attachment No. 9) and well construction diagrams (See Attachment No. 10) for all monitoring wells.

Groundwater Flow Rate and Direction:

K. Predominant soil type in water-bearing stratum (*e.g., sand, silt*): silty sand/clayey silt

L. Effective porosity of water-bearing stratum 0.15 cm<sup>3</sup> void/cm<sup>3</sup> soil

M. Hydraulic conductivity ( measured  estimated): 1x10<sup>-6</sup> cm/sec

N. Lateral hydraulic flow gradient (*attach a site map with groundwater flow direction and elevation data as Attachment No. 11 - USGS datum preferred*): 0.02 ft/ft

to the south

O. Effective groundwater flow rate: 0.1 ft/yr

P. Identify hydrogeologic conditions that could influence flow direction (*describe here or attach description as Attachment No. 12*: Preferential pathways within fill materials associated with underground utilities may influence groundwater flow direction.)

**Q.** Is there any indication of a vertical flow gradient?  Yes  No

**R.** If "Yes", describe: \_\_\_\_\_

**S.** Has the groundwater been affected by the release?  Yes  No  
**If "No", skip to Section 2.4; otherwise, continue with Section 2.3.**

**T.** Has there been more than one groundwater unit contaminated by the release?  
 Yes  No

**U.** If "Yes", attach additional sheets answering questions "G" through "R" for each groundwater unit.

**V.** Describe any groundwater remediation activities performed to date:

**W.** Total volume of groundwater remediated to date: 0 gallons

**X.** Does the known plume currently extend off-site?  Yes\*  No  Unknown

\* Below Groundwater Direct Contact Criteria.

**Y.** Attach Field Screening Results (Attachment No. 13) and Laboratory Results (See Attachment No. 14) tables showing the results of all groundwater sampling performed to date for the listed parameters. (NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)

**Z.** Provide in the Comparison Table for Groundwater (See Attachment No. 15) the maximum contaminant concentrations detected to date in the on-site or off-site groundwater for each listed parameter. (NOTE: Enter "ND" with the appropriate method detection limit when the parameter was not detected, and enter "NA" when the chemical was not analyzed. In areas where remediation has occurred, do not include sample results for areas where the groundwater has been subsequently altered due to remediation.)

**AA.** Show the maximum concentrations and the estimated aerial horizontal extent of the contaminated plume in relation to the groundwater sampling locations on the site map and include as Attachment No. 16 ( See Attachment No. 16).

**BB.** Describe the vertical extent and distribution of the groundwater contaminants using depth-coded cross sections (Attachment No. 17) that show screened intervals of the monitoring wells. Cross sections locations should be included on the site map.

**CC.** Were multiple groundwater sampling events conducted at the site?  Yes  No

**DD.** If "Yes", include a chronological summary of the results for each sampling location using the data tables provided in Attachment No. 14 and include as Attachment No. 18.

**2.4 CONDITIONS AND CHARACTERISTICS IN OTHER ENVIRONMENTAL MEDIA**

A. Is contamination present in any environmental media other than soil or groundwater?  
 Yes  No

**NOTE: If "Yes", answer questions "B" through "I". If "No", skip to Section 3.0.**

B. What other environmental media were investigated as part of this corrective action?  
(Check all that apply):

- Air             Surface Water     Sediment  
 Biota            Other (Specify): \_\_\_\_\_

**NOTE: For each environmental media checked, answer questions "C" through "I".**

C. Total volume of each of the other specified media remediated or disposed to date  
(Specify units): \_\_\_\_\_

D. Describe any remediation, treatment or disposal activities performed to date relative to each of the other specified media: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

E. Attach Field Screening Results (Attachment No. 19) and Laboratory Results (Attachment No. 20) tables showing the results of all sampling performed to date for the listed parameters in the other specified environmental media. (NOTE: The USD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)

F. Provide in the Comparison Table for Other Environmental Media (Attachment No. 21) the maximum contaminant concentrations detected to date in each other specified environmental media for each listed parameter. (NOTE: Enter "ND" with the appropriate method detection limit when the parameter was not detected, and enter "NA" when the chemical was not analyzed. In areas where remediation has occurred, do not include sample results for areas where the material has been subsequently removed or the characteristics of the material left in place have been altered due to the remediation.)

G. Show the maximum concentrations, sample depths, and extent of contamination in the other specified environmental media (as appropriate) in relation to the sampling locations on the site map included as Attachment No. 22.

H. Describe the extent and distribution of the contaminants in the other specified media: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I. If there is known contamination in the other specified media not related to the release, complete the following:

ON-SITE CONTAMINANTS NOT RELATED TO THE RELEASE	SOURCE OF THIS CONTAMINATION (If Known)	LOCATION OF THIS CONTAMINATION

**3.0 SITE CLASSIFICATION**

A. Indicate the current Site Classification Level (See Attachment No. 10 of the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks"):

- Class 1: Immediate threat to human health, safety, or sensitive environmental receptors
- Class 2: Short-term threat to human health, safety, or sensitive environmental receptors
- Class 3: Long-term threat to human health, safety, or sensitive environmental receptors
- Class 4: No demonstrable long-term threat to human health, safety, or sensitive environmental receptors

**NOTE: Regardless of the classification level, all reports must be submitted within the legislative time frame unless an alternate schedule is approved in writing by the USTD.**

B. Date of most recent classification or reclassification: 7/5/96 (Initial Abatement Report)

C. Is this classification a reclassification performed subsequent to the submission of the Initial Assessment Report?  Yes

D. If "Yes", describe the conditions that have changed significantly since the prior classification to justify the reclassification: \_\_\_\_\_

**4.0 RESULTS OF THE TIER II OR TIER III EVALUATION**

**4.1 CONFIRMATION OF EXPOSURE PATHWAYS AND SCENARIOS**

A. Have any of the following site characteristics or conditions, transport mechanisms, exposure routes, or potential receptors at the site or the surrounding area been newly identified to be present or changed significantly in character since the submission of the Initial Assessment Report?  Yes  No

B. If "Yes", check all that are newly identified or significantly changed since the submission of the Initial Assessment Report:

Site Characteristics or Conditions

- Neighboring Land Use or Local Zoning Changes
- New or Discontinued Uses of Groundwater At or Near the Site
- Changes in On-Site Facility Operations
- Construction of New Structures or Utilities At or Near the Site

Potential Transport Mechanism(s)

- Wind Erosion and Atmospheric Dispersion
- Volatilization and Atmospheric Dispersion
- Volatilization and Enclosed-Space Accumulation
- Leaching and Groundwater Transport
- Mobile Free-Liquid Migration
- Stormwater/Surface Water Transport
- Utility Corridors
- Other (Specify): \_\_\_\_\_

Potential Exposure Route(s)

- Soil Ingestion
- Direct Contact of Soil with Skin
- Inhalation of Airborne Particulates
- Inhalation of Volatiles
- Potable Water Use
- Use of Non-Potable Water
- Other (Specify): Direct Contact of Groundwater with Skin.

Potential Receptor(s)

- Resident
- Commercial Worker III\*
- Commercial Worker IV\*
- Industrial Worker
- Construction Worker
- Sensitive Habitat
- Structures
- Utilities
- Surface Waters
- Water Supply Wells
- Other (Specify): \_\_\_\_\_

\* As defined in Attachment No. 11 to the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks"

C. For each item checked above, briefly describe the change and its potential impact on the selection of exposure route(s) and potential receptors for the Tier II or Tier III evaluation relative to the Tier I or Tier II evaluation included in the Initial Assessment Report (use additional attached sheets, if necessary): The existence of

impacted groundwater on-site subsequent to the Initial Assessment Report identifies the potential for non-potable use of impacted water and the possibility of "Direct Contact of Groundwater with Skin".

*NOTE: A pathway must include three necessary elements:*

- 1) a source (e.g., contamination);*
- 2) a mechanism by which the contamination can become available to result in exposures at the source or via migration to other locations (e.g., free product and contaminated groundwater movement along a buried utility corridor); and*
- 3) an individual who may come into contact, ingest, or inhale the contamination at the point of exposure (e.g., a utility maintenance worker digging to repair the line).*

*Examples include:*

- 1. inhalation of soils by an on-site construction worker*
- 2. impacted soils leaching into potable ground water and being used by a nearby resident for drinking and bathing*
- 3. inhalation of vapors resulting from the migration of free product by a neighboring industrial worker*
- 4. groundwater discharging to wetlands*

**D.** List the most plausible potential residential exposure pathway(s) for the site:

The most plausible residential exposure pathway would result from the inhalation of vapors which may migrate to the atmosphere.

**E.** List the most plausible potential commercial exposure pathway(s) for the site:

The most plausible commercial exposure pathway would result from direct contact with impacted soil/groundwater by a construction worker during excavation activities.

**F.** List the most plausible potential industrial exposure pathway(s) for the site:

No plausible industrial exposure pathway is believed to exist.

---

**G.** List the most plausible potential sensitive habitat exposure pathway(s) for the site:

No plausible sensitive habitat exposure pathway is believed to exist.

---

#### **4.2 JUSTIFICATION FOR ALTERNATE ASSUMPTIONS OR MODELING PARAMETER SELECTIONS**

**A.** Has a site-specific Tier II or Tier III evaluation been conducted for this Final Assessment Report?

Yes  No



**B.** If "Yes", identify and justify where alternate assumptions or site-specific information was used in place of the default assumptions as defined in Attachment No. 11 of the "Guidance Document For Risk-Based Corrective Action At Leaking Underground Storage Tanks". *(If a Tier II evaluation was performed and described in the Initial Assessment Report, explicitly indicate where different assumptions or site-specific information were used in this Tier II or Tier III evaluation and why the change was justified.)*

ASSUMPTION	DEFAULT TIER I OR PRIOR TIER II SELECTION	ALTERNATE SELECTION	JUSTIFICATION OR BASIS FOR SUBSTITUTION <i>(Attach sheets if needed)</i>

**C.** Include the calculations supporting the development of the relevant Tier I RBSLs and Tier II or Tier III SSTLs as Attachment No. 23.

**4.3 IDENTIFICATION OF TIER I RISK-BASED SCREENING LEVELS OR TIER II / TIER III SITE-SPECIFIC TARGET LEVELS AND COMPARISON TO SITE DATA**

**A.** For each contaminated medium, complete a Tier I RBSL / Tier II or Tier III SSTL Comparison Table (Attachment No. 5 for soil, Attachment No. 15 for groundwater and Attachment No. 21 for other media, as appropriate) by:

1. Checking the box associated with the applicable land use scenario;
2. Checking the boxes associated with the contaminants currently present at the site;
3. Entering the current maximum detected on-site or off-site concentration for each selected contaminant, along with the corresponding sample identification number and date of sampling;
4. Entering the lowest applicable RBSL value from the Tier I Look-Up Tables (*refer to Attachment No. 11 of the "Guidance Document For Risk-Based Corrective Action At Leaking Underground Storage Tanks"*) for the specific exposure routes present and environmental medium being considered or a corresponding optional Tier II SSTL. *[NOTE: Include the exposure route code that identifies the basis for each applicable criterion noted. For example, 12 ug/kg (A) for a cleanup goal based on the direct contact with soil exposure route, and 12 ug/kg (B) for a cleanup goal based on the soil leaching to groundwater exposure route];*
5. Comparing the contaminant-specific maximum concentration to the corresponding RBSL or SSTL criterion; and
6. Identifying and recording whether or not there is an exceedence of the RBSL or the SSTL.

**B.** Tier I RBSL / Tier II or Tier III SSTL Comparison Tables are attached for the following (*Check all that apply*):

LAND USE	ENVIRONMENTAL MEDIUM		
	SOIL	GROUNDWATER	OTHER ( <i>Specify</i> )
Residential	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Commercial III	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial IV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**4.4 PROPOSED FOLLOW-UP ACTIVITIES**

**A.** Based on the results of the Tier II or III evaluation, indicate the follow-up activities proposed for the site:

<input type="checkbox"/> Site conditions do not exceed the relevant Tier I RBSLs or the calculated Tier II/ Tier III SSTLs do not rely on institutional controls	Proceed with site closure. <b>No further sections of Final Assessment Report need to be completed.</b>
<input checked="" type="checkbox"/> Site conditions exceed some or all of the relevant Tier I RBSLs or Tier II/Tier III SSTLs	Propose final corrective action to achieve Tier I RBSLs or Tier II/Tier III SSTLs. <b>Continue with Section 5.0.</b>

**5.0 FEASIBILITY ANALYSIS**

**A.** As appropriate, given the site conditions, complete the following comparison table of the potentially applicable corrective actions that were considered for the facility to reduce the volume, toxicity and/or mobility of the released regulated substances (*both on-site and off-site, as applicable*), noting the principal advantages and disadvantages of each listed alternative. (*Indicate explicitly, where appropriate, the relative estimated net present value cost of each alternative corrective action, its indicated effectiveness and feasibility, and the time needed to implement and complete the alternative. Attach additional sheets, if necessary.*)

CORRECTIVE ACTION ALTERNATIVES	PRINCIPAL ADVANTAGES	PRINCIPAL DISADVANTAGES
Soil, Groundwater, and Vapor Monitoring. *	Current soil and groundwater impacts are below Tier I residential RBSLs (direct contact) with the exception of xylenes in soil and PNAs in water. Vapor pathways can be initiated; natural attenuation can be monitored.	None

\* No remedial alternatives were considered. See Section 5.0 B.

**B.** Identify and briefly describe the preferred alternative. (*Attach additional sheets, if needed. Document the rationale for selecting this option by discussing how the selected remedial action will:*

- *Be protective of human health and the environment*
- *Comply with applicable or relevant and appropriate requirements*
- *Meet the requirements of the Risk-Based Corrective Action process*
- *Be a permanent solution (to the maximum extent possible)*
- *Be cost-effective)*

Petroleum hydrocarbon impacts to soil and groundwater appear to be below the appropriate Tier I Residential RBSLs (direct contact) for this site ( with the exception of xylenes in soil at location S-2 (2.5' bgs), and PNA constituents detected in groundwater at PH-2). Monitoring will allow the collection of soil, groundwater, and vapor data to assess natural attenuation. This approach is consistent with the requirements of the RBCA process, is in compliance with ARARs, and should result in a closure which is protective of human health and the environment. Should future evaluations indicate remediation is necessary, a revised FAR will be submitted.

**C.** Has a pilot study been conducted to demonstrate the performance of any component or subsystem associated with the corrective action?  Yes  No

**D.** If "Yes", describe the pilot study or testing that was conducted and present the results (*attach additional sheets, if necessary*): \_\_\_\_\_

E. If a pilot study or testing was not conducted, explain why they were not needed: No active remediation is proposed.

**6.0 CORRECTIVE ACTION PLAN**

**6.1 DESCRIPTION OF THE CORRECTIVE ACTION**

A. Describe the overall program and the primary components of the selected corrective action to be implemented at the facility (*attach additional sheets, if necessary*):

A soil, groundwater, and vapor monitoring program will be implemented to assess natural attenuation.

B. Include a schematic drawing of the remedial system to be employed (Attachment No. 24).

C. Include maps depicting capture zones/zones of influence, system layout, and anticipated system rates (Attachment No. 25).

D. From Attachment No. 12 to the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks" (*entitled "Guidance for Parameters, Analytical Methods, Sample Handling, Quality Control, and Cleanup Limits for Petroleum Hydrocarbon Releases"*), specify and justify the indicator parameters to be used (*if applicable*) to evaluate the implementation of the Corrective Action Plan. (*For each indicator parameter, identify the corresponding cleanup goal and the basis of the cleanup goal.*)

<b>INDICATOR PARAMETER / Rationale for Selection</b>	<b>IDENTIFIED CLEANUP GOAL</b>	<b>UNITS (ug/kg or ug/l)</b>	<b>BASIS OF THE CLEANUP GOAL</b>
Benzene	9,300 GW 88,000 soil	ug/l ug/kg	Direct contact Direct contact
Toluene	526,000 GW 6020000 soil	ug/l ug/kg	Solubility Soil saturation
Ethylbenzene	169,000 GW 380,000 soil	ug/l ug/kg	Solubility Soil saturation
Xylenes	186,000 GW 400,000 soil	ug/l ug/kg	Solubility Soil saturation
MTBE	1,700,000 GW 3,600,000 soil	ug/l ug/kg	Direct contact Direct contact
PNA	Reference Operational Memorandum #4 (Direct Contact)	ug/l ug/kg	Direct contact of appropriate Csat criteria

**6.2 AMBIENT AIR QUALITY MONITORING ACTIVITIES**

A. Will ambient air quality be monitored during the implementation of the corrective action?  
 Yes  No

B. If "No", explain why air monitoring is not needed: No active corrective action is proposed; the impacted area is directly below an operating gasoline service station.

C. If "Yes", describe the air quality monitoring to be conducted during the corrective action:

PARAMETERS TO BE MONITORED	ACTION LEVEL (Basis for Action Level)	MONITORING DEVICE TO BE USED	MONITORING FREQUENCY	PROCEDURE TO BE FOLLOWED IF ACTION LEVEL EXCEEDED

**6.3 PLANS FOR OPERATION AND MAINTENANCE**

A. Does any equipment or system associated with the corrective action need to be operated or maintained in order for the RBSLs or SSTLs to be met?  
 Yes  No

(NOTE: The USTD may request that operation and maintenance information and procedures for this equipment or systems be developed as identified in Section 21309(2)(b).)

**6.4 PLANS FOR PERFORMANCE MONITORING**

A. Does meeting the cleanup goals depend on the performance of a treatment system or a system for controlling the further release or migration of contaminants?  
 Yes  No

\* The site currently meets (with the exception of total xylenes in soil and some PNA constituents in groundwater) Tier I RBSLs (direct contact) therefore, additional monitoring is proposed to assess natural attenuation.

If "No", skip to Section 6.5.

B. Identify the environmental media to be monitored during the corrective action  
 (Check all that apply):

ENVIRONMENTAL MEDIA TO BE MONITORED	ON-SITE	OFF-SITE
Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Surface Water		

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Other ( <i>Specify</i> ): Vapor	<input checked="" type="checkbox"/>	
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C. Provide the following information regarding the plan for performance monitoring which is included as Attachment No. 26:

REQUIRED INFORMATION OR CONTENTS	INCLUDED IN THE MONITORING PLAN? (Yes or No)	IDENTIFY SECTION(S) / PAGE(S) WITHIN THE MONITORING PLAN WHERE THE SPECIFIED INFORMATION IS PRESENTED
Location of monitoring points (Include a site map with locations marked) [324.21309a(2)(c)(i)]	Yes	1
Monitoring frequency and schedule [324.21309a(2)(c)(iii)]	Yes	1
Monitoring methodology and sample collection procedures [324.21309a(2)(c)(iv)]	Yes	1
Monitoring parameters to be used as indicators, and the rationale for their selection [324.21309a(2)(c)(v)]	Yes	1
Laboratory name, analytical method to be employed, method detection limits, and practical quantitation limits [324.21309a(2)(c)(vi)]	Yes	1
Quality assurance/ quality control (QA/QC) procedures and measures to be employed [324.21309a(2)(c)(vii)]	Yes	2
Description of how the monitoring data will be presented and analyzed to demonstrate the effectiveness of the corrective action [324.21309a(2)(c)(viii) and (xi)]	Yes	2
Operation and maintenance provisions for the monitoring activities [324.21309a(2)(c)(x)]	No	N/A
Any contingency planning to address ineffective monitoring [324.21309a(2)(c)(ix)]	No	N/A
Other information requested by USTD [324.21309a(2)(c)(xii)] ( <i>Specify, if applicable</i> ): _____ _____	No	N/A

**NOTE: The USTD must be notified immediately if ineffective corrective action is indicated by monitoring activities.**

### **6.5 SCHEDULE FOR IMPLEMENTATION OF THE CORRECTIVE ACTION**

**A.** Attach the schedule for implementing the corrective action (*Include as Attachment No. 27. Reflect sufficient detail, a breakdown of the overall program into subcomponents, and the identification of key interim milestones (e.g., proposed submittal dates for Public Notice, Notice of Corrective Action, etc.) to demonstrate that the corrective action is implementable and has been adequately planned.*)

**B.** Date Confirmed Release Report Submitted: 4 / 8 / 96  
**C.** Date Initial Assessment Report Submitted: 7 / 5 / 96  
**D.** Date of Subsequent or Other Releases (*if appropriate*): 4 / 28 / 96  
**E.** Proposed Corrective Action Start Date: 6 / 8 / 97  
**F.** Dates of Key Interim Milestones (*Specify*):  
**G.** Proposed Remedial Activity Completion Date: 11/98  
**H.** Expected Performance Monitoring Completion Date: 11/98

### **6.6 NOTICES AND RESTRICTIONS**

**A.** Will the corrective action plan require the use of institutional controls to restrict land use or resources?  
 Yes  No

**If "No", skip to Section 6.7; otherwise, answer questions "B" through "F" below.**

**B.** What notices or restrictions will be filed based on the planned corrective action?  
(*Check all that apply*)

- Public Notice [324.21309a(3)]  Notice of Corrective Action [324.21310a(1)]  
 Restrictive Covenant [324.21310a(2)]  Other Mechanisms [324.21310a(3)]

**C.** Will USTD guidance be used to establish the form and content of the required notice(s) as provided in Attachment 20 of the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks"?  Yes  No

**D.** If "No", provide an explanation: \_\_\_\_\_  
\_\_\_\_\_

**E.** Describe all land use and/or resource limitations associated with the planned corrective action:  
\_\_\_\_\_

F. Identify the individuals or segments of the public to be provided notice of the proposed land use restrictions or limitations to be placed on resource use. (Include a map showing location(s) of the individuals or segments of the public to be notified, if appropriate, as Attachment No. 28):

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**6.7 FINANCIAL ASSURANCE MECHANISM**

A. Has a financial assurance agreement, as provided for in R29.2161 to R29.2169 of the Michigan Administrative Code, been included for approval by the USTD to assure the effectiveness and integrity of the corrective action?  Yes  No

B. If "No", provide an explanation: \_\_\_\_\_

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If "Yes", provide the following:

C. Date the financial assurance mechanism was submitted to USTD: 7/15/96

D. Amount of the financial assurance mechanism: \$ 2,000,000

E. Coverage of the financial assurance mechanism  
(check all that apply):

- Monitoring  Operation and Maintenance  
 Oversight  Other (Specify): \_\_\_\_\_

**6.8 PERMITTING AND APPROVAL REQUIREMENTS**

A. Will the corrective action result in any discharge during its implementation?  Yes  No

If "No", no more information is necessary; if "Yes", continue with questions "B" and "C".

B. Describe the activity(s) representing the source of the discharge:

C. Provide the following information regarding the planned discharges:



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<b>SOURCE OF THE DISCHARGE</b>	<b>LOCATION OF THE DISCHARGE POINT (Attach a Site Map, if applicable)</b>	<b>WILL TREATMENT BE PERFORMED PRIOR TO DISCHARGE? IF SO, DESCRIBE.</b>	<b>ARE PERMITS REQUIRED FOR DISCHARGE? IF SO, DESCRIBE WHAT STEPS HAVE BEEN TAKEN TO OBTAIN THEM.</b>

**ATTACHMENT 26**

**Monitoring Plan**  
 Shell Oil Products Company  
 975 Rochester Road  
 Rochester, Michigan

This performance monitoring plan has been developed for the above referenced site as directed by Michigan Public Act 451, Section 21309a(2)(c).

Monitoring Locations and Frequency

Groundwater and soil monitoring will be conducted to monitor natural attenuation at the site. The locations to be monitored are depicted on a site map (Attachment 25). Groundwater samples will be collected from these monitoring wells on a quarterly basis beginning June 1997. Soil samples will be collected from borings advanced at the monitoring points on an annual basis beginning September 1997. Samples will continue to be collected until such time that it is determined that: corrective action has been successful (at which time closure verification will be initiated), or corrective action has been unsuccessful and an alternative remedial approach is proposed. A schedule, assuming corrective action is complete in 18 months, is attached (Attachment 27).

Groundwater and Soil Sample Collection Procedures

Before collecting groundwater samples, three casing volumes of water will be removed from the wells. To insure sample integrity, monitoring wells will be purged and sampled using one disposable polyethylene bailer per well. Groundwater samples will be transferred from the bailer to laboratory prepared sample containers, placed on ice, and transported to an analytical laboratory under chain-of-custody protocol.

Soil samples will be collected by advancing a boring in the impacted area. The soil borings will be advanced to the water-table and a soil sample will be collected from the interval of the vadose zone indicating the highest organic vapor levels (based upon PID screening). The soil sample will be placed in a laboratory prepared sample container, placed on ice, and transported to an analytical laboratory under chain-of-custody protocol.

Monitoring Parameters and Analytical Methods/MDLs

Groundwater and soil samples will be analyzed for the following.

PARAMETER	ANALYTICAL METHOD	METHOD DETECTION LIMIT
Benzene	USEPA 8020 or similarly approved method from MERA Memo #6	5 ppb (GW) / 10 ppb (soil)
Toluene	USEPA 8020 or similarly approved method from MERA Memo #6	1 ppb (GW) / 10 ppb (soil)
Ethylbenzene	USEPA 8020 or similarly approved method from MERA Memo #6	1 ppb (GW) / 10 ppb (soil)
Xylenes	USEPA 8020 or similarly approved method from MERA Memo #6	3 ppb (GW) / 30 ppb (soil)
MTBE	USEPA 8020 or similarly approved method from MERA Memo #6	50 ppb (GW) / 100 ppb (soil)
PNA	USEPA 8310 or similarly approved method from MERA Memo #6.	5 ppb (GW) / 330 ppb (soil)

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These parameters have been identified as indicators for gasoline releases by the MDEQ's *Guidance for Parameters, Analytical Methods, Sample Handling, Quality Control, and Cleanup Limits for Petroleum Hydrocarbon Releases* (June 30, 1995) draft guidance document, and appear to be appropriate based upon previous site investigations.

The analytical laboratory is currently identified as Southern Petroleum Laboratories (SPL) in Traverse City, Michigan.

Quality Assurance and Quality Control Measures

EnecoTech's Quality Assurance/Quality Control (QA/QC) program will be adhered to during all phases of the investigation. QA/QC procedures include, but are not limited to:

- Decontamination of sampling equipment before and between sampling events;
- Chain-of-custody protocol for laboratory analyses;
- Proper calibration of field equipment; and
- Documentation of all field activities.

Additionally, a copy of SPLs QA/QC Program is attached for review.

Data Evaluations

Upon completion of the laboratory analysis, EnecoTech will review the sample results to determine if concentrations are above or below the RBSLs. The results will be reviewed to determine general trends. The results of EnecoTech's evaluations will be presented to the MDEQ on a quarterly basis in a Monitoring Summary Report. The report will include a copy of the analytical reports, site maps depicting analytical results, and a summary of findings.

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ATTACHMENT NO. 3  
FIELD SCREENING RESULTS - SOIL  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

Sample ID	BS-1		BS-2		NSW		SSW		ESW	
Sample Depth (feet BGS)	8.0		8.0		4.0		4.0		4.0	
Date Collected	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96	
Date Analyzed	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96	
Collection Method*	GS		GS		GS		GS		GS	
Screening Instrument	PID		PID		PID		PID		PID	
CONSTITUENT	Result	D.L	Result	D.L	Result	D.L	Result	D.L	Result	D.L
Total Organics (ppm)	ND	1	ND	1	ND	1	ND	1	ND	1
Benzene (ppb)										
Ethylbenzene (ppb)										
Toluene (ppb)										
Total Xylenes (ppb)										
Other (Specify)										
Sample ID	WSW		S-1		S-2		S-3		S-4	
Sample Depth (feet BGS)	4.0		2.5		2.5		2.0		2.0	
Date Collected	4/15/96		4/18/96		4/18/96		4/18/96		4/18/96	
Date Analyzed	4/15/96		4/18/96		4/18/96		4/18/96		4/18/96	
Collection Method*	GS		GS		GS		GS		GS	
Screening Instrument	PID		PID		PID		PID		PID	
CONSTITUENT	Result	D.L	Result	D.L	Result	D.L	Result	D.L	Result	D.L
Total Organics (ppm)	ND	1	668	1	2491	1	1849	1	3.0	1
Benzene (ppb)										
Ethylbenzene (ppb)										
Toluene (ppb)										
Total Xylenes (ppb)										
Other (Specify)										

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit

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**ATTACHMENT NO. 3**  
FIELD SCREENING RESULTS - SOIL  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

Sample ID	PH-1		PH-2		PH-3		PH-3		PH-4	
Sample Depth (feet BGS)	4-6		2-4		2-4		10-12		2-4	
Date Collected	10/17/96		10/17/96		10/17/96		10/18/96		10/17/96	
Date Analyzed	10/17/96		10/17/96		10/17/96		10/18/96		10/17/96	
Collection Method*	GP		GP		GP		GP		GP	
Screening Instrument	PID		PID		PID		PID		PID	
CONSTITUENT	Result	D.L	Result	D.L	Result	D.L	Result	D.L	Result	D.L
Total Organics (ppm)	4	0.1	545	0.1	ND	0.1	ND	0.1	ND	0.1
Benzene (ppb)										
Ethylbenzene (ppb)										
Toluene (ppb)										
Total Xylenes (ppb)										
Other (Specify)										
Sample ID	PH-4		PH-5		PH-5		PH-6		PH-6	
Sample Depth (feet BGS)	10-12		2-4		10-12		2-4		10-12	
Date Collected	10/17/96		10/18/96		10/18/96		10/18/96		10/18/96	
Date Analyzed	10/17/96		10/18/96		10/18/96		10/18/96		10/18/96	
Collection Method*	GP		GP		GP		GP		GP	
Screening Instrument	PID		PID		PID		PID		PID	
CONSTITUENT	Result	D.L	Result	D.L	Result	D.L	Result	D.L	Result	D.L
Total Organics (ppm)	ND	0.1	5	0.1	ND	0.1	ND	0.1	ND	0.1
Benzene (ppb)										
Ethylbenzene (ppb)										
Toluene (ppb)										
Total Xylenes (ppb)										
Other (Specify)										

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydrompunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit

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**ATTACHMENT NO. 3**  
FIELD SCREENING RESULTS - SOIL  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

Sample ID	PH-7		PH-7		PH-8		PH-9		PH-9	
Sample Depth (feet BGS)	2-4		10-12		2-4		4-6		10-12	
Date Collected	10/18/96		10/18/96		10/17/96		10/17/96		10/17/96	
Date Analyzed	10/18/96		10/18/96		10/17/96		10/17/96		10/17/96	
Collection Method*	GP		GP		GP		GP		GP	
Screening Instrument	PID		PID		PID		PID		PID	
CONSTITUENT	Result	D.L	Result	D.L	Result	D.L	Result	D.L	Result	D.L
Total Organics (ppm)	ND	0.1	ND	0.1	250	0.1	4	0.1	ND	0.1
Benzene (ppb)										
Ethylbenzene (ppb)										
Toluene (ppb)										
Total Xylenes (ppb)										
Other (Specify)										
Sample ID	PH-10		PH-10		PH-11		PH-12			
Sample Depth (feet BGS)	2-4		10-12		2-4		2-4			
Date Collected	10/17/96		10/17/96		10/17/96		10/17/96			
Date Analyzed	10/17/96		10/17/96		10/17/96		10/17/96			
Collection Method*	GP		GP		GP		GP			
Screening Instrument	PID		PID		PID		PID			
CONSTITUENT	Result	D.L	Result	D.L	Result	D.L	Result	D.L	Result	D.L
Total Organics (ppm)	ND	0.1	ND	0.1	10	0.1	4	0.1		
Benzene (ppb)										
Ethylbenzene (ppb)										
Toluene (ppb)										
Total Xylenes (ppb)										
Other (Specify)										

3BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
FINAL ASSESSMENT REPORT (CONTINUED)

ATTACHMENT NO. 4  
LABORATORY RESULTS - SOIL  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

VOLATILES										
Sample ID	BS-1		BS-2		NSW		SSW		ESW	
Sample Depth (feet BGS)	8.0		8.0		4.0		4.0		4.0	
Date Collected	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96	
Date Extracted										
Date Analyzed	4/27/96		4/28/96		4/27/96		4/27/96		4/27/96	
Analytical Method No.	8020		8020		8020		8020		8020	
Collection Method*	GS		GS		GS		GS		GS	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Toluene	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Total Xylenes	ND	5	ND	5	ND	5	ND	5	ND	5
<input type="checkbox"/> MTBE										
VOLATILES										
Sample ID	WSW		S-1		S-2		S-3		S-4	
Sample Depth (feet BGS)	4.0		2.5		2.5		2.0		2.0	
Date Collected	4/15/96		4/18/96		4/18/96		4/18/96		4/18/96	
Date Extracted										
Date Analyzed	4/27/96		4/24/96		4/24/96		4/24/96		4/23/96	
Analytical Method No.	8020		8020		8020		8020		8020	
Collection Method*	GS		GS		GS		GS		GS	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	5	8,700	610	14,000	1,200	28,000	560	ND	5
<input checked="" type="checkbox"/> Toluene	ND	5	20,000	610	32,000	1,200	47,000	560	ND	5
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	42,000	610	150,000	1,200	71,000	560	ND	5
<input checked="" type="checkbox"/> Total Xylenes	ND	5	173,000	610	510,000	1,200	320,000	560	ND	5
<input checked="" type="checkbox"/> MTBE	NA	NA	7,700	610	4,000	1,200	15,000	560	11	5

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
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ATTACHMENT NO. 4  
LABORATORY RESULTS - SOIL  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

VOLATILES										
Sample ID	PH-1		PH-2		PH-3		PH-3		PH-4	
Sample Depth (feet BGS)	4-6		2-4		2-4		10-12		2-4	
Date Collected	10/17/96		10/17/96		10/18/96		10/18/96		10/17/96	
Date Extracted										
Date Analyzed	10/29/96		10/28/96		10/29/96		10/29/96		10/29/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	5	25,000	550	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Toluene	ND	5	160,000	550	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	86,000	550	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Total Xylenes	ND	5	420,000	550	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> MTBE	6	5	18,000	550	ND	5	ND	5	5	5
VOLATILES										
Sample ID	PH-4		PH-5		PH-5		PH-6		PH-6	
Sample Depth (feet BGS)	10-12		2-4		10-12		2-4		10-12	
Date Collected	10/17/96		10/18/96		10/18/96		10/18/96		10/18/96	
Date Extracted										
Date Analyzed	10/29/96		10/26/96		10/26/96		10/29/96		10/28/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Toluene	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Total Xylenes	ND	5	ND	5	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> MTBE	ND	5	ND	5	ND	5	ND	5	ND	5

2BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit



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**ATTACHMENT NO. 4**  
**LABORATORY RESULTS - SOIL**  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

<b>VOLATILES</b>										
Sample ID	PH-7		PH-7		PH-8		PH-9		PH-9	
Sample Depth (feet BGS)	2-4		10-12		2-4		4-6		10-12	
Date Collected	10/18/96		10/18/96		10/17/96		10/17/96		10/17/96	
Date Extracted										
Date Analyzed	10/26/96		10/28/96		10/29/96		10/29/96		10/29/96	
Analytical Method No.	8020A		10/28/96		8020A		8020A		8020A	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	5	ND	5	27	5	7	5	8	5
<input checked="" type="checkbox"/> Toluene	ND	5	ND	5	ND	5	ND	5	6	5
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	ND	5	150	5	ND	5	ND	5
<input checked="" type="checkbox"/> Total Xylenes	ND	5	ND	5	134	5	ND	5	ND	5
<input checked="" type="checkbox"/> MTBE	ND	5	ND	5	30	5	13	5	10	5
<b>VOLATILES</b>										
Sample ID	PH-10		PH-10		PH-11		PH-12		MW-3	
Sample Depth (feet BGS)	2-4		10-12		2-4		2-4		2-4	
Date Collected	10/17/96		10/17/96		10/17/96		10/17/96		12/4/96	
Date Extracted										
Date Analyzed	10/29/96		10/26/96		10/29/96		10/29/96		12/17/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	GP		GP		GP		GP		SS	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	5	ND	5	6	5	18	5	71	6
<input checked="" type="checkbox"/> Toluene	ND	5	ND	5	7	5	ND	5	8	6
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	ND	5	ND	5	ND	5	490	6
<input checked="" type="checkbox"/> Total Xylenes	ND	5	ND	5	15	5	ND	5	209	6
<input checked="" type="checkbox"/> MTBE	ND	5	7	5	5	5	21	5	90	6

3BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit

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LABORATORY RESULTS - SOIL  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

VOLATILES										
Sample ID	MW-3		MW-8		MW-8					
Sample Depth (feet BGS)	8-10		2-4		10-12					
Date Collected	12/4/96		12/4/96		12/4/96					
Date Extracted										
Date Analyzed	12/15/96		12/15/96		12/15/96					
Analytical Method No.	8020A		8020A		8020A					
Collection Method*	SS		SS		SS					
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	5	5	5	5	ND	5				
<input checked="" type="checkbox"/> Toluene	ND	5	ND	5	ND	5				
<input checked="" type="checkbox"/> Ethylbenzene	ND	5	ND	5	ND	5				
<input checked="" type="checkbox"/> Total Xylenes	ND	5	ND	5	ND	5				
<input checked="" type="checkbox"/> MTBE	ND	5	ND	5	ND	5				
VOLATILES										
Sample ID										
Sample Depth (feet BGS)										
Date Collected										
Date Extracted										
Date Analyzed										
Analytical Method No.										
Collection Method*										
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input type="checkbox"/> Benzene										
<input type="checkbox"/> Toluene										
<input type="checkbox"/> Ethylbenzene										
<input type="checkbox"/> Total Xylenes										
<input type="checkbox"/> MTBE										

4BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
**FINAL ASSESSMENT REPORT (CONTINUED)**

**ATTACHMENT NO. 4**  
**LABORATORY RESULTS-SOIL**  
**FACILITY NAME Shell Service Station**  
**FACILITY ID NUMBER 0-009055**

<b>VOLATILES</b>										
Sample ID	BS-1		BS-2		NSW		SSW		ESW	
Sample Depth (feet BGS)	8.0		8.0		4.0		4.0		4.0	
Date Collected	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96	
Date Extracted										
Date Analyzed	4/22/96		4/22/96		5/3/96		5/3/96		5/3/96	
Analytical Method No.	8310		8310		8310		8310		8310	
Collection Method*	GS		GS		GS		GS		GS	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Acenaphthene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Acenaphthylene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Anthracene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	230	ND	230	ND	230	320	240	ND	240
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	230	ND	230	ND	230	360	240	ND	240
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	230	ND	230	ND	230	320	240	ND	240
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Chrysene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Fluoranthene	ND	230	ND	230	ND	230	550	240	270	240
<input checked="" type="checkbox"/> Fluorene	ND	230	ND	230	ND	230	4,100	240	1,300	240
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	ND	230	ND	230	ND	230	290	240	ND	240
<input checked="" type="checkbox"/> Naphthalene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Phenanthrene	ND	230	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Pyrene	ND	230	ND	230	ND	230	500	240	250	240
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ND	230	ND	230	ND	230	ND	240	ND	240

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
 FINAL ASSESSMENT REPORT (CONTINUED)

ATTACHMENT NO. 4  
 LABORATORY RESULTS-SOIL  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

<b>VOLATILES</b>										
Sample ID	WSW									
Sample Depth (feet BGS)	4.0									
Date Collected	4/15/96									
Date Extracted										
Date Analyzed	5/3/96									
Analytical Method No.	8310									
Collection Method*	GS									
<b>CONSTITUENT (ug/kg)</b>	<b>Conc</b>	<b>MDL</b>	<b>Conc</b>	<b>MDL</b>	<b>Conc</b>	<b>MDL</b>	<b>Conc</b>	<b>MDL</b>	<b>Conc</b>	<b>MDL</b>
<input checked="" type="checkbox"/> Acenaphthene	ND	230								
<input checked="" type="checkbox"/> Acenaphthylene	ND	230								
<input checked="" type="checkbox"/> Anthracene	ND	230								
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	230								
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	230								
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	230								
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	230								
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	230								
<input checked="" type="checkbox"/> Chrysene	ND	230								
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	230								
<input checked="" type="checkbox"/> Fluoranthene	ND	230								
<input checked="" type="checkbox"/> Fluorene	470	230								
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	ND	230								
<input checked="" type="checkbox"/> Naphthalene	ND	230								
<input checked="" type="checkbox"/> Phenanthrene	ND	230								
<input checked="" type="checkbox"/> Pyrene	ND	230								
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ND	230								

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
**FINAL ASSESSMENT REPORT (CONTINUED)**

**ATTACHMENT NO. 4**  
 LABORATORY RESULTS - SOIL  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

<b>METALS</b>										
Sample ID	BS-1		BS-2		NSW		SSW		ESW	
Sample Depth (feet BGS)	8.0		8.0		4.0		4.0		4.0	
Date Collected	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96	
Date Extracted										
Date Analyzed	4/27/96		4/27/96		4/27/96		4/27/96		4/27/96	
Analytical Method No.	7131/7191/7421		7131/7191/7421		7131/7191/7421		7131/7191/7421		7131/7191/7421	
Collection Method*	GS		GS		GS		GS		GS	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Cadmium	140	20	90	20	80	20	190	20	210	20
<input type="checkbox"/> Chromium III										
<input checked="" type="checkbox"/> Chromium VI	17,800	450	16,400	460	50,300	2,330	50,300	2,390	47,300	2,360
<input checked="" type="checkbox"/> Total Lead	4,570	110	4,850	120	5,500	120	15,400	240	31,600	240
<b>METALS</b>										
Sample ID	WSW		PH-4		PH-6		PH-7			
Sample Depth (feet BGS)	4.0		2-4		2-4		2-4			
Date Collected	4/15/96		10/17/96		10-18/96		10/18/96			
Date Extracted										
Date Analyzed	4/27/96		10/29/96		10/29/96		10/29/96			
Analytical Method No.	7131/4191/7421		7191		7191		7191			
Collection Method*	GS		GP		GP		GP			
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Cadmium	60	20								
<input type="checkbox"/> Chromium III										
<input checked="" type="checkbox"/> Chromium VI	39,400	2,310	15,200	470	20,900	470	44,700	2,340		
<input checked="" type="checkbox"/> Total Lead	5,110	120								

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
 FINAL ASSESSMENT REPORT (CONTINUED)

ATTACHMENT NO. 4  
 LABORATORY RESULTS - SOIL  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

PCBs										
Sample ID	BS-1		BS-2		NSW		SSW		ESW	
Sample Depth (feet BGS)	8.0		8.0		4.0		4.0		4.0	
Date Collected	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96	
Date Extracted										
Date Analyzed	4/29/96		4/29/96		4/29/96		4/29/96		4/29/96	
Analytical Method No.	8080		8080		8080		8080		8080	
Collection Method*	GS		GS		GS		GS		GS	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Aroclor 1016	ND	220	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Aroclor 1221	ND	220	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Aroclor 1232	ND	220	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Aroclor 1242	ND	220	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Aroclor 1248	ND	220	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Aroclor 1254	ND	220	ND	230	ND	230	ND	240	ND	240
<input checked="" type="checkbox"/> Aroclor 1260	ND	220	ND	230	ND	230	ND	240	ND	240
PCBs										
Sample ID	WSW									
Sample Depth (feet BGS)	4.0									
Date Collected	4/15/96									
Date Extracted										
Date Analyzed	4/29/96									
Analytical Method No.	8080									
Collection Method*	GS									
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Aroclor 1016	ND	230								
<input checked="" type="checkbox"/> Aroclor 1221	ND	230								
<input checked="" type="checkbox"/> Aroclor 1232	ND	230								
<input checked="" type="checkbox"/> Aroclor 1242	ND	230								
<input checked="" type="checkbox"/> Aroclor 1248	ND	230								
<input checked="" type="checkbox"/> Aroclor 1254	ND	230								
<input checked="" type="checkbox"/> Aroclor 1260	ND	230								

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
FINAL ASSESSMENT REPORT (CONTINUED)

**ATTACHMENT NO. 4**  
**LABORATORY RESULTS - SOIL**  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

<b>HALOGENATED HYDROCARBONS</b>											
Sample ID	BS-1		BS-2		NSW		SSW		ESW		
Sample Depth (feet BGS)	8.0		8.0		4.0		4.0		4.0		
Date Collected	4/15/96		4/15/96		4/15/96		4/15/96		4/15/96		
Date Extracted											
Date Analyzed	4/27/96		4/27/96		4/28/96		4/27/96		4/27/96		
Analytical Method No.	8010		8010		8010		8010		8010		
Collection Method*	GS		GS		GS		GS		GS		
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	
<input checked="" type="checkbox"/> Dichlorodifluoromethane	ND	1	ND	1	ND	1	ND	1	ND	1	
<input checked="" type="checkbox"/> Chloromethane	ND	0.80	ND	0.80	ND	0.80	ND	0.80	ND	0.80	
<input checked="" type="checkbox"/> Vinyl Chloride	ND	1.80	ND	1.80	ND	1.80	ND	1.80	ND	1.80	
<input checked="" type="checkbox"/> Bromomethane	ND	1	ND	1	ND	1	ND	1	ND	1	
<input checked="" type="checkbox"/> Chloroethane	ND	5.20	ND	5.20	ND	5.20	ND	5.20	ND	5.20	
<input checked="" type="checkbox"/> Trichlorofluoromethane	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	
<input checked="" type="checkbox"/> 1,1-Dichloroethene	ND	1.30	ND	1.30	ND	1.30	ND	1.30	ND	1.30	
<input checked="" type="checkbox"/> Methylene Chloride	6 B	0.80	4 B	0.80	8 B	0.80	5 B	0.80	4 B	0.80	
<input checked="" type="checkbox"/> trans-1,2-Dichloroethene	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	
<input checked="" type="checkbox"/> 1,1-Dichloroethane	ND	0.70	ND	0.70	ND	0.70	ND	0.70	ND	0.70	
<input checked="" type="checkbox"/> Chloroform	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	
<input checked="" type="checkbox"/> 1,1,1-Trichloroethane	ND	0.30	ND	0.30	ND	0.30	ND	0.30	ND	0.30	
<input checked="" type="checkbox"/> Carbon Tetrachloride	ND	1.20	ND	1.20	ND	1.20	ND	1.20	ND	1.20	
<input checked="" type="checkbox"/> 1,2-Dichloroethane	ND	0.30	ND	0.30	ND	0.30	ND	0.30	ND	0.30	
<input checked="" type="checkbox"/> Trichloroethene	ND	1.20	ND	1.20	ND	1.20	ND	1.20	ND	1.20	
<input checked="" type="checkbox"/> 1,2-Dichloropropane	ND	0.40	ND	0.40	ND	0.40	ND	0.40	ND	0.40	
<input checked="" type="checkbox"/> Bromodichloromethane	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	
<input checked="" type="checkbox"/> cis-1,3-Dichloropropene	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	
<input checked="" type="checkbox"/> trans-1,3-Dichloropropene	ND	3.40	ND	3.40	ND	3.40	ND	3.40	ND	3.40	
<input checked="" type="checkbox"/> 1,1,2-Trichloroethane	ND	0.20	ND	0.20	ND	0.20	ND	0.20	ND	0.20	
<input checked="" type="checkbox"/> Tetrachloroethene	ND	0.30	ND	0.30	ND	0.30	ND	0.30	1	0.30	
<input checked="" type="checkbox"/> Dibromochloromethane	ND	0.90	ND	0.90	ND	0.90	ND	0.90	ND	0.90	
<input checked="" type="checkbox"/> Chlorobenzene	ND	2.50	ND	2.50	ND	2.50	ND	2.50	ND	2.50	
<input checked="" type="checkbox"/> Bromoform	ND	2.00	ND	2.00	ND	2.00	ND	2.00	ND	2.00	
<input checked="" type="checkbox"/> 1,1,2,2-Tetrachloroethane	ND	0.30	ND	0.30	ND	0.30	ND	0.30	ND	0.30	
<input checked="" type="checkbox"/> 1,3-Dichlorobenzene	ND	3.20	ND	3.20	ND	3.20	ND	3.20	ND	3.20	
<input checked="" type="checkbox"/> 1,4-Dichlorobenzene	ND	2.40	ND	2.40	ND	2.40	ND	2.40	ND	2.40	
<input checked="" type="checkbox"/> 1,2-Dichlorobenzene	ND	1.50	ND	1.50	ND	1.50	ND	1.50	ND	1.50	

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

*If other (OT) specify here:* \_\_\_\_\_

MDL = Method Detection Limit

\* B = Compound present in method blank.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
 FINAL ASSESSMENT REPORT (CONTINUED)

ATTACHMENT NO. 4  
 LABORATORY RESULTS - SOIL  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

HALOGENATED HYDROCARBONS												
Sample ID	WSW											
Sample Depth (feet BGS)	4.0											
Date Collected	4/15/96											
Date Extracted												
Date Analyzed	4/27/96											
Analytical Method No.	8010											
Collection Method*	GS											
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Dichlorodifluoromethane	ND	1										
<input checked="" type="checkbox"/> Chloromethane	ND	0.80										
<input checked="" type="checkbox"/> Vinyl Chloride	ND	1.80										
<input checked="" type="checkbox"/> Bromomethane	ND	1										
<input checked="" type="checkbox"/> Chloroethane	ND	5.20										
<input checked="" type="checkbox"/> Trichlorofluoromethane	ND	1.00										
<input checked="" type="checkbox"/> 1,1-Dichloroethene	ND	1.30										
<input checked="" type="checkbox"/> Methylene Chloride	6 B	0.80										
<input checked="" type="checkbox"/> trans-1,2-Dichloroethene	ND	1.00										
<input checked="" type="checkbox"/> 1,1-Dichloroethane	ND	0.70										
<input checked="" type="checkbox"/> Chloroform	ND	0.50										
<input checked="" type="checkbox"/> 1,1,1-Trichloroethane	ND	0.30										
<input checked="" type="checkbox"/> Carbon Tetrachloride	ND	1.20										
<input checked="" type="checkbox"/> 1,2-Dichloroethane	ND	0.30										
<input checked="" type="checkbox"/> Trichloroethene	ND	1.20										
<input checked="" type="checkbox"/> 1,2-Dichloropropane	ND	0.40										
<input checked="" type="checkbox"/> Bromodichloromethane	ND	1.00										
<input checked="" type="checkbox"/> cis-1,3-Dichloropropene	ND	1.00										
<input checked="" type="checkbox"/> trans-1,3-Dichloropropene	ND	3.40										
<input checked="" type="checkbox"/> 1,1,2-Trichloroethane	ND	0.20										
<input checked="" type="checkbox"/> Tetrachloroethene	ND	0.30										
<input checked="" type="checkbox"/> Dibromochloromethane	ND	0.90										
<input checked="" type="checkbox"/> Chlorobenzene	ND	2.50										
<input checked="" type="checkbox"/> Bromoform	ND	2.00										
<input checked="" type="checkbox"/> 1,1,2,2-Tetrachloroethane	ND	0.30										
<input checked="" type="checkbox"/> 1,3-Dichlorobenzene	ND	3.20										
<input checked="" type="checkbox"/> 1,4-Dichlorobenzene	ND	2.40										
<input checked="" type="checkbox"/> 1,2-Dichlorobenzene	ND	1.50										

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

MDL = Method Detection Limit

\* B = Compound present in method blank.



