

**Source Property Information**

BRRTS #:	03-41-004217	Closure Date:	December 5, 2008
ACTIVITY NAME:	A. Pethke Service, Inc.	FID#:	
PROPERTY ADDRESS:	4337 South Howell Avenue	DATCP#:	
MUNICIPALITY:	Milwaukee	COMM#:	53207-5029-37
PARCEL ID#:	595-9980-100-0		

**\*WTM Coordinates:**

X:  Y:

*\*Coordinates are in WTM83, NAD83  
(1991)*

**WTM Coordinates Represent:**

- Approximate Center of Contaminant Source
- Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

**Contaminated Media:**

- |                                                                                 |                                                                                        |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> <u>Groundwater</u> Contamination > ES (236) | <input checked="" type="checkbox"/> <u>Soil</u> Contamination > *RCLs or **SSRCL (232) |
| <input type="checkbox"/> Groundwater Contamination in ROW                       | <input type="checkbox"/> Soil Contamination in ROW                                     |
| <input type="checkbox"/> Off-Source Contamination                               | <input type="checkbox"/> Off-Source Contamination                                      |

*(note: for list of impacted off-source properties see attached list of "Impacted Off-Source Property")*

*(note: for list of impacted off-source properties see attached list of "Impacted Off-Source Property")*

**Land Use Controls:**

- |                                                                 |                                                             |
|-----------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Soil: maintain industrial zoning (220) | <input type="checkbox"/> Cover or Barrier (222)             |
| <input type="checkbox"/> Structural Impediment (224)            | <input type="checkbox"/> Vapor Mitigation (226)             |
| <input type="checkbox"/> Site-Specific Condition (228)          | <input type="checkbox"/> Maintain Liability Exemption (230) |

*(note: soil contaminant concentrations between residential and industrial levels)*

*(note: maintenance plan for groundwater or direct contact)*

*(note: local government or economic development corporation)*

**Monitoring wells properly abandoned? (234)**

- Yes       No       N/A

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

**NOTICE: Completion of this form is mandatory** for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 03-41-004217

PARCEL ID #: 595-9980-100-0

ACTIVITY NAME: A. Pethke Service, Inc.

WTM COORDINATES: X: 690430 Y: 279119

**CLOSURE DOCUMENTS** (the Department adds these items to the final GIS packet for posting on the Registry)

- Closure Letter**
- Maintenance Plan** (if activity is closed with a land use limitation or condition (land use control) under s. 292.12, Wis. Stats.)
- Conditional Closure Letter**
- Certificate of Completion (COC)** for VPLE sites

**SOURCE LEGAL DOCUMENTS**

**Deed:** The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.  
**Note:** If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.

**Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

Figure #: NA Title:

**Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

**MAPS** (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 8.5 x 14 inches unless the map is submitted electronically.

**Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.  
**Note:** Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.

Figure #: 1 Title: Vicinity Diagram

**Detailed Site Map:** A map that shows all relevant features (buildings, roads, individual property boundaries, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

Figure #: 2,3 Title: Site Diagram, Extent of Excavation Diagram

**Soil Contamination Contour Map:** For sites closing with residual soil contamination, this map is to show the location of all contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

Figure #: 5-8 Title: Estimated GRO, DRO, Benzene, Xylene Contamination

BRRTS #: 03-41-004217

ACTIVITY NAME: A. Pethke Service, Inc.

**MAPS (continued)**

- Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: NA Title:

Figure #: Title:

- Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.

*Note: This is intended to show the total area of contaminated groundwater.*

Figure #: 2 Title: **Monitoring Well and Extraction Well Locations**

- Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: 5 Title: **Groundwater Elevations Diagram (June 1999)**

Figure #: 6 Title: **Groundwater Elevations Diagram (Sept. 1999)**

**TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))**

Tables must be no larger than 8.5 x 14 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

- Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.  
*Note:* This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: 3,5,6 Title: **PVOC, PAH, Lead Results - Soil Samples**

- Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: 2,3 Title: **Analytical Results - Groundwater Samples**

- Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: 1 Title: **Groundwater Elevations**

**IMPROPERLY ABANDONED MONITORING WELLS**

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.

*Note: If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.*

- Not Applicable**

- Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.

*Note: If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.*

Figure #: Title:

- Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

- Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

- Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 03-41-004217

ACTIVITY NAME: A. Pethke Service, Inc.