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION  
 FINAL ASSESSMENT REPORT (CONTINUED)

ATTACHMENT NO. 5  
 TIER I RBSL/TIER II OR TIER III SSTL COMPARISON TABLE FOR SOILS  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

Residential       Commercial III       Commercial IV       Industrial

Exposure Codes

A. Direct Contact

B. Soil Leaching to Potable Groundwater

Contaminant	Sample ID with Maximum Detected Concentration	Corresponding Sample Date	Maximum Detected Concentration (ug/kg)	Applicable Criterion with Exposure Codes (ug/kg)		Criterion Exceeded? (Yes or No)	
				Tier I RBSL (A)	Tier II/III SSTL	Tier I RBSL	Tier II/III SSTL
<b>VOLATILES</b>							
<input checked="" type="checkbox"/> Benzene	S-3 (2.5)	4/18/96	28,000	88,000		NO	
<input checked="" type="checkbox"/> Toluene	PH-2 (2-4)	10/17/96	160,000	620,000 *		NO	
<input checked="" type="checkbox"/> Ethylbenzene	S-2 (2.5)	4/18/96	150,000	380,000 *		NO	
<input checked="" type="checkbox"/> Total Xylenes	S-2 (2.5)	4/18/96	510,000	400,000 *		YES	
<input checked="" type="checkbox"/> MTBE	PH-2 (2-4)	10/17/96	18,000	3,600,000		NO	
<b>POLYNUCLEAR AROMATICS (PNAs)</b>							
<input checked="" type="checkbox"/> Acenaphthene	ALL	4/15/96	ND (240)	76,000,000		NO	
<input checked="" type="checkbox"/> Acenaphthylene	ALL	4/15/96	ND (240)	1,500,000		NO	
<input checked="" type="checkbox"/> Anthracene	ALL	4/15/96	ND (240)	420,000,000		NO	
<input checked="" type="checkbox"/> Benzo(a)anthracene	SSW (4.0)	4/15/96	320	14,000		NO	
<input checked="" type="checkbox"/> Benzo(a)pyrene	SSW (4.0)	4/15/96	360	1,400		NO	
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	SSW (4.0)	4/15/96	320	14,000		NO	
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ALL	4/15/96	ND (240)	1,500,000		NO	
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ALL	4/15/96	ND (240)	140,000		NO	
<input checked="" type="checkbox"/> Chrysene	ALL	4/15/96	ND (240)	1,400,000		NO	
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ALL	4/15/96	ND (240)	1,400		NO	
<input checked="" type="checkbox"/> Fluoranthene	SSW (4.0)	4/15/96	550	51,000,000		NO	
<input checked="" type="checkbox"/> Fluorene	SSW (4.0)	4/15/96	4,100	25,000,000		NO	
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	SSW (4.0)	4/15/96	290	14,000		NO	
<input checked="" type="checkbox"/> Naphthalene	ALL	4/15/96	ND (240)	15,000,000		NO	
<input checked="" type="checkbox"/> Phenanthrene	ALL	4/15/96	ND (240)	1,500,000		NO	
<input checked="" type="checkbox"/> Pyrene	SSW (4.0)	4/15/96	500	32,000,000		NO	
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ALL	4/15/96	ND (240)	15,000,000		NO	

\* No Direct Contact Criteria is available; Soil Saturation Criteria from Operational Memorandum #4 were utilized.

**ATTACHMENT NO. 5**  
**TIER I RBSL/TIER II OR TIER III SSSL COMPARISON TABLE FOR SOILS**  
**FACILITY NAME Shell Service Station**  
**FACILITY ID NUMBER 0-009055**

Residential       Commercial III       Commercial IV       Industrial

**Exposure Codes**

**A. Direct Contact**

**B. Soil Leaching to Potable Groundwater**

Contaminant	Sample ID with Maximum Detected Concentration	Corresponding Sample Date	Maximum Detected Concentration (ug/kg)	Applicable Criterion with Exposure Codes (ug/kg)		Criterion Exceeded? (Yes or No)	
				Tier I RBSL (A)	Tier II/III SSSL	Tier I RBSL	Tier II/III SSSL
<b>METALS</b>							
<input checked="" type="checkbox"/> Cadmium	ESW (4.0)	4/15/96	210	210,000		NO	
<input type="checkbox"/> Chromium III							
<input checked="" type="checkbox"/> Chromium VI	NSW/SSW (4.0)	4/15/96	50,300	2,000,000		NO	
<input checked="" type="checkbox"/> Total Lead	ESW (4.0)	4/15/96	31,600	400,000		NO	
<b>PCBs</b>							
<input checked="" type="checkbox"/> Aroclor 1016	ALL	4/15/96	ND (240)	330 *		NO	
<input checked="" type="checkbox"/> Aroclor 1221	ALL	4/15/96	ND (240)	330 *		NO	
<input checked="" type="checkbox"/> Aroclor 1232	ALL	4/15/96	ND (240)	330 *		NO	
<input checked="" type="checkbox"/> Aroclor 1242	ALL	4/15/96	ND (240)	330 *		NO	
<input checked="" type="checkbox"/> Aroclor 1248	ALL	4/15/96	ND (240)	330 *		NO	
<input checked="" type="checkbox"/> Aroclor 1254	ALL	4/15/96	ND (240)	330 *		NO	
<input checked="" type="checkbox"/> Aroclor 1260	ALL	4/15/96	ND (240)	330 *		NO	

\* - The Method Detection Limit of 330 ug/kg is the default RBSL value.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY-UNDERGROUND STORAGE TANK DIVISION  
FINAL ASSESSMENT REPORT

ATTACHMENT NO. 5  
TIER I RBSL/TIER II OR TIER III SSSL COMPARISON TABLE FOR SOILS  
FACILITY NAME Shell Service Station  
FACILITY ID NUMBER 0-009055

Residential     Commercial III     Commercial IV     Industrial

Exposure Codes

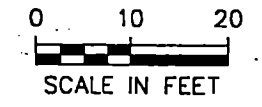
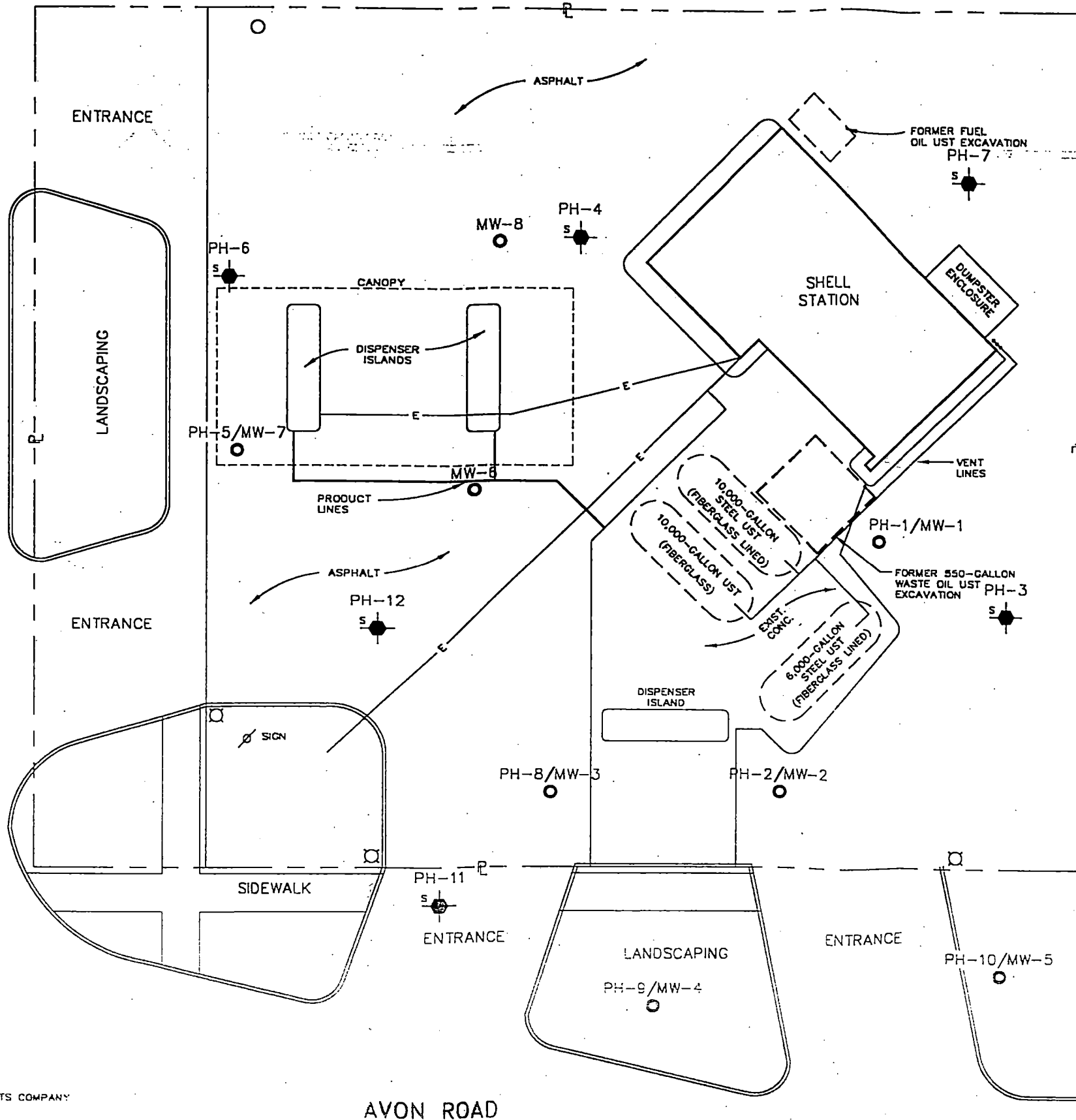
A. Direct Contact

B. Soil Leaching to Potable Groundwater

Contaminant	Sample ID with Maximum Detected Concentration	Corresponding Sample Date	Maximum Detected Concentration (ug/kg)	Applicable Criterion with Exposure Codes (ug/kg)		Criterion Exceeded? (Yes or No)	
				Tier I RBSL (A)	Tier II/III SSSL	Tier I RBSL	Tier II/III SSSL
<b>HALOGENATED HYDROCARBONS</b>							
<b>CONSTITUENT (ug/kg)</b>							
<input checked="" type="checkbox"/> Dichlorodifluoromethane	ALL	4/15/96	ND (1)	3,500,000		NO	
<input checked="" type="checkbox"/> Chloromethane	ALL	4/15/96	ND (.8)	200,000		NO	
<input checked="" type="checkbox"/> Vinyl Chloride	ALL	4/15/96	ND (1.8)	1,200		NO	
<input checked="" type="checkbox"/> Bromomethane	ALL	4/15/96	ND (1)	150,000		NO	
<input checked="" type="checkbox"/> Chloroethane	ALL	4/15/96	ND (5.20)	670,000		NO	
<input checked="" type="checkbox"/> Trichlorofluoromethane	ALL	4/15/96	ND (1)	1,500,000		NO	
<input checked="" type="checkbox"/> 1,1-Dichloroethene	ALL	4/15/96	ND (1.3)	110,000		NO	
<input checked="" type="checkbox"/> Methylene Chloride	NSW (4.0)	4/15/96	8 (B) *	340,000		NO	
<input checked="" type="checkbox"/> trans-1,2-Dichloroethene	ALL	4/15/96	ND (1.0)	1,900,000		NO	
<input checked="" type="checkbox"/> 1,1-Dichloroethane	ALL	4/15/96	ND (.7)	1,100,000		NO	
<input checked="" type="checkbox"/> Chloroform	ALL	4/15/96	ND (.5)	420,000		NO	
<input checked="" type="checkbox"/> 1,1,1-Trichloroethane	ALL	4/15/96	ND (.3)	1,100,000		NO	
<input checked="" type="checkbox"/> Carbon Tetrachloride	ALL	4/15/96	ND (1.2)	20,000		NO	
<input checked="" type="checkbox"/> 1,2-Dichloroethane	ALL	4/15/96	ND (.3)	28,000		NO	
<input checked="" type="checkbox"/> Trichloroethene	ALL	4/15/96	ND (1.2)	160,000		NO	
<input checked="" type="checkbox"/> 1,2-Dichloropropane	ALL	4/15/96	ND (0.4)	38,000		NO	
<input checked="" type="checkbox"/> Bromodichloromethane	ALL	4/15/96	ND (1.0)	41,000		NO	
<input checked="" type="checkbox"/> cis-1,3-Dichloropropene	ALL	4/15/96	ND (1.0)	14,000		NO	
<input checked="" type="checkbox"/> trans-1,3-Dichloropropene	ALL	4/15/96	ND (3.4)	14,000		NO	
<input checked="" type="checkbox"/> 1,1,2-Trichloroethane	ESW (4.0)	4/15/96	ND (0.2)	45,000		NO	
<input checked="" type="checkbox"/> Tetrachloroethene	ALL	4/15/96	1	50,000		NO	
<input checked="" type="checkbox"/> Dibromochloromethane	ALL	4/15/96	ND (0.9)	31,000		NO	
<input checked="" type="checkbox"/> Chlorobenzene	ALL	4/15/96	ND (2.5)	660,000		NO	
<input checked="" type="checkbox"/> Bromoform	ALL	4/15/96	ND(2.0)	320,000		NO	
<input checked="" type="checkbox"/> 1,1,2,2-Tetrachloroethane	ALL	4/15/96	ND (0.3)	13,000		NO	
<input checked="" type="checkbox"/> 1,3-Dichlorobenzene	ALL	4/15/96	ND(3.2)	10,000,000		NO	
<input checked="" type="checkbox"/> 1,4-Dichlorobenzene	ALL	4/15/96	ND (2.4)	110,000		NO	
<input checked="" type="checkbox"/> 1,2-Dichlorobenzene	ALL	4/15/96	ND (1.5)	590,000		NO	

\* - (B) Compound present in laboratory method blank.

ROCHESTER ROAD



**LEGEND**

- ⊔ PROPERTY BOUNDARY
- UST UNDERGROUND STORAGE TANK
- ⊠ AREA LIGHT
- e- ELECTRICAL CONDUIT RUNS
- ⊕ PROBEHOLE (PH)
- MONITORING WELL (MW)
- FORMER POTABLE GROUNDWATER WELL

BASEMAP SOURCE:  
SHELL OIL PRODUCTS COMPANY  
CR-978  
DATE: 3/25/73

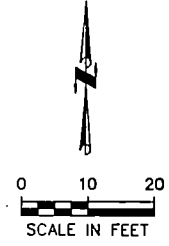
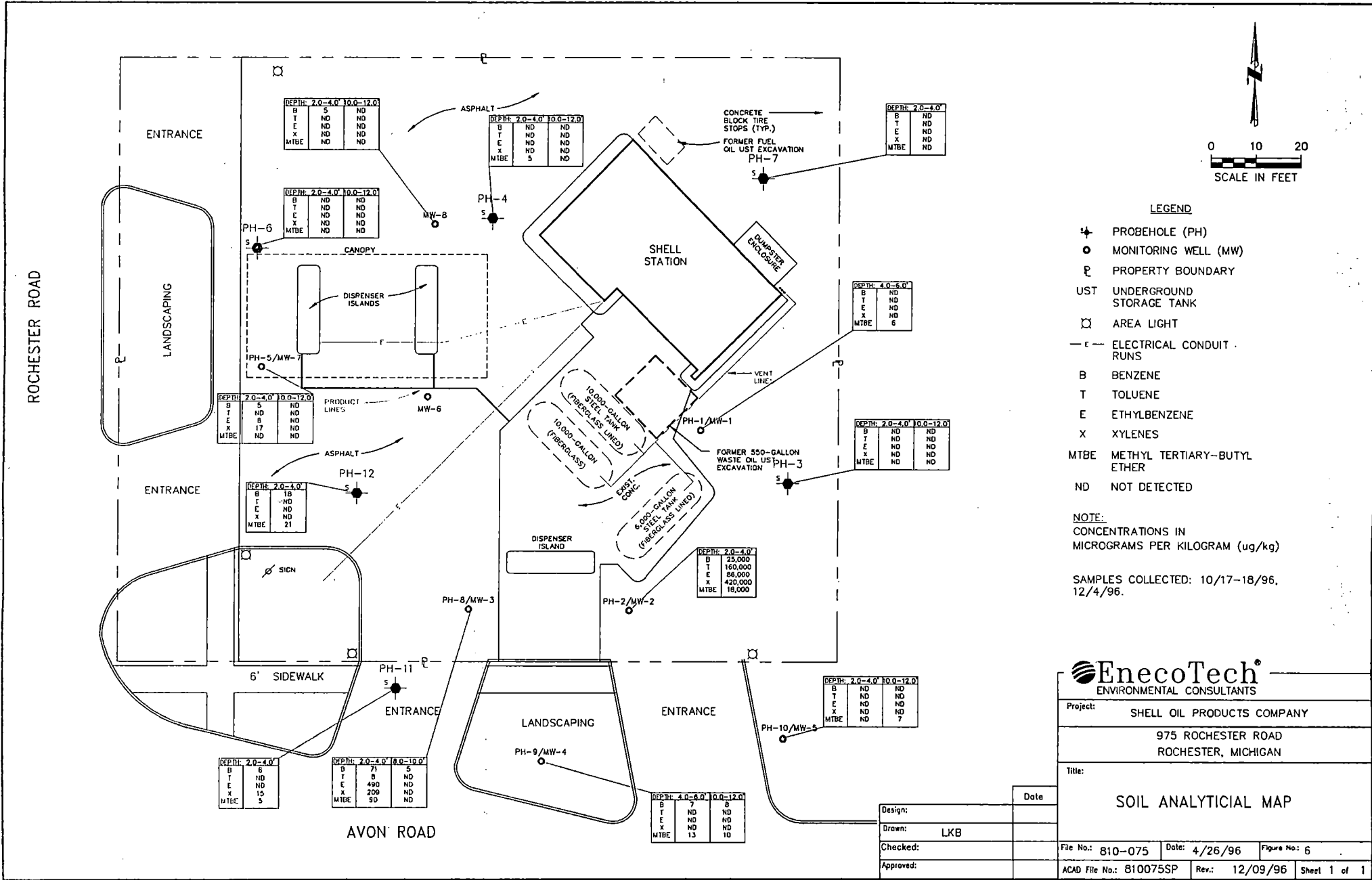
AVON ROAD

**EnecoTech**  
ENVIRONMENTAL CONSULTANTS

Project: SHELL OIL PRODUCTS COMPANY  
975 ROCHESTER ROAD  
ROCHESTER, MICHIGAN

Title: **SITE MAP**

Design:	DDB	Date	4/96
Drawn:	LKB	Date	4/96
Checked:		File No.:	810-075
Approved:		Date:	4/26/96
		Figure No.:	
		ACAD File No.:	810075SP
		Rev:	02/97
		Sheet:	



- LEGEND**
- ⊕ PROBEHOLE (PH)
  - MONITORING WELL (MW)
  - ⊔ PROPERTY BOUNDARY
  - UST UNDERGROUND STORAGE TANK
  - ⊠ AREA LIGHT
  - ELECTRICAL CONDUIT RUNS
  - B BENZENE
  - T TOLUENE
  - E ETHYLBENZENE
  - X XYLENES
  - MTBE METHYL TERTIARY-BUTYL ETHER
  - ND NOT DETECTED

**NOTE:**  
CONCENTRATIONS IN MICROGRAMS PER KILOGRAM (ug/kg)  
SAMPLES COLLECTED: 10/17-18/96, 12/4/96.

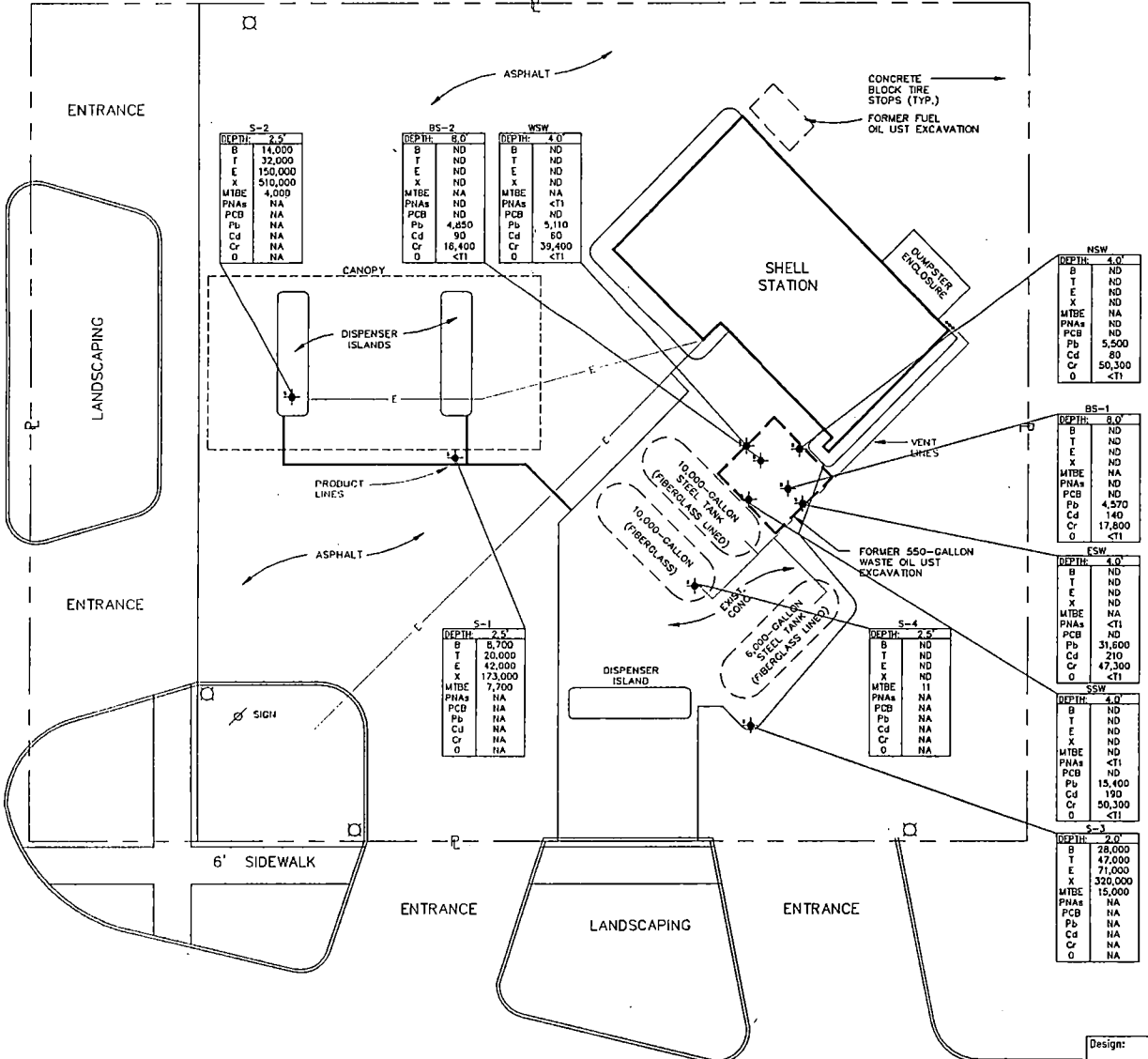
<b>EnecoTech</b> ENVIRONMENTAL CONSULTANTS			
Project: SHELL OIL PRODUCTS COMPANY			
975 ROCHESTER ROAD ROCHESTER, MICHIGAN			
Title: SOIL ANALYTICAL MAP			
Design:		Date:	
Drawn:	LKB		
Checked:		File No.:	810-075
Approved:		Date:	4/26/96
		Figure No.:	6
		ACAD File No.:	810075SP
		Rev.:	12/09/96
		Sheet	1 of 1

ROCHESTER ROAD



LEGEND

- ★ SAMPLE LOCATION
- ⊔ PROPERTY BOUNDARY
- UST UNDERGROUND STORAGE TANK
- ⊠ AREA LIGHT
- e- ELECTRICAL CONDUIT RUNS
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X XYLENES
- MTBE METHYL TERTIARY BUTYL ETHER
- PNA<sub>s</sub> POLYNUCLEAR AROMATIC HYDROCARBONS
- PCB POLYCHLORINATED BIPHENYLS
- Pb LEAD
- Cd CADMIUM
- Cr CHROMIUM
- O ORGANIC SOLVENTS
- ND NOT DETECTED
- NA NOT ANALYZED
- <T1 BELOW TIER 1 RESIDENTIAL CRITERIA



S-2

DEPTH	2.5'
B	14,000
T	32,000
E	150,000
X	510,000
MTBE	4,000
PNA <sub>s</sub>	NA
PCB	NA
Pb	NA
Cd	NA
Cr	NA
O	NA

BS-2

DEPTH	8.0'
B	ND
T	ND
E	ND
X	ND
MTBE	NA
PNA <sub>s</sub>	ND
PCB	ND
Pb	4,650
Cd	90
Cr	16,400
O	<T1

WSW

DEPTH	4.0'
B	ND
T	ND
E	ND
X	ND
MTBE	NA
PNA <sub>s</sub>	<T1
PCB	ND
Pb	5,110
Cd	60
Cr	39,400
O	<T1

NSW

DEPTH	8.0'
B	ND
T	ND
E	ND
X	ND
MTBE	NA
PNA <sub>s</sub>	ND
PCB	ND
Pb	5,500
Cd	80
Cr	50,300
O	<T1

BS-1

DEPTH	8.0'
B	ND
T	ND
E	ND
X	ND
MTBE	NA
PNA <sub>s</sub>	ND
PCB	ND
Pb	4,570
Cd	140
Cr	17,800
O	<T1

ESW

DEPTH	4.0'
B	ND
T	ND
E	ND
X	ND
MTBE	NA
PNA <sub>s</sub>	<T1
PCB	ND
Pb	31,600
Cd	210
Cr	47,300
O	<T1

SSW

DEPTH	4.0'
B	ND
T	ND
E	ND
X	ND
MTBE	ND
PNA <sub>s</sub>	<T1
PCB	ND
Pb	15,400
Cd	190
Cr	50,300
O	<T1

S-1

DEPTH	2.5'
B	6,700
T	20,000
E	42,000
X	173,000
MTBE	7,700
PNA <sub>s</sub>	NA
PCB	NA
Pb	NA
Cd	NA
Cr	NA
O	NA

S-4

DEPTH	2.5'
B	ND
T	ND
E	ND
X	ND
MTBE	11
PNA <sub>s</sub>	NA
PCB	NA
Pb	NA
Cd	NA
Cr	NA
O	NA

S-3

DEPTH	4.0'
B	ND
T	ND
E	ND
X	ND
MTBE	ND
PNA <sub>s</sub>	<T1
PCB	ND
Pb	15,400
Cd	190
Cr	50,300
O	<T1

S-5

DEPTH	2.0'
B	28,000
T	47,000
E	71,000
X	320,000
MTBE	15,000
PNA <sub>s</sub>	NA
PCB	NA
Pb	NA
Cd	NA
Cr	NA
O	NA

NOTE:  
CONCENTRATIONS IN  
MICROGRAMS PER KILOGRAM (ug/kg)

AVON ROAD

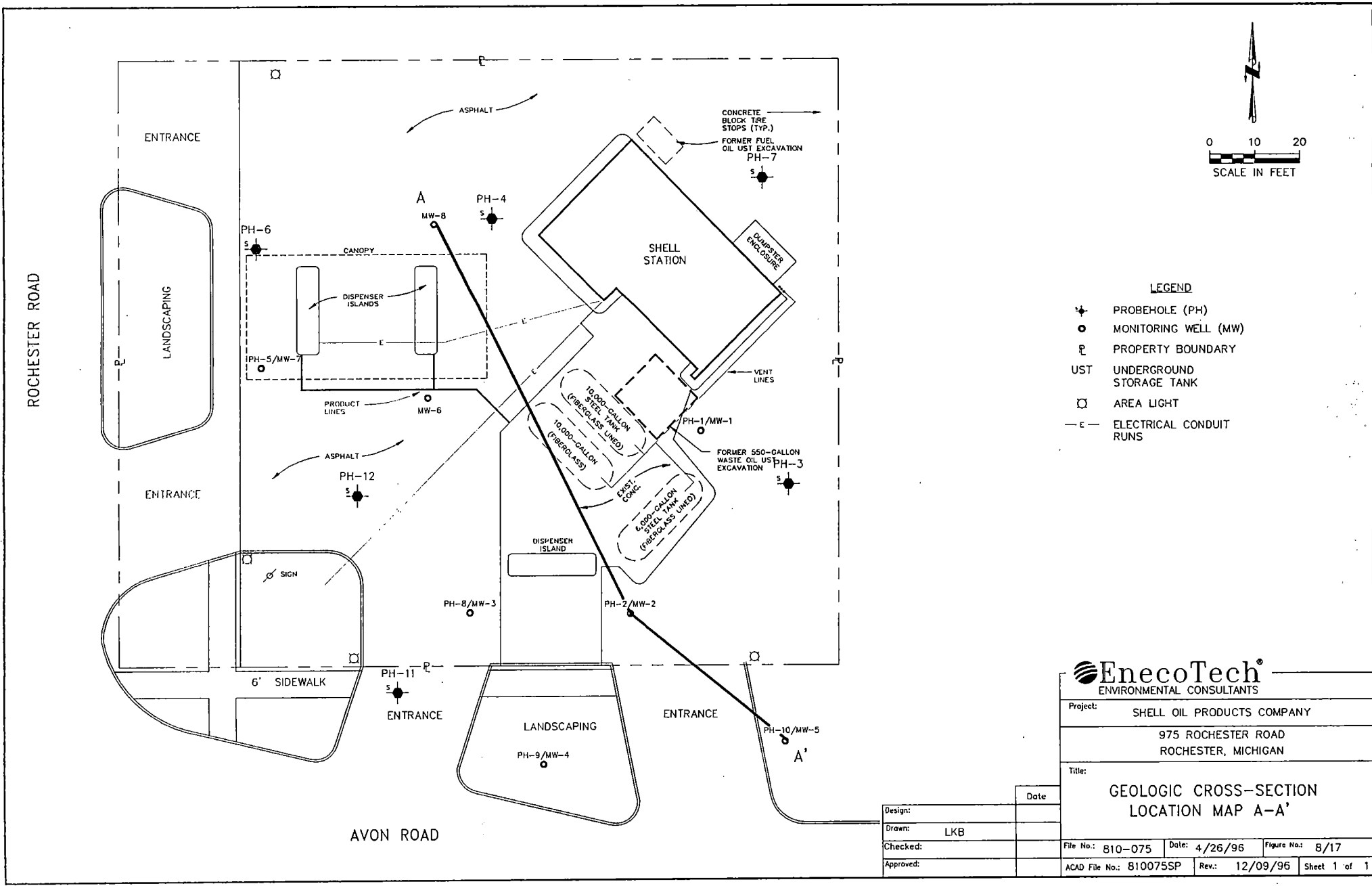
**EnecoTech**  
ENVIRONMENTAL CONSULTANTS

Project: SHELL OIL PRODUCTS COMPANY

975 ROCHESTER ROAD  
ROCHESTER, MICHIGAN

Title: SOIL ANALYTICAL MAP  
(UST REMOVAL/LINE UPGRADE)

Design:	Date:
Drawn: LKB	
Checked:	File No.: 810-075 Date: 4/26/96 Figure No.: 6/7
Approved:	ACAD File No.: 810075SP Rev.: 12/09/96 Sheet 1 of 1





## LEAKING UNDERGROUND STORAGE TANK SUPPLEMENTAL REPORT COVER SHEET

*Authorized by the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), Part 213.*

**INSTRUCTIONS:** Complete this form with all applicable information. Attach this form to all supplemental LUST submittals; this includes all reports other than the Initial Assessment, Final Assessment, and Closure Reports. The Certified Underground Storage Tank Professional (CP) **MUST** sign below.

**IDENTIFY TYPE OF SUPPLEMENTAL REPORT:**

FACILITY NAME: Shell Service Station		FACILITY ID NUMBER: 0-009055	
STREET ADDRESS: 975 Rochester Road		MERA SITE ID NUMBER:	
CITY: Rochester	STATE: MI	ZIP CODE: 48037	COUNTY: Oakland
DATE(S) RELEASE(S) DISCOVERED: 4/08/96 (Waste Oil)		CONFIRMED RELEASE NUMBER(S):	
4/24/96 (Gasoline)		C-214-96 (Waste Oil) C-252-96 (Gasoline)	
O/O NAME: Shell Oil Products Company		MUSTFA CLAIM NUMBER: NA	
O/O STREET ADDRESS: 17370 Laurel Park Drive N., Suite 200, Livonia		STATE: MI ZIP CODE: 48152	
CONTACT PERSON: Ms. Angela Porter		PHONE NUMBER: (313) 953-4300	

**ANSWER ALL QUESTIONS**

1. Type(s) of product released: Waste Oil (4/08/96); Gasoline (4/24/96)

2. Free product present: a. Currently?  YES  NO If YES, total gallons recovered since last report:  
 b. Previously?  YES  NO If YES, total gallons recovered to date:

3. Have vapors been identified in any confined spaces (basement, sewers)?  YES  NO

4. Estimated depth to groundwater: ~ 3.0 feet Estimated groundwater flow direction: south

5. Estimated distance and direction from point of release to nearest:  
 a. Private well: 150 feet south b. Municipal well: <0.5 mile c. Surface water/wetland: >0.5 mile

6. Since last report: a. cubic yards of soil remediated: 0 b. gallons of groundwater remediated: 0

7. Totals to date: a. cubic yards of soil remediated: 40 b. gallons of groundwater remediated: 0

8. Michigan RBCA Site Classification (1-4): 4

**CERTIFICATION OF REPORT COMPLETION**

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate, and complete. I certify that it was submitted to the USTD on July 28, 1997

(date submitted-Required)

Andrew J. Foery 7-28-97  
 CP Original Signature - Required Date

Darryl D. Barricklow  
 PRINT QC Project Manager's Name  
EnecoTech Midwest, Inc.  
 NAME OF CONSULTING FIRM  
**JUL 31 1997**  
 UNDERGROUND STORAGE TANK DIV  
 (248) 489-0809 (248) 489-4184  
 PHONE NO. FAX NO.

Andrew J. Foery, P.G.  
 PRINT CP's Name  
39255 Country Club Drive, Suite B-40, Farmington Hills, Michigan 48331  
 ADDRESS

Please return this completed report cover sheet and associated attachments to the appropriate USTD District Office listed on the back of this page.



## UNDERGROUND STORAGE TANK DIVISION OFFICES AND LOCATIONS

Determine in which county the UST release occurred. Return all completed forms and associated reports to the USTD office listed next to that county in the following table. Addresses for the USTD offices are listed below.

COUNTY	USTD OFFICE	COUNTY	USTD OFFICE	COUNTY	USTD OFFICE	COUNTY	USTD OFFICE
Alcona	Grayling	Dickinson	Marquette	Lake	Grayling	Oceana	Grand Rapids
Alger	Marquette	Eaton	Shiawassee	Lapeer	Shiawassee	Ogemaw	Grayling
Allegan	Plainwell	Emmet	Grayling	Leelanau	Grayling	Ontonagon	Marquette
Alpena	Grayling	Genesee	Shiawassee	Lenawee	Jackson	Osceola	Grayling
Antrim	Grayling	Gladwin	Grayling	Livingston	Shiawassee	Oscoda	Grayling
Arenac	Grayling	Gogebic	Marquette	Luce	Marquette	Otsego	Grayling
Baraga	Marquette	Grand Traverse	Grayling	Mackinac	Marquette	Ottawa	Grand Rapids
Barry	Plainwell	Gratiot	Shiawassee	Macomb	SE Michigan	Presque Isle	Grayling
Bay	Saginaw-Bay	Hillsdale	Jackson	Manistee	Grayling	Roscommon	Grayling
Benzie	Grayling	Houghton	Marquette	Marquette	Marquette	Saginaw	Saginaw-Bay
Berrien	Plainwell	Huron	Saginaw-Bay	Mason	Grayling	Sanilac	Saginaw-Bay
Branch	Jackson	Ingham	Shiawassee	Mecosta	Grand Rapids	Schoolcraft	Marquette
Calhoun	Jackson	Ionia	Grand Rapids	Menominee	Marquette	Shiawassee	Shiawassee
Cass	Plainwell	Iosco	Grayling	Midland	Saginaw-Bay	St Clair	SE Michigan
Charlevoix	Grayling	Iron	Marquette	Missaukee	Grayling	St Joseph	Plainwell
Cheboygan	Grayling	Isabella	Saginaw-Bay	Monroe	SE Michigan	Tuscola	Saginaw-Bay
Chippewa	Marquette	Jackson	Jackson	Montcalm	Grand Rapids	Van Buren	Plainwell
Clare	Grayling	Kalamazoo	Plainwell	Montmorency	Grayling	Washtenaw	Jackson
Clinton	Shiawassee	Kalkaska	Grayling	Muskegon	Grand Rapids	Wayne	SE Michigan
Crawford	Grayling	Kent	Grand Rapids	Newaygo	Grand Rapids	Wexford	Grayling
Delta	Marquette	Keweenaw	Marquette	Oakland	SE Michigan		

<b><u>CADILLAC OFFICE</u></b> ROUTE #1 8015 MACKINAW TRAIL CADILLAC MI 49601  616-775-9727 (PHONE) 616-775-9671 (FAX)	<b><u>JACKSON OFFICE</u></b> 301 E LOUIS GLICK HIGHWAY JACKSON MI 49201  517-780-7900 (PHONE) 517-780-7855 (FAX)	<b><u>SAGINAW BAY OFFICE</u></b> 503 N EUCLID AVE SUITE 9 BAY CITY MI 48706  517-684-9141 (PHONE) 517-684-9799 (FAX)
<b><u>GAYLORD OFFICE</u></b> P0 BOX 667 GAYLORD MI 49735  517-732-3541 (PHONE) 517-732-0794 (FAX)	<b><u>MARQUETTE OFFICE</u></b> 1990 US 41 SOUTH MARQUETTE MI 49855  906-228-6561 (PHONE) 906-228-5245 (FAX)	<b><u>SHIAWASSEE OFFICE</u></b> 10650 BENNETT DR MORRICE MI 48857-9792  517-625-4600 (PHONE) 517-625-5000 (FAX)
<b><u>GRAND RAPIDS OFFICE</u></b> 350 OTTAWA ST NW GRAND RAPIDS MI 49503  616-456-5071 (PHONE) 616-456-1239 (FAX)	<b><u>PLAINWELL OFFICE</u></b> 1342 SR-89 SUITE B PLAINWELL MI 49080-1915  616-692-2120 (PHONE) 616-692-3050 (FAX)	<b><u>SE MICHIGAN OFFICE</u></b> 38980 SEVEN MILE RD LIVONIA MI 48152  313-953-0241 (PHONE) 313-432-1295 (FAX)
<b><u>GRAYLING OFFICE</u></b> 1955 NORTH I-75 BL GRAYLING MI 49738  517-348-6371 (PHONE) 517-348-8825 (FAX)		

EnecoTech Midwest Inc.  
39255 Country Club Drive • Suite B40  
Farmington Hills, Michigan 48331  
(810) 489-0809 • Fax (810) 489-4184



July 28, 1997

Mr. Paul Owens  
Michigan Department of Environmental Quality  
Underground Storage Tank Division  
38980 Seven Mile Road  
Livonia, Michigan 48152

0400810075

**CERTIFIED MAIL: July 28, 1997 (P 432 168 296)**

**SUBJECT: Shell Service Station**  
975 Rochester Road  
Rochester, Michigan  
WIC#: 221-8070-0704

Dear Mr. Owens:

As proposed in the Final Assessment Report dated April 8, 1997, EnecoTech Midwest, Inc. (EnecoTech), on behalf of Shell Oil Products Company (Shell) has prepared the following Monitoring Summary Report for the Michigan Department of Environmental Quality (MDEQ), Underground Storage Tank Division (USTD) for the groundwater monitoring event conducted at the subject site on June 4, 1997.

**Scope-of-Work**

Activities conducted during the monitoring event included:

- Gauging of groundwater in select monitoring wells for evaluation of groundwater flow direction;
- Purging of select monitoring wells for the collection of groundwater samples;
- Collection and submittal, under chain-of-custody documentation, of groundwater samples for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) using modified USEPA Method 8020A; and
- Screening of utility corridors adjacent to the site by utilizing a photoionization detector to monitor potential organic vapors in utility manways and catch basins.

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Mr. Paul Owens  
Michigan Department of Environmental Quality  
July 28, 1997  
Page 2

**Summary**

Results of the groundwater gauging activity and subsequent evaluation indicate that the groundwater flow at the subject site is generally toward the southeast. A Groundwater Elevation Map is presented in Attachment A, with the Historical Groundwater Elevation Data in presented in Table 1.

Analytical results, depicted on Attachment B, Groundwater Analytical Map, indicate that petroleum hydrocarbon impacts to groundwater are below the Risk Based Corrective Action, Tier I, Groundwater Direct Contact Criteria in all monitoring wells. Laboratory analytical results for groundwater samples collected from monitoring wells MW-2, 3, 6, and 7 indicate a decline in BTEX/MTBE concentrations. Laboratory analytical results for monitoring wells MW-4 and 5 indicate slight increases in BTEX/MTBE concentrations from the December 1996 monitoring event. The general decline in BTEX/MTBE concentrations appears to demonstrate that natural attenuation is occurring at the site.


Results of the organic vapor screening activities, presented in Attachment C, Organic Vapor Screening Results, indicate that potential organic vapors from petroleum hydrocarbon impacts are not measureable in the adjacent utility corridors.

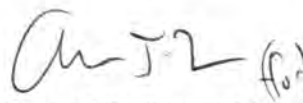
The next scheduled monitoring activity, as specified in the FAR dated April 8, 1997, will be conducted during September 1997. The next scheduled monitoring summary report will be submitted in October 1997.

Should you have any questions, please call our office at (248) 489-0809.

Sincerely,

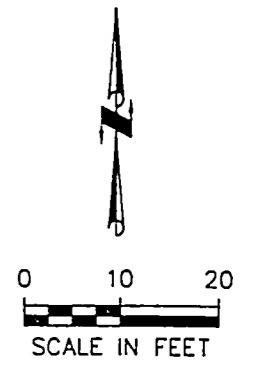
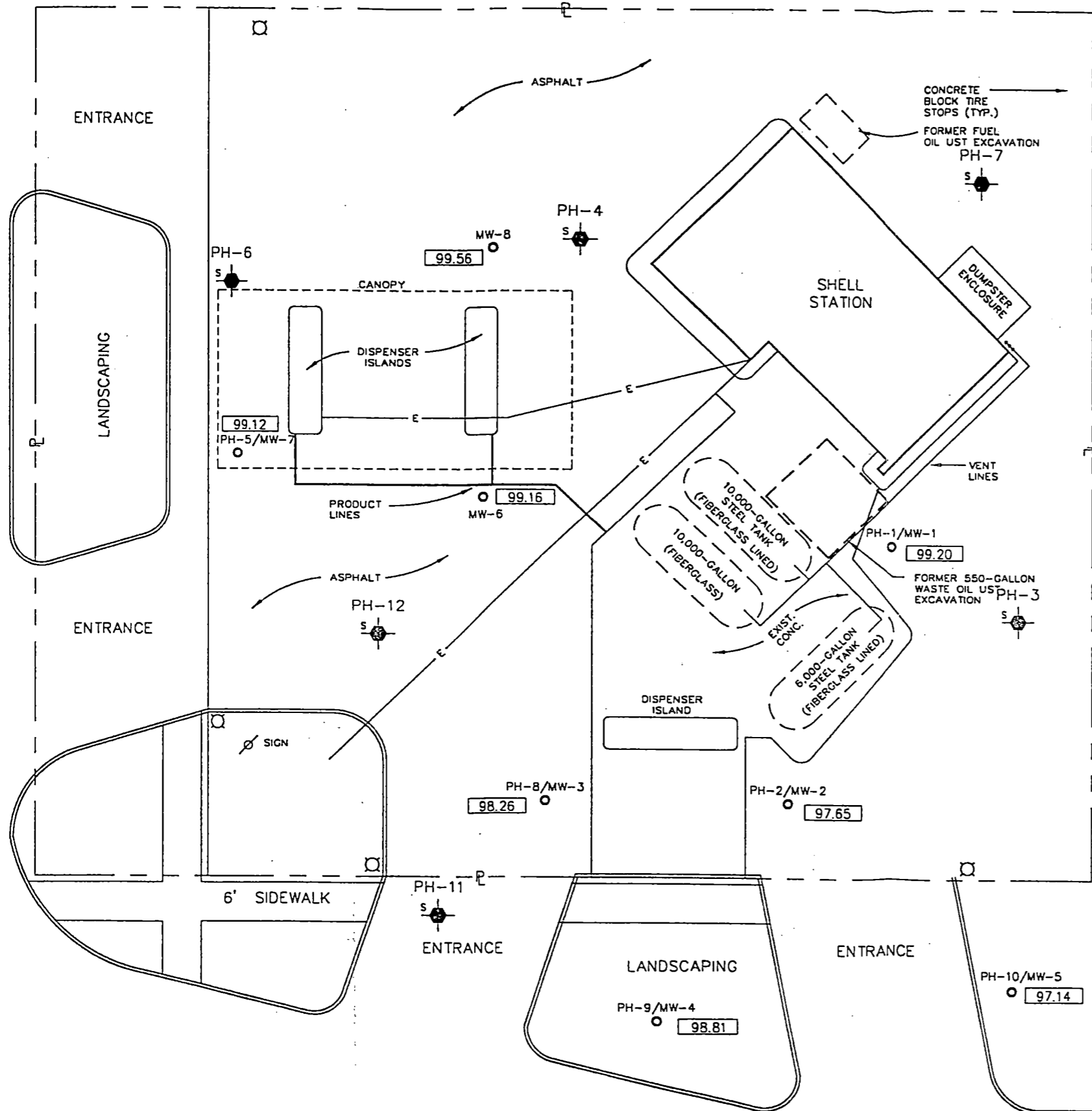
**ENECOTECH MIDWEST, INC.**

  
Brian Palys  
Senior Staff Geologist

  
Darryl D. Barricklow  
Project Scientist

**ATTACHMENT A**  
**Groundwater Elevation Map**  
**and**  
**Groundwater Elevation Data**

ROCHESTER ROAD



- LEGEND**
- ⊕ PROBEHOLE (PH)
  - MONITORING WELL (MW)
  - ⊔ PROPERTY BOUNDARY
  - UST UNDERGROUND STORAGE TANK
  - AREA LIGHT
  - E — ELECTRICAL CONDUIT RUNS
  - XX.XX GROUNDWATER ELEVATION 6/4/97
- \*NOTE: GROUNDWATER FLOW DIRECTION BASED UPON GROUNDWATER ELEVATION DATA IN ON-SITE MONITORING WELLS.



<b>EnecoTech</b> ENVIRONMENTAL CONSULTANTS			
Project: SHELL OIL PRODUCTS COMPANY			
975 ROCHESTER ROAD ROCHESTER, MICHIGAN			
Title: <b>GROUNDWATER ELEVATION MAP</b>			
Design:		Date:	
Drawn: MRP			
Checked:		File No.: 810-075	Date: 4/26/96
Approved:		ACAD File No.: 810075SP	Rev.: 4/1/97
			Figure No.:
			Sheet 1 of 1

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**

**SHELL SERVICE STATION**  
**975 ROCHESTER ROAD**  
**ROCHESTER, MICHIGAN**  
**PROJECT NO. 0400810075**

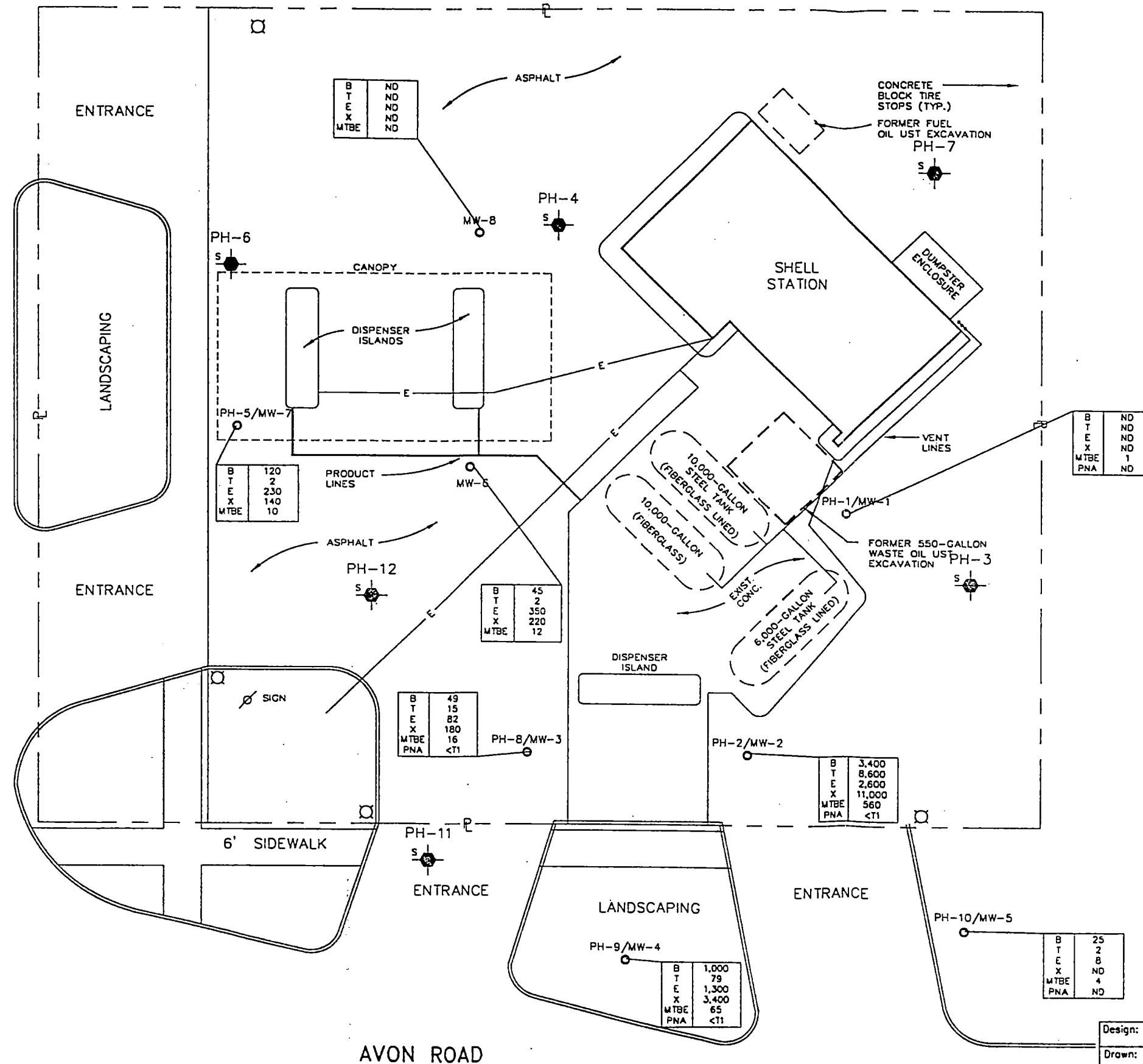
Units = feet

LOCATION	TOC ELEVATION	GAUGING DATE			
		12/9/96		6/4/97	
		DTW	ELEV.	DTW	ELEV.
MW-1	101.40	2.98	98.42	2.20	99.20
MW-2	100.14	2.67	97.47	2.49	97.65
MW-3	100.02	2.48	97.54	1.76	98.26
MW-4	100.44	3.47	96.97	1.63	98.81
MW-5	98.70	2.16	96.54	1.56	97.14
MW-6	101.56	3.18	98.38	2.40	99.16
MW-7	102.00	3.63	98.37	2.88	99.12
MW-8	102.16	2.87	99.29	2.60	99.56

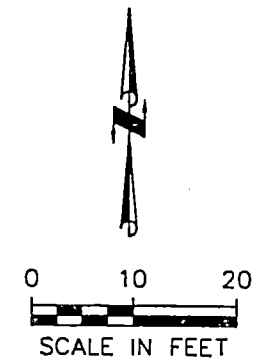
MW = Monitoring Well  
DTW = Depth To Water  
TOC = Top Of Casing

**ATTACHMENT B**  
**Groundwater Analytical Map**  
**and**  
**Historical Groundwater Data**

ROCHESTER ROAD



AVON ROAD



- LEGEND**
- ⊕ PROBEHOLE (PH)
  - MONITORING WELL (MW)
  - ⊔ PROPERTY BOUNDARY
  - UST UNDERGROUND STORAGE TANK
  - ⊠ AREA LIGHT
  - E- ELECTRICAL CONDUIT RUNS
  - B BENZENE
  - T TOLUENE
  - E ETHYLBENZENE
  - X XYLENES
  - MTBE METHYL TERTIARY-BUTYL ETHER
  - PNA POLYNUCLEAR AROMATIC HYDROCARBONS
  - <T1 LESS THAN TIER 1 (DC)
  - NS NOT SAMPLED
  - ND NOT DETECTED

**NOTE:**  
CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L)  
SAMPLES COLLECTED 6/4/97.

<b>EnecoTech</b> ENVIRONMENTAL CONSULTANTS	
Project:	SHELL OIL PRODUCTS COMPANY
975 ROCHESTER ROAD ROCHESTER, MICHIGAN	
Title:	<b>GROUNDWATER ANALYTICAL MAP</b>
Design:	Date
Drawn: LKB	
Checked:	
Approved:	
File No.: 810-075	Date: 4/26/96
ACAD File No.: 810075SP	Rev.: 12/09/96
Figure No.:	Sheet 1 of 1



**HISTORICAL GROUNDWATER DATA**  
**LABORATORY RESULTS - GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

GROUNDWATER SAMPLING EVENT 10/17/96

<b>VOLATILES</b>										
Sample ID	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-5 (W)	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/22/96		10/26/96		10/22/96		10/22/96		10/28/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	5,700	100	ND	1	ND	1	130	1
<input checked="" type="checkbox"/> Toluene	ND	1	17,000	100	ND	1	ND	1	2	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	3,200	100	ND	1	ND	1	140	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	16,000	100	ND	1	ND	1	69	1
<input checked="" type="checkbox"/> MTBE	ND	1	130	100	ND	1	ND	1	26	1
<b>VOLATILES</b>										
Sample ID	PH-6 (W)		PH-7 (W)		PH-11 (W)					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected	10/18/96		10/18/96		10/17/96					
Date Extracted										
Date Analyzed	10/29/96		10/22/96		10/29/96					
Analytical Method No.	8020A		8020A		8020A					
Collection Method*	GP		GP		GP					
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	ND	1	ND	1				
<input checked="" type="checkbox"/> Toluene	ND	1	ND	1	1	1				
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	ND	1	ND	1				
<input checked="" type="checkbox"/> Total Xylenes	ND	1	ND	1	ND	1				
<input checked="" type="checkbox"/> MTBE	ND	1	ND	1	10	1				

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BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**HISTORICAL GROUNDWATER**  
**LABORATORY RESULTS - GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

**GROUNDWATER SAMPLING EVENT 10/17/96**

<b>METALS</b>										
Sample ID	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-7 (W)	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/29-30/96		10/29-30/96		10/29-30/96		10/29-30/96		10/29-30/96	
Analytical Method No.	7131/7191/7421		7131/7191/7421		7131/7191/7421		7131/7191/7421		7131/7191/7421	
Collection Method*	GP		GP		GP		GP		GP	
<b>CONSTITUENT (ug/l)</b>	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Cadmium	ND	0.2	ND	0.2	ND	0.2	ND	0.2	ND	0.2
<input type="checkbox"/> Chromium III										
<input checked="" type="checkbox"/> Chromium VI	ND	1	ND	1	ND	1	ND	1	ND	1
<input checked="" type="checkbox"/> Total Lead	ND	1	19	1	ND	1	ND	1	ND	1
<b>METALS</b>										
Sample ID										
Sample Depth (feet BGS)										
Date Collected										
Date Extracted										
Date Analyzed										
Analytical Method No.										
Collection Method*										
<b>CONSTITUENT (ug/kg)</b>	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input type="checkbox"/> Cadmium										
<input type="checkbox"/> Chromium III										
<input type="checkbox"/> Chromium VI										
<input type="checkbox"/> Total Lead										

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**HISTORICAL GROUNDWATER DATA**  
**LABORATORY RESULTS-GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

GROUNDWATER SAMPLING EVENT 10/17/96

<b>POLYNUCLEAR AROMATICS</b>										
Sample ID	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-7 (W)	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/29/96		10/30/96		11/1/96		10/30/96		11/4/96	
Analytical Method No.	8310		8310		8310		8310		8310	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Acenaphthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Acenaphthylene	ND	5	12,000	500	ND	5	ND	5	200	100
<input checked="" type="checkbox"/> Anthracene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Chrysene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Fluoranthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Fluorene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Naphthalene	ND	5	16,000	500	ND	5	ND	5	710	100
<input checked="" type="checkbox"/> Phenanthrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Pyrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ND	5	27,000	500	ND	5	ND	5	420	100

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**HISTORICAL GROUNDWATER DATA**  
**LABORATORY RESULTS - GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

GROUNDWATER SAMPLING EVENT 10/17/96

HALOGENATED HYDROCARBONS										
Sample ID	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-7 (W)	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/26/96		10/26/96		10/26/96		10/26/96		10/27/96	
Analytical Method No.	8010		8010		8010		8010		8010	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Dichlorodifluoromethane	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> Chloromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Vinyl Chloride	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> Bromomethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Chloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Trichlorofluoromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1-Dichloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Methylene Chloride	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> trans-1,2-Dichloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1-Dichloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Chloroform	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1,1-Trichloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Carbon Tetrachloride	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> 1,2-Dichloroethane	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> 2-chloroethylvinyl ether	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Trichloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,2-Dichloropropane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Bromodichloromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> cis-1,3-Dichloropropene	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> trans-1,3-Dichloropropene	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> 1,1,2-Trichloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Tetrachloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Dibromochloromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Chlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Bromoform	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1,2,2-Tetrachloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,3-Dichlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,4-Dichlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,2-Dichlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**HISTORICAL GROUNDWATER DATA**  
**LABORATORY RESULTS - GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

GROUNDWATER SAMPLING EVENT 12/9/96

<b>VOLATILES</b>										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		2.5-7.5		2.5-7.5	
Date Collected	12/9/96		12/9/96		12/9/96		12/9/96		12/9/96	
Date Extracted										
Date Analyzed	12/19/96		12/19/96		12/19/96		12/19/96		12/18/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	4,600	50	110	5	390	5	22	1
<input checked="" type="checkbox"/> Toluene	ND	1	12,000	50	45	5	12	5	ND	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	2,900	50	200	5	18	5	1	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	15,000	50	570	5	17	5	2	1
<input checked="" type="checkbox"/> MTBE	ND	1	230	50	8	5	18	5	8	1
<b>VOLATILES</b>										
Sample ID	MW-6		MW-7		MW-8					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected	12/9/96		12/9/96		12/9/96					
Date Extracted										
Date Analyzed	12/19/96		12/19/96		12/18/96					
Analytical Method No.	8020A		8020A		8020A					
Collection Method*	BL		BL		BL					
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	68	5	170	1	ND	1				
<input checked="" type="checkbox"/> Toluene	ND	5	7	1	ND	1				
<input checked="" type="checkbox"/> Ethylbenzene	970	5	260	1	ND	1				
<input checked="" type="checkbox"/> Total Xylenes	1,300	5	230	1	ND	1				
<input checked="" type="checkbox"/> MTBE	9	5	14	1	ND	1				

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**HISTORICAL GROUNDWATER DATA**  
**LABORATORY RESULTS - GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

**GROUNDWATER SAMPLING EVENT 6/4/97**

<b>VOLATILES</b>										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		2.5-7.5		2.5-7.5	
Date Collected	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Date Extracted										
Date Analyzed	6/24/97		6/24/97		6/24/97		6/24/97		6/24/97	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	BL		BL		BL		BL		BL	
<b>CONSTITUENT (ug/L)</b>	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	3,400	20	49	1	100	10	25	1
<input checked="" type="checkbox"/> Toluene	ND	1	8,600	20	15	1	79	10	2	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	2,600	20	82	1	1,300	10	8	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	11,000	20	180	1	3,400	10	ND	1
<input checked="" type="checkbox"/> MTBE	1	1	560	20	16	1	65	10	4	1
<b>VOLATILES</b>										
Sample ID	MW-6		MW-7		MW-8					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected	6/4/97		6/4/97		6/4/97					
Date Extracted										
Date Analyzed	6/24/97		6/24/97		6/24/97					
Analytical Method No.	8020A		8021400A		8020A					
Collection Method*	BL		230BL		BL					
<b>CONSTITUENT (ug/L)</b>	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	45	1	120	1	ND	1				
<input checked="" type="checkbox"/> Toluene	2	1	2	1	ND	1				
<input checked="" type="checkbox"/> Ethylbenzene	350	1	230	1	ND	1				
<input checked="" type="checkbox"/> Total Xylenes	220	1	140	1	ND	1				
<input checked="" type="checkbox"/> MTBE	12	1	10	1	ND	1				

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**HISTORICAL GROUNDWATER DATA**  
**LABORATORY RESULTS-GROUNDWATER**  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

GROUNDWATER SAMPLING EVENT 6/4/97

<b>POLYNUCLEAR AROMATICS</b>										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Date Extracted	6/9/97		6/9/97		6/9/97		6/9/97		6/9/97	
Date Analyzed	6/10/97		6/11/97		6/10/97		6/11/97		6/10/97	
Analytical Method No.	8310		8310		8310		8310		8310	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/L)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Acenaphthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Acenaphthylene	ND	5	440	100	14	5	74	5	ND	5
<input checked="" type="checkbox"/> Anthracene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Chrysene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Fluoranthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Fluorene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Naphthalene	ND	5	2,100	100	37	5	16	5	ND	5
<input checked="" type="checkbox"/> Phenanthrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Pyrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ND	5	890	100	17	5	94	5	ND	5

BGS = Below Ground Surface

\* Collection Method Codes (*List all that apply*): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If Other (OT), specify here: \_\_\_\_\_

MDL = Method Detection Limit

**ATTACHMENT C**  
**Organic Vapor Screening Results**



**TABLE 2  
ORGANIC VAPOR SCREENING RESULTS**

**SHELL SERVICE STATION  
975 ROCHESTER ROAD  
ROCHESTER, MICHIGAN  
PROJECT NO. 0400810075**

<b>LOCATION</b>	<b>DATE</b>	<b>PID RESULT (PPM)</b>
SE Catch Basin - Avon Road	4/15/96	ND
	6/4/97	ND
SW Catch Basin - Rochester Road	4/15/96	ND
	6/4/97	ND
NE Catch Basin - Rochester Road	4/15/96	ND
	6/4/97	ND
Catch Basin - Property North of Site	4/15/96	ND
	6/4/97	ND

PPM = Parts per million  
ND = Not Detected

**LEAKING UNDERGROUND STORAGE TANK  
SUPPLEMENTAL REPORT COVER SHEET***Authorized by the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), Part 213.***INSTRUCTIONS:** Complete this form with all applicable information. Attach this form to all supplemental LUST submittals; this includes all reports other than the Initial Assessment, Final Assessment, and Closure Reports. The Certified Underground Storage Tank Professional (CP) **MUST** sign below.**IDENTIFY TYPE OF SUPPLEMENTAL REPORT: Monitoring Summary Report**

FACILITY NAME: Shell Oil Station

FACILITY ID NUMBER:  
0-009055

STREET ADDRESS: 975 Rochester Road

MERA SITE ID NUMBER:

CITY: Rochester

STATE: Michigan

ZIP CODE: 48306

COUNTY: Oakland

DATE(S) RELEASE(S) DISCOVERED: 4/8/96 (waste oil)  
4/24/96 (gasoline)CONFIRMED RELEASE NUMBER(S):  
C-214-96 (waste oil) C-252-96 (gasoline)

O/O NAME:

Shell Oil Products Company

MUSTFA CLAIM NUMBER:

O/O STREET ADDRESS:

CITY:

STATE:

ZIP CODE:

17370 Laurel Park Drive N., Suite 200, Livonia, MI 48152

CONTACT PERSON: Mr. Jamie Keuper

PHONE NUMBER:  
(630) 572-5885**ANSWER ALL QUESTIONS**

1. Type(s) of product released: Used motor oil and gasoline

2. Free product present: a. Currently?  YES  NO If YES, total gallons recovered since last report:  
b. Previously?  YES  NO If YES, total gallons recovered to date:3. Have vapors been identified in any confined spaces (basement, sewers)?  YES  NO

4. Estimated depth to groundwater:

Estimated groundwater flow direction:

5. Estimated distance and direction from point of release to nearest:

a. Private well: Approximately 150'

b. Municipal well: &gt; 0.5 Mile

c. Surface water/wetland: &gt; 0.5 Mile

6. Since last report: a. cubic yards of soil remediated: 0

b. gallons of groundwater remediated: 0

7. Totals to date: a. cubic yards of soil remediated: 40

b. gallons of groundwater remediated: 0

8. Michigan RBCA Site Classification (1-4): 4**CERTIFICATION OF REPORT COMPLETION**I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate, and complete. I certify that it was submitted to the USTD on October 8, 1997.

(date submitted-Required)

Andrew J. Foerg  
CP Original Signature - Required10-8-97  
DateDarryl D. Barricklow

PRINT QC Project Manager's Name

Andrew J. Foerg, P.G.

PRINT CP's Name

EnecoTech Midwest, Inc.

NAME OF CONSULTING FIRM

39255 Country Club Drive, Suite B40, Farmington Hills, MI 48331  
ADDRESS(248) 489-0809  
PHONE NO.(248) 489-4184  
FAX NO.

R:\DOCS\SHELL\810-075\SUPCOV1.DOC

Please return this completed report cover sheet and associated attachments to the appropriate USTD District Office listed on the back of this page.

EnecoTech Midwest, Inc.  
39255 Country Club Drive • Suite B40  
Farmington Hills, Michigan 48331  
(248) 489-0809 • Fax (248) 489-4184



October 8, 1997

Mr. Paul Owens  
Michigan Department of Environmental Quality  
Underground Storage Tank Division  
38980 Seven Mile Road  
Livonia, Michigan 48152

0400810075

**CERTIFIED MAIL: October 8, 1997 (P 432 199 250)**

**SUBJECT: Shell Service Station**  
975 Rochester Road  
Rochester, Michigan  
WIC#: 221-8070-0704



Dear Mr. Owens:

As proposed in the Final Assessment Report dated April 8, 1997, EnecoTech Midwest, Inc. (EnecoTech), on behalf of Shell Oil Products Company (Shell) has prepared the following Monitoring Summary Report for the Michigan Department of Environmental Quality (MDEQ), Underground Storage Tank Division (USTD) for the groundwater monitoring event conducted at the subject site on August 31, 1997.

**Scope-of-Work**

Activities conducted have included:

- Gauging depth of groundwater in site monitoring wells;
- Purging of select site monitoring wells, and subsequent collection of groundwater samples;
- Submittal of groundwater samples, under chain-of-custody documentation, for laboratory analysis of benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) using modified USEPA Method 8020A, and polynuclear aromatic hydrocarbons (PNAs) using USEPA Method 8310;
- Screening of utility manways and catch basins adjacent to the site, utilizing a photoionization detector, for potential organic vapors in utility corridors; and
- Review of field data and laboratory results for evaluation of natural attenuation trends, and current status of remaining petroleum hydrocarbon impacts, relative to Michigan Department of Environmental Quality, Tier 1 Direct Contact, Risk Based Screening Level values.

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Mr. Paul Owens  
Michigan Department of Environmental Quality  
October 8, 1997  
Page 2

### **Summary**

Results of the groundwater gauging activity conducted on August 31, 1997 are depicted in Attachment A, Groundwater Flow Map, and indicate that the groundwater flow at the subject site is generally toward the south-southeast. Historical groundwater elevation data is presented in Table 1. Historically, groundwater elevation data has indicated flow direction to be southeasterly.

Laboratory analytical results for the August 31, 1997 groundwater monitoring event are depicted in Attachment B, Groundwater Analytical Map. Results indicate that petroleum hydrocarbon impacts to groundwater are currently below the Risk Based Screening Levels (RBSLs) for Tier I Direct Contact to Groundwater Criteria for the gasoline release indicator parameters BTEX and MTBE. Laboratory analytical results for groundwater samples collected from monitoring wells MW-1, 2, 4, 5, and 7 indicate a continuing decline in BTEX/MTBE concentrations. Additionally, results indicate impact concentration declines in all monitoring well locations since the initial groundwater sample event.

Laboratory analytical results for constituents of the waste oil indicator parameter PNA continue to be uncertain, but indicate potential for concentrations to be above RBSLs for Tier I Direct Contact to Groundwater Criteria in the vicinity of monitoring well MW-2. Accurate evaluation of PNA constituent concentrations has not been achieved due to sample background interference which requires the laboratory to utilize practical quantitation limits (PQLs) in excess of the approved method detection limits (MDLs).

Results of the organic vapor screening activities, presented in Attachment C, Organic Vapor Screening Results, indicate that organic vapors are not present in the adjacent utility corridors.

### **Conclusion**

The continued general decline in BTEX/MTBE groundwater concentrations indicates that natural attenuation is occurring at the site. Concentrations are currently below appropriate RBSL Direct Contact to Groundwater criteria. Soil impact concentrations were initially found to be below RBSL Direct Contact to Soil criteria in all source and perimeter sample locations, with the exception of xylene impacts in the shallow (2.5') soil sample designated S-2 (collected during equipment upgrade activities, directly beneath the western-most dispenser island), and in the PH-2/MW-2 (2'-4') soil sample.

Utility corridor screening activities have not detected the presence of vapors. Impact concentrations in the groundwater are currently below the RBSL for groundwater to indoor air vapor of 5,600 parts per billion (ppb) benzene which, per recent discussion with the ERD toxicologist Linda Larsen, is pending final approval. While some previously existing soil impact concentrations are above the pending 1,600 ppb benzene soil indoor air vapor

Mr. Paul Owens  
Michigan Department of Environmental Quality  
October 8, 1997  
Page 3


criteria, they are not believed to present a hazard at the active, paved gasoline retail facility. Further evaluation of the vapor pathway will be conducted upon final approval of the indoor air vapor criteria.

The next scheduled monitoring activity, as specified in the FAR dated April 8, 1997, will be conducted during December 1997. The next monitoring summary report will be submitted in January 1998.

Should you have any questions, please call our office at (248) 489-0809.

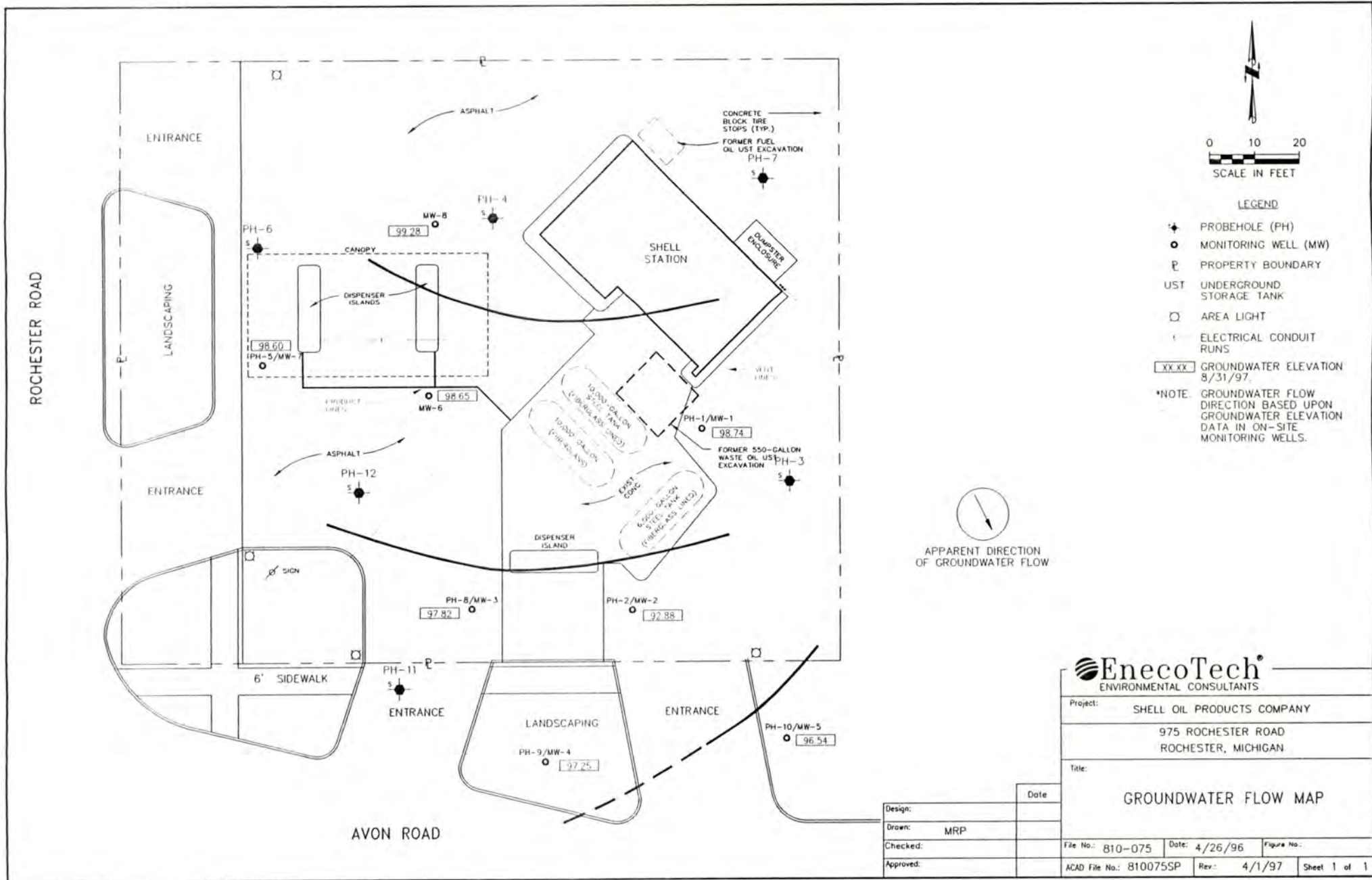
Sincerely,

**ENECOTECH MIDWEST, INC.**



Darryl D. Barricklow  
Project Scientist

**ATTACHMENT A**  
**Groundwater Elevation Map**  
**and**  
**Groundwater Elevation Data**



- LEGEND**
- ⊕ PROBEHOLE (PH)
  - MONITORING WELL (MW)
  - ⊔ PROPERTY BOUNDARY
  - UST UNDERGROUND STORAGE TANK
  - AREA LIGHT
  - ELECTRICAL CONDUIT RUNS
  - xx.xx GROUNDWATER ELEVATION 8/31/97
  - \*NOTE: GROUNDWATER FLOW DIRECTION BASED UPON GROUNDWATER ELEVATION DATA IN ON-SITE MONITORING WELLS.



<b>EnecoTech</b> ENVIRONMENTAL CONSULTANTS			
Project: SHELL OIL PRODUCTS COMPANY			
975 ROCHESTER ROAD ROCHESTER, MICHIGAN			
Title: <b>GROUNDWATER FLOW MAP</b>			
Design:		Date:	
Drawn:	MRP		
Checked:		File No.:	810-075
Approved:		Date:	4/26/96
		Figure No.:	
		ACAD File No.:	810075SP
		Rev.:	4/1/97
		Sheet	1 of 1

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**

**SHELL SERVICE STATION**  
**975 ROCHESTER ROAD**  
**ROCHESTER, MICHIGAN**

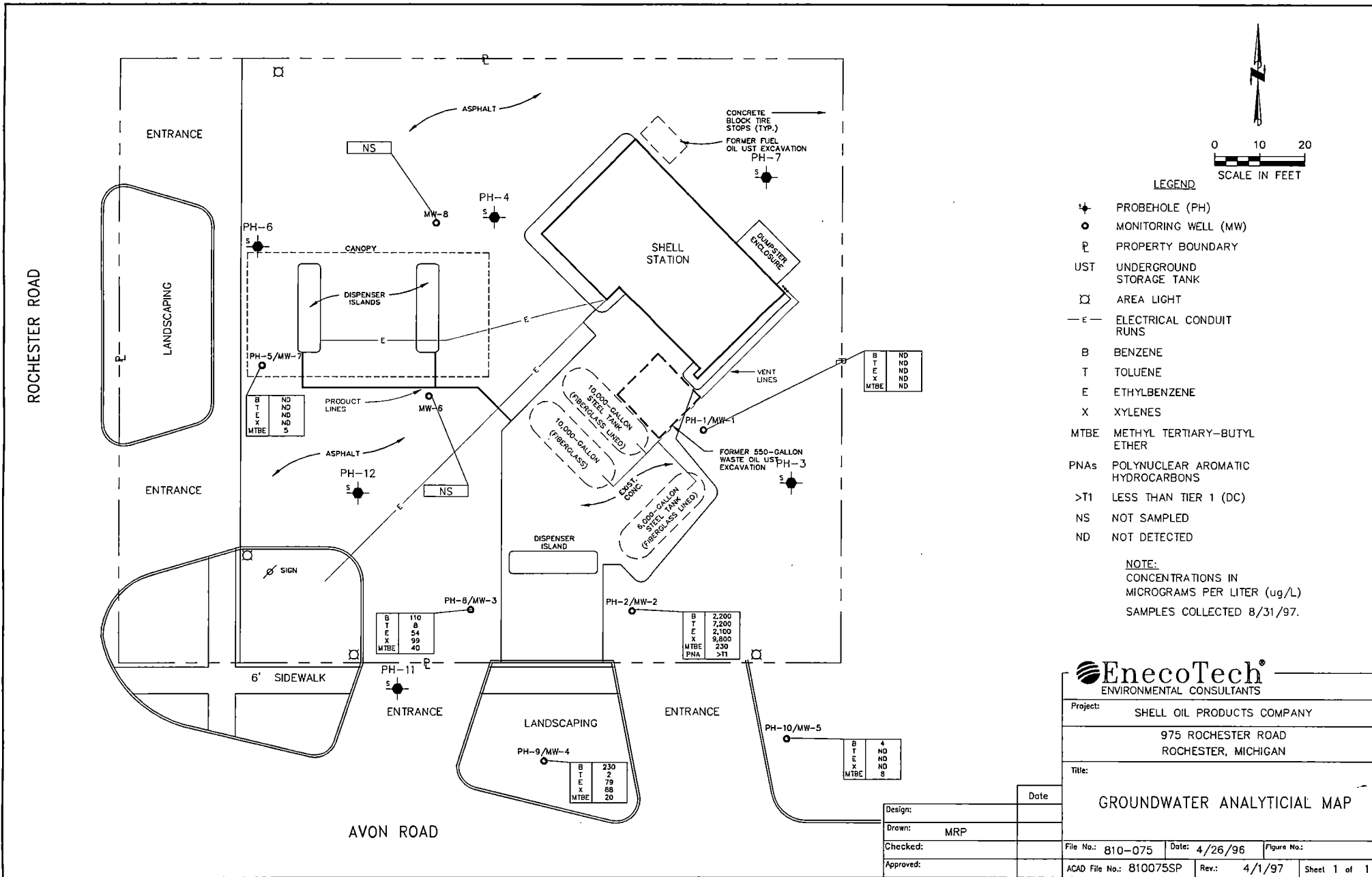
Units = feet

LOCATION	TOC ELEVATION	GAUGING DATE					
		12/9/96		6/4/97		8/31/97	
		DTW	ELEV.	DTW	ELEV.	DTW	ELEV.
MW-1	101.40	2.98	98.42	2.20	99.20	2.66	98.74
MW-2	100.14	2.67	97.47	2.49	97.65	2.26	97.88
MW-3	100.02	2.48	97.54	1.76	98.26	2.20	97.82
MW-4	100.44	3.47	96.97	1.63	98.81	3.19	97.25
MW-5	98.70	2.16	96.54	1.56	97.14	2.16	96.54
MW-6	101.56	3.18	98.38	2.40	99.16	2.91	98.65
MW-7	102.00	3.63	98.37	2.88	99.12	3.40	98.6
MW-8	102.16	2.87	99.29	2.60	99.56	2.88	99.28

MW = Monitoring Well  
DTW = Depth To Water  
TOC = Top Of Casing



**ATTACHMENT B**  
**Groundwater Analytical Map**  
**and**  
**Historical Groundwater Data**



**EnecoTech**  
ENVIRONMENTAL CONSULTANTS

Project: SHELL OIL PRODUCTS COMPANY

975 ROCHESTER ROAD  
ROCHESTER, MICHIGAN

Title: GROUNDWATER ANALYTICAL MAP

Design:	Date:
Drawn: MRP	
Checked:	File No.: 810-075 Date: 4/26/96 Figure No.:
Approved:	ACAD File No.: 810075SP Rev.: 4/1/97 Sheet 1 of 1

LABORATORY RESULTS - GROUNDWATER  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

VOLATILES										
Sample ID	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-5 (W)	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/22/96		10/26/96		10/22/96		10/22/96		10/28/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	5,700	100	ND	1	ND	1	130	1
<input checked="" type="checkbox"/> Toluene	ND	1	17,000	100	ND	1	ND	1	2	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	3,200	100	ND	1	ND	1	140	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	16,000	100	ND	1	ND	1	69	1
<input checked="" type="checkbox"/> MTBE	ND	1	130	100	ND	1	ND	1	26	1
VOLATILES										
Sample ID	PH-6 (W)		PH-7 (W)		PH-11 (W)					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected	10/18/96		10/18/96		10/17/96					
Date Extracted										
Date Analyzed	10/29/96		10/22/96		10/29/96					
Analytical Method No.	8020A		8020A		8020A					
Collection Method*	GP		GP		GP					
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	ND	1	ND	1				
<input checked="" type="checkbox"/> Toluene	ND	1	ND	1	1	1				
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	ND	1	ND	1				
<input checked="" type="checkbox"/> Total Xylenes	ND	1	ND	1	ND	1				
<input checked="" type="checkbox"/> MTBE	ND	1	ND	1	10	1				

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_ BL = Bailer

MDL = Method Detection Limit

**LABORATORY RESULTS - GROUNDWATER**

FACILITY NAME Shell Service Station

FACILITY ID NUMBER 0-009055

Groundwater Sample Event; 12/9/96

<b>VOLATILES</b>										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		2.5-7.5		2.5-7.5	
Date Collected	12/9/96		12/9/96		12/9/96		12/9/96		12/9/96	
Date Extracted										
Date Analyzed	12/19/96		12/19/96		12/19/96		12/19/96		12/18/96	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	4,600	50	110	5	390	5	22	1
<input checked="" type="checkbox"/> Toluene	ND	1	12,000	50	45	5	12	5	ND	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	2,900	50	200	5	18	5	1	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	15,000	50	570	5	17	5	2	1
<input checked="" type="checkbox"/> MTBE	ND	1	230	50	8	5	18	5	8	1
<b>VOLATILES</b>										
Sample ID	MW-6		MW-7		MW-8					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected	12/9/96		12/9/96		12/9/96					
Date Extracted										
Date Analyzed	12/19/96		12/19/96		12/18/96					
Analytical Method No.	8020A		8020A		8020A					
Collection Method*	BL		BL		BL					
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	68	5	170	1	ND	1				
<input checked="" type="checkbox"/> Toluene	ND	5	7	1	ND	1				
<input checked="" type="checkbox"/> Ethylbenzene	970	5	260	1	ND	1				
<input checked="" type="checkbox"/> Total Xylenes	1,300	5	230	1	ND	1				
<input checked="" type="checkbox"/> MTBE	9	5	14	1	ND	1				

LABORATORY RESULTS - GROUNDWATER

FACILITY NAME Shell Service Station

FACILITY ID NUMBER 0-009055

Groundwater Sample Event: 6/4/97

<b>VOLATILES</b>										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		2.5-7.5		2.5-7.5	
Date Collected	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Date Extracted										
Date Analyzed	6/11/97		6/18/97		6/11/97		6/13/97		6/11/97	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	3,400	20	49	1	1,000	10	25	1
<input checked="" type="checkbox"/> Toluene	ND	1	8,600	20	15	1	79	10	2	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	2,600	20	82	1	1,300	10	8	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	11,000	20	180	1	3,400	10	ND	1
<input checked="" type="checkbox"/> MTBE	1	1	560	20	16	1	65	10	4	1
<b>VOLATILES</b>										
Sample ID	MW-6		MW-7		MW-8					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected	6/4/97		6/4/97		6/4/97					
Date Extracted										
Date Analyzed	6/11/97		6/11/97		6/11/97					
Analytical Method No.	8020A		8020A		8020A					
Collection Method*	BL		BL		BL					
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	45	1	120	1	ND	1				
<input checked="" type="checkbox"/> Toluene	2	1	2	1	ND	1				
<input checked="" type="checkbox"/> Ethylbenzene	350	1	230	1	ND	1				
<input checked="" type="checkbox"/> Total Xylenes	220	1	140	1	ND	1				
<input checked="" type="checkbox"/> MTBE	12	1	10	1	ND	1				

LABORATORY RESULTS - GROUNDWATER

FACILITY NAME Shell Service Station

FACILITY ID NUMBER 0-009055

Groundwater Sample Event: 8/31/97

<b>VOLATILES</b>										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		2.5-7.5		2.5-7.5	
Date Collected	8/31/97		8/31/97		8/31/97		8/31/97		8/31/97	
Date Extracted										
Date Analyzed	9/4/97		9/3/97		9/4/97		9/4/97		9/4/97	
Analytical Method No.	8020A		8020A		8020A		8020A		8020A	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	ND	1	2,200	20	110	1	230	1	4	1
<input checked="" type="checkbox"/> Toluene	ND	1	7,200	20	8	1	2	1	ND	1
<input checked="" type="checkbox"/> Ethylbenzene	ND	1	2,100	20	54	1	79	1	ND	1
<input checked="" type="checkbox"/> Total Xylenes	ND	1	9,800	20	99	1	88	1	ND	1
<input checked="" type="checkbox"/> MTBE	ND	1	230	20	40	1	20	1	8	1
<b>VOLATILES</b>										
Sample ID	MW-6		MW-7		MW-8					
Sample Depth (feet BGS)	3-8		3-8		3-8					
Date Collected			8/31/97							
Date Extracted										
Date Analyzed			9/4/97							
Analytical Method No.			8020A							
Collection Method*			BL							
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Benzene	NS		ND	1	NS					
<input checked="" type="checkbox"/> Toluene	NS		ND	1	NS					
<input checked="" type="checkbox"/> Ethylbenzene	NS		ND	1	NS					
<input checked="" type="checkbox"/> Total Xylenes	NS		ND	1	NS					
<input checked="" type="checkbox"/> MTBE	NS		5	1	NS					



LABORATORY RESULTS-GROUNDWATER  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

POLYNUCLEAR AROMATICS										
Sample ID	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-7 (W)	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/29/96		10/30/96		11/1/96		10/30/96		11/4/96	
Analytical Method No.	8310		8310		8310		8310		8310	
Collection Method*	GP		GP		GP		GP		GP	
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Acenaphthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Acenaphthylene	ND	5	12,000	500	ND	5	ND	5	200	100
<input checked="" type="checkbox"/> Anthracene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Chrysene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Fluoranthene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Fluorene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Naphthalene	ND	5	16,000	500	ND	5	ND	5	710	100
<input checked="" type="checkbox"/> Phenanthrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> Pyrene	ND	5	ND	500	ND	5	ND	5	ND	100
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ND	5	27,000	500	ND	5	ND	5	420	100

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS)m Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)

If other (OT) specify here: \_\_\_\_\_

BL = Bailer

MDL = Method Detection Limit



LABORATORY RESULTS-GROUNDWATER  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

POLYNUCLEAR AROMATICS										
Sample ID	MW-2									
Sample Depth (feet BGS)	3-8									
Date Collected	8/31/97									
Date Extracted	9/5/97									
Date Analyzed	9/9/97									
Analytical Method No.	8310									
Collection Method*	BL									
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Acenaphthene	ND	100								
<input checked="" type="checkbox"/> Acenaphthylene	290	100								
<input checked="" type="checkbox"/> Anthracene	ND	100								
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	100								
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	100								
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	100								
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	100								
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	100								
<input checked="" type="checkbox"/> Chrysene	ND	100								
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	100								
<input checked="" type="checkbox"/> Fluoranthene	ND	100								
<input checked="" type="checkbox"/> Fluorene	ND	100								
<input checked="" type="checkbox"/> Indeno(1,2,3- cd)pyrene	ND	100								
<input checked="" type="checkbox"/> Naphthalene	1,100	100								
<input checked="" type="checkbox"/> Phenanthrene	ND	100								
<input checked="" type="checkbox"/> Pyrene	ND	100								
<input checked="" type="checkbox"/> 2-Methylnaphthalene	420	100								

BGS = Below Ground Surface

\* If applicable

\*\* Footnote and define all Collection Method Codes used in this table: GS = Grab Sample

MDL = Method Detection Limit

LABORATORY RESULTS-GROUNDWATER  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

POLYNUCLEAR AROMATICS										
Sample ID	MW-1		MW-2		MW-3		MW-4		MW-5	
Sample Depth (feet BGS)	3-8		3-8		3-8		2.5-7.5		2.5-7.5	
Date Collected	6/4/97		6/4/97		6/4/97		6/4/97		6/4/97	
Date Extracted	6/9/97		6/9/97		6/9/97		6/9/97		6/9/97	
Date Analyzed	6/10/97		6/11/97		6/10/97		6/10/97		6/10/97	
Analytical Method No.	8310		8310		8310		8310		8310	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/l)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Acenaphthene	ND	5	440	100	14	5	74	5	ND	5
<input checked="" type="checkbox"/> Acenaphthylene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Anthracene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(a)anthracene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(a)pyrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(b)fluoranthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(g,h,i)perylene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Benzo(k)fluoranthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Chrysene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Dibenzo(a,h)anthracene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Fluoranthene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Fluorene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Indeno(1,2,3-cd)pyrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Naphthalene	ND	5	2,100	100	37	5	16	5	ND	5
<input checked="" type="checkbox"/> Phenanthrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> Pyrene	ND	5	ND	100	ND	5	ND	5	ND	5
<input checked="" type="checkbox"/> 2-Methylnaphthalene	ND	5	890	100	17	5	94	5	ND	5

BGS = Below Ground Surface

\* If applicable

\*\* Footnote and define all Collection Method Codes used in this table: GS = Grab Sample

MDL = Method Detection Limit

BGS = Below Ground Surface

\* If applicable

\*\* Footnote and define all Collection Method Codes used in this table: GS = Grab Sample

---

MDL = Method Detection Limit

LABORATORY RESULTS - GROUNDWATER  
 FACILITY NAME Shell Service Station  
 FACILITY ID NUMBER 0-009055

HALOGENATED HYDROCARBONS	PH-1 (W)		PH-2 (W)		PH-3 (W)		PH-4 (W)		PH-7 (W)	
Sample ID	3-8		3-8		3-8		3-8		3-8	
Sample Depth (feet BGS)	3-8		3-8		3-8		3-8		3-8	
Date Collected	10/17/96		10/17/96		10/18/96		10/17/96		10/18/96	
Date Extracted										
Date Analyzed	10/26/96		10/26/96		10/26/96		10/26/96		10/27/96	
Analytical Method No.	8010		8010		8010		8010		8010	
Collection Method*	BL		BL		BL		BL		BL	
CONSTITUENT (ug/kg)	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL	Conc	MDL
<input checked="" type="checkbox"/> Dichlorodifluoromethane	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> Chloromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Vinyl Chloride	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> Bromomethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Chloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Trichlorofluoromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1-Dichloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Methylene Chloride	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> trans-1,2-Dichloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1-Dichloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Chloroform	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1,1-Trichloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Carbon Tetrachloride	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> 1,2-Dichloroethane	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> 2-chloroethylvinyl ether	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Trichloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,2-Dichloropropane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Bromodichloromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> cis-1,3-Dichloropropene	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> trans-1,3-Dichloropropene	ND	0.5	ND	5	ND	0.5	ND	0.5	ND	0.5
<input checked="" type="checkbox"/> 1,1,2-Trichloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Tetrachloroethene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Dibromochloromethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Chlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> Bromoform	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,1,2,2-Tetrachloroethane	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,3-Dichlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,4-Dichlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0
<input checked="" type="checkbox"/> 1,2-Dichlorobenzene	ND	1.0	ND	10	ND	1.0	ND	1.0	ND	1.0

BGS = Below Ground Surface

\* Collection Method Codes (List all that apply): Grab Sample (GS), Split Spoon (SS), Hand Auger (HA), Geoprobe (GP), Continuous Corer (CC), Soil Gas (SG), Cone Penetrometer (CP), Hydropunch (HP)  
 If other (OT) specify here: \_\_\_\_\_ BL = Bailer

MDL = Method Detection Limit

**ATTACHMENT C**  
**Organic Vapor Screening Results**

**TABLE 2  
ORGANIC VAPOR SCREENING RESULTS**

**SHELL SERVICE STATION  
975 ROCHESTER ROAD  
ROCHESTER, MICHIGAN**

<b>LOCATION</b>	<b>DATE</b>	<b>PID RESULT (PPM)</b>
SE Catch Basin - Avon Road	4/15/96	ND
	6/4/97	ND
	8/31/97	ND
SW Catch Basin - Rochester Road	4/15/96	ND
	6/4/97	ND
	8/31/97	ND
NE Catch Basin - Rochester Road	4/15/96	ND
	6/4/97	ND
	8/31/97	ND
Catch Basin - Property North of Site	4/15/96	ND
	6/4/97	ND
	8/31/97	ND

PPM = Parts per million  
 ND = Not Detected



***Groundwater Monitoring /  
Site Status Report***

*975 Rochester Road  
Rochester, Michigan  
WIC # 221-6983-0100*

*Prepared for:*

**Stace R. Bieber, P.G.  
Environmental Geologist  
Shell Oil Products US  
9436 Maltby Road  
Brighton, MI 48116**

*Prepared by:*

**Groundwater & Environmental Services, Inc.  
9436 Maltby Road  
Brighton, MI 48116**

**January 22, 2003**



## LEAKING UNDERGROUND STORAGE TANK

## SUPPLEMENTAL REPORT COVER SHEET

**INSTRUCTIONS:** Complete this form with all applicable information. Attach this form to all supplemental Leaking Underground Storage Tank (LUST) submittals; this includes all reports other than the Initial Assessment, Final Assessment, and Closure Reports. The Certified Underground Storage Tank Professional (CP) MUST sign below. Please return this completed report cover sheet to the appropriate STD District Office listed on page 2. Use of this form to provide the listed information is voluntary.

## IDENTIFY TYPE OF SUPPLEMENTAL REPORT: GROUNDWATER MONITORING / SITE STATUS REPORT

FACILITY NAME: Shell Rochester @ Avon (221-6983-0100)

FACILITY ID NUMBER: 0-009055

STREET ADDRESS: 975 Rochester Road

CITY: Rochester

STATE: MI

ZIP CODE: 48037

COUNTY: Oakland

DATE(S) RELEASE(S) DISCOVERED: 04/08/1996, 04/24/1996

CONFIRMED RELEASE NUMBER(S): C-0214-96, C-0252-96

O/O NAME: Shell Oil Products US

O/O STREET ADDRESS: 9436 Maltby Road, Brighton

STATE: MI

ZIP CODE: 48116

CONTACT PERSON: Stace R. Bieber, P.G. (Shell Oil Products US)

PHONE NUMBER: (248) 670-1471

## ANSWER ALL QUESTIONS

1. Type(s) of product released: Unleaded Gasoline and Waste Oil

2. Free product present:

a. Currently?  YES  NO  
b. Previously?  YES  NOIf YES, total gallons recovered since last report:  
If YES, total gallons recovered to date:3. Have vapors been identified in any confined spaces (basement, sewers)?  YES  NO

4. Estimated depth to groundwater: Approximately 4 feet

Estimated groundwater flow direction: Radial

5. Estimated distance and direction from point of release to nearest:

a. Private well: 150 feet south

b. Municipal well: &lt; 1/2 Radial Mile

c. Surface water/wetland: &gt; 1/2 Mile North

6. Since last report: a. cubic yards of soil remediated: Zero

b. gallons of groundwater remediated: Zero

7. Totals to date: a. cubic yards of soil remediated: Approximately 40 yd<sup>3</sup>

b. gallons of groundwater remediated: Zero

8. Michigan RBCA Site Classification (1-4): 3

9. Has contamination migrated off-site above Tier 1 Residential RBSLs  YES  NOIf YES, have off-site impacted parties been notified (per Section 21309a(3) of Part 213  YES  NO

10. MTBE

Has MTBE been detected in any sample?  YES  NOIs any sample above 40 ppb?  YES  NO

## CERTIFICATION OF REPORT COMPLETION

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate, and complete. I certify that it was submitted to the Storage Tank Division (STD) on 1/23/03.

(date submitted-Required)

1/23/03

CP ORIGINAL SIGNATURE - REQUIRED

DATE

Jeffrey Berntsen

PRINT QC PROJECT MANAGER'S NAME

Kirk Pompilius, P.G.

PRINT CP'S NAME

Groundwater &amp; Environmental Services, Inc. (GES)

NAME OF CONSULTING FIRM

9436 Maltby Road, Brighton, MI 48116

ADDRESS

(810) 227-0002

PHONE NO.

(810) 227-0008

FAX NO.



# DEQ STORAGE TANK DIVISION OFFICES AND LOCATIONS

Determine in which county/city the UST is located and which Storage Tank Division (STD) office serves that county/city, then locate the proper STD address/phone listed below.

COUNTY	STD OFFICE	COUNTY	STD OFFICE	COUNTY	STD OFFICE	COUNTY	STD OFFICE
Alcona	Gaylord	Dickinson	Marquette	Lake	Cadillac	Oceana	Grand Rapids
Alger	Marquette	Eaton	Shiawassee	Lapeer	Shiawassee	Ogemaw	Saginaw-Bay
Allegan	Kalamazoo	Emmet	Gaylord	Leelanau	Cadillac	Ontonagon	Marquette
Alpena	Gaylord	Genesee	Shiawassee	Lenawee	Jackson	Osceola	Cadillac
Antrim	Gaylord	Gladwin	Saginaw-Bay	Livingston	Shiawassee	Oscoda	Gaylord
Arenac	Saginaw-Bay	Gogebic	Marquette	Luce	Marquette	Otsego	Gaylord
Baraga	Marquette	Grand Traverse	Cadillac	Mackinac	Marquette	Ottawa	Grand Rapids
Barry	Grand Rapids	Gratiot	Shiawassee	Macomb	SE Michigan	Presque Isle	Gaylord
Bay	Saginaw-Bay	Hillsdale	Jackson	Manistee	Cadillac	Roscommon	Gaylord
Benzie	Cadillac	Houghton	Marquette	Marquette	Marquette	Saginaw	Saginaw-Bay
Berrien	Kalamazoo	Huron	Saginaw-Bay	Mason	Cadillac	Sanilac	Saginaw-Bay
Branch	Kalamazoo	Ingham	Shiawassee	Mecosta	Grand Rapids	Schoolcraft	Marquette
Calhoun	Kalamazoo	Ionia	Grand Rapids	Menominee	Marquette	Shiawassee	Shiawassee
Cass	Kalamazoo	Iosco	Saginaw-Bay	Midland	Saginaw-Bay	St Clair	SE Michigan
Charlevoix	Gaylord	Iron	Marquette	Missaukee	Cadillac	St Joseph	Kalamazoo
Cheboygan	Gaylord	Isabella	Saginaw-Bay	Monroe	Jackson	Tuscola	Saginaw-Bay
Chippewa	Marquette	Jackson	Jackson	Montcalm	Grand Rapids	Van Buren	Kalamazoo
Clare	Saginaw-Bay	Kalamazoo	Kalamazoo	Montmorency	Gaylord	Washtenaw	Jackson
Clinton	Shiawassee	Kalkaska	Cadillac	Muskegon	Grand Rapids	Wayne*	SE Michigan
Crawford	Gaylord	Kent	Grand Rapids	Newaygo	Grand Rapids	*Detroit	Detroit
Delta	Marquette	Keweenaw	Marquette	Oakland	SE Michigan	*Highland	Detroit
						Park	
						*Hamtramck	Detroit
						Wexford	Cadillac

<b><u>CADILLAC DISTRICT OFFICE</u></b> 120 W CHAPIN ST CADILLAC MI 49601-2158  (PHONE) 231-775-3960 (FAX) 231-775-1511	<b><u>DETROIT FIELD OFFICE</u></b> 300 RIVERPLACE, SUITE 3600 DETROIT MI 48207  (PHONE) 313-392-6480 (FAX) 313-392-6488	<b><u>GAYLORD FIELD OFFICE</u></b> 2100 WEST M-32 GAYLORD MI 49735  (PHONE) 989-705-3415 (FAX) 989-731-6181
<b><u>GRAND RAPIDS DISTRICT OFFICE</u></b> 350 OTTAWA AVE N.W. UNIT 10 GRAND RAPIDS MI 49503-2341  (PHONE) 616-356-0500 (FAX) 616-356-0202	<b><u>JACKSON DISTRICT OFFICE</u></b> 301 E LOUIS B. GLICK HIGHWAY JACKSON MI 49201-1556  (PHONE) 517-780-7690 (FAX) 517-780-7855	<b><u>KALAMAZOO DISTRICT OFFICE</u></b> 7953 ADOBE ROAD KALAMAZOO MI 49009-5026  (PHONE) 616-567-3500 (FAX) 616-567-9440
<b><u>MARQUETTE DISTRICT OFFICE</u></b> 1990 US 41 SOUTH MARQUETTE MI 49855-9198  (PHONE) 906-228-6568 (FAX) 906-228-5245	<b><u>SAGINAW-BAY DISTRICT OFFICE</u></b> 503 N EUCLID AVE SUITE 1 BAY CITY MI 48706-2965  (PHONE) 989-686-8025 ext. 8377 (FAX) 989-684-9799	<b><u>SE MICHIGAN DISTRICT OFFICE</u></b> 38980 SEVEN MILE RD LIVONIA MI 48152-1006  (PHONE) 734-953-1450 (FAX) 734-432-1295
<b><u>SHIAWASSEE DISTRICT OFFICE</u></b> 10650 BENNETT DR MORRICE MI 48857-9792  (PHONE) 517-625-5515 (FAX) 517-625-5000	<b><u>MAIN OFFICE</u></b> 333 S. CAPITOL AVE, PO BOX 30157 LANSING MI 48909-7657 (PHONE) 517-373-8168 (FAX) 517-335-2245 or 517-335-0146 E-MAIL: <a href="mailto:deq-std-tanks@state.mi.us">deq-std-tanks@state.mi.us</a> WEB SITE: <a href="http://www.deq.state.mi.us/std/">http://www.deq.state.mi.us/std/</a> REPORT UNDERGROUND STORAGE TANK RELEASES: 800-642-4878	



## **Groundwater Monitoring / Site Status Report**

**January 2003**

Shell Retail Station

975 Rochester Road@ Avon

Rochester, MI 48313

WIC: 221-6983-0100

Facility ID: 0-009055

Groundwater & Environmental Services, Inc. (GES) was retained by Shell Oil Products US (Shell), to prepared this Groundwater Monitoring / Site Status Report addressing the following confirmed releases at the Shell branded retail gasoline facility at 975 Rochester Road, Rochester, Oakland County Michigan (site):

- C-0214-96 on 04/08/1996; and
- C-0252-96 on 04/24/1996

This report summarizes recently completed site activities, provides explanations of proposed future activities based on the current site data and presents data obtained from the recent activities.

Based on a detailed evaluation of current site conditions and a review of previously completed regulatory documents, GES considers the site to fulfill Class 3 requirements per the newly drafted MDEQ Operational Memorandum No. 5, dated 07/10/95, Revised 08/28/02. Furthermore, GES considers direct contact with impacted subsurface soils and groundwater as well as hydrocarbon volatilization to indoor air to be applicable exposure pathways at the site.

### **Recently Completed Activities**

In January 2001, GES assumed environmental consulting services at the site. Upon receiving the site, GES conducted a detailed review of all available site data.

In May 2001, and April 2002, GES sampled on-site monitoring wells to determine prevailing site conditions.

In March 2002, GES obtained a permit from the Road Commission of Oakland County to access both the northern and southern rights-of-way of Avon Road.

On November 12 and 13, 2002, GES directed the installation and construction of five (5) monitoring well locations on-site along the southern property boundary and within both the northern and southern rights-of-way of Avon Road.

### **Proposed 2003 Activities**

- Sample all monitoring wells;
- Evaluate closure potential or update FAR

### **Recently Collected Data**

Refer to Appendix A for scaled site maps depicting the site, it's prominent features, respective property boundaries, and current monitoring well locations.

Refer to Appendix B for the boring log and monitoring well diagrams prepared for the soil borings and monitoring wells completed on site under GES' direction in November 2002.

Refer to Appendix C for analytical data tables presenting the laboratory analytical data generated from on-site soil and groundwater samples as compared to the applicable Tier 1 Residential and Commercial III RBSLs per MDEQ Part 213 Operational Memorandum No. 4, Attachment 2, Revision 5, dated June 2000.

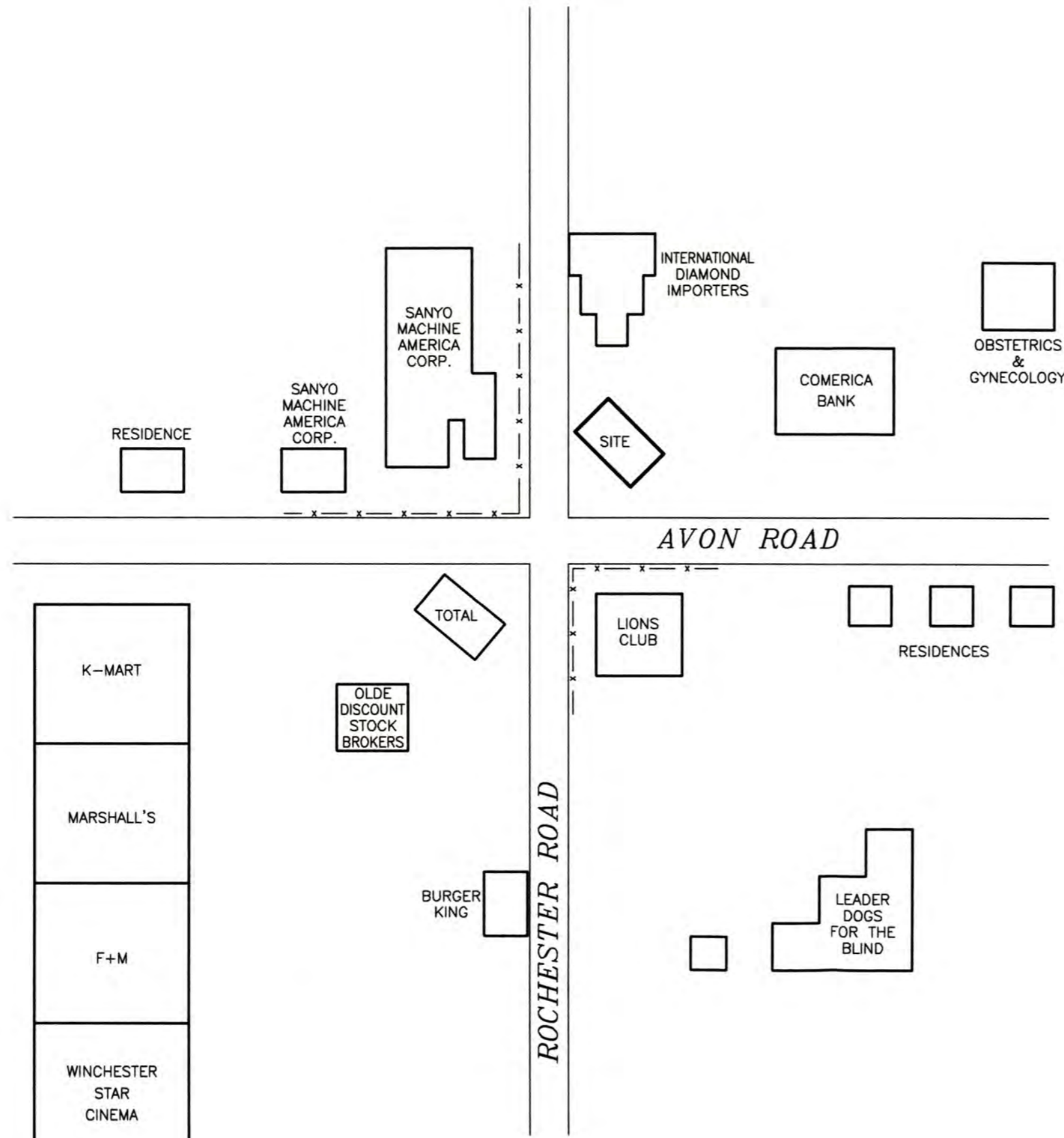
See Appendices.



## **Appendix A**

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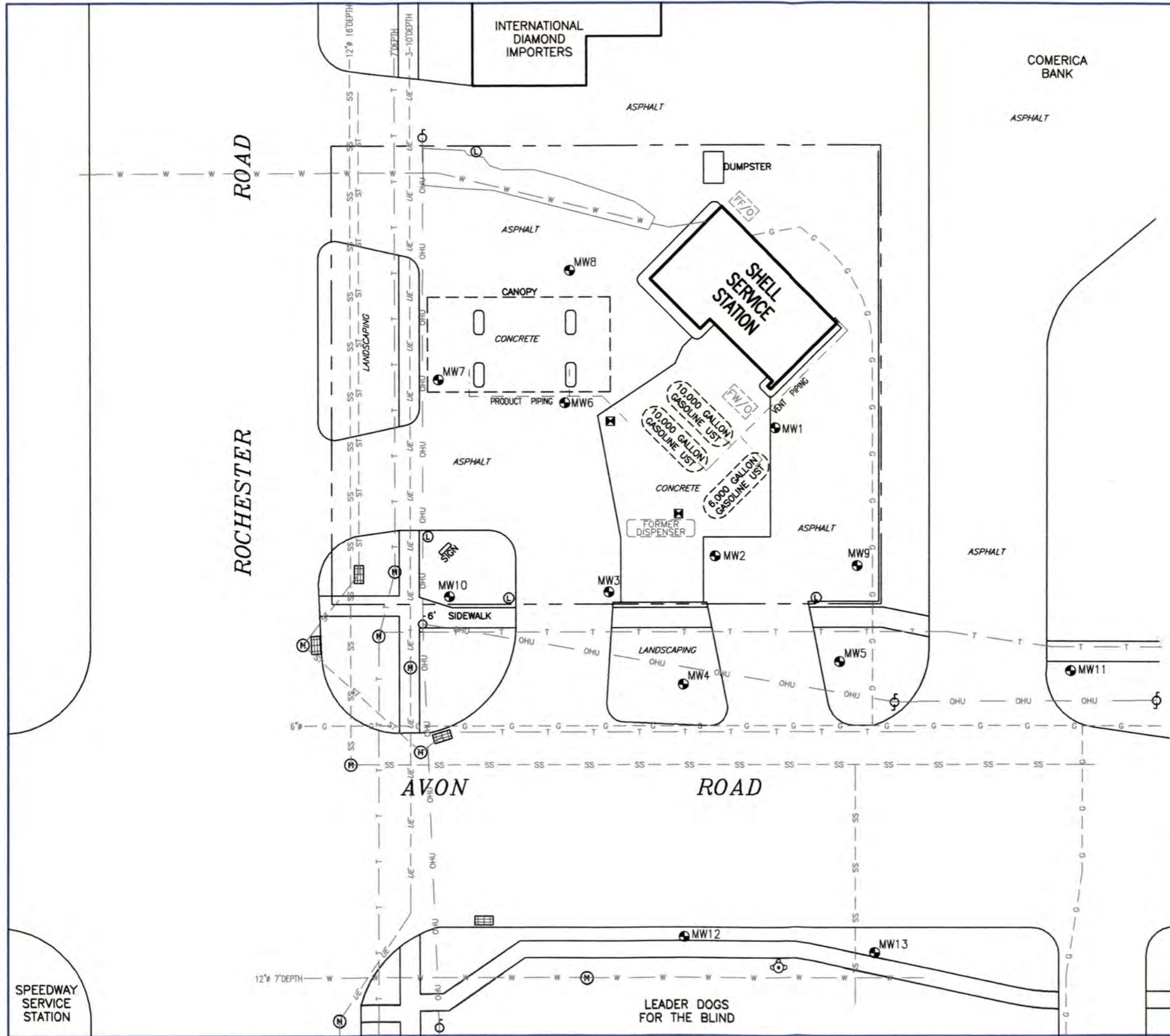
### *Site Maps*



M:\Graphics\Graphics-Detroit\Shell\8070-0704 Rochester Hills\8070-0704 rochester hills LAM.dwg, Model, 12/31/2002 01:35:47 PM, JMaui, 1:1, GES

DRAFTED BY: J.S.M. (WALL)	LOCAL AREA MAP	
CHECKED BY:	SHELL SERVICE STATION WIC #221-8070-0704 975 ROCHESTER ROAD ROCHESTER HILLS, MICHIGAN	
REVIEWED BY:	Groundwater & Environmental Services, Inc. 9436 MALTBY ROAD, BRIGHTON, MICHIGAN 48116	
NORTH 	NOT TO SCALE	FIGURE
	DATE 12-31-02	

M:\Graphics\Graphics-Detroit\Shell\8070-0704 Rochester Hills\8070-0704 Rochester Hills SM.dwg, 01/21/2003 09:58:05 AM, DKessler, 1:30, GES

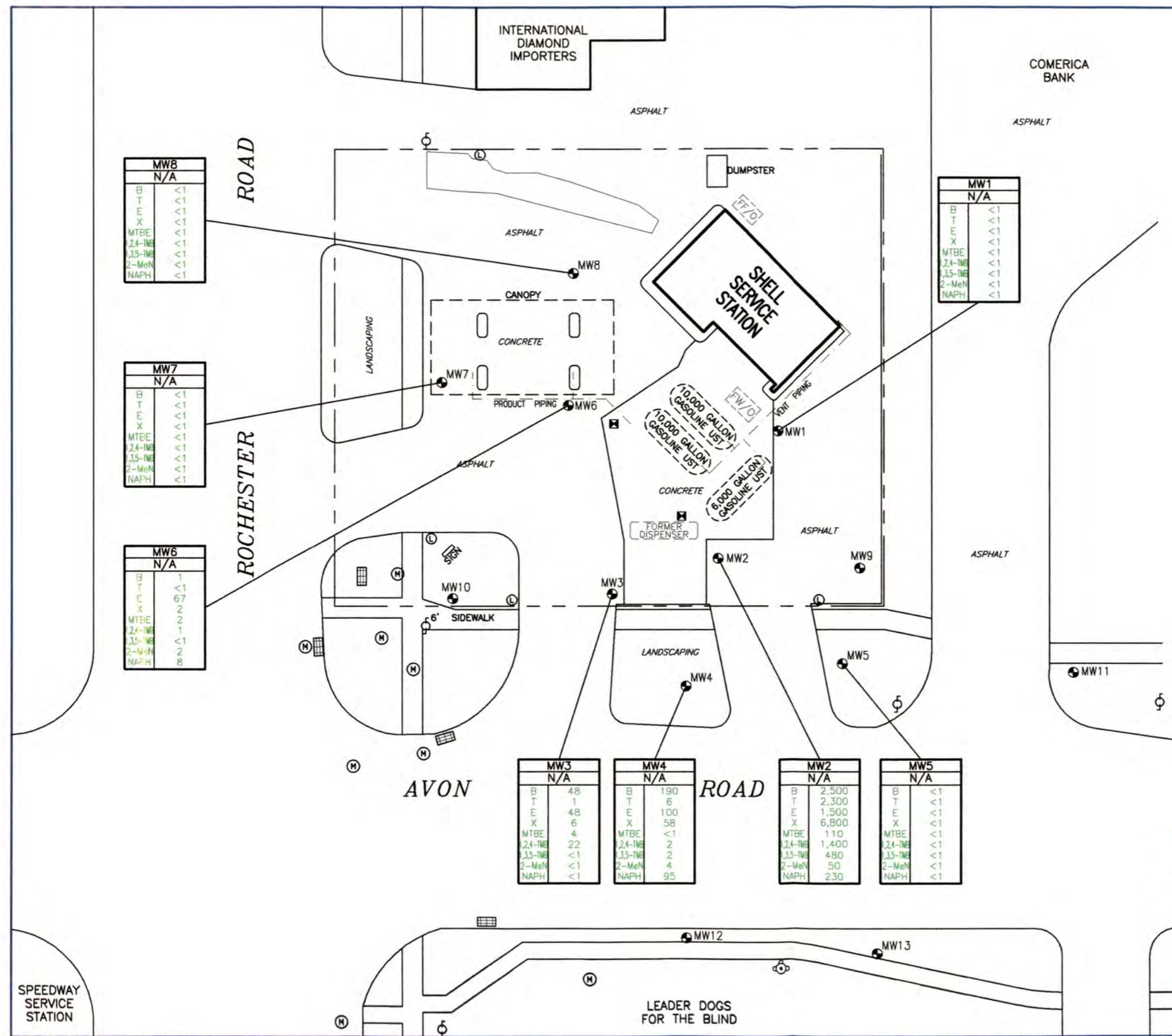


- LEGEND**
- [F/O] FORMER FUEL OIL TANK
  - [W/O] FORMER 550 GALLON WASTE OIL TANK
  - ⊙ LIGHT POLE
  - DISPENSER ISLAND
  - ⊕ MONITORING WELL
  - SS— UNDERGROUND SANITARY SEWER
  - ST— UNDERGROUND STORM SEWER
  - G— UNDERGROUND GAS LINE
  - W— UNDERGROUND WATER LINE
  - T— UNDERGROUND TELEPHONE
  - UE— UNDERGROUND ELECTRIC
  - OHU— OVERHEAD UTILITIES

DRAFTED BY: D.M.K. (WALL)	<b>SITE MAP</b>	
CHECKED BY:	<b>SHELL SERVICE STATION WIC #221-8070-0704 975 ROCHESTER ROAD ROCHESTER HILLS, MICHIGAN</b>	
REVIEWED BY:	<b>Groundwater &amp; Environmental Services, Inc. 9436 MALTBY ROAD, BRIGHTON, MICHIGAN 48116</b>	
NORTH 	SCALE IN FEET 	DATE 1-21-03
		FIGURE

SPEEDWAY SERVICE STATION

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**LEGEND**

- [F/O] FORMER FUEL OIL TANK
- [W/O] FORMER 550 GALLON WASTE OIL TANK
- ⊙ LIGHT POLE
- DISPENSER ISLAND
- ⊕ MONITORING WELL

MW1		WELL IDENTIFICATION
N/A		GROUNDWATER ELEVATION (feet)
B	<1	BENZENE CONCENTRATION (ug/L)
T	<1	TOLUENE CONCENTRATION (ug/L)
E	<1	ETHYLBENZENE CONCENTRATION (ug/L)
X	<1	XYLENES CONCENTRATION (ug/L)
MTBE	<1	MTBE CONCENTRATION (ug/L)
1,2,4-TMB	<1	1,2,4-TRIMETHYLBENZENE CONCENTRATION (ug/L)
1,3,5-TMB	<1	1,3,5-TRIMETHYLBENZENE CONCENTRATION (ug/L)
2-MeN	<1	2-METHYLNAPHTHALENE CONCENTRATION (ug/L)
NAPH	<1	NAPHTHALENE CONCENTRATION (ug/L)

ug/L MICROGRAMS PER LITER  
 MTBE METHYL *tert*-BUTYL ETHER  
 <# WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN  
 N/A NOT AVAILABLE

MW8		N/A
B	<1	
T	<1	
E	<1	
X	<1	
MTBE	<1	
1,2,4-TMB	<1	
1,3,5-TMB	<1	
2-MeN	<1	
NAPH	<1	

MW7		N/A
B	<1	
T	<1	
E	<1	
X	<1	
MTBE	<1	
1,2,4-TMB	<1	
1,3,5-TMB	<1	
2-MeN	<1	
NAPH	<1	

MW6		N/A
B	1	
T	<1	
E	67	
X	2	
MTBE	2	
1,2,4-TMB	1	
1,3,5-TMB	<1	
2-MeN	2	
NAPH	8	

MW1		N/A
B	<1	
T	<1	
E	<1	
X	<1	
MTBE	<1	
1,2,4-TMB	<1	
1,3,5-TMB	<1	
2-MeN	<1	
NAPH	<1	

MW3		N/A
B	48	
T	1	
E	48	
X	6	
MTBE	4	
1,2,4-TMB	22	
1,3,5-TMB	<1	
2-MeN	<1	
NAPH	<1	

MW4		N/A
B	190	
T	6	
E	100	
X	58	
MTBE	<1	
1,2,4-TMB	2	
1,3,5-TMB	2	
2-MeN	4	
NAPH	95	

MW2		N/A
B	2,500	
T	2,300	
E	1,500	
X	6,800	
MTBE	110	
1,2,4-TMB	1,400	
1,3,5-TMB	480	
2-MeN	50	
NAPH	230	

MW5		N/A
B	<1	
T	<1	
E	<1	
X	<1	
MTBE	<1	
1,2,4-TMB	<1	
1,3,5-TMB	<1	
2-MeN	<1	
NAPH	<1	

DRAFTED BY: D.M.K. (WALL)	<b>GROUNDWATER MONITORING MAP</b> 3 APRIL 2002	
CHECKED BY:	SHELL SERVICE STATION WIC #221-8070-0704 975 ROCHESTER ROAD ROCHESTER HILLS, MICHIGAN	
REVIEWED BY:	Groundwater & Environmental Services, Inc. 9436 MALTBY ROAD, BRIGHTON, MICHIGAN 48116	
NORTH 	SCALE IN FEET 	DATE 1-21-03
		FIGURE







## **Appendix B**

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### *Soil Boring & Monitoring Well Diagrams*



# Monitoring Well Log

ID NO. **MW-9**

Groundwater and Environmental Services, Inc.

Page 1 of 1



PROJECT: **Shell: Rochester @ Avon** SURFACE ELEV.: **NA** TOTAL DEPTH: **15'**  
 ADDRESS: **975 Rochester Rd, Rochester Hills, MI** WATER DEPTH: **3.5'** CASING EL.: **NA**  
 JOB NO. **Incident # 98998040** BOREHOLE DIA.: **8"** WELL DIA.: **2"**

Logged By: **J. Bostek** Drilling Method: **Hand Auger, Direct Push, 4.25" ID HSA**  
 Dates Drilled: **11/12/02** Sampling Method: **Continuous**  
 Drilling Company: **Fibertec** Soil Class. System: **USCS**  
 Drill Rig Type: **66 DT Geoprobe** Field Screening: **PID 10.6 eV Lamp (ppm)**

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Recovery	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0					ASPHALT	ASPHALT		Concrete Flush Mount
					CLAY: Silty, sandy, moist, brown, gray and green	SILTY, SANDY CLAY	CL	Bentonite Seal
2	7.7							2" PVC Riser
				100%	SAND: Little silt and clay, trace organics, fine, moist, black	SAND	SW	#5 Sand Pack
4	38.2				SILTY SAND: Fine, wet, brown and gray	SILTY SAND	SM	2" Slot 0.010" Screen
			9					
6					CLAY: Silty, very soft, moist, brown	SILTY CLAY	CL	Well Plug
			0	100%				
8					CLAY: Little silt, trace sand, medium stiff, moist, brown	CLAY		
			0					
10								
			0					
12					CLAY: Silty, sandy, moist, gray	SILTY, SANDY CLAY		
			0	100%				
14								
			0					

Location:  
 Northing/Latitude: **NA**  
 Easting/Longitude: **NA**  
 Horizontal Datum: **NA**  
 Vertical Datum: **NA**

General Comments:

Symbol Key:  
 Apparent Water Level   
 Lab Sample Location 



# Monitoring Well Log

ID NO. **MW-10**

Groundwater and Environmental Services, Inc.

Page 1 of 1

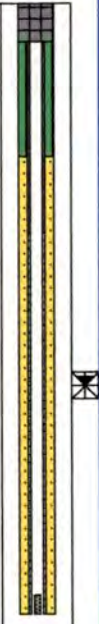
PROJECT: **Shell: Rochester @ Avon** SURFACE ELEV.: **NA** TOTAL DEPTH: **15'**  
 ADDRESS: **975 Rochester Rd, Rochester Hills, MI** WATER DEPTH: **5'** CASING EL.: **NA**  
 JOB NO. **Incident # 98998040** BOREHOLE DIA.: **8"** WELL DIA.: **2"**

Logged By: **J. Bostek** Drilling Method: **Hand Auger, Direct Push, 4.25" ID HSA**  
 Dates Drilled: **11/12/02** Sampling Method: **Continuous**  
 Drilling Company: **Fibertec** Soil Class. System: **USCS**  
 Drill Rig Type: **66 DT Geoprobe** Field Screening: **PID 10.6 eV Lamp (ppm)**

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Recovery	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0					CLAY: Silty, sandy, moist, brown	<b>SILTY, SANDY CLAY</b>	CL	Concrete Flush Mount
2					SAND: Fine to medium grained, moist, brown	<b>SAND</b>	SP	Bentonite Seal
					CLAY: Silty, sandy, moist, brown	<b>SILTY, SANDY CLAY</b>	CL	2" PVC Riser
4					SAND: Gravelly, fine to coarse grained, moist, brown	<b>GRAVELLY SAND</b>	SP	#5 Sand Pack
					SILTY SAND: Clayey, trace organics, fine, moist, black and dark brown	<b>SILTY, CLAYEY SAND</b>	SM, SC	
6					SILTY SAND: Fine, wet, brown	<b>SILTY SAND</b>		2" Slot 0.010" Screen
8							SM	Well Plug
10					CLAY: Silty, sandy, very soft, moist, brown	<b>SILTY, SANDY CLAY</b>		
12					CLAY: Silty, sandy, soft, moist, gray		CL	
14								

Soil sample MW-10 (4-6)' analyzed

Soil sample MW-10 (12-14)' analyzed



Location:

Northing/Latitude: **NA**  
 Easting/Longitude: **NA**  
 Horizontal Datum: **NA**  
 Vertical Datum: **NA**

General Comments:

Symbol Key:

Apparent Water Level

Lab Sample Location



# Monitoring Well Log

ID NO. **MW-11**

Groundwater and Environmental Services, Inc.

Page 1 of 1



PROJECT: **Shell: Rochester @ Avon** SURFACE ELEV.: **NA** TOTAL DEPTH: **15'**  
 ADDRESS: **975 Rochester Rd, Rochester Hills, MI** WATER DEPTH: **3'** CASING EL.: **NA**  
 JOB NO. **Incident # 98998040** BOREHOLE DIA.: **8"** WELL DIA.: **2"**

Logged By: **J. Bostek** Drilling Method: **Hand Auger, Direct Push, 4.25" ID HSA**  
 Dates Drilled: **11/12/02** Sampling Method: **Continuous**  
 Drilling Company: **Fibertec** Soil Class. System: **USCS**  
 Drill Rig Type: **66 DT Geoprobe** Field Screening: **PID 10.6 eV Lamp (ppm)**

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Recovery	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0					SILTY SAND: Clayey, trace organics, fine, moist, black and dark brown	<b>SILTY, CLAYEY SAND</b>	SM, SC	Concrete Flush Mount Bentonite Seal 2" PVC Riser
2	Soil sample MW-11 (2-4)' analyzed			100%	SILTY SAND: Fine, wet, brown	<b>SILTY SAND</b>	SM	#5 Sand Pack
4					CLAY: Silty, sandy, moist, brown and gray	<b>SILTY, SANDY CLAY</b>	CL	2" Slot 0.010" Screen
					SILTY SAND: Fine, wet, brown	<b>SILTY SAND</b>	SM	
6					CLAY: Silty, sandy, very soft, moist, brown	<b>SILTY, SANDY CLAY</b>		Well Plug
8				100%				
10							CL	
12	Soil sample MW-11 (12-14)' analyzed			100%	CLAY: Silty, sandy, soft, moist, gray			
14								

Location:  
 Northing/Latitude: **NA**  
 Easting/Longitude: **NA**  
 Horizontal Datum: **NA**  
 Vertical Datum: **NA**

General Comments:

Symbol Key:  
 Apparent Water Level   
 Lab Sample Location 



# Monitoring Well Log

ID NO. **MW-12**

Groundwater and Environmental Services, Inc.

Page 1 of 1

PROJECT: **Shell: Rochester @ Avon** SURFACE ELEV.: **NA** TOTAL DEPTH: **13'**  
 ADDRESS: **975 Rochester Rd, Rochester Hills, MI** WATER DEPTH: **5.5'** CASING EL.: **NA**  
 JOB NO. **Incident # 98998040** BOREHOLE DIA.: **8"** WELL DIA.: **2"**

Logged By: **J. Bostek** Drilling Method: **Hand Auger, Direct Push, 4.25" ID HSA**  
 Dates Drilled: **11/13/02** Sampling Method: **Continuous**  
 Drilling Company: **Fibertec** Soil Class. System: **USCS**  
 Drill Rig Type: **66 DT Geoprobe** Field Screening: **PID 10.6 eV Lamp (ppm)**

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Recovery	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0					CLAY: Silty, sandy, trace organics, moist, brown	<b>SILTY, SANDY CLAY</b>	CL	Concrete Flush Mount
2				100%	SILTY SAND: Clayey, fine, moist, black	<b>SILTY, CLAYEY SAND</b>	SM, SC	Bentonite Seal
					SAND: Fine, moist, brown	<b>SAND</b>	SW	2" PVC Riser
4	Soil sample MW-12 (4-6)' analyzed				CLAY: Silty, sandy, moist, brown and gray	<b>SILTY, SANDY CLAY</b>	CL	#5 Sand Pack
					SILTY SAND: Fine, moist, brown	<b>SILTY SAND</b>		
6					SILTY SAND: Trace clay, fine, wet, brown		SM	2" Slot 0.010" Screen
8				100%	CLAY: Silty, sandy, very soft, moist, brown	<b>SILTY, SANDY CLAY</b>		Well Plug
10	Soil sample MW-12 (10-12)' analyzed				CLAY: Silty, sandy, moist, brown		CL	
12				100%				

Location:  
 Northing/Latitude: **NA**  
 Easting/Longitude: **NA**  
 Horizontal Datum: **NA**  
 Vertical Datum: **NA**

General Comments:

Symbol Key:

Apparent Water Level

Lab Sample Location



# Monitoring Well Log

ID NO. **MW-13**

Groundwater and Environmental Services, Inc.

Page 1 of 1



PROJECT: **Shell: Rochester @ Avon** SURFACE ELEV.: **NA** TOTAL DEPTH: **15'**  
 ADDRESS: **975 Rochester Rd, Rochester Hills, MI** WATER DEPTH: **5'** CASING EL.: **NA**  
 JOB NO. **Incident # 98998040** BOREHOLE DIA.: **8"** WELL DIA.: **2"**

Logged By: **J. Bostek** Drilling Method: **Hand Auger, Direct Push, 4.25" ID HSA**  
 Dates Drilled: **11/13/02** Sampling Method: **Continuous**  
 Drilling Company: **Fibertec** Soil Class. System: **USCS**  
 Drill Rig Type: **66 DT Geoprobe** Field Screening: **PID 10.6 eV Lamp (ppm)**

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Recovery	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0					SILTY SAND: Trace organics and debris (wood), fine, moist, black	SILTY SAND		Concrete Flush Mount
2							SM	Bentonite Seal
4					CLAY: Silty, sandy, moist, brown and gray	SILTY, SANDY CLAY	CL	2" PVC Riser
4	Soil sample MW-13 (4-6)' analyzed				SAND: Fine, moist, black and brown	SAND	SW	#5 Sand Pack
6					SILTY SAND: Fine, wet, brown	SILTY SAND	SM	2" Slot 0.010" Screen
8					CLAY: Silty, sandy, moist, brown	SILTY, SANDY CLAY		Well Plug
12					CLAY: Silty, sandy, moist, gray		CL	
14	Soil sample MW-13 (12-14)' analyzed							

Location:  
 Northing/Latitude: NA  
 Easting/Longitude: NA  
 Horizontal Datum: NA  
 Vertical Datum: NA

General Comments:

Symbol Key:  
 Apparent Water Level   
 Lab Sample Location 







## Appendix C

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### *Analytical Data Tables*



**Table I**

Historical Dissolved Unleaded Gasoline Parameters Concentrations (ug/L)  
 Shell Oil Products US  
 Shell Service Station at 975 South Rochester @ Avon, Rochester, Michigan  
 WIC # 221-6185-0100

Page 1 of 1

Well Identification	Date Collected	Date Analyzed	COMPOUNDS (ug/L)								
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2-Methylnaphthalene	Naphthalene
MW-1	05/02/2001	05/10/2001	<1	<1	<1	<	<1	<1	<1	<1	<1
MW-1	04/03/2002	04/16/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	05/02/2001	05/10/2001	200	140	170	540	<5	100	33	<5	17
MW-2	04/03/2002	04/17/2002	2,500	2,300	1,500	6,800	110	1,400	480	50	230
MW-3	05/02/2001	05/10/2001	50	2	54	5	1	10	<1	<1	2
MW-3	04/03/2002	04/16/2002	48	1	48	6	4	22	<1	<1	1
MW-4	05/02/2001	05/10/2001	480	23	750	1,000	<5	31	12	<6	180
MW-4	04/03/2002	04/16/2002	190	6	100	58	<1	2	2	4	95
MW-5	05/02/2001	05/10/2001	71	2	8	<1	<1	<1	<1	<1	<1
MW-5	04/03/2002	04/16/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	05/02/2001	05/10/2001	3	<1	54	1	4	<1	<1	2	8
MW-6	04/03/2002	04/16/2002	1	<1	67	2	2	1	<1	2	8
MW-7	05/02/2001	05/10/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-7	04/03/2002	04/16/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-8	05/02/2001	05/10/2001	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-8	04/03/2002	04/16/2002	<1	<1	<1	<1	<1	<1	<1	<1	<1
MDEQ Tier 1 Commercial III Volatilization to Indoor Air Inhalation RBSLs <sup>1</sup>			36,000	530,000	170,000	190,000	47,000,000	56,000	61,000	ID	31,000
MDEQ Tier 1 Commercial III Groundwater Contact RBSLs <sup>1</sup>			11,000	530,000	170,000	190,000	690,000	56,000	61,000	25,000	31,000

1) MDEQ Tier 1 Risk-Based Screening Levels (RBSLs) Per Operational Memorandum No. 4, Attachment 2, Dated June 2000

ID - Inadequate data to develop RBSL

NA	- Not Analyzed
<1	- Not detected above laboratory method detection limit
2,500	- Contaminant concentration above laboratory method detection limit
NONE	- Contaminant concentration above current MDEQ Tier 1 Commercial III RBSLs

Table II

Adsorbed BTEX, MTBE, Naphthalene, 2-Methylnaphthalene, & TMB (ULG) Concentrations  
 Shell Oil Products US  
 Shell Service Station at 975 Rochester Road, Rochester, Michigan  
 WIC # 221-6983-0100

Page 1 of 1

Parameters	MDEQ Tier I Residential Soil Drinking Water Protection RBSLs <sup>1</sup> (ug/kg)	MDEQ Tier I Residential Direct Contact RBSLs <sup>1</sup> (ug/kg)	MDEQ Tier I Residential Soil Groundwater Surface Water Interface Protection RBSLs <sup>1</sup> (ug/kg)	MDEQ Tier I Soil Saturation Concentrations RBSLs <sup>1</sup> (ug/kg)	MDEQ Tier I Commercial III Soil Direct Contact RBSLs <sup>1</sup> (ug/kg)	MDEQ Tier I Commercial III Soil Volatilization to Indoor Air Inhalation RBSLs <sup>1</sup> (ug/kg)	Sample identification, depth, date collected, date analyzed, concentration (ug/kg)									
							MW-9 2-4'	MW-9 12-14'	MW-10 4-6'	MW-10 12-14'	MW-11 2-4'	MW-11 12-14'	MW-12 4-6'	MW-12 10-12'	MW-13 4-6'	MW-13 12-14'
							11/12/02 11/16/02	11/12/02 11/16/02	11/12/02 11/16/02	11/12/02 11/16/02	11/12/18 11/16/02	11/12/02 11/16/02	11/13/02 11/16/02	11/13/02 11/16/02	11/13/02 11/16/02	11/13/02 11/16/02
Benzene	100	180,000	4,000	400,000	400,000	8,400	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Toluene	16,000	250,000	2,800	250,000	250,000	250,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Ethylbenzene	1,500	140,000	360	140,000	140,000	140,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Xylenes	5,600	150,000	700	150,000	150,000	150,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
MTBE	800	1,800,000	15,000	59,000,000	5,900,000	5,900,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Naphthalene	35,000	16,000,000	870	NA	140,000,000	470,000	90	<56	<60	<56	<65	<56	<59	<56	<62	<55
2-Methylnaphthalene	57,000	8,100,000	ID	NA	72,000,000	ID	66	<56	<60	<56	<65	<56	<59	<56	<62	<55
1,2,4-Trimethylbenzene	2,100	110,000	ID	110,000	110,000	110,000	110	<56	<60	<56	<65	<56	<59	<56	<62	<55
1,3,5-Trimethylbenzene	1,800	94,000	ID	94,000	94,000	94,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55

NA	- Not Analyzed
<63	- Not detected above laboratory method detection limit indicated
90	- Contaminant concentration above laboratory method detection limit
NONE	- Contaminant concentration exceeds MDEQ Tier I Residential RBSLs

1) MDEQ Tier I Residential & Commercial III Risk-Based Screening Levels (RBSLs) Per Operational Memorandum No. 4, Attachment 2, Dated June 2000

ID Inadequate data to develop RBSLs

NA Not Applicable





MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
**CONFIRMATION / REQUEST FOR DISCLOSURE OF DEQ RECORDS**  
**Under The Freedom Of Information Act**

(This information is required under Authority of Act 442, P. A. 1976 as amended in order to request public records information)

ALL INFORMATION MUST BE TYPED OR PRINTED EXCEPT FOR WRITTEN SIGNATURES

Company Name (If Applicable) Or Organization (If Any) PM Environmental, Inc.		Business Phone # Area Code (248) 336-9988
Requester's Name Alex Kozlowski (02-3141-1, 02-3132-1, 02-3138-1, 02-3131-1, 02-3134-1)		Daytime Phone # Area Code (248) 336-9988
Address (Street And Number) 4080 West Eleven Mile Road		Home Phone # Area Code
City Berkley	State MI	Zip Code 48072

I wish to  examine  receive a copy of the following materials:  
 (Provide detailed descriptions of materials being requested and specify number of copies needed of each) (Attach additional sheets if necessary)  
 Review all available RRD files associated with

- Safeway Acquisitions Group LLC, 975 S. [REDACTED] Rochester Hills, Oakland Co. (FID 00009055) ✓
- Safeway Acquisitions Group LLC, [REDACTED] Rochester Hills, Oakland Co. (FID 00010453) ✓
- Safeway Acquisitions Group LLC, [REDACTED] Oakland Co. (FID 00010462) - Kim ✓
- Safeway Acquisitions Group LLC, [REDACTED] Oakland Co. (FID 00010441) ✓
- Safeway Acquisitions Group LLC, [REDACTED] Rochester Hills, Oakland Co. (FID 00010468) ✓

Possible copies may be necessary after review of the file.

NO. OF COPIES: Kelly Boyajian  
 SET# 163957

*All this box  
has not arrived*

I hereby request a waiver or reduction in fees as provided in Section 4(1) of F.O.I.A. because I am indigent or receive public assistance. (Attach proof)

I understand the DEQ may take 10 additional business days, if necessary, to fill my request due to the diverse locations or large volume of the material. I understand that if it is determined that some or all of the materials which I have requested to review or have copied may not be disclosed, I will receive a written denial including the reason for denial and explaining my right to appeal. I also understand that I may be charged with costs associated with this request.

**RECEIVED**  
 JUN 20 2012

Signature of Requester (If available) Alex J. Kozlowski Date June 20, 2012

Please submit this completed confirmation / request to:  
**MICHIGAN DEPARTMENT ENVIRONMENTAL QUALITY**  
 Remediation and Redevelopment Division  
 S. E. Michigan District Office  
 27700 Donald Court  
 Warren, MI 48092-2793

REMEDIAION DIVISION  
 SOUTHEAST MICHIGAN DISTRICT OFFICE  
 TELEPHONE NO.:  
 Email: boyajiank@michigan.gov

If you have any questions regarding this request, please contact:

S. E. Michigan District Office	Unit
DEQ Employee Name	Telephone No.
	Area Code

Date this request was completed:

FOR DEPARTMENT OF ENVIRONMENTAL QUALITY USE ONLY		
This section to be completed by the DEQ division/office employee fulfilling this request		
Detail of Charges		INDEX
Labor \$ _____		PCA
Labor \$ _____		AGENCY OBJECT <b>8857</b>
Copying \$ _____		PROJECT
Mailing \$ _____		PHASE
TOTAL \$ _____		

**-THIS IS NOT A BILL-**  
 You will be invoiced separately for any charges listed.

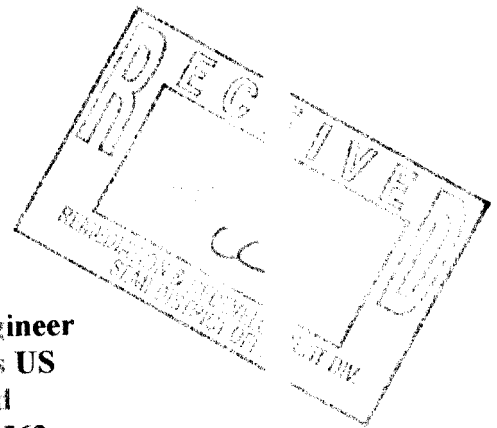
# ***Closure Report***

*Former Shell # 138063  
975 Rochester Road  
Rochester Hills, Michigan 48037  
Facility ID # 00009055*

*Oakland*

*Prepared for:*

**John Robbins  
Environmental Engineer  
Shell Oil Products US  
603 Diehl Road  
Naperville, IL 60563**



*Prepared by:*

**Groundwater & Environmental Services, Inc.  
9436 Maltby Road  
Brighton, MI 48116**

**August 27, 2004**



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY -  
 PO BOX 30426, LANSING, MI 48909-7926, Phone 517-373-9837, Fax 517-373-2

DATE ENTERED INTO DATABASE

8-30-04

**LEAKING UNDERGROUND STORAGE TANK CLOSURE REPORT**

STAFF INITIALS:

AK

INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY. The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit this report within the stated time period may result in administrative penalties as provided for in Part 213, Section 21313a of 1994 PA 451, as amended. PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE RRD DISTRICT OFFICE. See form eqp4410 for a complete list of RRD district offices.

FACILITY NAME: Former Shell 975 Rochester Rd. # 138063		FACILITY ID NUMBER: 0-00905	
STREET ADDRESS: 975 Rochester Rd.			
CITY: Rochester Hills		ZIP: 48037	COUNTY: Oakland
DATE(S) RELEASE DISCOVERED: 04/08/1996 & 04/24/1996		CONFIRMED RELEASE NUMBER(S): C-0214-96 & C-0252-96	
O/O NAME: Shell Oil Products US			
O/O STREET ADDRESS: 603 Diehl Road, Naperville		STATE: IL	ZIP: 60563
CONTACT PERSON: John Robbins		PHONE NUMBER: (630) 276-4206	

**ANSWER ALL QUESTIONS (DO NOT LEAVE BLANKS):**

1. a. Has the UST been emptied? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If no, explain why): Currently Active	
b. Has the UST system been properly closed? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If no, explain why): Currently Active	
2. Free product present: a. Currently? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If YES, total gallons recovered since last report:	
b. Previously? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If YES, total gallons recovered to date:	
3. Have vapors been identified in any confined spaces (basement, sewers, etc.)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
4. State the number of homes where drinking water is or was affected as a result of a release from this facility: Zero	
5. Estimated distance and direction from point of release to nearest:	
a. Private well: 150 feet South	b. Municipal well: >1/2 Radial Mile
c. Surface water/wetland: >1/2 Mile North	
6. Since last report: a. cubic yards of soil remediated: Zero	
b. gallons of groundwater remediated: Zero	
7. Totals to date: a. cubic yards of soil remediated: 40 yd <sup>3</sup>	
b. gallons of groundwater remediated: Zero	
8. Michigan RBCA Site Classification (1-4): 4	
Previous RBCA Site Classification (1-4): 3	
9. Has contamination migrated off-site above Tier 1 Residential RBSLs <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If YES, have off-site impacted parties been notified (per Section 21309a(3) of Part 213) <input type="checkbox"/> YES <input type="checkbox"/> NO	
10. Is an institutional control required for contamination that has migrated or will migrate off-site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
11. MTBE	Has MTBE been detected in any groundwater sample? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Maximum concentration of MTBE found in ground water: 2 ppb.	

**CERTIFICATION OF REPORT COMPLETION**

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate, and complete. I certify that the report was submitted to the Remediation & Redevelopment Division (RRD) on 8/24/04 (Date submitted REQUIRED)

Kirk Pompilius  
 CP Original Signature - (REQUIRED)  
 PRINT CP's Name  
 CP ID: 894

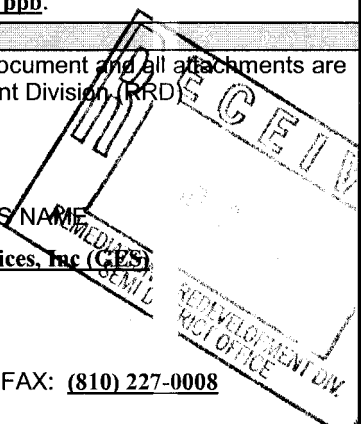
8/24/04  
 Date

Jeffrey Berntsen  
 PRINT QC PROJECT MANAGER'S NAME  
Groundwater & Environmental Services, Inc (GES)  
 NAME OF CONSULTING FIRM  
 QC ID: Z0345

ADDRESS: 9436 Maltby Road, Brighton, MI 48116

PHONE: (810) 227-0002

FAX: (810) 227-0008



**CERTIFICATION OF CLOSURE**

1. Type of RBCA Evaluation: <input checked="" type="checkbox"/> Tier 1 <input type="checkbox"/> Tier 2 <input type="checkbox"/> Tier 3	
2. Closure report based on which type of land use?: <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial III <input type="checkbox"/> Commercial IV <input type="checkbox"/> Industrial	
3. Institutional Controls: <input type="checkbox"/> None <input type="checkbox"/> Notice of Corrective Action <input checked="" type="checkbox"/> Restrictive Covenant <input type="checkbox"/> Other	

I certify under penalty of law that corrective actions associated with the above referenced release at this facility were completed in accordance with Part 213, 1994 PA 451, as amended, and current departmental guidance and procedures available at the time the work was completed. I further certify 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 directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

CP Signature - (REQUIRED) [Signature]

Date 8/26/04

**Instructions** - Utilize the following checklist to ensure that all required information is provided in the Closure Report. Include this checklist as the table of contents. The order in which the information is provided is at your discretion. Each page of the report (including the cover sheet, table of contents, appendices, figures, etc.) should be consecutively numbered. The location column should be completed with the appropriate page number for each item. You may reference previously submitted materials by specifying the location within that document. Maps, tables, figures, etc. should be combined as appropriate.

All information required by Part 213 to be included in the Closure Report **must** be provided, and all sections of the report must be completed. If any items are not applicable to the site, provide a justification regarding the absence of this information in the appropriate section of the report.

**If an Initial Assessment Report (IAR) and/or a Final Assessment Report (FAR) have not been submitted for this release, provide all required information from the IAR and/or FAR not included below.**

Section	Table of Contents	Page
---------	-------------------	------

**1.0 PROJECT CHRONOLOGY**

- |   |   |
|---|---|
| A. Provide the date and time the confirmed release(s) was/were discovered and reported. | 1 |
| B. Provide the IAR submittal date.  | 1 |
| C. Provide the FAR submittal date.  | 1 |
| D. Provide dates for any other submittals.  | 1 |

**2.0 SUMMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED**

**2.1 IMMEDIATE RESPONSE ACTION IMPLEMENTATION**

If an IAR has not been previously submitted, provide all information requested in Section 1.0 of the IAR	2
--	---

**2.2 FREE PRODUCT DISCOVERY AND REMOVAL**

**If free product has not been discovered, then proceed to Section 2.3.**

- |  |   |
|--|---|
| A. Describe initial response actions performed at this site to address the presence of free product as specified in Sections 21307(2)(c) and (f), and (3)(b) and (c), 21308a(1)(b)(xviii). Refer to the Storage Tank Division Operational Memorandum No. 7, <i>Identification, Reporting, and Recovery of Free Product at LUST Sites</i> . | 2 |
| B. Attach a final RRD Free Product Recovery Status Report (EQP 3850) if not previously submitted.  | 2 |

**2.3 SITE ASSESSMENT ACTIVITIES**

- |  |   |
|--|---|
| A. If an IAR has not been previously submitted, provide all information requested in Section 3.0 of the IAR. | 2 |
| B. If a FAR has not been previously submitted, provide all information requested in Section 2.0 of the FAR.  | 2 |

**2.4 SITE CLASSIFICATION**

- |   |   |
|---|---|
| A. Indicate the current Site Classification Level, in accordance with Storage Tank Division Operational Memorandum No. 5, <i>Leaking Underground Storage Tank (LUST) Site Classification System</i> . | 6 |
| B. Provide a justification for this classification. Identify the current conditions that are the  | 6 |

basis of the classification.

- C. Indicate whether the site classification has changed since the submission of the last report.

6

## 2.5 TIERED EVALUATIONS AND CLEANUP GOALS

- A. Indicate whether a site-specific Tier II or Tier III evaluation has been conducted for this site.

8

- B. If applicable, identify and justify where alternate assumptions or site-specific information were used in place of the default assumptions as defined in the Storage Tank Division Operational Memorandum No. 4, *Tier 1 Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank (LUST) Sites*.

8

**NOTE: If a Tier II evaluation was performed and described in the IAR or the FAR, explicitly indicate where different assumptions or site-specific information were used in this Tier II or Tier III evaluation and why the change was justified.**

- C. Provide the calculations and reference citations supporting the development of the relevant Tier II or Tier III SSTLs.

10

- D. Provide a table which compares the maximum remaining contaminant concentrations for each required parameter for all media to the appropriate RBSLs (as provided in the Storage Tank Division Operational Memorandum No. 4), and/or the calculated SSTLs. Identify all applicable land use scenario(s).

Appendix C

## 2.6 MODELING

Provide all modeling documentation. Refer to the Storage Tank Division Operational Memorandum No. 10 *Presentation of Tier 2 and 3 Groundwater Modeling Evaluations*.

11

## 2.7 NOTICES AND RESTRICTIONS

**If the closure does not require the use of institutional controls to restrict land or resource use, then proceed to Section 2.8.**

**NOTE: Draft copies of all Restrictive Covenants and Notices of Corrective Action for off-site institutional controls must be submitted to the RRD for approval prior to filing.** Refer to Storage Tank Division Operational Memorandum No. 12, *Institutional Controls and Public Notice Requirements and Procedures*.

11

- A. Submit copies of all notices or restrictions which have been filed, and provide proof of filing these notices or restrictions. If the person filing is not the property owner, attach a copy of the written permission for the filing from the property owner.
- B. Identify the individuals or segments of the public which have been provided with notice of the proposed land use restrictions or limitations to be placed on resource use. Include the names and addresses of the affected parties (unless large segments of the public will be provided notice, e.g., users of a municipal water supply system). Include proof that notice was provided to the affected parties.

11

- C. Provide a map depicting the location(s) of the individuals or segments of the noticed public.

11



D. Describe any alternate mechanism utilized to restrict exposure to regulated substances as defined in Section 324.21310a(3), and justify how this mechanism reliably restricts exposure to the regulated substances.	12
--	----

**2.8 PERMITS**

List all discharge permits and/or permit exemptions that were required for the corrective action, and include the type of permit, permit number, application date, approval date and termination date.	11
--	----

**2.9 CORRECTIVE ACTION PLAN**

A. Summarize the corrective action activities that resulted in release closure. Include the operating history of any active treatment systems.	12
--	----

B. Summarize the types of monitoring activities performed, including the media and parameters monitored.	12
--	----

C. Attach performance monitoring data.	12
--	----

D. Describe and justify changes to the previously submitted Corrective Action Plan.	12
---	----

E. Provide the total volume of soil remediated, and include disposal location and proof of disposal (e.g., invoices, not load tickets) for all soils excavated subsequent to submittal of the last report, if appropriate.	12
--	----

F. Provide the total volume of groundwater actively remediated to date, and include disposal documentation, if appropriate.	12
---	----

**3.0 CLOSURE VERIFICATION SAMPLING**

**3.1 SOIL CLOSURE VERIFICATION**

**NOTE: Verification sampling must be conducted whenever contaminated soils are identified but not remediated, including when contaminated soil is returned to an excavation after the removal of a UST.**

A. Describe the soil verification sampling strategy applied at the site by providing the following:	
1. A scaled site map which identifies the former extent of the soil contamination, and the soil verification sampling locations relative to existing site features. <i>(Multiple chemical contaminants and multiple sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)</i>	Appendix A

2. For a corrective action involving excavation, a scaled drawing(s) showing the floor and walls of the excavation and the associated sampling locations. The drawing should also depict the subsurface stratigraphy, soil types, fractures, discolored soil locations, adjoining conduits or potential migration pathways, and locations of former and existing UST system components, as appropriate.	Appendix A
---	------------

3. A description of how the number and location of samples collected for soil verification purposes was established. If your sampling strategy differs from the	
---	--

MDEQ *Verification of Soil Remediation Guidance Document* and Storage Tank Division Operational Memorandum No. 9, *Groundwater and Soil Closure Verification Guidance*, provide justification.

12

4. A list of the analytical parameters used to verify the soil remediation.
5. A justification if all soil verification samples were not analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*.

12

12

- B.** Provide a table with laboratory data showing the results of all verification soil sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational memorandum No. 14 *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*. The table should include the following:

**Appendix B**

1. Sample ID
2. Sample depth
3. Date of collection
4. Dates of extraction and analysis
5. Method Detection Limits
6. Analytical method

*(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

- C.** Provide copies of all soil boring logs not previously submitted.

**Appendix C**

### 3.2 GROUNDWATER CLOSURE VERIFICATION

- A.** Describe the groundwater verification sampling strategy applied at the site by providing the following:

13

1. A scaled site map which identifies the former extent of groundwater contamination, the groundwater verification sampling locations relative to existing site features, and the groundwater flow direction(s). *(Multiple chemical contaminants and multiple aquifer/sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility.)*
2. A description of how the sampling frequency and duration of sampling for groundwater verification purposes was established. If your sampling strategy differs from the Storage Tank Division Operational Memorandum No. 9.
3. A list of the analytical parameters used to verify groundwater closure
4. A justification if all groundwater verification samples were not analyzed, preserved, and handled in accordance with the Storage Tank Division Operational Memorandum No. 14 *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*.

- B.** Provide a table with laboratory data showing the results of all verification groundwater sampling performed to date for the required parameters. Refer to the Storage Tank Division Operational Memorandum No. 14 *Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases*. The table should include the following:

**Appendix B**

1. Sample ID
2. Sampling depth or screened interval
3. Date of collection

- 4. Dates of extraction and analysis
- 5. Method Detection Limits
- 6. Analytical method


*(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

- C. Attach copies of the following:**
- 1. Boring logs not previously submitted.
  - 2. Well construction diagrams not previously submitted.
  - 3. Potentiometric surface maps for each groundwater verification sampling event.
  - 4. Elevation data (USGS datum preferred), including top-of-casing and grade elevations, and depth to groundwater for each groundwater verification sampling event.

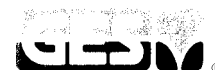
**Appendix B**


**3.3 CLOSURE VERIFICATION FOR OTHER MEDIA**

- A.** Describe the verification sampling strategy for other media applied at the site.
- B.** Provide a scaled site map which identifies the verification sampling locations relative to existing site features and boundaries, if appropriate.
- C.** Provide a table with the laboratory data showing the results of all verification sampling performed to date in the other specified environmental media.

13
13
13

*(NOTE: The RRD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*



## 1.0 PROJECT CHRONOLOGY

Groundwater & Environmental Services, Inc. (GES) was retained by Shell Oil Products US (Shell) to prepare this Tier 1 Commercial III Closure Report to address the two confirmed releases (C-0214-96 & C-0252-96) at the former Shell branded retail gasoline service station located at 975 Rochester Road in Rochester Hills, Oakland County Michigan (site).

### 1.1 Confirmed Releases

On April 8, 1996, a confirmed waste oil release was reported to the MDEQ following a failed tightness test on the on-site waste oil UST. Later, on April 25, 1996, a confirmed unleaded gasoline release was reported to the MDEQ – Storage Tank Division (STD) following the discovery of hydrocarbon-impacted soils encountered during on-site UST system upgrade and replacement activities.

### 1.2 Site Description

The site is currently a Shell branded retail gasoline station located at the northeast corner of the intersection of Rochester and Avon Roads in Rochester Hills, Michigan. The site currently operates as a retail gasoline station and is surrounded by commercial properties. The predominant site feature is a masonry brick building located within the northeast corner of the parcel.

The gasoline UST system, located directly south and west of the site building, consists of following components:

- One (1) 10,000-gallon fiberglass-lined steel unleaded gasoline UST;
- One (1) 10,000-gallon fiberglass unleaded gasoline UST;
- One (1) 6,000-gallon steel unleaded gasoline UST;
- Four (4) multi-product dispensers (MPDs) on two (2) islands;
- Rigid fiberglass petroleum product piping supplying the MPDs;
- Tank vent piping; and
- A 1,512 ft<sup>2</sup> steel canopy over the two islands.

Refer to Appendix A for a site map with prominent site features including the site building and UST system layout.

### 1.3 Site History and Previous Report Submittals

An Initial Assessment Report (IAR) was submitted to the MDEQ, on Shell's behalf, on July 5, 1996. A FAR was submitted to the MDEQ, on behalf of Shell, on April 8, 1997. Most recently, GES, on behalf of Shell, submitted a Groundwater Monitoring / Site Status Report to the MDEQ on January 23, 2003.



## 2.0 SUMMARY OF CORRECTIVE ACTIONS PERFORMED

### 2.1 Immediate Response Activities

Immediate response activities performed on-site addressing the confirmed unleaded gasoline and waste oil releases are discussed in detail in the July 5, 1996, IAR.

### 2.2 Corrective Actions Performed

Corrective actions performed on-site addressing the confirmed unleaded gasoline and waste oil releases are discussed in detail in the July 5, 1996, IAR. Recently, GES has completed several groundwater monitoring events, installed five (5) monitoring wells, and drafted a Restrictive Covenant and Notices of Corrective Action.

Refer to Appendix C for the restrictions and notices.

### 2.3 Free Product Discovery and Removal

According to a review of previous site data, no free product has been discovered on-site.

### 2.4 Site Assessment Activities

#### 2.4.1 *Scaled Site Maps*

Refer to Appendix A, for a scaled site map.

#### 2.4.2 *Site Geology*

Soil conditions documented in previously completed regulatory reports as well as those encountered by GES during the January 2003 monitoring well installation activities consist primarily of coarse, sand-based fill material extending from directly beneath the surface pavement to approximately 4-feet below surface grade (BSG), underlain by silty firm clay to approximately 15-feet BSG. The maximum explored depth on-site is approximately 16-feet BSG.

Refer to the March 4, 2003, FAR, Appendix A, for cross section diagrams and Appendix B, for boring log diagrams.

#### 2.4.3 *Evaluation of Horizontal and Vertical Delineation of Soil*

To accurately determine the current horizontal and vertical extent of hydrocarbon distribution on-site, GES evaluated laboratory analytical data generated from on- and off-site soil and groundwater samples, as presented in previously submitted reports. Additionally, GES also evaluated recent data generated for the soil and groundwater samples collected in 2002 and 2003. Moreover, to further evaluate complete

delineation, GES conducted a direct comparative analysis between the laboratory data and the Tier 1 Residential and Commercial Risk Based Screening Levels (RBSLs) per MDEQ Operational Memorandum No. 4, Revision 5, dated June 2000. Refer to Appendix B for analytical data tables developed to present the soil and groundwater data generated for samples collected by GES in 2002 and 2003.

For the purposes of this report, GES evaluated the current horizontal and vertical distribution of hydrocarbons, both on- and off-site, using those data generated from the 10 soil and 9 groundwater samples collected from borings installed under the direct supervision of GES in November 2002 and January 2003, respectively. These samples were analyzed for MDEQ Unleaded Gasoline (ULG) parameters by GC/MS, Method SW8260B. This analysis targets the following compounds:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Methyl tertiary-butyl ether (MTBE);
- 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene (TMBs);
- Naphthalene; and
- 2-Methylnaphthalene.

Review of the laboratory analytical data summaries prepared for these samples reveals complete vertical delineation has been achieved, as all hydrocarbon concentrations detected in soil samples collected deeper than 12-feet BSG do not exceed the applicable MDEQ Tier 1 Residential RBSLs. Refer to the following Section 2.6 Tiered Evaluation and Cleanup Goals for a discussion of the selection and determination of applicable screening levels.

Further review also reveals complete horizontal on-site delineation has been achieved based on an evaluation of the analytical data obtained from soil samples collected from MW-5, MW-9, MW-10, MW-12, and MW-13. According to this evaluation, detected hydrocarbon concentrations do not exceed the applicable Residential RBSLs.

Furthermore, those concentrations detected in soil samples collected from locations in close proximity to adjoining utility corridors and corresponding property boundaries do not exceed the Tier 1 Residential RBSLs, also per the above mentioned MDEQ Operational Memorandum Number 4.

#### 2.4.4 *Groundwater Conditions and Characteristics*

GES assumed environmental consulting services at the site in January 2001. Upon review of the historical site data, GES recognized consistently elevated dissolved phase concentrations detected in groundwater samples collected from MW-2, MW-3, MW-4, and MW-5 as compared to other data obtained from other on-site monitoring wells. Furthermore, previous site investigations also indicated a southern groundwater flow direction. Consequently, in May 2001 and April 2002, GES



sampled all existing on-site monitoring wells to evaluate current groundwater conditions on-site, particularly those well locations in close proximity to the southern property boundary. Review of the groundwater analytical data indicated that dissolved concentrations at MW-2, MW-3, and MW-4 remained elevated above the Tier 1 Residential Drinking Water and Groundwater / Surface Water Interface RBSLs. Therefore, on November 12, 2002, GES supervised the installation and construction of five (5) monitoring wells, designated MW-9, MW-10, MW-11, MW-12, and MW-13 to delineate those concentrations detected along the southern property boundary.

Specifically, the following monitoring wells were installed in the following locations to serve the following purposes:

- MW-9 and MW-10 were installed on-site to confirm eastern and western delineation of concentrations detected in MW-2, MW-3, MW-4, and MW-5;
- MW-10 and MW-11 were installed along the southern property boundary and within the northern Avon Road right-of-way, respectively, to evaluate contaminant migration into and along the public utility corridor located therein; and
- MW-12 and MW-13 were installed within Avon Road's southern right-of-way to confirm the southern delineation of concentrations detected in MW-4 and MW-5.

On January 22, 2003, GES sampled MW-2, MW-3, MW-4, MW-5, MW-9, MW-10, MW-11, MW-12, and MW-13. A detailed review of the laboratory analytical data generated from groundwater samples collected from these locations indicates that complete southern, eastern, and western delineation was achieved as hydrocarbon concentrations in groundwater samples collected from MW-10, MW-11, MW-12, and MW-13 do not exceed the MDL. Furthermore, on February 20, 2003, GES surveyed and gauged on- and off-site monitoring wells and confirmed a south / southeast groundwater flow direction.

Refer to Appendix A for a site map. Refer to Appendix B for updated soil and groundwater analytical data tables. Refer to the March 4, 2003 FAR, Appendix B, for soil boring and monitoring well diagrams.

To evaluate groundwater conditions on-site, GES reviewed information provided in the 1997 FAR, prepared on behalf of Shell by Enecotech Midwest, Inc., addressing the 1996 confirmed releases. In addition, GES also reviewed current data obtained from the recently installed monitoring wells MW-9 through MW-13. Based on historical site information as presented in the 1997 FAR, the following groundwater characteristics were determined:



- Hydraulic Conductivity:  $1 \times 10^{-6}$  cm/sec
- Lateral Hydraulic Gradient: 0.02 ft/ft
- Effective Flow Rate: 0.1 ft/yr
- Predominant Saturated Soil Type: Silty sand
- Effective Porosity:  $0.15 \text{ cm}^3 \text{ void/cm}^3 \text{ soil}$

Review of the well construction diagrams prepared for all previously and recently constructed on-site monitoring wells indicates each well was properly completed with properly screened intervals based upon the documented soil conditions encountered at those specific locations, as presented in the diagram.

Refer to the March 4, 2003, FAR for soil boring and monitoring well logs.

According to elevation data obtained from MW-3, MW-4, MW-5, MW-9, MW-10, MW-11, MW-12, and MW-13 in February 2003, GES has determined on-site groundwater flows in a southeastern direction.

Based on a review of available site information, including previously submitted reports, regional water well records, and field observations made during the recent monitoring well installation activities, **GES considers on-site groundwater to be laterally extensive, but not in communication with the deeper, potable zones identified in regional water well records.** The following characteristics aid in justification:

- A review of regional water well records indicates that a continuous confining clay layer underlay the general vicinity from approximately 9 to 70-feet BSG. The groundwater encountered on-site is not likely to be in direct communication with a deeper aquifer; and
- Regional drinking water wells are constructed with screen intervals ranging between 120 and 147-feet BSG. GES has no indication that these water wells are producing potable supplies from the shallow, impacted groundwater zone on-site.

According to the MDEQ Drinking Water and Radiological Protection Division, the site is not located within a current wellhead protection zone. Municipal water supplies the site. Finally, according to the Oakland County Health Department personnel, no crock wells are located in the site's vicinity.

Based on these characteristics, on-site groundwater is considered to be perched, non-communicative with the deeper water bearing strata, and cannot be considered a potable groundwater pathway as defined by MDEQ Part 213 Operational Memorandum No. 11.

Refer to the March 4, 2003 FAR, Appendix C, for regional water well logs.





## 2.5 Site Classification

The previous site classification was Class 4, per the 1997 FAR, completed by Enecotech, on behalf of Shell. However, given current site conditions, GES considers the site to fulfill the Class 3 requirements per the draft Operational Memorandum No. 5, dated 07/10/95, and revised 08/28/2002, as drafted.

***Therefore, site conditions do not demonstrate a long-term threat to human health, safety, or sensitive environmental receptors.***

Refer to the previous Section 2.4.4 *Groundwater Conditions and Characteristics* for a detailed discussion of on-site groundwater.

## 2.6 Tiered Evaluation and Cleanup Goals

### 2.6.1 *Transport Mechanisms Evaluation/Elimination – Soil and Groundwater*

GES evaluated potential transport mechanisms and exposure pathways to identify potential hydrocarbon migration pathways that may present a potential risk to a receptor. The following Exhibit A summarizes this evaluation.

Refer to the following page 7.



**Exhibit A  
Potential Sources, Transport Mechanisms, and Exposure Pathways**

***Impacted Surface Soil (<2 feet depth)***

Transport Mechanisms	Exposure Pathways	Applies to Site	Complete Pathway
Direct Contact	Soil, Dermal Contact/Ingestion/Absorption	NO <sup>1,2</sup>	NO <sup>1,2</sup>
Wind Atmospheric Dispersion	Soil Ingestion/Absorption	NO <sup>1,2</sup>	NO <sup>1,2</sup>
Volatilization and Atmospheric Dispersion	Inhalation	NO <sup>1</sup>	NO <sup>1</sup>
Volatilization and Enclosed-Space Accumulation			
Leaching and Groundwater Transport	Ingestion/Use	NO <sup>1,3</sup>	NO <sup>1,3</sup>

***Impacted Subsurface Soil (>2 feet depth)***

Transport Mechanisms	Exposure Pathways	Applies to Site	Complete Pathway
Volatilization and Atmospheric Dispersion	Inhalation	YES <sup>4</sup>	NO <sup>4</sup>
Volatilization and Enclosed-Space Accumulation			
Leaching and Groundwater Transport	Ingestion/Use	NO <sup>3</sup>	NO <sup>4</sup>
Utility Worker	Direct Contact	YES <sup>4</sup>	NO <sup>4</sup>

***Dissolved Groundwater Plume***

Transport Mechanisms	Exposure Pathways	Applies to Site	Complete Pathway
Volatilization and Atmospheric Dispersion	Inhalation	NO <sup>3</sup>	NO <sup>3</sup>
Volatilization and Enclosed-Space Accumulation			
Utility Worker	Direct Contact	NO <sup>3</sup>	NO <sup>3</sup>
Groundwater Exposure	Ingestion	YES <sup>3</sup>	NO <sup>3</sup>

***Free-Phase Liquid Plume***

Transport Mechanisms	Exposure Pathways	Applies to Site	Complete Pathway
Volatilization and Atmospheric Dispersion	Inhalation	NO <sup>5</sup>	NO <sup>5</sup>
Volatilization and Enclosed-Space Accumulation			
Leaching and Groundwater Transport	Ingestion/Use	NO <sup>3,5</sup>	NO <sup>3,5</sup>
Mobile Free-Phase Liquid Migration	Direct Contact	NO <sup>5</sup>	NO <sup>5</sup>

***Groundwater – Surface Water Interface***

Transport Mechanisms	Exposure Pathways	Applies to Site	Complete Pathway
Volatilization and Atmospheric Dispersion	Inhalation	NO <sup>3</sup>	NO <sup>3</sup>
Volatilization and Enclosed-Space Accumulation			
Direct Contact with Surface Water/Perched Groundwater Transport	Recreational/Direct Contact/Ingestion	NO <sup>3,6</sup>	NO <sup>3,6</sup>

- 1) All site soils covered with bituminous and/or concrete pavement. Restrictive Covenant will provide specific requirements for compliance.
- 2) Absence of stockpiled or uncovered impacted soils on-site.
- 3) Detected groundwater concentrations exceed the Tier 1 Drinking Water RBSLs but do not exceed the Tier 1 Volatilization to Indoor Air or Groundwater Contact RBSLs.
- 4) Detected concentrations exceed the Tier 1 Residential Soil Volatilization to Indoor Air and Direct Contact RBSLs.
- 5) No free product has been encountered on-site.
- 6) The nearest surface water source is greater than 1/2 radial mile from the site.



### 2.6.2 Tier 1 Analysis – Soil

For the purposes of this report, GES conducted a Tier 1 analysis of on-site adsorbed hydrocarbon concentrations detected in soil samples collected from the recently completed MW-9, MW-10, MW-11, MW-12, and MW-13. These soil samples were analyzed for the presence of the following compounds:

- BTEX;
- MTBE;
- Naphthalene;
- 2-Methylnaphthalene; and
- TMBs.

Furthermore, refer to the information presented in the April 8, 1997, FAR completed on behalf of Shell by Enecotech, for details concerning evaluations of previously collected samples during historical investigative activities.

As presented in the previous Exhibit A, GES identified the following two soil exposure pathways and used them to select the appropriate RBSLs:

1. Volatilization to Indoor Air
2. Direct Contact with Soil

According to the City of Rochester Hills Planning and Zoning Department, the property is currently zoned B-3 Auto Service. The site is also currently surrounded by commercial properties. However, given the close proximity of previously detected elevated hydrocarbon concentrations to the southern property boundary, GES evaluated those hydrocarbon concentrations detected in soil samples collected from MW-9, MW-10, MW-11, MW-12, and MW-13 using the Residential Drinking Water Protection and Groundwater / Surface Water Interface Protection RBSLs per the MDEQ Part 213 Operational Memorandum No. 4, Attachment 2, Revision 5, dated June 2000. Furthermore, information presented in the April 8, 1997, FAR indicates that those concentrations detected in previously collected on-site soil samples did not exceed the Residential RBSLs.

Review of the analytical data summaries generated for the soil samples collected from MW-9, MW-10, MW-11, MW-12, and MW-13 indicate that only naphthalene, 2-methylnaphthalene, and 1,2,4 trimethylbenzene concentrations were detected in excess of the laboratory method detection limit (MDL) at MW-9. GES then compared these detected concentrations to the applicable Tier 1 Residential Drinking Water Protection and GSI Protection RBSLs. Furthermore, a review of hydrocarbon concentrations detected in samples collected during previous investigations reveals concentrations exceeding the applicable Tier 1 Residential and Commercial III RBSLs. However, the properly filed Restrictive Covenant provides for the complete excavation and proper disposal; of soils impacted by these concentrations and



likewise, eliminates the potential exposure pathway associated with those concentrations. Additionally, lead, cadmium and chromium concentrations detected in on-site soil samples exceeding the statewide background levels do not exceed the applicable Tier 1 Commercial II RBSLs.

Refer to Appendix C for the Restrictive Covenant and the specific provisions detailed therein.

***Based on this comparative analysis detected hydrocarbon concentrations do not exceed the applicable Tier 1 Commercial III RBSL.***

Refer to Appendix A for a Site Map. Refer to the April 8, 1997, FAR for a historical soil sample location map. Refer to Appendix B for soil analytical data tables.

#### 2.6.4 Tier 1 Analysis – Groundwater

GES conducted a Tier 1 analysis of on-site dissolved hydrocarbon concentrations detected in groundwater samples collected from MW-2, MW-3, MW-4, MW-5, MW-9, MW-10, MW-11, MW-12, and MW-13. These groundwater samples were analyzed for the presence of the following compounds:

- BTEX;
- MTBE;
- Naphthalene;
- 2-Methylnaphthalene; and
- TMBs.

Refer to Appendix A for a site map with monitoring well locations and groundwater monitoring maps. Refer to Appendix B for groundwater analytical data tables.

As presented in the previous Exhibit A, GES identified the following two groundwater exposure pathways and used them to select the appropriate RBSLs:

1. Volatilization to Indoor Air
2. Direct Contact with Groundwater

Given the close proximity of previously detected elevated hydrocarbon concentrations to the southern property boundary, GES evaluated those hydrocarbon concentrations detected in groundwater samples collected from MW-2, MW-3, MW-4, MW-5, MW-9, MW-10, MW-11, MW-12, and MW-13 using the Residential Drinking Water and Groundwater / Surface Water Interface RBSLs per the MDEQ Part 213 Operational Memorandum No. 4, Attachment 2, Revision 5, dated June 2000.



Review of the laboratory analytical data summaries generated for on-site groundwater samples collected on March 11, 2004, revealed dissolved BTEX, MTBE, naphthalene, 2-methylnaphthalene, and TMBs concentrations exceeding the laboratory method detection limit (MDL) in groundwater samples collected from MW-2, MW-3, and MW-4. GES then compared these detected concentrations to the Tier 1 Residential RBSLs.

Hydrocarbon concentrations detected in samples collected from MW-2, MW-3, and MW-4 exceed the Residential Drinking Water and Groundwater / Surface Water Interface RBSLs per the MDEQ Part 213 Operational Memorandum No. 4, Attachment 2, Revision 5, dated June 2000. However, these concentrations do not exceed the applicable Commercial III Volatilization to Indoor and Groundwater Contact RBSLs. Moreover, samples collected from down gradient MW-11, MW-12, and MW-13 do not exceed the MDL.

***Based on this direct comparative analysis, dissolved hydrocarbon concentrations detected in on-site groundwater samples do not exceed the applicable Tier 1 Commercial III RBSLs.***

#### *2.6.5 Tier 2 Evaluation - Soil*

A Tier 2 analysis of on-site soil conditions is not necessary, as detected adsorbed hydrocarbon concentration do not exceed the applicable Tier 1 Residential RBSLs.

#### *2.6.6 Tier 2 Evaluation - Groundwater*

A Tier 2 analysis of on-site soil conditions is not necessary, as detected dissolved hydrocarbon concentration do not exceed the applicable Tier 1 RBSLs.

#### *2.6.7 Utility Corridor Evaluation*

Public utility corridors are located within the eastern right-of-way of Rochester Road, along the western property boundary and within the northern right-of-way of Avon Road, along the southern property boundary.

Municipal water enters the property at the western property boundary from Rochester Road near the northwest property corner, into the western building wall, nearest the northwest building corner. Gas utilities enter the site at the southern property boundary from Avon Road near the southeast property corner, into the northern building wall, nearer the northwest building corner. The sanitary sewer enters the site at the western property boundary from Rochester Road near the northwest property corner, into the western building wall, nearest the northwest building corner. The overhead electric utility enters the site from a pole located along the northern property boundary near the northeast corner of the property.



The following table summarizes these recognized utility corridors:

Utility	Relative Utility Locations	Approximate Depth in Feet Below Surface Grade
Water	From the eastern Rochester Road right-of-way at western property boundary into western building wall	5-feet
Gas	From the northern right-of-way of Avon Road at southern property boundary into northern building wall	4.5-feet
Electric	Overhead from the north property boundary	NA
Sanitary Sewer	From the eastern Rochester Road right-of-way at western property boundary into western building wall	5-feet

Refer to Appendix A, for a Site Map with utility locations and the corresponding depths thereof.

Furthermore, the sanitary sewer, identified under Avon Road, is likely not impacted by hydrocarbons originating on-site as all recognized utility corridors within both the northern and southern Avon Road rights-of-way have not been impacted or have been proven to not be a migratory pathway.

#### 2.7 Modeling

No modeling was necessary to demonstrate closure.

#### 2.8 Notices and Restrictions

A properly executed Restrictive Covenant, following the deed in perpetuity, has been filed with the Oakland County Register of Deeds. Furthermore, a Notice to Local Units of Government of Land Use Restrictions has been delivered to and received by both the City of Rochester Hills and the Oakland County Health Department.

Refer to Appendix C for copies of the filed Restrictive Covenant, Notices to Local Units of Government of Land Use Restrictions, and the corresponding proof of delivery thereof.

#### 2.9 Permits

No discharge permits or permit exemptions are necessary to obtain closure.



## 2.10 Corrective Action

Corrective Action measures performed in response to the gasoline release consist of the following:

- To date, approximately 40 yd<sup>3</sup> of hydrocarbon impacted soil has been excavated and hauled off-site for proper disposal (refer to the 07/05/1996 IAR for specific information);
- Periodic groundwater sampling demonstrates that completely delineated dissolved hydrocarbons remain below the applicable MDEQ-RRD RBSLs;
- A properly executed Restrictive Covenant filed with the Oakland County Register of Deeds eliminates applicable human exposure routes to detected adsorbed and dissolved hydrocarbons via specific restrictions following the deed in perpetuity; and
- Avon Road serves to eliminate human exposure to dissolved hydrocarbon concentrations as confirmed by a conversation with the Road Commission of Oakland County Programming Department indicating that plans to move or alter the location of that public roadway do not exist

Refer to Appendix D for a statement of confirmation from the Road Commission of Oakland County Programming Department concerning Avon Road.

## 3.0 CLOSURE VERIFICATION SAMPLING

### 3.1 Soil Closure Verification

For the purposes of this report, GES assumes that soil samples collected by previous environmental consultants were collected in general accordance with prevailing MDEQ-RRD requirements and current industry standards.

GES personnel field screened soil samples collected continuously from the ground surface to the terminal depth of each boring. Representative samples were collected at two feet intervals for evaluation using a photo ionization detector (PID), properly calibrated with 100 ppm isobutylene gas, to determine the extent of hydrocarbon impact to subsurface soils as indicated by the highest PID measurement. GES personnel selected the sample exhibiting PID indication of hydrocarbon impact. Where no PID indication was apparent, a sample was collected from the observed vadose zone, immediately above the documented static water level at each boring location. Finally, GES personnel also collected a sample from the terminal depth of each boring to verify vertical delineation. Select soil samples were split into separated portions with one being sealed and placed in an iced cooler pending final selection for submittal and the other being placed into disposable plastic bags to evaluate headspace concentrations for the presence of volatile organic compound (VOC) concentrations using the



PID. Soil samples selected for final laboratory analysis were collected from the sample portion stored in the sealed iced cooler, field preserved with methanol per U.S. Environmental Protection Agency (EPA) SW-846 Method 5035, and immediately returned to the cooler pending laboratory submittal via over night courier to Southern Petroleum Labs (SPL), in Traverse City, Michigan. All samples were relinquished to SPL under Chain-of-Custody for MDEQ ULG Parameters.

*Review of the laboratory analytical data summary reports generated for these soil samples reveals that hydrocarbon concentrations **DO NOT** exceed the applicable MDEQ Part 213 Tier 1 Residential or Commercial III RBSLs.*

### 3.2 Closure Verification for Groundwater

GES personnel collected representative groundwater samples from on- and off-site monitoring wells to verify that detectable dissolved hydrocarbon concentrations do not exceed the applicable MDEQ-RRD RBSLs and remain delineated. Groundwater samples were collected in general accordance with STD Operational Memorandum No. 14 Analytical Parameters and Methods, Sample Handling, and Preservation for Petroleum Releases. For the purposes of this report, GES assumes that groundwater samples collected during previous investigations, conducted by other consultants, were preserved and handled in general accordance with the same. Furthermore, it is also assumed that these groundwater samples were analyzed for BTEX and MTBE per applicable MDEQ guidance at the time of collection and analysis.

*Review of the laboratory analytical data reveals that dissolved hydrocarbon concentrations detected above the MDL **DO NOT** exceed the applicable MDEQ Part 213 Tier 1 Residential or Commercial III RBSLs.*

### 3.3 Closure Verification for Other Media

Sampling of other media such as air, surface water, sediments, and biota was not necessary to demonstrate and obtain closure.





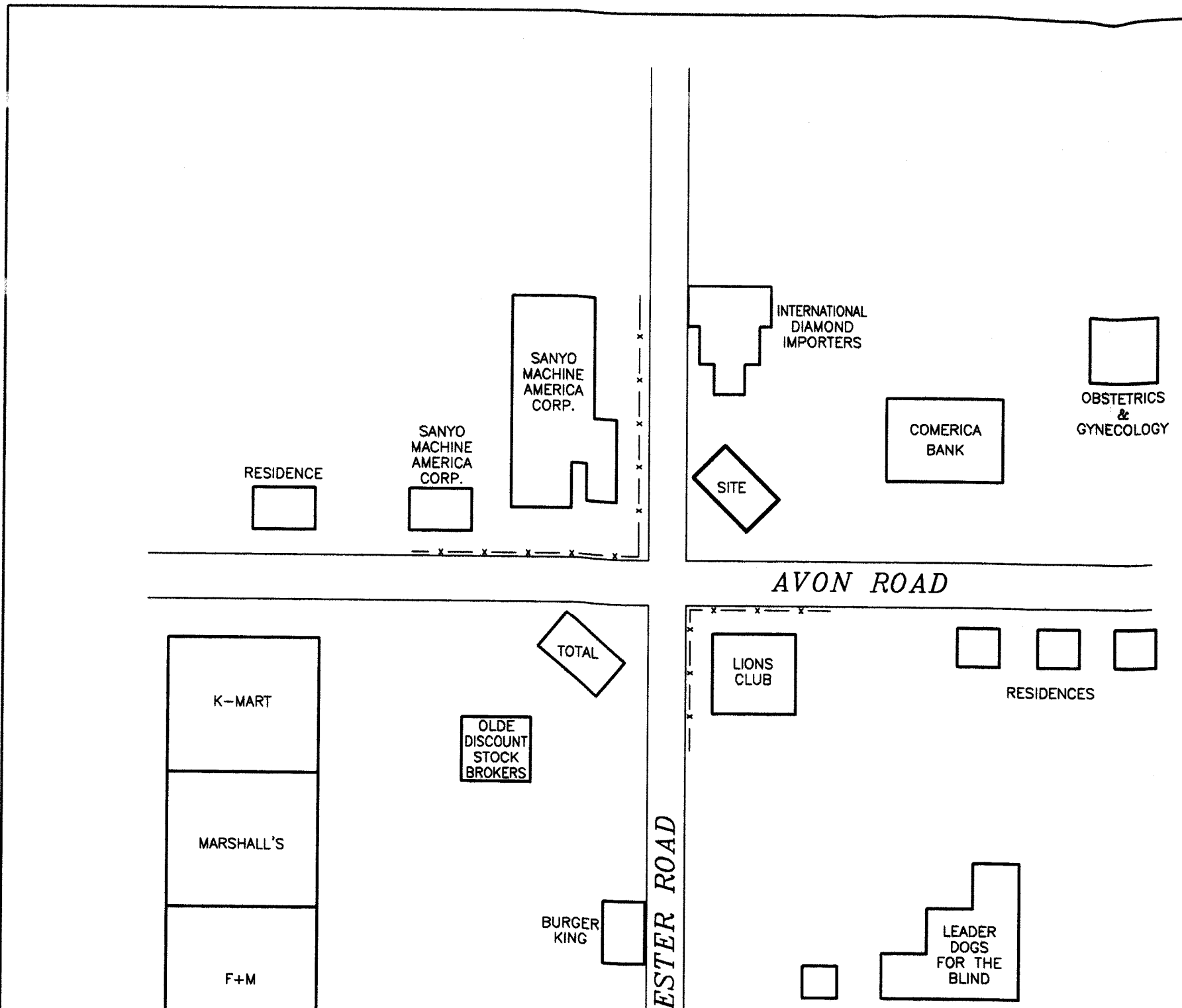
#### 4.0 CONCLUSION

Based on current site conditions, evaluation and elimination of non-pertinent exposure pathways, and completion of a direct comparative analysis between laboratory analytical data and the MDEQ Part 213 Tier 1 Residential and Commercial III RBSLs, GES has determined that current site conditions adequately fulfill all Tier 1 Commercial III Closure requirements based on the following justifications:

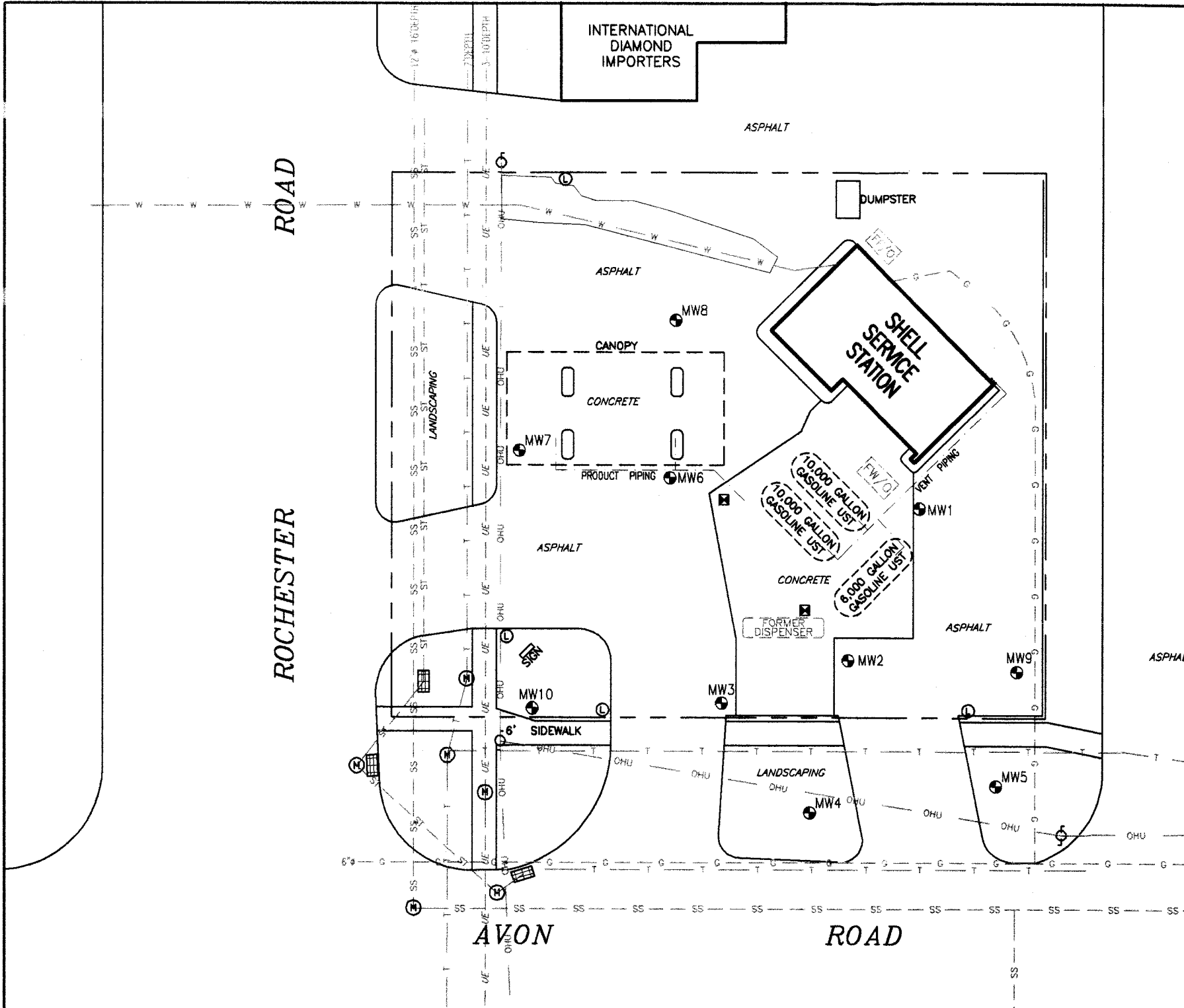
1. Based on a review of available site information, including previously submitted reports, regional water well records, and field observations made during the recent monitoring well installation activities, GES considers on-site groundwater to be laterally extensive, but not in communication with the deeper, potable zones identified in regional water well records;
2. Based on a detailed evaluation of on-site utilities, hydrocarbons have not migrated off-site via these pathways;
3. A properly executed Restrictive Covenant, filed with the Oakland County Register of Deeds, eliminates applicable human exposure pathways by preventing any Residential and Commercial I or II land use development as well as prohibiting the use of on-site groundwater;
4. Adsorbed hydrocarbon concentrations detected on-site do not exceed the applicable MDEQ Part 213 Tier 1 Commercial III RBSLs;
5. Dissolved hydrocarbon concentrations do not exceed the applicable MDEQ Part 213 Tier 1 Commercial III RBSLs;
6. Dissolved hydrocarbon concentrations detected in samples collected from monitoring wells along the southern property boundary exceeding the MDEQ Part 213 Tier 1 Drinking Water and Groundwater Surface Water RBSLs are completely delineated within a limited area directly surrounding the northern edge of Avon Road. The Road Commission of Oakland County Program Department has no plans to move or otherwise alter the location of Avon Road, and thus serves as an adequate engineering control mechanism.

Therefore, GES recommends a **TIER 1 COMMERCIAL III CLOSURE** with no further on-site activity.

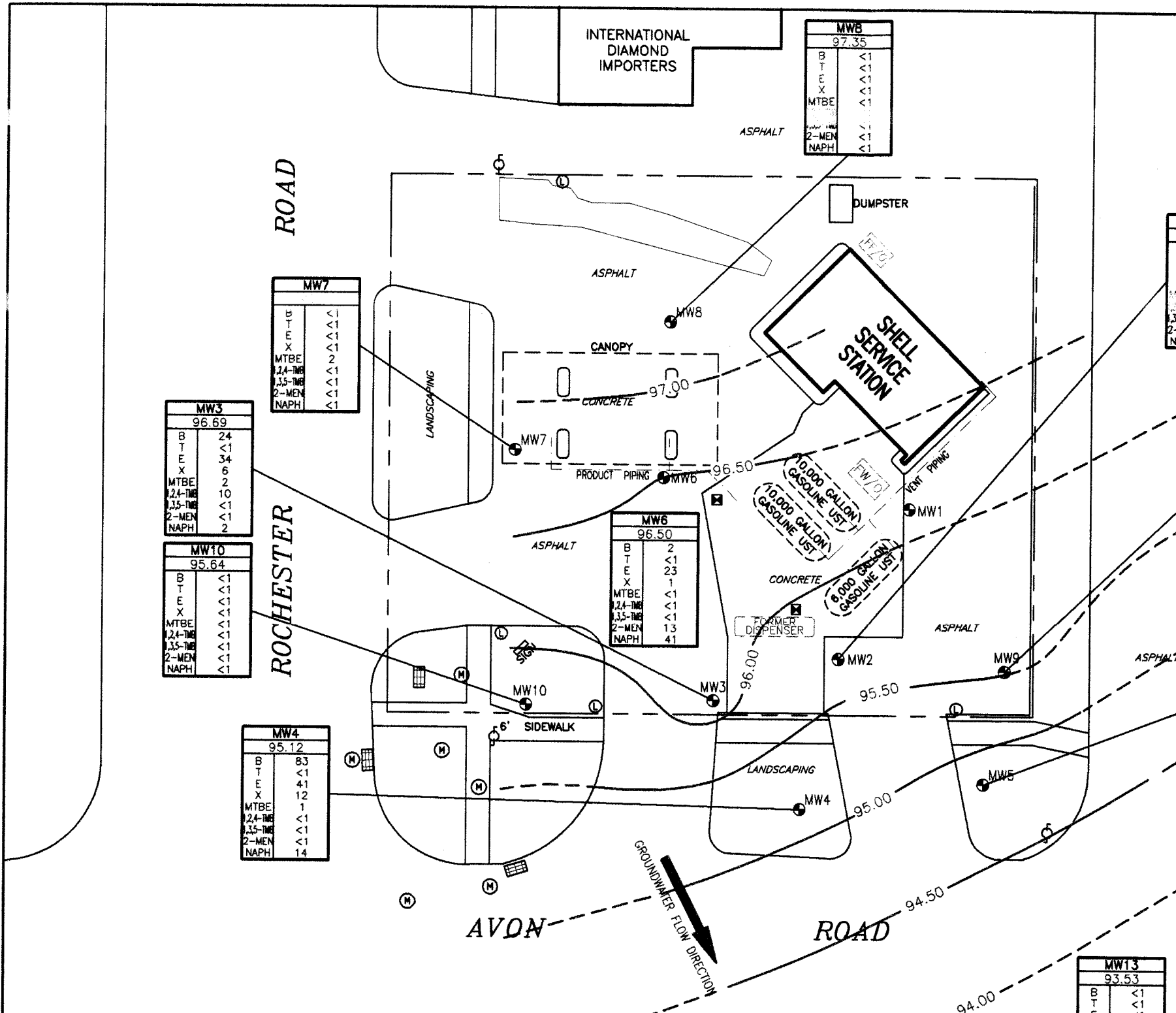
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106983-0100 Rochester Hills6983-0100 rochester hills SM.dwg, 06/15/2004 01:24:37 PM, TMichaelis, Tabloid, 1:30, GES



MW3	
96.69	
B	24
T	<1
E	34
X	8
MTBE	2
2,4-TM	10
3,5-TM	<1
2-MEN	<1
NAPH	2

MW10	
95.64	
B	<1
T	<1
E	<1
X	<1
MTBE	<1
2,4-TM	<1
3,5-TM	<1
2-MEN	<1
NAPH	<1

MW4	
95.12	
B	83
T	<1
E	41
X	12
MTBE	1
2,4-TM	<1
3,5-TM	<1
2-MEN	<1
NAPH	14

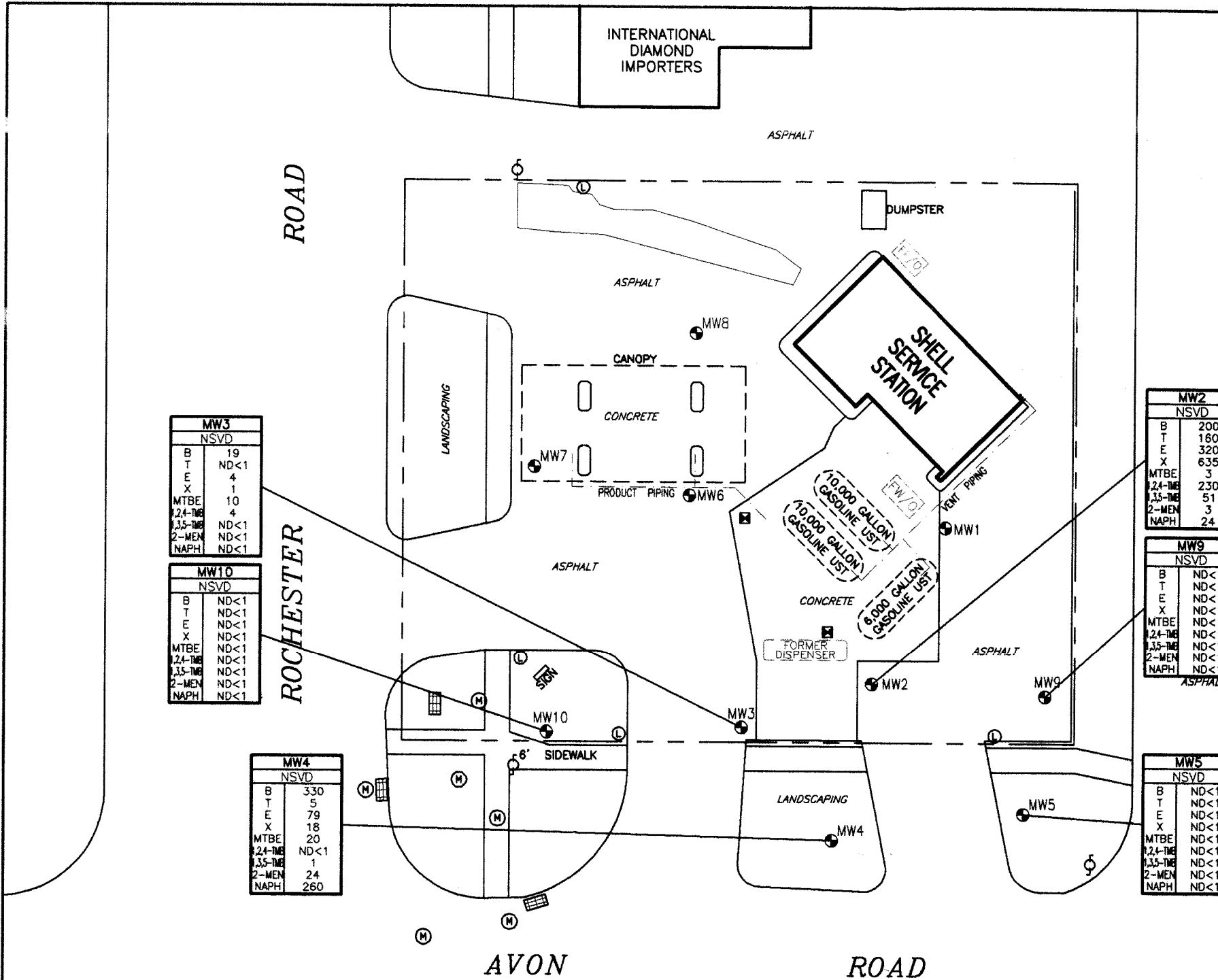
MW7	
B	<1
T	<1
E	<1
X	<1
MTBE	2
2,4-TM	<1
3,5-TM	<1
2-MEN	<1
NAPH	<1

MW6	
96.50	
B	2
T	<1
E	23
X	1
MTBE	<1
2,4-TM	<1
3,5-TM	<1
2-MEN	13
NAPH	41

MW8	
97.35	
B	<1
T	<1
E	<1
X	<1
MTBE	<1
2-MEN	<1
NAPH	<1

MW13	
93.53	
B	<1
T	<1

10/16/98-0-100 Rochester Hills SM.dwg, 04/06/2004 03:26:14 PM, T:\Michaelidis, Tabloid, 1:30, GES



MW3	
NSVD	
B	19
T	ND<1
E	4
X	1
MTBE	10
1,2,4-TM	4
1,3,5-TM	ND<1
2-MEN	ND<1
NAPH	ND<1

MW10	
NSVD	
B	ND<1
T	ND<1
E	ND<1
X	ND<1
MTBE	ND<1
1,2,4-TM	ND<1
1,3,5-TM	ND<1
2-MEN	ND<1
NAPH	ND<1

MW4	
NSVD	
B	330
T	5
E	79
X	18
MTBE	20
1,2,4-TM	ND<1
1,3,5-TM	1
2-MEN	24
NAPH	260

MW2	
NSVD	
B	200
T	180
E	320
X	635
MTBE	3
1,2,4-TM	230
1,3,5-TM	51
2-MEN	3
NAPH	24

MW9	
NSVD	
B	ND<1
T	ND<1
E	ND<1
X	ND<1
MTBE	ND<1
1,2,4-TM	ND<1
1,3,5-TM	ND<1
2-MEN	ND<1
NAPH	ND<1

MW5	
NSVD	
B	ND<1
T	ND<1
E	ND<1
X	ND<1
MTBE	ND<1
1,2,4-TM	ND<1
1,3,5-TM	ND<1
2-MEN	ND<1
NAPH	ND<1

MW12	
NSVD	
B	ND<1
T	ND<1
E	ND<1

MW13	
NSVD	
B	ND<1
T	ND<1
F	ND<1

SOIL ADSORBED CONCENTRATIONS (ug/kg)

Shell Oil Products US  
Former Shell Station  
975 Rochester Road  
Rochester Hills, MI  
SAP# 138063

PARAMETERS	MDEQ Residential "Drinking Water Protection" <sup>1</sup>	MDEQ Residential "Groundwater Surface Water Interface Protection" <sup>1</sup>	MDEQ Commercial III "Soil Volatilization to Indoor Air Inhalation" <sup>1</sup>	MDEQ Commercial III "Direct Contact" <sup>1</sup>	sample ID, depth, date sampled, date analyzed										
					BS-1 <sup>2</sup> 8'	BS-2 <sup>2</sup> 8'	NSW <sup>2</sup> 4'	SSW <sup>2</sup> 4'	ESW <sup>2</sup> 4'	WSW <sup>2</sup> 4'	S-1 2.5'	S-2 2.5'	S-3 2'	S-4 2'	PH-1 4-6'
					4/15/1996 4/27/1996	4/15/1996 4/28/1996	4/15/1996 4/27/1996	4/15/1996 4/27/1996	4/15/1996 4/27/1996	4/15/1996 4/27/1996	4/18/1996 4/24/1996	4/18/1996 4/24/1996	4/18/1996 4/24/1996	4/18/1996 4/23/1996	10/17/1996 10/29/1996
<b>Constituents of Concern</b>															
<b>BTEX &amp; MTBE</b>															
Benzene	100	4,000	8,400	400,000	<5	<5	<5	<5	<5	<5	8,700	14,000	28,000	<5	<5
Ethylbenzene	1,500	360	140,000	140,000	<5	<5	<5	<5	<5	<5	42,000	150,000	71,000	<5	<5
Methyl-tert-butyl ether	800	15,000	5,900,000	5,900,000	NA	NA	NA	NA	NA	NA	7,700	4,000	15,000	11	6
Toluene	16,000	2,800	250,000	250,000	<5	<5	<5	<5	<5	<5	20,000	32,000	47,000	<5	<5
Xylenes	5,600	700	150,000	150,000	<5	<5	<5	<5	<5	<5	173,000	510,000	320,000	<5	<5
<b>VOLATILES</b>															
Methylene chloride	100	19,000	240,000	2,300,000	6B	4B	8B	5B	4B	6B	NA	NA	NA	NA	NA
Tetrachloroethylene	100	900	60,000	88,000	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	2,100	570	110,000	110,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	1,800	1,100	94,000	94,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>INORGANICS</b>															
Total Cadmium	6,000	NC	NLV	2,100,000	140	90	80	190	210	60	NA	NA	NA	NA	NA
Chromium (VI)	30,000	3,300	NLV	10,000,000	17,800	16,400	50,300	50,300	47,300	39,400	NA	NA	NA	NA	NA
Lead	700,000	NC	NLV	400,000	4,570	4,850	5,500	15,400	31,600	5,110	NA	NA	NA	NA	NA
<b>PNAs</b>															
Benzo(a)anthracene	NLL	NLL	NLV	160,000	<230	<230	<230	320	<240	<230	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NLL	NLL	ID	160,000	<230	<230	<230	320	<240	<230	NA	NA	NA	NA	NA
Benzo(a)pyrene	NLL	NLL	NLV	16,000	<230	<230	<230	360	<240	<230	NA	NA	NA	NA	NA
Fluoranthene	730,000	5,500	1,000,000,000	240,000,000	<230	<230	<230	550	270	<230	NA	NA	NA	NA	NA
Fluorene	390,000	5,300	1,000,000,000	120,000,000	<230	<230	<230	4,100	1,300	470	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NLL	NLL	NLV	160,000	<230	<230	<230	290	<240	<230	NA	NA	NA	NA	NA
2-Methylnaphthalene	57,000	ID	ID	37,000,000	<230	<230	<230	<240	<240	<230	NA	NA	NA	NA	NA
Naphthalene	35,000	870	470,000	72,000,000	<230	<230	<230	<240	<240	<230	NA	NA	NA	NA	NA
Pyrene	480,000	ID	1,000,000,000	150,000,000	<230	<230	<230	500	250	<230	NA	NA	NA	NA	NA

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NLV: Not Likely to Volatilize under most conditions

NA	Not analyzed
<5	Not detected above laboratory detection limit
6	Above laboratory detection limit
5,500	Above applicable RBSLs

1) RBSLs referenced from Part 201, Generic Residential and Commercial Tier 1 RBSLs, Operational Memorandum No. 18, dated December 21, 2002, as amended, and adopted by reference for Part 213, Operational Memorandum No. 4.

2) Samples analyzed for PNAs, PCBs, and halogenated hydrocarbons. All are non-detect except for those listed on the above table.



SOIL ADSORBED CONCENTRATIONS (ug/kg)

Shell Oil Products US  
Former Shell Station  
975 Rochester Road  
Rochester Hills, MI  
SAP# 138063

PARAMETERS	MDEQ Residential "Drinking Water Protection" <sup>1</sup>	MDEQ Residential "Groundwater Surface Water Interface Protection" <sup>1</sup>	MDEQ Commercial III "Soil Volatilization to Indoor Air Inhalation" <sup>1</sup>	MDEQ Commercial III "Direct Contact" <sup>1</sup>	sample ID, depth, date sampled, date analyzed											
					PH-2 2-4'	PH-3 2-4'	PH-3 10-12'	PH-4 2-4'	PH-4 10-12'	PH-5 2-4'	PH-5 10-12'	PH-6 2-4'	PH-6 10-12'	PH-7 2-4'	PH-7 10-12'	
					10/17/1996 10/28/1996	10/18/1996 10/29/1996	10/18/1996 10/29/1996	10/17/1996 10/29/1996	10/17/1996 10/29/1996	10/18/1996 10/26/1996	10/18/1996 10/26/1996	10/18/1996 10/29/1996	10/18/1996 10/28/1996	10/18/1996 10/26/1996	10/18/1996 10/28/1996	
<b>Constituents of Concern</b>																
<b>BTEX &amp; MTBE</b>																
Benzene	100	4,000	8,400	400,000	25,000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	1,500	360	140,000	140,000	85,000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Methyl-tert-butyl ether	800	15,000	5,900,000	5,900,000	18,000	<5	<5	5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	16,000	2,800	250,000	250,000	160,000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylenes	5,600	700	150,000	150,000	420,000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
<b>VOLATILES</b>																
Methylene chloride	100	19,000	240,000	2,300,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	100	900	60,000	88,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	2,100	570	110,000	110,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	1,800	1,100	94,000	94,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>INORGANICS</b>																
Total Cadmium	6,000	NC	NLV	2,100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (VI)	30,000	3,300	NLV	10,000,000	NA	NA	NA	15,200	NA	NA	NA	20,900	NA	44,700	NA	NA
Lead	700,000	NC	NLV	400,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>PNAs</b>																
Benzo(a)anthracene	NLL	NLL	NLV	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NLL	NLL	ID	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NLL	NLL	NLV	16,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	730,000	5,500	1,000,000,000	240,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	390,000	5,300	1,000,000,000	120,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NLL	NLL	NLV	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	57,000	ID	ID	37,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	35,000	870	470,600	72,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	480,000	ID	1,000,000,000	150,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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NA	Not analyzed
<5	Not detected above laboratory detection limit
6	Above laboratory detection limit
3,500	Above applicable RBSLs

<sup>1</sup> RBSLs referenced from Part 201, Generic Residential and Commercial Tier 1 RBSLs, Operational Memorandum No. 18, dated December 21, 2002, as amended, and adopted by reference for Part 213, Operational Memorandum No. 4.

<sup>2</sup> Samples analyzed for PNAs, PCBs, and halogenated hydrocarbons. All are non-detect except for those listed on the above table.

SOIL ADSORBED CONCENTRATIONS (ug/kg)

Shell Oil Products US  
Former Shell Station  
975 Rochester Road  
Rochester Hills, MI  
SAP# 138063

PARAMETERS	MDEQ Residential "Drinking Water Protection" <sup>1</sup>	MDEQ Residential "Groundwater Surface Water Interface Protection" <sup>1</sup>	MDEQ Commercial III "Soil Volatilization to Indoor Air Inhalation" <sup>1</sup>	MDEQ Commercial III "Direct Contact" <sup>1</sup>	sample ID, depth, date sampled, date analyzed											
					PH-8 2-4'	PH-9 4-6'	PH-9 10-12'	PH-10 2-4'	PH-10 10-12'	PH-11 2-4'	PH-12 2-4'	MW-3 2-4'	MW-3 8-10'	MW-8 2-4'	MW-8 10-12'	
					10/17/1996 10/29/1996	10/17/1996 10/29/1996	10/17/1996 10/29/1996	10/17/1996 10/29/1996	10/17/1996 10/26/1996	10/17/1996 10/29/1996	10/17/1996 10/29/1996	12/4/1996 12/17/1996	12/4/1996 12/15/1996	12/4/1996 12/15/1996	12/4/1996 12/15/1996	
<b>Constituents of Concern</b>																
<b>BTEX &amp; MTBE</b>																
Benzene	100	4,000	8,400	400,000	27	7	8	<5	<5	6	18	71	5	5	<5	
Ethylbenzene	1,500	360	140,000	140,000	150	<5	<5	<5	<5	<5	<5	490	<5	<5	<5	
Methyl-tert-butyl ether	800	15,000	5,900,000	5,900,000	30	13	10	<5	7	5	21	90	<5	<5	<5	
Toluene	16,000	2,800	250,000	250,000	<5	<5	6	<5	<5	7	<5	8	<5	<5	<5	
Xylenes	5,600	700	150,000	150,000	134	<5	<5	<5	<5	15	<5	209	<5	<5	<5	
<b>VOLATILES</b>																
Methylene chloride	100	19,000	240,000	2,300,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Tetrachloroethylene	100	900	60,000	88,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	2,100	570	110,000	110,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	1,800	1,100	94,000	94,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>INORGANICS</b>																
Total Cadmium	6,000	NC	NLV	2,100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chromium (VI)	30,000	3,500	NLV	10,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead	700,000	NC	NLV	400,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<b>PNAs</b>																
Benzo(a)anthracene	NLL	NLL	NLV	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzo(b)fluoranthene	NLL	NLL	ID	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzo(a)pyrene	NLL	NLL	NLV	16,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Fluoranthene	730,000	5,500	1,000,000,000	240,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Fluorene	390,000	5,300	1,000,000,000	120,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Indeno(1,2,3-cd)pyrene	NLL	NLL	NLV	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Methylnaphthalene	57,000	ID	ID	37,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Naphthalene	35,000	870	470,000	72,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Pyrene	480,000	ID	1,000,000,000	150,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

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1) RBSLs referenced from Part 201, Generic Residential and Commercial Tier 1 RBSLs, Operational Memorandum No. 18, dated December 21, 2002, as amended, and adopted by reference for Part 213, Operational Memorandum No. 4.

2) Samples analyzed for PNAs, PCBs, and halogenated hydrocarbons. All are non-detect except for those listed on the above table.





SOIL ADSORBED CONCENTRATIONS (ug/kg)

Shell Oil Products US  
Former Shell Station  
975 Rochester Road  
Rochester Hills, MI  
SAP# 138063

PARAMETERS	MDEQ Residential "Drinking Water Protection" <sup>1</sup>	MDEQ Residential "Groundwater Surface Water Interface Protection" <sup>1</sup>	MDEQ Commercial III "Soil Volatilization to Indoor Air Inhalation" <sup>1</sup>	MDEQ Commercial III "Direct Contact" <sup>1</sup>	sample ID, depth, date sampled, date analyzed									
					MW-9 2-4'	MW-9 12-14'	MW-10 4-6'	MW-10 12-14'	MW-11 2-4'	MW-11 12-14'	MW-12 4-6'	MW-12 10-12'	MW-13 4-6'	MW-13 12-14'
					11/12/02 11/16/02	11/12/02 11/16/02	11/12/02 11/16/02	11/12/02 11/16/02	11/12/18 11/16/02	11/12/02 11/16/02	11/13/02 11/16/02	11/13/02 11/16/02	11/13/02 11/16/02	11/13/02 11/16/02
<b>Constituents of Concern</b>														
<b>BTEX &amp; MTBE</b>														
Benzene	100	4,000	8,400	400,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Ethylbenzene	1,500	360	140,000	140,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Methyl-tert-butyl ether	800	15,000	5,900,000	5,900,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Toluene	16,000	2,800	250,000	250,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
Xylenes	5,600	700	150,000	150,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
<b>VOLATILES</b>														
Methylene chloride	100	19,000	240,000	2,300,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	100	900	60,000	88,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	2,100	570	110,000	110,000	110	<56	<60	<56	<65	<56	<59	<56	<62	<55
1,3,5-Trimethylbenzene	1,800	1,100	94,000	94,000	<63	<56	<60	<56	<65	<56	<59	<56	<62	<55
<b>INORGANICS</b>														
Total Cadmium	6,000	NC	NLV	2,100,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (VI)	30,000	3,300	NLV	10,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	700,000	NC	NLV	400,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>PNAs</b>														
Benzo(a)anthracene	NLL	NLL	NLV	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NLL	NLL	ID	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NLL	NLL	NLV	16,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	730,000	5,500	1,000,000,000	240,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	390,000	5,500	1,000,000,000	120,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NLL	NLL	NLV	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	57,000	ID	ID	37,000,000	66	<56	<60	<56	<65	<56	<59	<56	<62	<55
Naphthalene	35,000	870	470,000	72,000,000	90	<56	<60	<56	<65	<56	<59	<56	<62	<55
Pyrene	480,000	ID	1,000,000,000	150,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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2) Samples analyzed for PNAs, PCBs, and halogenated hydrocarbons. All are non-detect except for those listed on the above table.



Historical Dissolved Concentrations (ug/L)  
 Shell Oil Products US  
 975 South Rochester Road @ Avon  
 Rochester, MI  
 WIC # 221-6185-0100

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2,4-Trimethylbenzene (ug/L)	1,3,5-Trimethylbenzene (ug/L)	2-Methylnaphthalene (ug/L)	Acenaphthene (ug/L)	Acenaphthylene (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Lead, Total (ug/L)
GC					11,000	530,000	170,000	190,000	610,000	31,000	56,000	61,000	25,000	4,200	3,900	190,000	460,000	NA
VIA - Industrial & Comm. II, III, & IV					35,000	530,000	170,000	190,000	47,000,000	31,000	56,000	61,000	NA	4,200	3,900	NA	NA	NA
MW-1	12/09/1996	-	-	-	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	<1	<1	<1	<1	1	<5	NA	NA	<5	<5	<5	NA	NA	NA
	08/31/1997	-	-	-	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
	04/03/2002	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
MW-2	12/09/1996	-	-	-	4,600	12,000	2,900	15,000	230	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	3,400	8,600	2,600	11,000	560	2,100	NA	NA	890	440	<100	NA	NA	NA
	08/31/1997	-	-	-	2,200	7,200	2,100	9,800	230	1,100	NA	NA	420	NA	290	NA	NA	NA
	05/02/2001	-	-	-	200	140	170	540	<5	17	100	33	<5	-	-	-	-	-
	04/03/2002	-	-	-	2,500	2,300	1,500	6,800	110	230	1,400	480	50	-	-	-	-	-
	01/22/2003	-	4.65	-	200	160	320	635	3	24	230	51	3	-	-	-	-	-
	03/11/2004	-	1.93	-	1,500	3,500	1,800	5,200	<10	220	1,300	380	72	-	-	-	-	-
MW-3	12/09/1996	-	-	-	110	45	200	570	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	49	15	82	180	16	37	NA	NA	17	14	<5	NA	NA	NA
	08/31/1997	-	-	-	110	8	54	99	40	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	50	2	54	5	1	2	10	<1	<1	-	-	-	-	-
	04/03/2002	-	-	-	48	1	48	6	4	1	22	<1	<1	-	-	-	-	-
	01/22/2003	-	4.59	-	19	<1	4	1	10	<1	4	<1	<1	-	-	-	-	-
03/11/2004	-	0.94	-	24	<1	34	6	2	2	10	<1	<1	-	-	-	-	-	
MW-4	12/09/1996	-	-	-	390	12	18	17	18	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	1,000	79	1,300	3,400	65	16	NA	NA	94	74	<5	NA	NA	NA
	08/31/1997	-	-	-	230	2	79	88	20	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	480	23	750	1,000	<5	180	31	12	<6	-	-	-	-	-
	04/03/2002	-	-	-	190	6	100	58	<1	95	2	2	4	-	-	-	-	-
	01/22/2003	-	5.24	-	330	5	79	18	20	260	<1	1	24	-	-	-	-	-
	03/11/2004	-	2.67	-	83	<1	41	12	1	14	<1	<1	<1	-	-	-	-	-
MW-5	12/09/1996	-	-	-	22	<1	1	2	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	25	2	8	<1	4	<5	NA	NA	<5	<5	<5	NA	NA	NA
	08/31/1997	-	-	-	4	<1	<1	<1	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	71	2	8	<1	<1	<1	<1	<1	<1	-	-	-	-	-
	04/03/2002	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
	01/22/2003	-	3.98	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
	03/11/2004	-	1.20	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
MW-6	12/09/1996	-	-	-	68	<5	970	1,300	9	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	45	2	350	220	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	3	<1	54	1	4	8	<1	<1	2	-	-	-	-	-
	04/03/2002	-	-	-	1	<1	67	2	2	8	1	<1	2	-	-	-	-	-
	03/11/2004	-	2.40	-	2	<1	23	1	<1	41	<1	<1	13	-	-	-	-	-
MW-7	12/09/1996	-	-	-	170	7	260	230	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	120	2	230	140	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/1997	-	-	-	<1	<1	<1	<1	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
	04/03/2002	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-
	03/11/2004	-	2.75	-	<1	<1	<1	<1	2	<1	<1	<1	<1	-	-	-	-	-



Historical Dissolved Concentrations (ug/L)  
 Shell Oil Products US  
 975 South Rochester Road @ Avon  
 Rochester, MI  
 WIC # 221-6185-0100

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	CW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2,4-Trimethylbenzene (ug/L)	1,3,5-Trimethylbenzene (ug/L)	2-Methylnaphthalene (ug/L)	Acenaphthene (ug/L)	Acenaphthylene (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Lead, Total (ug/L)
GC					11,000	530,000	170,000	190,000	610,000	31,000	56,000	61,000	25,000	4,200	3,900	190,000	460,000	NA
VIA - Industrial & Comm. II, III, & IV					35,000	530,000	170,000	190,000	47,000,000	31,000	56,000	61,000	NA	4,200	3,900	NA	NA	NA
MW-8	12/09/1996	-	-	-	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
	06/04/1997	-	-	-	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/02/2001	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	04-03-2002	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	01/22/2003	NS	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	03/11/2004	NS	2.25	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
MW-9	01/22/2003	-	4.23	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	03/11/2004	-	1.41	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
MW-10	01/22/2003	-	5.60	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	03/11/2004	-	2.98	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
MW-11	01/22/2003	-	2.26	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	03/11/2004	-	0.00	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
MW-12	01/22/2003	-	4.82	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	03/11/2004	-	2.24	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
MW-13	01/22/2003	-	3.51	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
	03/11/2004	-	1.00	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA
PH-1	10/17/1996	-	-	-	<1	<1	<1	<1	<1	<5	NA	NA	<5	NA	<5	<0.2	<1	<1
PH-2	10/17/1996	-	-	-	5,700	17,000	3,200	16,000	130	16,000	NA	NA	27,000	NA	2,900	<0.2	<1	19
PH-3	10/18/1996	-	-	-	<1	<1	<1	<1	<1	<5	NA	NA	<5	NA	<5	<0.2	<1	<1
PH-4	10/17/1996	-	-	-	<1	<1	<1	<1	<1	<5	NA	NA	<5	NA	<5	<0.2	<1	<1
PH-5	10/18/1996	-	-	-	130	2	140	69	26	NA	NA	NA	NA	NA	NA	NA	NA	NA
PH-6	10/18/1996	-	-	-	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA
PH-7	10/18/1996	-	-	-	<1	<1	<1	<1	<1	710	NA	NA	420	NA	200	<0.2	<1	<1
PH-11	10/17/1996	-	-	-	<1	1	<1	<1	10	NA	NA	NA	NA	NA	NA	NA	NA	NA

- In October 1996, PH-1 (W), PH-2, PH-3 (W), PH-4 (W), and PH-7 (W), were analyzed for PNAs and halogenated hydrocarbons. All are non-detect except those listed on the above table.  
 - On 6/4/97, MW-1 through MW-5 and on 8/31/97, MW-2 were analyzed for PNAs. All are non-detect except those listed on the above table.  
 <# = Less than the method detection limit of #  
 ug/L = Micrograms/liter  
 MTBE = Methyl tertiary butyl ether  
 NA = Not Available or not analyzed for that specific compound  
 NS = Not Sampled



**SUBSURFACE INVESTIGATION REPORT  
975 ROCHESTER ROAD  
ROCHESTER HILLS, MICHIGAN**

*for*

**SAFEWAY ACQUISITION, LLC  
CANTON, MICHIGAN**

**AKT Peerless Project No. 4500F-2-20  
March 31, 2005**

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**SUBSURFACE INVESTIGATION REPORT  
975 ROCHESTER ROAD  
ROCHESTER HILLS, MICHIGAN  
FOR  
SAFEWAY ACQUISITION, LLC  
CANTON, MICHIGAN**

**AKT PEERLESS PROJECT NO. 4500F-2-20**

**1.0 INTRODUCTION**

Safeway Acquisition, LLC retained AKT Peerless Environmental Services (AKT Peerless) to conduct a Phase II Subsurface Investigation at the subject property located at 975 Rochester Road in Rochester Hills, Michigan (subject property). The scope of the subsurface investigation was based on AKT Peerless' Phase I Environmental Assessment (ESA), dated February 22, 2005. See Figure 1 for a topographic site location map. See Figure 2 for a site map of the subject property.

This report documents the field activities, sampling protocols, and laboratory results associated with AKT Peerless' March 9, 2005, subsurface investigation. AKT Peerless' scope of work was based on American Society for Testing and Materials (ASTM) "*Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process E-1903-97.*" ASTM E-1903-97 provides a framework for employing good commercial and customary practices in conducting a Phase II ESA of a property with recognized environmental conditions. This report was conducted in accordance with the AKT Peerless' Proposal for a Phase II Site Investigation (Proposal Number PF-5922rv1), dated January 21, 2005.

AKT Peerless' Phase II subsurface investigation was performed for the benefit of Safeway Acquisition, and Comerica Bank, both of which may rely on the contents and conclusions of this report.

**2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS**

**2.1 SHELL OIL COMPANY ENVIRONMENTAL INVESTIGATIONS**

Safeway Acquisition, LLC provided AKT Peerless with several environmental reports pertaining to the subject property. AKT Peerless reviewed the following environmental reports:

- Groundwater and Environmental Services (GES) Inc.'s Phase I ESA, dated June 28, 2002;
- GES' Groundwater Monitoring Site Status Report, dated January 22, 2003; and
- GES' Final Assessment Report (FAR), dated March 4, 2003.

## 2.2 SUMMARY OF AKT PEERLESS PHASE I ESA

AKT Peerless completed a Phase I ESA of the subject property on February 22, 2005. AKT Peerless identified the following RECs associated with the subject property:

REC 1 The subject property was identified on the registered UST and "open" LUST site databases. The following USTs are registered to the subject property:

Tank ID	Contents	Capacity (gallons)	Tank Material	Installation Date	Status
1	Gasoline	10,000	Asphalt coated or Bare Steel Reinforced Plastic	April 9, 1977	Removed in 1996
2	Gasoline	10,000	Asphalt coated or Bare Steel Lined Interior	April 9, 1977	Current
3	Gasoline	6,000	Asphalt coated or Bare Steel Lined Interior	April 9, 1977	Current
4	Used Oil	1,000	Asphalt coated or Bare Steel	April 9, 1977	Removed in 1996
5	Gasoline	10,000	Double Walled, Fiberglass Reinforced Plastic	May 1, 1996	Currently in use

According to historical information, confirmed releases were reported on April 8, 1996 and April 26, 1996. The releases were reported based on failed tank tightness tests and laboratory results of soil samples collected at dispenser islands during UST upgrade activities. Natural attenuation has been deemed the remedial technology currently in use. Groundwater contamination has been identified onsite and has migrated offsite to the south towards Avon Road. Quarterly sampling of monitoring wells onsite and offsite is planned until institutional controls have been implemented. Upon completion of the institutional controls, GES plans to prepare and submit a Closure Report for the site.

REC 2 Automotive service activities were conducted at the subject property from at least 1970 until the late 1990s. The subject property used a septic system from at least 1970 until 1991. AKT Peerless observed floor drains in the former maintenance garage area during the site inspection. This system presents an environmental concern to the subject property, due to: (1) the use of hazardous chemicals and/or petroleum products associated with automotive maintenance activities, and (2) the potential introduction of hazardous chemicals and/or petroleum products to the septic system via the floor drains.

REC 3 Natural gas service was not connected to the subject property until 1980. Therefore, the subject property would have used an alternative fuel (i.e., coal, electricity, wood, or heating oil) as a source for the buildings heating system between 1970 and 1980. A heating oil UST was reportedly removed from the northwestern corner of the subject building. Specific information (i.e., removal records, verification sampling results, size, location, contents, and construction) regarding this former UST was not available during this assessment.



REC 4 Two in-ground hydraulic hoists were identified on-site. No documentation or analytical results concerning removal activities of the two hoists were available during the completion of AKT Peerless' Phase I ESA. AKT Peerless observed what appeared to be the location of the controls for the hoists, which are typically removed with the hoist system. Therefore, in AKT Peerless' opinion, these hoists represent an environmental concern to the subject property.

REC 5 An oil-water separator was historically utilized on-site. The oil-water separator was identified in the former maintenance garage during AKT Peerless' site inspection.

### 3.0 SUBSURFACE INVESTIGATION ACTIVITIES

#### 3.1 SCOPE OF ASSESSMENT

On March 9, 2005, AKT Peerless conducted subsurface investigations at the subject property to address the recognized environmental conditions identified in AKT Peerless' Phase I ESA. AKT Peerless' subsurface investigation was consistent with federal and state programs and ASTM standard methods.

To evaluate the recognized environmental conditions identified at the subject property, AKT Peerless (1) conducted a geophysical survey, (2) drilled 7 soil borings; (3) installed 3 temporary monitoring wells; (4) collected 11 soil samples and 3 groundwater samples; and (5) submitted soil and groundwater samples for laboratory analyses. AKT Peerless performed a qualitative analysis of all soil samples collected during drilling and a quantitative analysis (laboratory analysis) of discrete soil and groundwater samples.

Soil and groundwater samples were submitted for laboratory analyses of select parameters including unleaded gasoline parameters<sup>1</sup> and waste oil parameters.<sup>2</sup> The following table summarizes each recognized environmental condition and the investigation activities and laboratory analyses performed for that recognized environmental condition:

<b>REC #</b>	<b>Environmental Concern</b>	<b>Investigation Activity</b>	<b>Analytical Parameters</b>
REC 1	Current and Historical UST Systems	B-2, B-3, B-4, B-5	Unleaded Gasoline
REC 2	Automotive Maintenance	B-1W, B-6W, B-7W	Waste Oil
REC 3	Former Heating Oil UST	B-7W	Waste Oil
REC 4	Hydraulic Hoists	B-1W, B-6W, B-7W	Waste Oil

<sup>1</sup> Unleaded gasoline parameters consist of benzene, toluene, ethylbenzene, and xylenes (BTEX); trimethylbenzene isomers (TMBs); methyl-tert butyl ether (MTBE); naphthalene; and 2- methylnaphthalene.

<sup>2</sup> Waste oil parameters consist of benzene, toluene, ethylbenzene, and xylenes (BTEX); trimethylbenzene isomers (TMBs); 1,2-dibromoethane (EDB); 1,2-dichloroethane (DCA); polynuclear aromatics (PNAs); lead; cadmium; chromium; volatile halocarbons (VOCs); and polychlorinated biphenyls (PCBs).

<b>REC #</b>	<b>Environmental Concern</b>	<b>Investigation Activity</b>	<b>Analytical Parameters</b>
REC 5	Oil Water Separator	B-1W, B-6W, B-7W	Waste Oil

See Figure 3 for a site map with soil boring locations.

### **3.2 GEOPHYSICAL SURVEY**

AKT Peerless retained Work Smart, Inc. to conduct a geophysical survey of the subject property using a USRADAR SPR ground penetrating radar unit with a 500 MHz antenna. The geophysical survey did not indicate any anomalies consistent with an underground storage tank. A copy of the geophysical survey report is included as Appendix C.

### **3.3 SOIL EVALUATION**

On March 9, 2005, AKT Peerless retained Stock Drilling (Stock) of Ida, Michigan to drill 7 soil borings at the subject property. AKT Peerless and Stock used a hand-auger to drill the initial five feet, and completed the borings using hydraulic drive/direct-push (Geoprobe<sup>®</sup>) sampling techniques following the drilling procedures outlined in ASTM publication ASTM D-4700. Stock collected continuous soil samples from the soil borings at four-foot intervals to a maximum depth of 14-feet below ground surface (bgs). See Figure 3 for a site map with soil boring locations.

### **3.3 GROUNDWATER EVALUATION**

During drilling activities, AKT Peerless encountered groundwater in all seven soil borings (B-1 through B-7) drilled at the subject property. Groundwater was encountered in two water-bearing formations at approximate depths of 3.5 feet and 5.5 feet below ground surface. AKT Peerless instructed Stock to install temporary wells in three of these soil borings. See Figure 4 for a site map with temporary well locations.

### **3.4 LABORATORY ANALYSES AND METHODS**

AKT Peerless submitted 11 soil samples and 3 groundwater samples for laboratory analyses. The following table summarizes the soil samples submitted for laboratory analyses:

Soil Boring	Sample Depth	Unleaded Gasoline Parameters	Waste Oil
B-1	2-3		✓
	Water		✓
B-2	3-4	✓	
	10-12	✓	
B-3	3-4	✓	
	10-12	✓	
B-4	3-4	✓	
	10-12	✓	
B-5	3-4	✓	
	10-12	✓	
B-6	3-4		✓
	Water		✓
B-7	3-4		✓
	Water		✓

The laboratory analyzed the samples for (1) unleaded gasoline parameters in accordance with USEPA Method 5035/8260 and (2) waste oil parameters in accordance with USEPA Method 5035/8260/8270/8082/6020.

#### 4.0 LOCAL GEOLOGY AND HYDROGEOLOGY

##### 4.1 LOCAL GEOLOGY

During drilling activities, AKT Peerless encountered:

- ASPHALT and CONCRETE from the ground surface to approximately six inches below ground surface.
- SAND from six inches below the ground surface to approximately 3.5 to 4.5 feet below ground surface.
- CLAY from beneath the sand layer to approximately 5 to 6 feet below ground surface.
- SAND and SILT from beneath the clay layer to approximately 7 to 11 feet below ground surface.
- CLAY from beneath the sand layer to approximately 12 to 14 feet below ground surface (the extent of the soil borings).

The subsurface soil at the property is consistent with the description of lacustrine sand and gravel as described in the *Quaternary Geology of Southern Michigan*. See Appendix A for AKT

Peerless' soil boring logs. The soil contamination appears to be primarily in the shallow sandy soil deposit located within the top five feet below ground surface.

## 4.2 LOCAL HYDROGEOLOGY

During drilling activities, AKT Peerless encountered groundwater in all seven soil borings drilled at the subject property. Groundwater was encountered in two water-bearing formations at approximate depths of 3.5 feet and 5.5 feet below ground surface. Based on AKT Peerless' field observations and previous reports completed by GES, the saturated thickness of the sandy and silty layers is approximately 0.5 feet to 5 feet.

## 5.0 ANALYTICAL RESULTS

### 5.1 RELEVANT CRITERIA

For the purpose of evaluating the subject property in regard to determining facility status, the analytical results are compared to the Part 201 Generic Residential Cleanup Criteria and Screening Levels. A specific evaluation of each exposure pathway was not completed as part of this evaluation, therefore it is assumed that all pathways are applicable. In addition, according to MDEQ *Operational Memorandum #1, December 10, 2004*, the subject property is categorized as Commercial III, therefore, these criteria were used to evaluate the subject property in terms of due care and Part 213 Closure options.

### 5.2 SOIL ANALYTICAL RESULTS

AKT Peerless submitted 11 soil samples for laboratory analyses of select parameters including unleaded gasoline parameters and waste oil parameters. Based on the laboratory analyses, the following table summarizes the contaminants that exceed the Part 201 Generic Cleanup Criteria and the Part 213 Tier 1 Risk-based Screening Levels (RBSLs).

Soil Contaminants that Exceed Tier 1 Risk-Based Screening Levels

Parameter	Drinking Water	Groundwater Surface Water Interface	Indoor Air Inhalation	Ambient Air Inhalation	Direct Contact	Soil Saturation
Benzene	✓	✓	✓			
Toluene	✓	✓	✓		✓	✓
Ethylbenzene	✓	✓	✓		✓	✓
Xylenes	✓	✓	✓		✓	✓
1,2,4-TMB	✓	✓	✓		✓	✓
1,3,5-TMB	✓	✓	✓		✓	✓
Naphthalene		✓				
n-Propylbenzene	✓					
Chromium (total)		✓				

✓ Indicates the contaminant exceeds this Tier 1 RBSL

See Table 1 for a summary of the soil analytical results. See Figure 3 for a site map with soil boring locations.

### 5.3 GROUNDWATER ANALYTICAL RESULTS

AKT Peerless submitted 3 groundwater samples for laboratory analyses of select parameters including waste oil parameters. Based on the laboratory analyses, the following table summarizes the contaminants that exceed the Part 201 Generic Cleanup Criteria and the Part 213 Tier 1 Risk-based Screening Levels (RBSLs).

Groundwater Contaminants that Exceed Tier 1 Risk-Based Screening Levels

Parameter	Drinking Water	Groundwater Surface Water	Indoor Air Inhalation	Groundwater Contact
Cadmium	✓			
Chromium	✓	✓		
Lead	✓			

✓ Indicates the contaminant exceeds this Tier 1 RBSL

See Figure 3 for a site map with temporary well locations. See Table 2 for groundwater analytical results.

### 6.0 EXTENT AND MIGRATION OF CONTAMINATION

#### 6.1 APPROXIMATE EXTENT OF SOIL CONTAMINATION

Based on a review of the reports listed in Section 2.1.1, the extent and potential migration of soil contamination is listed below.

##### *Area of Soil Contamination*

The greatest concentration of contamination is located to the south of the former dispenser island. The extent of contamination is not defined to the south towards the Avon Road Right of Way.

##### *Description of Local Geology in Relation to Soil Contamination*

Based on a review of the listed reports, the subsurface soils appear to consist of the following:

- ASPHALT and CONCRETE from the ground surface to approximately six inches below ground surface.
- SAND from six inches below the ground surface to approximately 3.5 to 4.5 feet below ground surface.
- CLAY from beneath the sand layer to approximately 5 to 6 feet below ground surface.
- SAND and SILT from beneath the clay layer to approximately 7 to 11 feet below ground surface.
- CLAY from beneath the sand layer to approximately 12 to 14 feet below ground surface (the extent of the soil borings).

The soil contamination appears to be primarily in the sand formation from just below the ground surface to an approximate depth of 4.5 feet.

### ***Potential for Off-site Migration***

Soil contamination appears to have migrated from the former gasoline dispensers to the south towards the Avon Road Right of Way. The extent of contamination is not defined. Therefore, the potential for off-site migration can not be ruled out based on existing data. Refer to Figure 4 for a map depicting the approximate extent of the soil contamination.

## **6.2 APPROXIMATE EXTENT OF GROUNDWATER CONTAMINATION**

Based on a review of the reports listed in Section 2.1.1, the extent and potential migration of groundwater contamination is listed below.

### ***Area of Groundwater Contamination***

The greatest concentration of contamination is located near the former gasoline dispensers. The extent of groundwater contamination has not been defined to the north, east, and southwest. Groundwater flow direction is to the southeast. Based on the analytical results of the groundwater samples collected from monitoring wells MW-11, MW-12 and MW-13 contaminated groundwater has migrated into the Avon Road right-of-way. However, it appears that this contamination has not reached the southern or eastern adjoining properties.

### ***Potential for Free Product***

Free product was not identified during any of the investigations.

### ***Description of Local Geology in Relation to Groundwater Contamination***

Based on a review of the listed reports, the subsurface soils appear to consist of the following:

- ASPHALT and CONCRETE from the ground surface to approximately six inches below ground surface.
- SAND from six inches below the ground surface to approximately 3.5 to 4.5 feet below ground surface.
- CLAY from beneath the sand layer to approximately 5 to 6 feet below ground surface.
- SAND and SILT from beneath the clay layer to approximately 7 to 11 feet below ground surface.
- CLAY from beneath the sand layer to approximately 12 to 14 feet below ground surface (the extent of the soil borings).

Groundwater beneath the subject property appears to be perched and not part of a usable aquifer.

### ***Potential for Off-site Migration***

Based on the analytical results, contaminated groundwater has migrated into the Avon Road right-of-way. However, it appears that this contamination has not reached the southern or eastern adjoining properties. Refer to Figure 5 for a map depicting the approximate extent of groundwater contamination.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

### **7.1 CONCLUSIONS**

AKT Peerless completed a Phase I ESA of the subject property on February 22, 2005. This Phase I ESA identified the following RECs associated with the subject property:

- REC 1 Open LUST site.
- REC 2 Historical automotive service.
- REC 3 Possible presence of a heating oil UST behind the building.
- REC 4 Two in-ground hydraulic hoists.
- REC 5 Former presence of an oil-water separator.

AKT Peerless conducted a subsurface investigation to evaluate these RECs. AKT Peerless investigation included (1) the installation of seven soil borings, (2) the collection of soil and groundwater samples from the soil borings and (3) a geophysical survey northwest of the subject building. AKT Peerless submitted the samples for select parameters including VOCs, PNAs, PCBs, cadmium, chromium, lead, and MDEQ Unleaded Gasoline Parameters. The following sections present a summary of the investigation performed to evaluate each REC.

AKT Peerless retained Work Smart, Inc. to conduct a geophysical survey of the subject property using a USRADAR SPR ground penetrating radar unit with a 500 MHz antenna. The geophysical survey did not indicate any anomalies consistent with an underground storage tank.

#### **REC 1**

Soil borings B-2, B-3, B-4 and B-5 were installed to further evaluate REC 1. Six soil samples were collected from the soil borings for laboratory analyses for MDEQ Unleaded Gasoline Parameters. The laboratory analytical results indicated the presence of BTEX; 1,2,4-TMB; 1,3,5-TMB, naphthalene; and N-Propylbenzene in soil sample B-4 (2-3') above MDEQ Generic Commercial III Drinking Water Protection, Direct Contact, and GSI Criterion. Soil sample B-4 (10-12') vertically delineated the extent of this soil contamination. Therefore, the thickness of contamination appears to be approximately 2 meters. The analytical results of B-4 (2-3') did not exceed MDEQ Commercial III Ambient Air two-meter thickness criteria. The analytical results of the soil samples collected from B-2, B-3 and B-5 did not indicate the presence of target compounds above MDEQ Generic Residential Cleanup Criteria.

To address the UST release, EnecoTech conducted an investigation in 1996 that included the installation of soil borings and the collection of soil samples for laboratory analyses for BTEX and MTBE. The analytical results of these soil samples indicated the presence of MTBE above MDEQ Generic Residential and Commercial III Cleanup Criteria in soil boring PH-8/MW-3. The analytical results of the other soil samples did not indicate target compounds above MDEQ Generic Residential Cleanup Criteria.

To further address the UST release, drilled four soil borings (MW-9 through MW-13) and collected soil samples from these soil borings. The laboratory analytical results of these soil samples did not indicate the presence of target compounds above MDEQ Generic Residential Cleanup Criteria.

GES conducted groundwater sampling of existing monitoring wells in January of 2003. GES submitted the groundwater samples for laboratory analyses for MDEQ Unleaded Gasoline Parameters. The laboratory analytical results of GES's groundwater samples indicated the presence of benzene, ethylbenzene, 1,2,4-TMB, and xylenes above MDEQ Generic Residential, Commercial III and GSI Cleanup Criteria in monitoring wells MW-2, MW-3, MW-4 and MW-6.

### **REC 2, REC 3, REC 4 and REC 5**

Soil borings B-1, B-6 and B-7, were installed to address REC 2, REC 3, REC 3, and REC 4. The geophysical survey was conducted to address REC 3. Three soil samples were collected from the soil borings and submitted for laboratory analyses for VOCs, PNAs, PCBs, cadmium, chromium and lead. The laboratory analytical results of the soil samples indicated the presence of total chromium in soil samples collected from soil borings B-1, B-6, and B-7 above MDEQ Generic Residential Cleanup Criteria; however, these results are consistent with MDEQ Statewide Default Background Concentrations. Further, no other target compound was detected in these soil samples. Therefore, these chromium concentrations appear to be background concentrations and not associated with a release.

AKT Peerless submitted groundwater samples from soil borings B-1, B-6 and B-7 for laboratory analyses for VOCs, PNA, PCBs, cadmium, chromium and lead. The laboratory analytical results indicated the presence of cadmium, chromium and lead above MDEQ Residential and Commercial III Cleanup Criteria in groundwater sample B-7. Further, lead was detected in groundwater samples B-1 and B-6 above MDEQ Generic Residential and Commercial III Cleanup Criteria. The geophysical survey did not identify the presence of an anomaly consistent with a UST.

## **7.2 RECOMMENDATIONS**

The investigations identified the presence of a consistent clay confining layer across the subject property. Depth to clay ranged from 6-11 feet bgs and averaged approximately 6 feet in thickness. Further, regional water well records attached to previous reports identified a continuous confining clay layer across the region from 9-70 feet bgs. Therefore, groundwater beneath the subject property appears to be perched and not part of a usable aquifer.

The subject property is an open LUST site. Free product was not identified during any of the investigations. However, the extent of soil contamination has not been defined to the south (in the utility corridor). Further, the extent of groundwater contamination has not been defined to the north and east. Groundwater flow direction is to the southeast. Based on the analytical results of the groundwater samples collected from monitoring wells MW-11, MW-12 and MW-13, groundwater contamination does not appear to be migrating to the southern or eastern adjoining properties.

To achieve a Commercial III closure, additional work is necessary as follows:

- Delineate the extent of soil and groundwater contamination.
- Conduct quarterly groundwater monitoring for two years (eight quarters).
- Prepare a Commercial III LUST Closure Report.

Based on the current soil and groundwater data, AKT Peerless believes that two years of quarterly groundwater monitoring will be sufficient to achieve closure. Based on the results of the proposed investigation, it will likely be necessary to restrict the road right-of-way. Because



the extent of contamination is not fully defined, AKT Peerless is proposing a ‘Remediation Cost Estimate’. Details regarding this cost estimate are presented in the following section.

### **7.3 REMEDIATION COST ESTIMATE**

Based the results of the investigations, AKT Peerless proposes natural attenuation to achieve a Commercial III Closure of the subject property. AKT Peerless proposes the following scope of work:

- Drill one soil boring/permanent monitoring well in utility corridor along Avon Road western end of the subject property.
- Drill one soil boring/permanent monitoring well in utility corridor along Avon Road on the eastern end of the subject property.
- Drill one soil boring on the southern adjoining property.
- Collect soil samples from the soil borings for laboratory analyses for MDEQ Unleaded Gasoline Parameters.
- Install one permanent monitoring well on the northern adjoining property.
- Install one permanent monitoring well on the eastern adjoining property.
- Collect quarterly groundwater samples from all the monitoring wells for MDEQ Unleaded Gasoline Parameters for two years (eight quarters).
- Prepare a Commercial III UST Closure Report (including any additional notification that may be necessary).

AKT Peerless estimates that the remediation cost estimate for this site ranges from \$72,000 to \$84,000. These costs assume (1) the proposed scope of work is sufficient to delineate the extent of contamination to MDEQ Generic Residential Cleanup Criteria, (2) 12 quarters of groundwater monitoring is sufficient to demonstrate compliance with MDEQ Generic Residential Cleanup Criteria on adjoining properties (not including utility corridors. These will be restricted to Commercial III), (3) 12 quarters of groundwater monitoring is sufficient to demonstrate compliance with MDEQ Commercial III Cleanup Criteria on the subject property and (4) the subject property can be restricted to the Commercial III land use scenario.

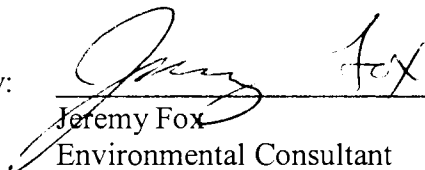
## 8.0 LIMITATIONS

The information and opinions obtained in this report are for the exclusive use of Safeway Acquisition, LLC, and Comerica Bank. No distribution to or reliance by other parties may occur without the express written permission of AKT Peerless. AKT Peerless will not distribute this report without your written consent or as required by law or by a Court order. The information and opinions contained in the report are given in light of that assignment. This report must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein. Any third parties who have been extended the right to rely on the contents of this report by AKT Peerless (which is expressly required prior to any third-party release), expressly agrees to be bound by the original terms and conditions entered into by AKT Peerless and Safeway Acquisition.

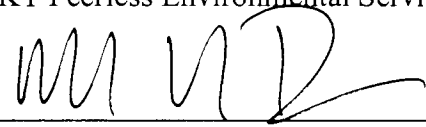
Subject to the above and the terms and conditions, AKT Peerless accepts responsibility for the competent performance of its duties in executing the assignment and preparing reports in accordance with the normal standards of the profession, but disclaims any responsibility for consequential damages. Although AKT Peerless believes that results contained herein are reliable, AKT Peerless cannot warrant or guarantee that the information provided is exhaustive or that the information provided by Safeway Acquisition, or third parties is complete or accurate.

AKT Peerless warrants that the services, findings, and/or recommendations provided to Comerica Incorporated, its affiliates and subsidiaries, and their respective successors and assigns Comerica, have been prepared, performed and rendered in accordance with procedures, practices, and standards generally accepted and customary in the consultant's profession for use in similar assignments. AKT Peerless shall indemnify, save and hold harmless Comerica from and against any and all losses, costs, expenses and liabilities, including without limit reasonable attorneys fees, which are attributable to the breach of the above warranty, up to an aggregate amount of \$1,000,000 (One Million Dollars), notwithstanding any limitation (expressed or implied) contained in any other agreement or document relating to the services, findings and/or recommendations provided by AKT Peerless.

Report submitted by:

  
\_\_\_\_\_  
Jeremy Fox  
Environmental Consultant  
Environmental Engineering Services  
AKT Peerless Environmental Services

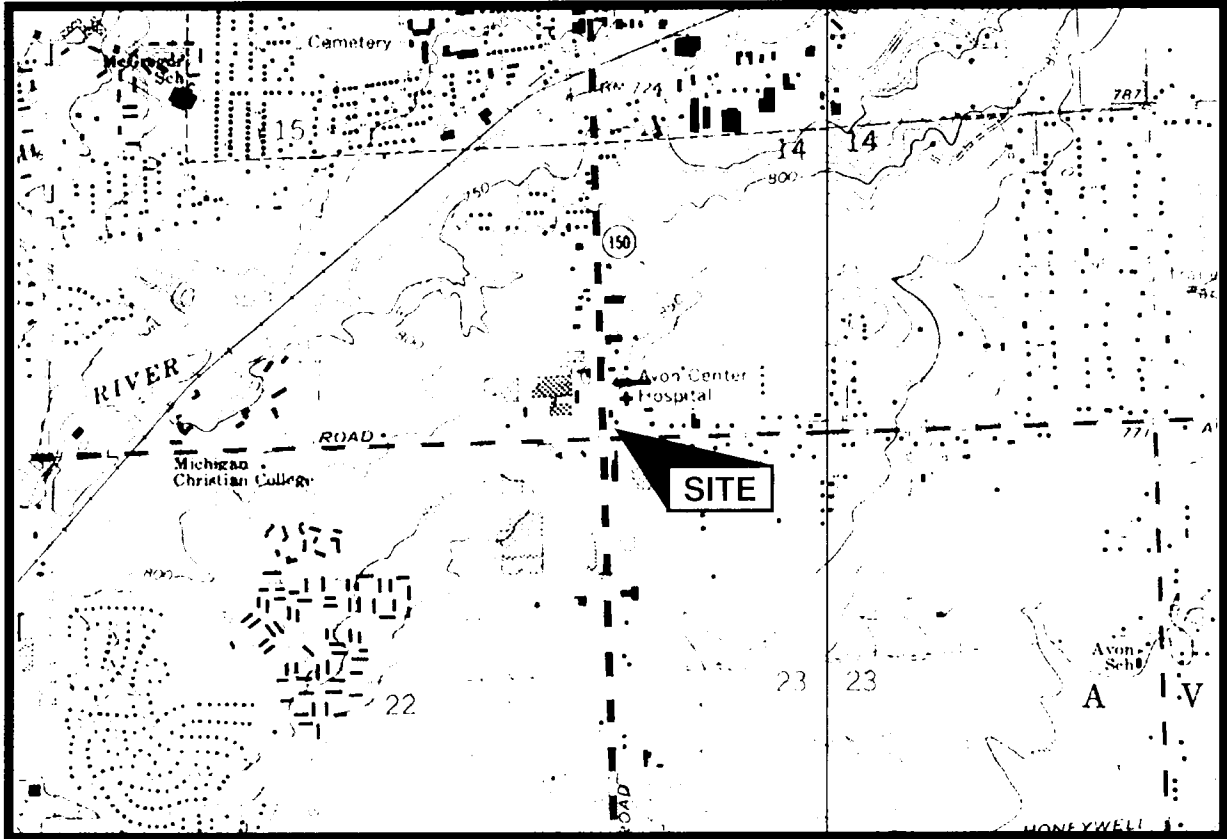
Report reviewed by:

  
\_\_\_\_\_  
Mark E. Van Doren  
Senior Project Manager  
Environmental Engineering Services  
AKT Peerless Environmental Services

March 31, 2005

## FIGURES

ROCHESTER QUADRANGLE  
 MICHIGAN - OAKLAND COUNTY  
 7.5 MINUTE SERIES (TOPOGRAPHIC)



T.3 N. - R.11 E.

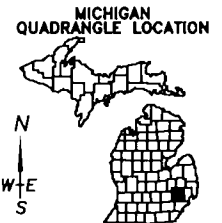
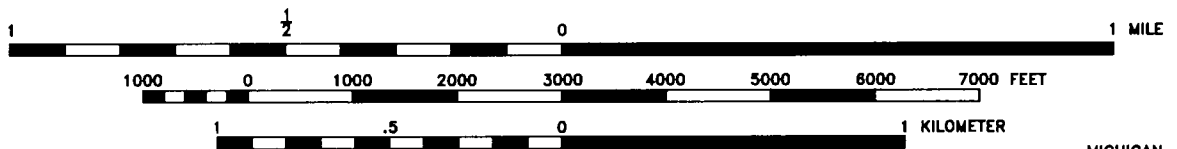


IMAGE TAKEN FROM 1968 U.S.G.S. TOPOGRAPHIC MAP  
 PHOTOREVISED 1981

**AKT** PEERLESS  
 environmental services

214 Jones Avenue, P.O. Box 1873, Saginaw, MI 48605  
 Phone: (989)754-9896 Fax: (989)754-3804

TOPOGRAPHIC LOCATION MAP  
 975 SOUTH ROCHESTER ROAD  
 ROCHESTER HILLS, MICHIGAN  
 PROJECT NUMBER : 4500F-2-20  
 DRAWING NUMBER : TOPO

DRAWN BY: OGO  
 DATE: 02-10-05

FIGURE 1

ROCHESTER ROAD

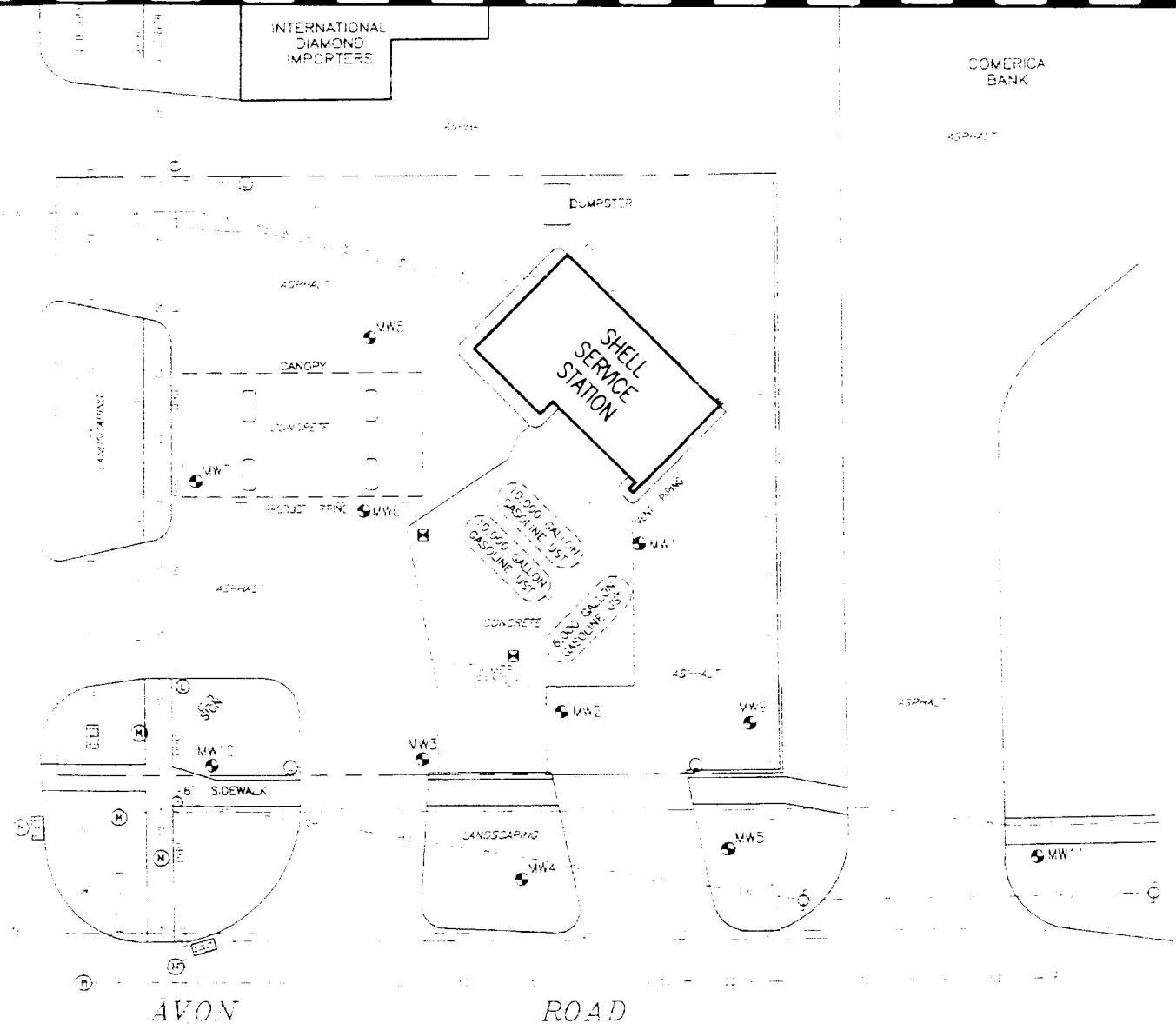
ROCHESTER ROAD

AVON ROAD

AVON ROAD

INTERNATIONAL  
DIAMOND  
IMPORTERS

COMERICA  
BANK



\*Site map originated by GES

**AKT** PEERLESS  
environmental services

22725 Orchard Lake Road, Farmington, MI 48336  
phone: (248) 615-1333 fax: (248) 615-1334

**\*Site Map with Utility Locations**

**Rochester and Avon Shell Station**

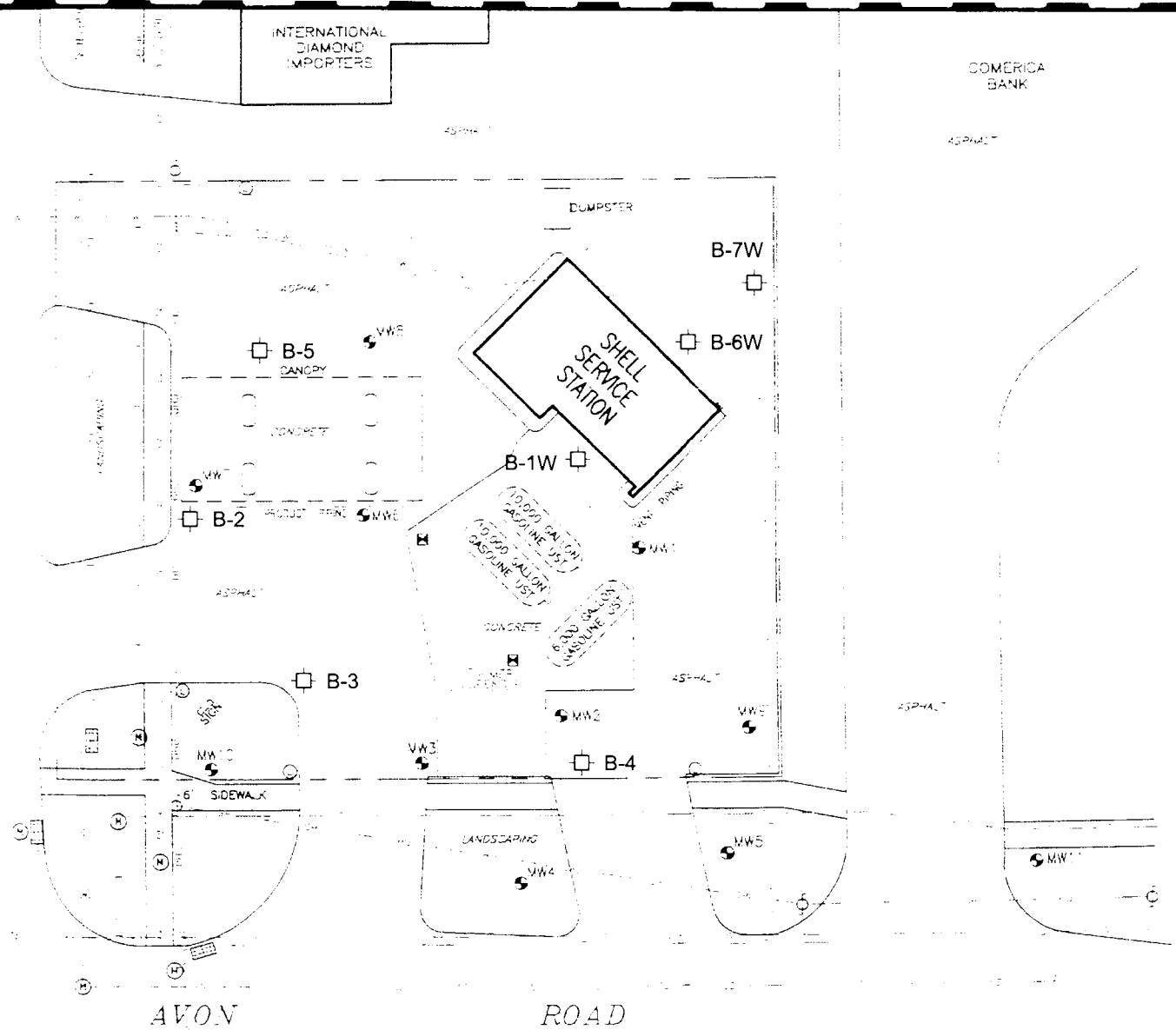
975 South Rochester Road  
Rochester Hills, MICHIGAN  
PROJECT NUMBER: 4500F-2-20

DRAWN BY: RAH  
DATE: 3/21/05

**FIGURE 2**

ROCHESTER ROAD

ROCHESTER ROAD



\*Site map originated by GES

**AKT** PEERLESS  
 environmental services

22725 Orchard Lake Road, Farmington, MI 48336  
 phone: (248) 615-1333 fax: (248) 615-1334

**\*Soil Boring Location Map**

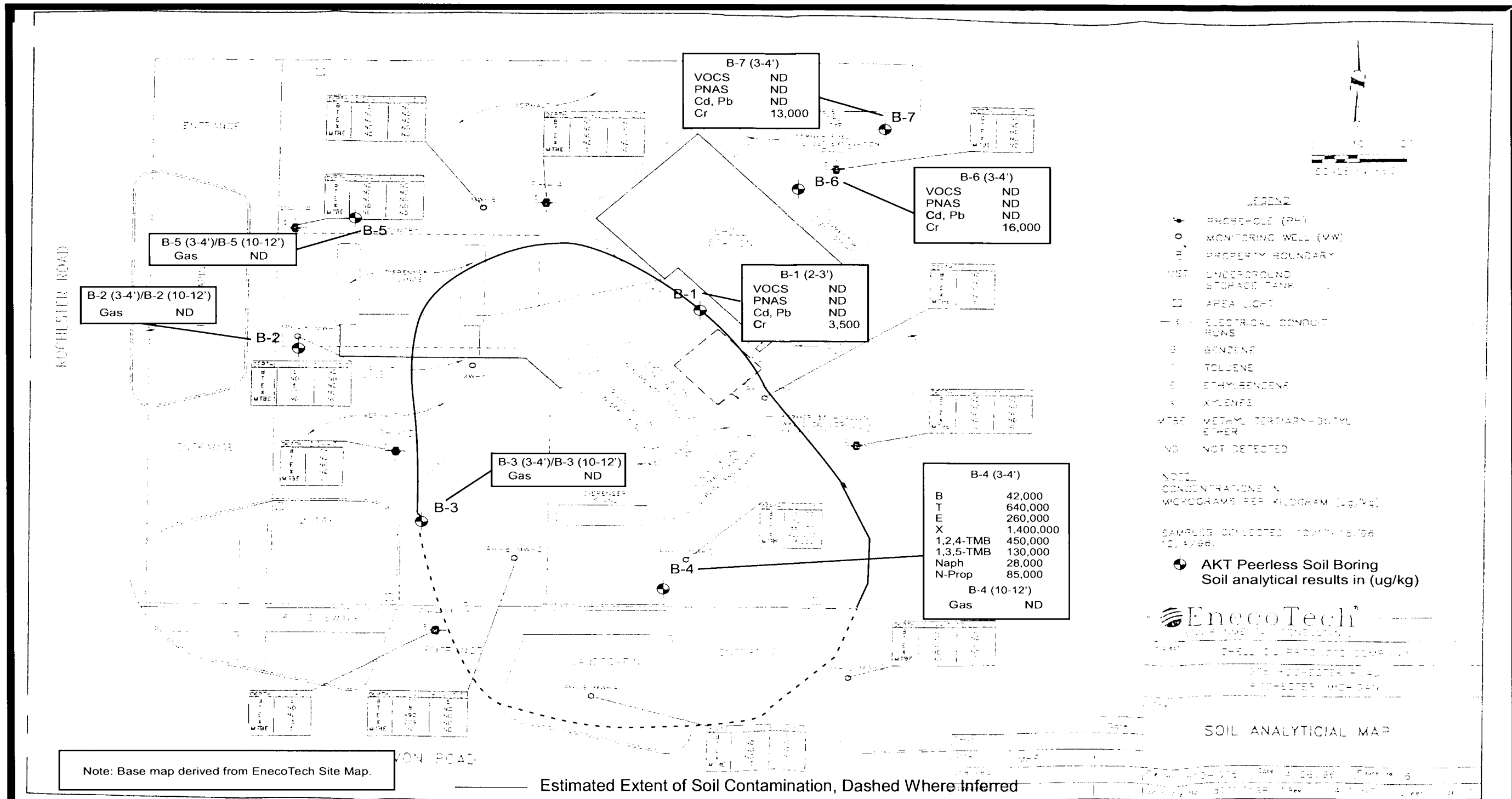
**Rochester and Avon Shell Station**

975 South Rochester Road  
 Rochester Hills, MICHIGAN  
 PROJECT NUMBER: 4500F-2-20

DRAWN BY: RAH

DATE: 3/21/05

**FIGURE 3**



**AKT PEERLESS**  
environmental services

22725 Orchard Lake Road, Farmington, MI 48336  
phone: (248) 615-1333 fax: (248) 615-1334

**APPROXIMATE EXTENT OF SOIL CONTAMINATION  
Rochester and Avon Shell Station**

975 South Rochester Road

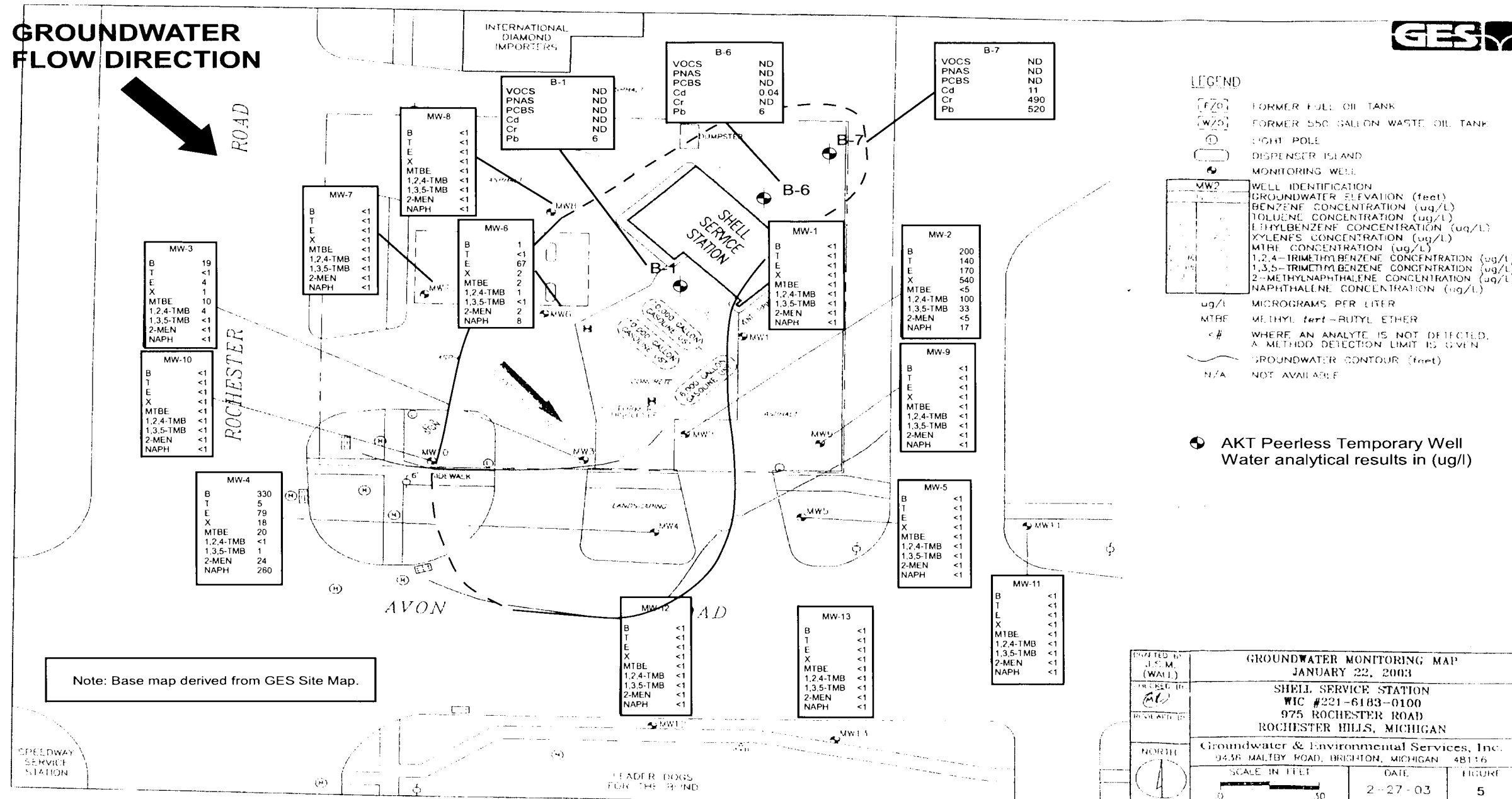
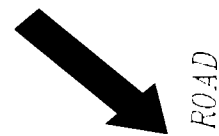
Rochester Hills, Michigan  
PROJECT NUMBER: 4500F-2-20

DRAWN BY: MEV

DATE: 3/23/2005

**FIGURE 4**

**GROUNDWATER FLOW DIRECTION**



Note: Base map derived from GES Site Map.

Estimated Extent of Groundwater Contamination, Dashed Where Inferred

**AKT PEERLESS**  
environmental services

22725 Orchard Lake Road, Farmington, MI 48336  
phone: (248) 615-1333 fax: (248) 615-1334

**APPROXIMATE EXTENT OF GROUNDWATER CONTAMINATION**  
Rochester and Avon Shell Station  
975 South Rochester Road

Rochester Hills, Michigan  
PROJECT NUMBER: 4500F-2-20

DRAWN BY: MEV  
DATE: 3/23/2005

FIGURE 5

DESIGNED BY J.C.M. (WALL)	GROUNDWATER MONITORING MAP JANUARY 22, 2003	
DRAWN BY MEV	SHELL SERVICE STATION WIC #221-6183-0100 975 ROCHESTER ROAD ROCHESTER HILLS, MICHIGAN	
SCALE IN FEET 0 10	DATE 2-27-03	FIGURE 5



## TABLES



**Table 2**  
**Summary of Groundwater Analytical Results**  
 Safeway Acquisition, LLC  
 975 Rochester Rd  
 Rochester Hills, MI  
 AKT Peerless Project No  
 4500F-2-20

Target Parameter and MDEQ Criteria		Residential & Commercial I Drinking Water Criteria & RBSLs	Industrial & Commercial II, III & IV Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Sample Identification and Date		
								B-1 W	B-6 W	B-7 W
Volatile Organic Compounds (ug/L)		CAS #						3/9/2005	3/9/2005	3/9/2005
Benzene (I)	71432	5.0 (A)	5.0 (A)	200 (X)	5,600	35,000	11,000	ND	ND	ND
Toluene (I)	108883	790 (E)	790 (E)	140	5.3E+5 (S)	5.3E+5 (S)	5.3E+5 (S)	ND	ND	ND
Ethylbenzene (I)	100414	74 (E)	74 (E)	18	1.1E+5	1.7E+5 (S)	1.7E+5 (S)	ND	ND	ND
Xylenes (I)	1330207	280 (E)	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	1.9E+5 (S)	ND	ND	ND
Methyl-tert-butyl ether (MTBE)	1634044	40 (E)	40 (E)	730 (X)	4.7E+7 (S)	4.7E+7 (S)	6.1E+5	ND	ND	ND
1,2,4-Trimethylbenzene (I)	95636	63 (E)	63 (E)	17	56,000 (S)	56,000 (S)	56,000 (S)	ND	ND	ND
1,3,5-Trimethylbenzene (I)	108678	72 (E)	72 (E)	45	61,000 (S)	61,000 (S)	61,000 (S)	ND	ND	ND
1,2-Dichloroethane (I)	107062	5.0 (A)	5.0 (A)	360 (X)	9,600	59,000	19,000	ND	ND	ND
Ethylene dibromide	106934	0.05 (A)	0.05 (A)	0.2 (X)	2,400	15,000	25	ND	ND	ND
2-Methylnaphthalene	91576	260	750	ID	ID	ID	25,000 (S)	ND	ND	ND
Naphthalene	91203	520	1,500	13	31,000 (S)	31,000 (S)	31,000 (S)	ND	ND	ND
Remaining VOCs	Various	-	-	-	-	-	-	ND	ND	ND
<b>Polynuclear Aromatic Hydrocarbons (ug/L)</b>										
Acenaphthene	83329	1,300	3,800	19	4,200 (S)	4,200 (S)	4,200 (S)	ND	ND	ND
Acenaphthylene	208968	52	150	ID	3,900 (S)	3,900 (S)	3,900 (S)	ND	ND	ND
Anthracene	120127	43 (S)	43 (S)	ID	43 (S)	43 (S)	43 (S)	ND	ND	ND
Benzo(a)anthracene (Q)	56553	2.1	8.5	ID	NLV	NLV	9.4 (S,AA)	ND	ND	ND
Benzo(a)pyrene (Q)	50328	5.0 (A)	5.0 (A)	ID	NLV	NLV	1.0 (M,AA), 0.64 (S)	ND	ND	ND
Benzo(b)fluoranthene (Q)	205992	1.5 (S, AA)	1.5 (S, AA)	ID	ID	ID	1.5 (S,AA)	ND	ND	ND
Benzo(g,h,i)perylene	191242	1.0 (M), 0.26 (S)	1.0 (M), 0.26 (S)	NA	NLV	NLV	1.0 (M,AA), 0.26 (S)	ND	ND	ND
Benzo(k)fluoranthene (Q)	207089	1.0 (M), 0.8 (S)	1.0 (M), 0.8 (S)	NA	NLV	NLV	1.0 (M,AA), 0.8 (S)	ND	ND	ND
Chrysene (Q)	218019	1.6 (S)	1.6 (S)	ID	ID	ID	1.6 (S,AA)	ND	ND	ND
Dibenzo(a,h)anthracene (Q)	53703	2.0 (M), 0.21	2.0 (M), 0.85	ID	NLV	NLV	2.0 (M,AA), 0.31 (S)	ND	ND	ND
Fluoranthene	206440	210 (S)	210 (S)	1.6	210 (S)	210 (S)	210 (S)	ND	ND	ND
Fluorene	86737	880	2,000 (S)	12	2,000 (S)	2,000 (S)	2,000 (S)	ND	ND	ND
Indeno(1,2,3-cd)pyrene (Q)	193395	2.0 (M), 0.022 (S)	2.0 (M), 0.022 (S)	ID	NLV	NLV	2.0 (M,AA), 0.022 (S)	ND	ND	ND
Phenanthrene	85018	52	150	2.4	1,000 (S)	1,000 (S)	1,000 (S)	ND	ND	ND
Pyrene	129000	140 (S)	140 (S)	ID	140 (S)	140 (S)	140 (S)	ND	ND	ND
Remaining PNAs	Various	-	-	-	-	-	-	ND	ND	ND
<b>Metals (ug/L)</b>										
Cadmium (B)	7440439	<b>5.0 (A)</b>	<b>5.0 (A)</b>	(G,X)	NLV	NLV	1.9E+5	ND	0.4	<b>11</b>
Chromium (VI)	18540299	<b>100 (A)</b>	<b>100 (A)</b>	<b>11</b>	NLV	NLV	4.6E+5	ND	ND	<b>490</b>
Lead (B)	7439921	<b>4.0 (L)</b>	<b>4.0 (L)</b>	(G,X)	NLV	NLV	ID	<b>6</b>	<b>8</b>	<b>520</b>
<b>PCBs (ug/L)</b>										
Polychlorinated biphenyls (PCBs) (J,T)	1336363	0.5 (A)	0.5 (A)	0.2 (M), 2.6E-5	45 (S)	45 (S)	3.3 (AA)	ND	ND	ND
<b>Glycols (ug/L)</b>										
Ethylene glycol	107211	15,000	42,000	1.9E+5 (X)	NLV	NLV	1.0E+9 (S)	NS	NS	NS

Note  
 (ug/L)-Micrograms per liter  
 A - Criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act, Act No. 399 of the Public Act of 1976  
 E - Criterion is the aesthetic drinking water value, as required by Sec. 2020(1)(5)  
 G - GSI criterion is pH or water hardness dependent  
 L - Reserved  
 M - Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.  
 S - Criterion defaults to the chemical-specific water solubility limit  
 X - The GSI criterion shown is not protective for surface water that is used as a drinking water source  
 AA - Filtered groundwater samples must be collected for appropriate comparison to the GCC, since these hazardous substances are likely to be adsorbed to particulates rather than dissolved in water  
 ID - Inadequate data to develop criterion  
 NA - RBSL or value is not available or, as is the case for Csat, not applicable  
 ND - Non-detect  
 NLV - Hazardous substance is not likely to volatilize under most conditions  
 NS - Not submitted

**Underground Storage Tank System  
Site Assessment Report and Closure  
Tank Number 2 & Tank Number 3**

**Shell Gas Station Property  
Facility ID Number 00009055  
975 South Rochester Road  
Rochester, Michigan 48037**

**Prepared for:**

**Mr. Sam Beydoun, CEO  
Safeway Acquisitions Group LLC  
8700 Brandt  
Dearborn, MI 48126**

**Completed:**

**July 17, 2008**

**Waste & Hazardous  
Materials Division**

**JUL 21 2008**



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - WASTE AND HAZARDOUS MATERIALS DIVISION

C-0214-96  
1K-used Oil

2/17/05 T-1, C-R  
C-0252-96  
1K, 6K-gal  
T-1, C-R

## UNDERGROUND STORAGE TANK SYSTEM SITE ASSESSMENT REPORT AND CLOSURE OR CHANGE-IN-SERVICE REGISTRATION FORM

This information is required under Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, being Sections 324.21101 to 324.21113 of the Michigan Compiled Laws Annotated. Any owner who knowingly fails to notify or submits false information shall be subject to a misdemeanor and/or civil penalties not to exceed \$5000 per day for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS: For permanent closure and change-in-service, complete all the information on this form and submit with the site assessment analytical results, chain of custody and site sketch which indicates the location and depths of tanks, piping, and samples. This form must be received within 45 days of the samples being taken. The owner is required to keep a copy of the site assessment report for a minimum of three years. See reverse side of this form for additional information.		<b>FACILITY ID NUMBER</b>	
		ID# 00009055	
<b>I. OWNERSHIP OF TANKS</b>		<b>II. LOCATION OF TANKS</b>	
NAME OF OWNER (CORPORATION, INDIVIDUAL, ETC.) <b>Safeway Acquisitions Group LLC</b>		FACILITY NAME OR COMPANY SITE IDENTIFIER <b>Shell Service Station</b>	
STREET ADDRESS <b>8700 Brandt</b>		STREET ADDRESS (PO BOX NOT ACCEPTABLE) <b>975 S. Rochester Rd</b>	
CITY <b>Dearborn</b>	STATE <b>MI</b>	ZIP CODE <b>48126</b>	CITY <b>Rochester</b>
			STATE <b>MI</b>
			ZIP CODE <b>48037</b>
AREA CODE & TELEPHONE NUMBER <b>313 624 9911</b>		CONTACT PERSON FOR LOCATION <b>Kassem Beydoun</b>	AREA CODE & TELEPHONE NUMBER <b>313 624 9911</b>
<b>III. TANK INFORMATION</b>			
TANK NUMBER	<b>2</b>	<b>3</b>	
TANK SIZE	<b>10,000</b>	<b>6,000</b>	
SUBSTANCE STORED	<b>Gasoline</b>	<b>Gasoline</b>	
DATE LAST USED	<b>6/6/08</b>	<b>6/6/08</b>	
DATE CLOSED	<b>6/11/08</b>	<b>6/11/08</b>	
REMOVED FROM GROUND	<b>No</b>	<b>No</b>	
CLOSED IN PLACE (INDICATE TYPE OF FILL)	<b>concrete</b>	<b>concrete</b>	
CHANGE-IN-SERVICE			
OWNER'S NAME <b>Safeway Acquisition LLC</b>	OWNER'S SIGNATURE 		DATE <b>7-17-08</b>
<b>IV. SUBMITTER INFORMATION</b>			
SUBMITTED BY (COMPANY NAME) <b>Midwest Environmental Consulting Corp.</b>		NAME (INDIVIDUAL) <b>James A. Kyle</b>	
SIGNATURE 	DATE <b>6/24/08</b>	AREA CODE & TELEPHONE NUMBER <b>313 792 9670</b>	
<b>DO NOT WRITE BELOW THIS LINE (FOR OFFICE USE ONLY)</b>			

### SITE ASSESSMENT REVIEW REPORT

Your site assessment has been reviewed by the Storage Tank Unit staff and the following determination has been made:

- The contamination concentration is below the threshold detection levels, and there is no evidence of a confirmed release.
- The test methodology or level of detection is faulty. The data submitted is not considered valid. Please perform another site assessment and forward a copy of the results to this office within 45 days.
- The number of sampling points analyzed are considered inadequate to make a determination of the cleanliness of the site. Please perform another site assessment and forward a copy of the results to this office within 45 days.
- The contaminant concentrations are greater than the threshold detection levels and there is evidence of a confirmed release. A confirmed release report is being generated. Follow reporting requirements in accordance with 451 PA 1994, Part 213, as amended.
- The soils excavated and removed from the site were greater than allowable volumes. A confirmed release was not reported to this office within 24 hours per the Michigan Underground Storage Tank Rules (MUSTR) prior to excavation of contaminated soil. A confirmed release report is being generated. Follow reporting requirements in accordance with 451 PA 1994, Part 213, as amended.

SIGNATURE OF REVIEWER	DATE OF REVIEW

MAIL COPIES TO: WASTE AND HAZARDOUS MATERIALS DIVISION, STORAGE TANK UNIT  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
PO BOX 30241 LANSING, MI 48909-7741

EQP3881 (11/05)

**SMR JUL 22 2008**

**SMR JUL 22 2008**


**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

44075 Phoenix Drive  
Sterling Heights, Michigan 48314-1420  
Phone 586.731.1818 Fax 586.731.2590  
Outside Michigan 1.800.368.5227  
www.environmentalqualitylabs.com

CLIENT NAME: MIDWEST ENVIRONMENTAL  
4507 S. VERNON RD  
DEARBORN, MI 48124

PROJECT NAME/NO.: 975 S ROCHESTER RD

DATE REPORTED	DATE RECEIVED	SAMPLE TEMP	DATE COLLECTED	DATE ANALYZED
06/19/08	06/12/08	4°C	06/12/08	06/12/08

ANALYZED BY: NK


REFERENCED METHOD: 8021/5035

DRY WEIGHT CORRECTED (SOILS ONLY)  
ALL RESULTS REPORTED IN ppBillion

LAB NO.	RDL		1323	1324	1325	1326	1327	1328	1329
	SOIL	WATER	SOIL SB-1	SOIL SB-2	SOIL SB-3	SOIL SB-4	SOIL SB-5	SOIL SB-6	SOIL SB-6
			10.5'	12'	11'	11'	11'	3.5'	12'
COMPOUND NAME	ppB	ppB							
BENZENE	50	1.0	ND	ND	ND	ND	ND	ND	ND
TOLUENE	100	1.0	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	50	1.0	ND	ND	ND	ND	ND	ND	ND
XYLENES	150	3.0	ND	ND	ND	ND	ND	ND	ND

NOTE: "ND" DENOTES THAT ANALYTE RESULT IS BELOW THE REPORTED REGULATORY DERIVED TARGET  
LIMIT OF DETECTION.

THOMAS S. MEGNA, PRESIDENT 

ALA GAJDA, LAB SUPERVISOR 

REFERENCES: 40 CFR PART 136. CURRENT EDITION.

las rev 020105



**ENVIRONMENTAL QUALITY LABORATORIES, INC.**  
 44075 Phoenix Drive  
 Sterling Heights, Michigan 48314-1420  
 (586) 731-1818 • (800) 368-5227 • Fax (586) 731-2590

2 0799

CR-11-0000

**Analysis Request**

PAGE 03

ENV QUALITY LABS

586-731-2590

06/19/2008 13:36

**1** Consultant Midwest Environmental  
 Sampler: S. Kyle Phone: \_\_\_\_\_  
 Project: 975 S. Rochester Rd  
 Fax: \_\_\_\_\_

Sample Identification	Collection		Grab	Composite	Soil	Water	Other	Total # of Containers	Analysis Requested	Remarks
	Date	Time								
SB-1 10.5'	1323	6/12 9:15			✓			2	BTEX	
SB-2 12'	1324	9:40			✓		2			
SB-3 11'	1325	10:00			✓		2			
SB-4 11'	1326	10:15			✓		2			
SB-5 11'	1327	10:40			✓		2			
SB-6 3.5'	1328	10:50			✓		2			
SB-6 12'	1329	11:00			✓		2			

**7** Turnaround time requested, (please circle): Emergency, Routine  
 (Call to confirm Emergency turnaround time).  
 Rush analysis results via:  
 Fax#: 866-633-5691 -or- Phone #: \_\_\_\_\_

**9** CONDITION OF SAMPLES UPON RECEIPT AT EQL.  
 Sample Temp: \_\_\_\_\_ Preserve? \_\_\_\_\_ Damaged? \_\_\_\_\_  
 Comments: \_\_\_\_\_

**8** - This section MUST be signed each time the sample changes hands -

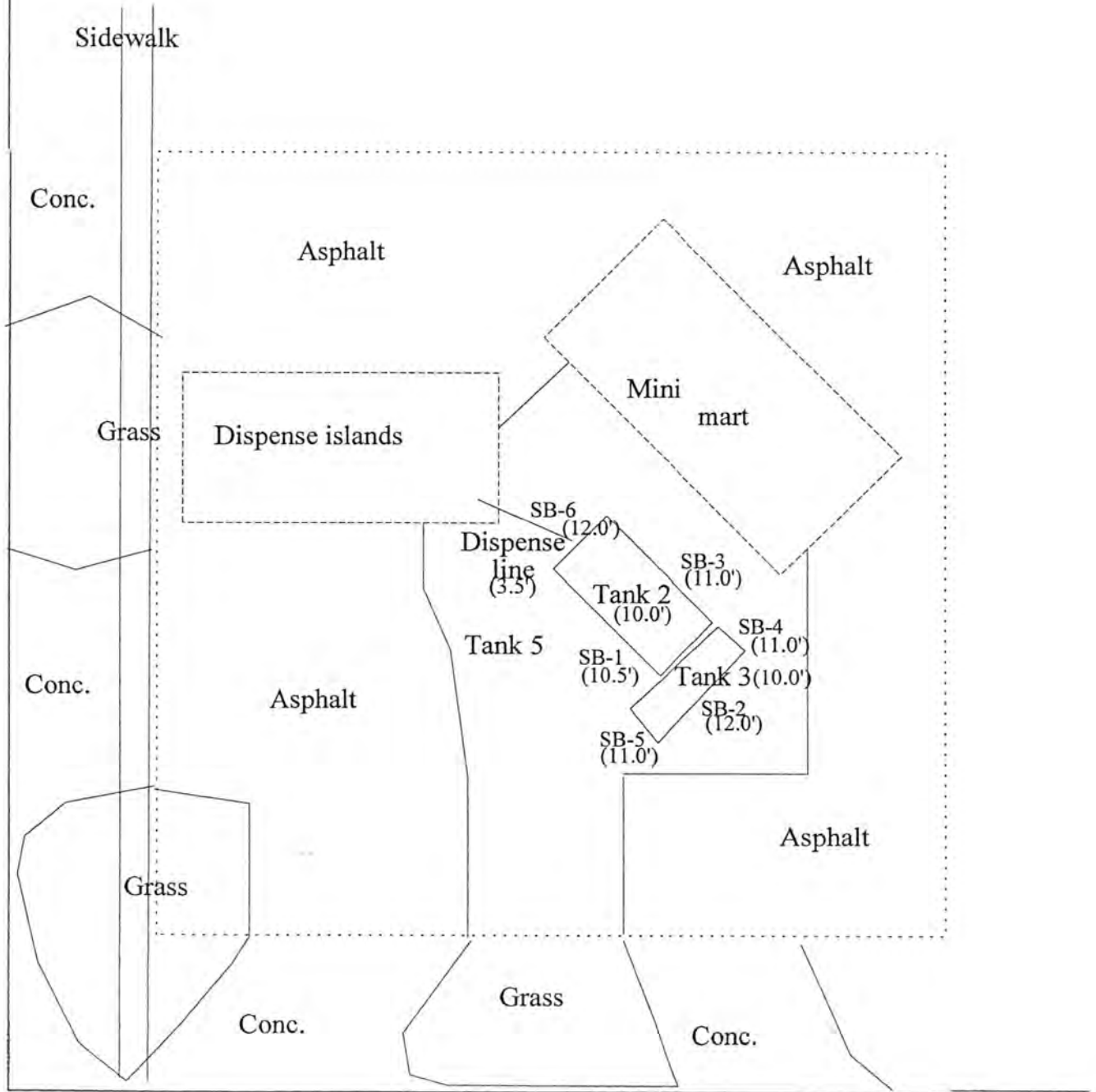
Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	6/12/08	11:10	<i>[Signature]</i>	6/12/08	11:30
<i>[Signature]</i>	Return	12:30	<i>[Signature]</i>		

In case we have questions when the samples arrive, call:  
 Name: Jim Kyle Phone: 313-850-6127  
 Send report to: \_\_\_\_\_

N ↑

Scale 1"=25'

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Avon Road

Site Sketch-975 South Rochester Road, Rochester, N



# Appendix D



## ENVIRONMENTAL DATABASE SEARCH

**945 and 975 South Rochester Road**

945 and 975 South Rochester Road

Rochester Hills, MI 48307

Inquiry Number: 05753114.2r

August 15, 2019

## The EDR Radius Map™ Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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Government Records Searched/Data Currency Tracking .....	GR-1

## GEOCHECK ADDENDUM

GeoCheck - Not Requested

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

945 AND 975 SOUTH ROCHESTER ROAD  
ROCHESTER HILLS, MI 48307

#### COORDINATES

Latitude (North): 42.6668540 - 42° 40' 0.67"  
Longitude (West): 83.1326620 - 83° 7' 57.58"  
Universal Transverse Mercator: Zone 17  
UTM X (Meters): 325225.8  
UTM Y (Meters): 4725811.0  
Elevation: 843 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 6066320 ROCHESTER, MI  
Version Date: 2014  
  
East Map: 6066338 UTICA, MI  
Version Date: 2014

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140721  
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:  
 945 AND 975 SOUTH ROCHESTER ROAD  
 ROCHESTER HILLS, MI 48307

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
<a href="#">A1</a>	EXPRESS 100 INC.	975 S ROCHESTER RD	LUST, UST, INVENTORY		TP
<a href="#">A2</a>	FORMER SHELL 975 ROC	975 ROCHESTER ROAD	AUL		TP
<a href="#">A3</a>	SHELL SERVICE STATIO	975 S ROCHESTER RD	RGA LUST		TP
<a href="#">A4</a>	ROCHESTER HILLS INC	975 S ROCHESTER RD	EDR Hist Auto		TP
<a href="#">A5</a>	EQUILON ENTERPRISES	975 S ROCHESTER RD	WDS		TP
<a href="#">A6</a>	EXPRESS 100 INC.	975 S ROCHESTER RD	Financial Assurance		TP
<a href="#">A7</a>	SHELL SERVICE STATIO	975 S ROCHESTER	RGA LUST		TP
<a href="#">A8</a>	SANYO MACHINE AMERIC	950 S ROCHESTER RD	UST	Higher	80, 0.015, NW
<a href="#">A9</a>	DETROIT BROACH & MAC	950 S ROCHESTER RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	80, 0.015, NW
<a href="#">B10</a>	SPEEDWAY #8832	1010 S ROCHESTER RD	LUST, UST, AUL, INVENTORY, AIRS, Financial...	Lower	220, 0.042, SSW
<a href="#">B11</a>	SPEEDWAY SUPERAMERIC	1010 N ROCHESTER RD	EDR Hist Auto	Lower	220, 0.042, SSW
<a href="#">C12</a>	SPRINGFIELD INDUSTRI	873 ROCHESTER RD	RCRA-CESQG, FINDS, ECHO	Lower	401, 0.076, NNW
<a href="#">B13</a>	LEADER DOG FOR THE B	1039 S ROCHESTER RD	UST	Lower	461, 0.087, South
<a href="#">B14</a>	PENSKE AUTO CENTER	1100 S ROCHESTER RD	RCRA NonGen / NLR	Lower	466, 0.088, SSW
<a href="#">B15</a>	PENSKE AUTO CENTER	1100 S ROCHESTER RD	RCRA-CESQG, FINDS, ECHO	Lower	466, 0.088, SSW
<a href="#">C16</a>	SHELTON PONTIAC-BUIC	855 S ROCHESTER RD	LUST, UST, WDS	Higher	653, 0.124, North
<a href="#">C17</a>	SHELTON PONTIAC BUIC	855 S ROCHESTER RD	RCRA-CESQG, FINDS, ECHO	Higher	653, 0.124, North
<a href="#">D18</a>	FOX TOYOTA/FOX VOLKS	755 AND 773 SOUTH RO	BEA	Lower	929, 0.176, North
<a href="#">D19</a>	FOX TOYOTA/FOX VOLKS	755 AND 773 SOUTH RO	INVENTORY	Lower	929, 0.176, North
<a href="#">D20</a>	770 SOUTH ROCHESTER	770 SOUTH ROCHESTER	INVENTORY	Lower	939, 0.178, North
<a href="#">D21</a>	FOX TOYOTA/FOX VOLKS	755 ROCHESTER ROAD	INVENTORY, BEA	Lower	1009, 0.191, North
<a href="#">D22</a>	BILL FOX AMC INC	755 S ROCHESTER RD	LUST, UST, INVENTORY, ASBESTOS	Lower	1009, 0.191, North
<a href="#">D23</a>	FOX AUTOMOTIVE GROUP	755 S ROCHESTER RD	RCRA-SQG, FINDS, ECHO	Lower	1009, 0.191, North
<a href="#">D24</a>	MIDAS MUFFLER	746 S ROCHESTER RD	RCRA-CESQG, FINDS, ECHO	Lower	1046, 0.198, North
<a href="#">E25</a>	CHRISMAN LINCOLN MER	1185 S ROCHESTER RD	UST	Lower	1111, 0.210, South
<a href="#">E26</a>	CRISSMAN LINCOLN MER	1185 S ROCHESTER RD	RCRA NonGen / NLR	Lower	1111, 0.210, South
<a href="#">E27</a>	CRISSMAN LINCOLN MER	1185 S. ROCHESTER RO	US BROWNFIELDS	Lower	1111, 0.210, South
<a href="#">28</a>	LIFETIME FITNESS	200 W AVON RD	RCRA NonGen / NLR	Lower	1162, 0.220, WNW
<a href="#">F29</a>	BILL FOX CHEVROLET I	725 S ROCHESTER RD	RCRA-SQG, FINDS, ECHO	Lower	1274, 0.241, North
<a href="#">F30</a>	BILL FOX CHEVROLET I	725 S ROCHESTER RD	LUST, UST, Financial Assurance, WDS	Lower	1274, 0.241, North
<a href="#">31</a>	ROCHESTER HILLS CHRR	1301 S ROCHESTER RD	LUST, UST, Financial Assurance	Lower	1522, 0.288, South
<a href="#">32</a>	ROCHESTER GLASS WORK	560 S ROCHESTER RD	LUST, INVENTORY, BEA	Lower	2065, 0.391, North
<a href="#">33</a>	WP BURKE CO	93 MILL STREET	DEL PART 201, WDS	Lower	3740, 0.708, North
<a href="#">34</a>	ITT AUTOMOTIVE	301 EAST THIRD STREE	AUL, PART 201, BEA	Lower	4614, 0.874, North

## EXECUTIVE SUMMARY

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
EXPRESS 100 INC. 975 S ROCHESTER RD ROCHESTER HILLS, MI 48307	<b>LUST</b> Release Status: Closed Substance Release: Used Oil Substance Release: Gasoline Facility Id: 00009055  <b>UST</b> Database: UST, Date of Government Version: 02/06/2019 Tank Status: Removed from Ground Tank Status: Currently In Use Facility Type: ACTIVE Facility Id: 00009055  <b>INVENTORY</b> Facility ID: 00009055	N/A
FORMER SHELL 975 ROC 975 ROCHESTER ROAD ROCHESTER HILLS, MI 48037	<b>AUL</b> Facility ID: 00000905	N/A
SHELL SERVICE STATIO 975 S ROCHESTER RD ROCHESTER, MI	<b>RGA LUST</b> Facility ID: 9055	N/A
ROCHESTER HILLS INC 975 S ROCHESTER RD ROCHESTER, MI 48063	EDR Hist Auto	N/A
EQUILON ENTERPRISES 975 S ROCHESTER RD ROCHESTER HILLS, MI 48307	<b>WDS</b> WMD Id: 426933 Site Id: MIG000008833	N/A
EXPRESS 100 INC. 975 S ROCHESTER RD ROCHESTER HILLS, MI 48307	<b>Financial Assurance</b> Database: FINANCIAL ASSURANCE 3, Date of Government Version: 04/08/2019	N/A
SHELL SERVICE STATIO 975 S ROCHESTER ROCHESTER, MI	<b>RGA LUST</b> Facility ID: 9055	N/A

## EXECUTIVE SUMMARY

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal NPL site list***

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

#### ***Federal Delisted NPL site list***

Delisted NPL..... National Priority List Deletions

#### ***Federal CERCLIS list***

FEDERAL FACILITY..... Federal Facility Site Information listing  
SEMS..... Superfund Enterprise Management System

#### ***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

#### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

#### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

#### ***Federal RCRA generators list***

RCRA-LQG..... RCRA - Large Quantity Generators

#### ***Federal institutional controls / engineering controls registries***

LUCIS..... Land Use Control Information System  
US ENG CONTROLS..... Engineering Controls Sites List  
US INST CONTROL..... Sites with Institutional Controls

#### ***Federal ERNS list***

ERNS..... Emergency Response Notification System

#### ***State- and tribal - equivalent CERCLIS***

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.



# EXECUTIVE SUMMARY

## ***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF..... Solid Waste Facilities Database

## ***State and tribal leaking storage tank lists***

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

## ***State and tribal registered storage tank lists***

FEMA UST..... Underground Storage Tank Listing

AST..... Aboveground Tanks

INDIAN UST..... Underground Storage Tanks on Indian Land

## ***State and tribal voluntary cleanup sites***

INDIAN VCP..... Voluntary Cleanup Priority Listing

## ***State and tribal Brownfields sites***

BROWNFIELDS..... Brownfields and UST Site Database

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

HIST LF..... Inactive Solid Waste Facilities

SWRCY..... Recycling Facilities

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

ODI..... Open Dump Inventory

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

IHS OPEN DUMPS..... Open Dumps on Indian Land

### ***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL..... Delisted National Clandestine Laboratory Register

CDL..... Clandestine Drug Lab Listing

US CDL..... National Clandestine Laboratory Register

### ***Local Land Records***

LIENS..... Lien List

LIENS 2..... CERCLA Lien Information

### ***Records of Emergency Release Reports***

HMIRS..... Hazardous Materials Information Reporting System

SPILLS..... Pollution Emergency Alerting System

### ***Other Ascertainable Records***

FUDS..... Formerly Used Defense Sites

DOD..... Department of Defense Sites

## EXECUTIVE SUMMARY

SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR.....	Financial Assurance Information
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
TSCA.....	Toxic Substances Control Act
TRIS.....	Toxic Chemical Release Inventory System
SSTS.....	Section 7 Tracking Systems
ROD.....	Records Of Decision
RMP.....	Risk Management Plans
RAATS.....	RCRA Administrative Action Tracking System
PRP.....	Potentially Responsible Parties
PADS.....	PCB Activity Database System
ICIS.....	Integrated Compliance Information System
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS.....	Material Licensing Tracking System
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER.....	PCB Transformer Registration Database
RADINFO.....	Radiation Information Database
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS.....	Incident and Accident Data
CONSENT.....	Superfund (CERCLA) Consent Decrees
INDIAN RESERV.....	Indian Reservations
FUSRAP.....	Formerly Utilized Sites Remedial Action Program
UMTRA.....	Uranium Mill Tailings Sites
LEAD SMELTERS.....	Lead Smelter Sites
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
US MINES.....	Mines Master Index File
ABANDONED MINES.....	Abandoned Mines
FINDS.....	Facility Index System/Facility Registry System
UXO.....	Unexploded Ordnance Sites
ECHO.....	Enforcement & Compliance History Information
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
AIRS.....	Permit and Emissions Inventory Data
ASBESTOS.....	ASBESTOS
COAL ASH.....	Coal Ash Disposal Sites
DRYCLEANERS.....	Drycleaning Establishments
LEAD.....	Lead Safe Housing Registry
NPDES.....	List of Active NPDES Permits
UIC.....	Underground Injection Wells Database

### **EDR HIGH RISK HISTORICAL RECORDS**

#### ***EDR Exclusive Records***

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner.....	EDR Exclusive Historical Cleaners

### **EDR RECOVERED GOVERNMENT ARCHIVES**

#### ***Exclusive Recovered Govt. Archives***

RGA PART 201.....	Recovered Government Archive State Hazardous Waste Facilities List
-------------------	--

## EXECUTIVE SUMMARY

RGA LF..... Recovered Government Archive Solid Waste Facilities List

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal RCRA generators list***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/25/2019 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>FOX AUTOMOTIVE GROUP</i></b> EPA ID:: MID151407434	<b><i>755 S ROCHESTER RD</i></b>	<b><i>N 1/8 - 1/4 (0.191 mi.)</i></b>	<b><i>D23</i></b>	<b><i>43</i></b>
<b><i>BILL FOX CHEVROLET I</i></b> EPA ID:: MID017338039	<b><i>725 S ROCHESTER RD</i></b>	<b><i>N 1/8 - 1/4 (0.241 mi.)</i></b>	<b><i>F29</i></b>	<b><i>59</i></b>

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/25/2019 has revealed that there are 4 RCRA-CESQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>SHELTON PONTIAC BUIC</i></b> EPA ID:: MID017339078	<b><i>855 S ROCHESTER RD</i></b>	<b><i>N 0 - 1/8 (0.124 mi.)</i></b>	<b><i>C17</i></b>	<b><i>37</i></b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>SPRINGFIELD INDUSTRI</i></b>	<b><i>873 ROCHESTER RD</i></b>	<b><i>NNW 0 - 1/8 (0.076 mi.)</i></b>	<b><i>C12</i></b>	<b><i>27</i></b>

## EXECUTIVE SUMMARY

EPA ID:: MIK158690277				
<b>PENSKE AUTO CENTER</b>	<b>1100 S ROCHESTER RD</b>	<b>SSW 0 - 1/8 (0.088 mi.)</b>	<b>B15</b>	<b>31</b>
EPA ID:: MIK777456526				
<b>MIDAS MUFFLER</b>	<b>746 S ROCHESTER RD</b>	<b>N 1/8 - 1/4 (0.198 mi.)</b>	<b>D24</b>	<b>45</b>
EPA ID:: MIR000008375				

### **State and tribal leaking storage tank lists**

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's Leaking Underground Storage Tank (LUST) Database.

A review of the LUST list, as provided by EDR, and dated 05/03/2019 has revealed that there are 6 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SHELTON PONTIAC-BUIC</b> Release Status: Closed Substance Release: Other,Used Oil,Other Facility Id: 00002058	<b>855 S ROCHESTER RD</b>	<b>N 0 - 1/8 (0.124 mi.)</b>	<b>C16</b>	<b>33</b>
<b>Lower Elevation</b>	<b>Address</b>	<b>Direction / Distance</b>	<b>Map ID</b>	<b>Page</b>
<b>SPEEDWAY #8832</b> Release Status: Open Substance Release: Unknown,Unknown Substance Release: Gasoline,Gasoline,Diesel Facility Id: 00016387	<b>1010 S ROCHESTER RD</b>	<b>SSW 0 - 1/8 (0.042 mi.)</b>	<b>B10</b>	<b>18</b>
<b>BILL FOX AMC INC</b> Release Status: Open Substance Release: Gasoline,Unknown Facility Id: 00007644	<b>755 S ROCHESTER RD</b>	<b>N 1/8 - 1/4 (0.191 mi.)</b>	<b>D22</b>	<b>41</b>
<b>BILL FOX CHEVROLET I</b> Release Status: Closed Substance Release: Unknown Facility Id: 00003748	<b>725 S ROCHESTER RD</b>	<b>N 1/8 - 1/4 (0.241 mi.)</b>	<b>F30</b>	<b>63</b>
<b>ROCHESTER HILLS CHRR</b> Release Status: Closed Substance Release: Gasoline Facility Id: 00008294	<b>1301 S ROCHESTER RD</b>	<b>S 1/4 - 1/2 (0.288 mi.)</b>	<b>31</b>	<b>66</b>
<b>ROCHESTER GLASS WORK</b> Release Status: Open Substance Release: Unknown Facility Id: 50002234	<b>560 S ROCHESTER RD</b>	<b>N 1/4 - 1/2 (0.391 mi.)</b>	<b>32</b>	<b>69</b>

## EXECUTIVE SUMMARY

### ***State and tribal registered storage tank lists***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Michigan UST database.

A review of the UST list, as provided by EDR, has revealed that there are 7 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SANYO MACHINE AMERIC Database: UST, Date of Government Version: 02/06/2019 Tank Status: Temporarily Out of Use Facility Type: CLOSED Facility Id: 00002684	950 S ROCHESTER RD	NW 0 - 1/8 (0.015 mi.)	A8	15
<b>SHELTON PONTIAC-BUIC</b> Database: UST, Date of Government Version: 02/06/2019 Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00002058	<b>855 S ROCHESTER RD</b>	<b>N 0 - 1/8 (0.124 mi.)</b>	<b>C16</b>	<b>33</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SPEEDWAY #8832</b> Database: UST, Date of Government Version: 02/06/2019 Tank Status: Currently In Use Tank Status: Removed from Ground Facility Type: ACTIVE Facility Id: 00016387	<b>1010 S ROCHESTER RD</b>	<b>SSW 0 - 1/8 (0.042 mi.)</b>	<b>B10</b>	<b>18</b>
LEADER DOG FOR THE B Database: UST, Date of Government Version: 02/06/2019 Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00019352	1039 S ROCHESTER RD	S 0 - 1/8 (0.087 mi.)	B13	29
<b>BILL FOX AMC INC</b> Database: UST, Date of Government Version: 02/06/2019 Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00007644	<b>755 S ROCHESTER RD</b>	<b>N 1/8 - 1/4 (0.191 mi.)</b>	<b>D22</b>	<b>41</b>
CHRISMAN LINCOLN MER Database: UST, Date of Government Version: 02/06/2019 Tank Status: Currently In Use Tank Status: Removed from Ground Facility Type: CLOSED Facility Id: 00003791	1185 S ROCHESTER RD	S 1/8 - 1/4 (0.210 mi.)	E25	47
<b>BILL FOX CHEVROLET I</b> Database: UST, Date of Government Version: 02/06/2019 Tank Status: Currently In Use Tank Status: Removed from Ground Facility Type: ACTIVE Facility Id: 00003748	<b>725 S ROCHESTER RD</b>	<b>N 1/8 - 1/4 (0.241 mi.)</b>	<b>F30</b>	<b>63</b>

## EXECUTIVE SUMMARY

### ***State and tribal institutional control / engineering control registries***

AUL: A listing of sites with institutional and/or engineering controls in place.

A review of the AUL list, as provided by EDR, and dated 03/19/2019 has revealed that there is 1 AUL site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SPEEDWAY #8832</b> Facility ID: 00016359	<b>1010 S ROCHESTER RD</b>	<b>SSW 0 - 1/8 (0.042 mi.)</b>	<b>B10</b>	<b>18</b>

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Brownfield lists***

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 12/17/2018 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>CRISSMAN LINCOLN MER</b> ACRES property ID: 113893	<b>1185 S. ROCHESTER RO</b>	<b>S 1/8 - 1/4 (0.210 mi.)</b>	<b>E27</b>	<b>55</b>

#### ***Local Lists of Hazardous waste / Contaminated Sites***

PART 201: A Part 201 Listed site is a location that has been evaluated and scored by the DEQ using the Part 201 scoring model. The location is or includes a "facility" as defined by Part 201, where there has been a release of a hazardous substance(s) in excess of the Part 201 residential criteria, and/or where corrective actions have not been completed under Part 201 to meet the applicable cleanup criteria for unrestricted residential use. The Part 201 List does not include all of the sites of contamination that are subject to regulation under Part 201 because owners are not required to inform the DEQ about the sites and can pursue cleanup independently. Sites of environmental contamination that are not known to DEQ are not on the list, nor are sites with releases that resulted in low environmental impact.

A review of the PART 201 list, as provided by EDR, and dated 10/01/2013 has revealed that there is 1 PART 201 site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>ITT AUTOMOTIVE</b> Facility Status: Remedial Action in Progress (may incl. use restrictions, O&M and/or monitoring) Facility ID: 63000881	<b>301 EAST THIRD STREE</b>	<b>N 1/2 - 1 (0.874 mi.)</b>	<b>34</b>	<b>70</b>

## EXECUTIVE SUMMARY

**INVENTORY:** The Inventory of Facilities has three data sources: Facilities under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) identified through state funded or private party response activities (Projects); Facilities under Part 213, Leaking Underground Storage Tanks of the NREPA; and Facilities identified through submittals of Baseline Environmental Assessments (BEA) submitted pursuant to Part 201 or Part 213 of the NREPA. The Part 201 Projects Inventory does not include all of the facilities that are subject to regulation under Part 201 because owners are not required to inform the Department of Environmental Quality (DEQ) about the facilities and can pursue cleanup independently. Facilities that are not known to DEQ are not on the Inventory, nor are locations with releases that resulted in low environmental impact. Part 213 facilities listed here may have more than one release; a list of releases for which corrective actions have been completed and list of releases for which corrective action has not been completed is located on the Leaking Underground Storage Tanks Site Search webpage. The DEQ may or may not have reviewed and concurred with the conclusion that the corrective actions described in a closure report meets criteria. A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

A review of the INVENTORY list, as provided by EDR, and dated 04/23/2019 has revealed that there are 6 INVENTORY sites within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>SPEEDWAY #8832</b> Facility ID: 00016387	<b>1010 S ROCHESTER RD</b>	<b>SSW 0 - 1/8 (0.042 mi.)</b>	<b>B10</b>	<b>18</b>
FOX TOYOTA/FOX VOLKS 770 SOUTH ROCHESTER	755 AND 773 SOUTH RO 770 SOUTH ROCHESTER	N 1/8 - 1/4 (0.176 mi.) N 1/8 - 1/4 (0.178 mi.)	D19 D20	40 40
<b>FOX TOYOTA/FOX VOLKS</b> <b>BILL FOX AMC INC</b> Facility ID: 00007644	<b>755 ROCHESTER ROAD</b> <b>755 S ROCHESTER RD</b>	<b>N 1/8 - 1/4 (0.191 mi.)</b> <b>N 1/8 - 1/4 (0.191 mi.)</b>	<b>D21</b> <b>D22</b>	<b>41</b> <b>41</b>
<b>ROCHESTER GLASS WORK</b> Facility ID: 50002234	<b>560 S ROCHESTER RD</b>	<b>N 1/4 - 1/2 (0.391 mi.)</b>	<b>32</b>	<b>69</b>

**DEL PART 201:** A deleted site has been removed from the Part 201 List because information known to the DEQ at the time of the evaluation does not support inclusion on the Part 201 List. This designation is often applied to sites where changes in cleanup criteria resulted in a determination that the site no longer exceeds any applicable cleanup criterion. A delisted site has been removed from the Part 201 List because response actions have reduced the levels of contaminants to concentrations which meet or are below the criteria for unrestricted residential use.

A review of the DEL PART 201 list, as provided by EDR, and dated 08/01/2013 has revealed that there is 1 DEL PART 201 site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>WP BURKE CO</b> Facility Id: 63000175 Facility Id: 63000829	<b>93 MILL STREET</b>	<b>N 1/2 - 1 (0.708 mi.)</b>	<b>33</b>	<b>70</b>

## EXECUTIVE SUMMARY

### ***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/25/2019 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>DETROIT BROACH &amp; MAC</b> EPA ID:: MID041115361	<b>950 S ROCHESTER RD</b>	<b>NW 0 - 1/8 (0.015 mi.)</b>	<b>A9</b>	<b>16</b>

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
PENSKE AUTO CENTER EPA ID:: MIR000010850	1100 S ROCHESTER RD	SSW 0 - 1/8 (0.088 mi.)	B14	30
CRISSMAN LINCOLN MER EPA ID:: MID052048972	1185 S ROCHESTER RD	S 1/8 - 1/4 (0.210 mi.)	E26	53
LIFETIME FITNESS EPA ID:: MIK992176982	200 W AVON RD	WNW 1/8 - 1/4 (0.220 mi.)	28	58

BEA: A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

A review of the BEA list, as provided by EDR, and dated 08/21/2013 has revealed that there are 3 BEA sites within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
FOX TOYOTA/FOX VOLKS	755 AND 773 SOUTH RO	N 1/8 - 1/4 (0.176 mi.)	D18	40
<b>FOX TOYOTA/FOX VOLKS</b>	<b>755 ROCHESTER ROAD</b>	<b>N 1/8 - 1/4 (0.191 mi.)</b>	<b>D21</b>	<b>41</b>
<b>ROCHESTER GLASS WORK</b>	<b>560 S ROCHESTER RD</b>	<b>N 1/4 - 1/2 (0.391 mi.)</b>	<b>32</b>	<b>69</b>

### **EDR HIGH RISK HISTORICAL RECORDS**

#### ***EDR Exclusive Records***

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk



## EXECUTIVE SUMMARY

Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

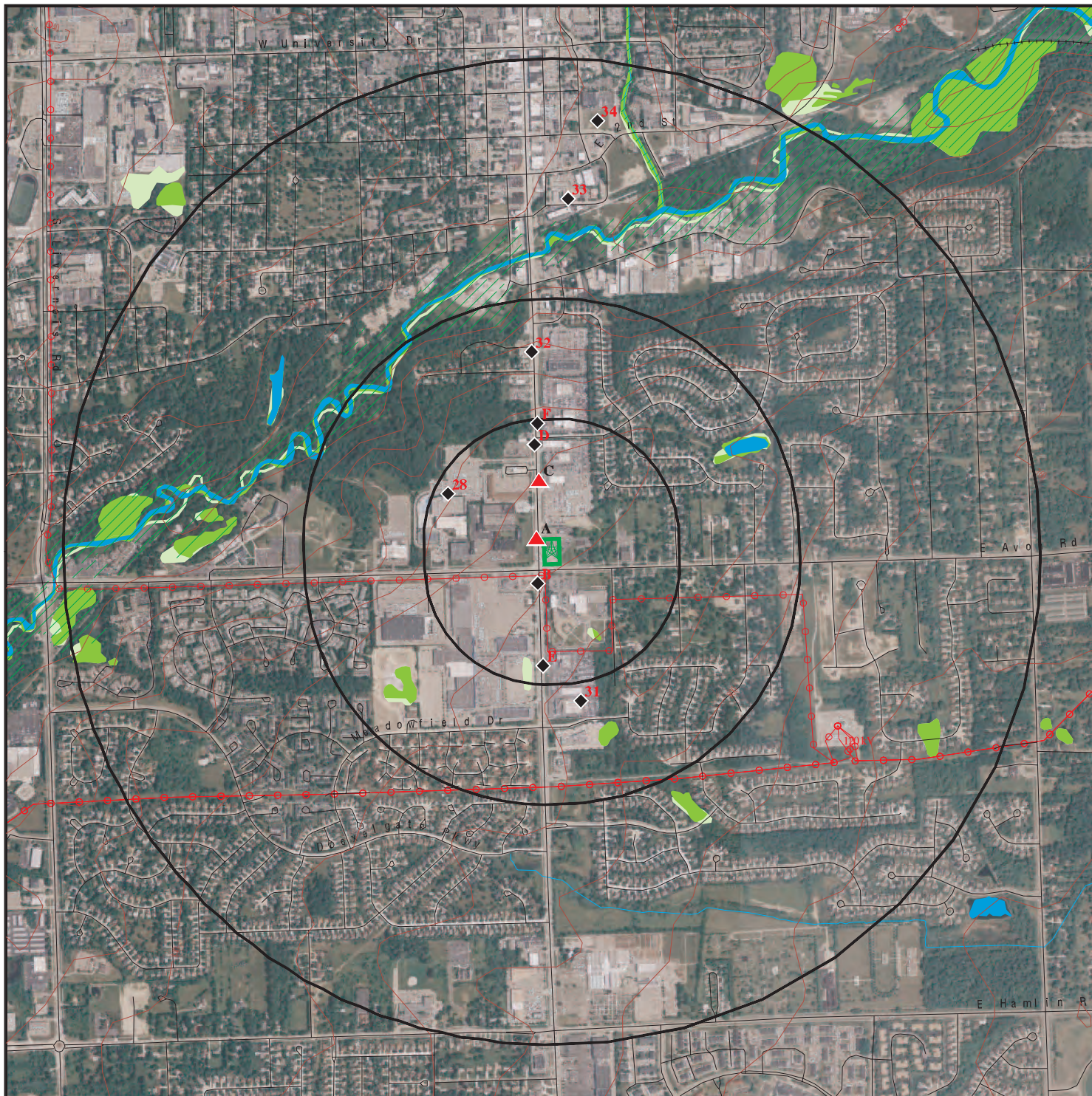
A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.125 miles of the target property.













<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SPEEDWAY SUPERAMERIC	1010 N ROCHESTER RD	SSW 0 - 1/8 (0.042 mi.)	B11	27

## EXECUTIVE SUMMARY

There were no unmapped sites in this report.

# OVERVIEW MAP - 05753114.2R



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Power transmission lines
-  100-year flood zone
-  500-year flood zone
-  National Wetland Inventory
-  State Wetlands



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 945 and 975 South Rochester Road  
 ADDRESS: 945 and 975 South Rochester Road  
 Rochester Hills MI 48307  
 LAT/LONG: 42.666854 / 83.132662

CLIENT: PM Environmental, Inc.  
 CONTACT: Josephine Hamilton  
 INQUIRY #: 05753114.2r  
 DATE: August 15, 2019 8:08 am