## NOTIFICATIONS

### Source Property

- Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.
- Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

### Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

- Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.  
**Note:** Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.  
**Number of "Off-Source" Letters:**
- Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.
- Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies)**. This does not apply to right-of-ways.  
**Note:** If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).  
**Number of "Governmental Unit/Right-Of-Way Owner" Letters:**



ENVIRONMENTAL & REGULATORY SERVICES DIVISION  
BUREAU OF PECFA  
9316 North 107th Street  
Milwaukee, Wisconsin 53224-1121  
TTY: Contact Through Relay  
Fax: (414) 357-4700  
Jim Doyle, Governor  
Richard J. Leinenkugel, Secretary

December 5, 2008

Mr. Allen Pethke  
A. Pethke Service, Inc.  
4337 South Howell Avenue  
Milwaukee, WI 53207-5029

RE: **Final Closure**

**Commerce # 53207-5029-37-A DNR BRRTS # 03-41-004217**  
A. Pethke Service, Inc., 4337 South Howell Avenue, Milwaukee

Dear Mr. Pethke:

The Wisconsin Department of Commerce (Commerce) has received all items required as conditions for closure of the site referenced above. This site is now listed as "closed" on the Commerce database and will be included on the Department of Natural Resources (DNR) Geographic Information System (GIS) Registry of Closed Remediation Sites to address residual soil and groundwater contamination. To review the sites on the GIS Registry web page, visit <http://dnr.wi.gov/org/aw/rr/gis/index.htm>. If you intend to construct or reconstruct a potable well on this property, you must get prior DNR approval.

All current and future owners and occupants of the property need to be aware that excavation of contaminated soil may pose a hazard. Special precautions may be needed to prevent inhalation, ingestion or dermal contact with the residual contamination when it is removed. If soil is excavated, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present, the property owner at the time of excavation must determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable State regulations and standards.

Costs for sampling and excavation activities conducted after case closure are not eligible for PECFA reimbursement. However, if it is determined that any undisturbed remaining petroleum contamination poses a threat, the case may be reopened and further investigation or remediation may be required. If this case is reopened, any original claim under the PECFA fund would also reopen and you may apply for assistance to the extent of remaining eligibility.

Thank you for your efforts to bring this case to closure. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 357-4705.

Sincerely,

A handwritten signature in black ink that reads "Monica Weis". The signature is written in a cursive, flowing style.

Monica L. Weis  
Senior Hydrogeologist  
Site Review Section



July 19, 2000

Mr. Allen Pethke  
A. Pethke Service, Inc.  
4337 S. Howell Ave.  
Milwaukee, WI 53207

RE: **Commerce # 53207-5029-37**  
BRRTS # 03-41-004217  
A. Pethke Service, Inc. 4337 South Howell Avenue, Milwaukee

**Conditional Case Closure**

Dear Mr. Pethke:

On July 19, 2000, the above-named site was reviewed for closure by Wisconsin Department of Commerce PECFA Site Review staff in response to the closure request prepared by your consultant, Drake Environmental, Inc. It is understood that there is residual soil and groundwater contamination present on site. Using the standards established in NR 700 and Comm 46, the Department has determined that this site does not pose a significant threat to the environment and human health and no further investigation or remedial action is necessary. However, due to the presence of residual soil and groundwater contamination, a condition of the case closure is that the owner sign and records a notification of soil contamination and groundwater use restriction for the property.

**The following items are necessary to satisfy the conditions of closure:**

1. A notification of soil contamination and groundwater use restriction must be placed on the deed to the property. This should state that residual petroleum contaminants exist on the site and if a potable well is ever constructed, the WDNR water supply unit must be contacted to assist in proper design and placement. I have enclosed an example of a notification of soil contamination and groundwater use restriction. Please complete this and record a copy with the county Register of Deeds. To document that this condition has been met, please submit a copy of the signed and notarized notification/restriction to this office. If you wish to modify the language, you must submit a copy to this office for review prior to filing it with the county Register of Deeds. The notification of soil contamination and groundwater use restriction may be amended in the future with the approval of Commerce if conditions change at the site and the residual contamination is remediated.
2. Monitoring well abandonment forms must be submitted to Commerce.

**IMPORTANT:** Before this case can be officially listed as "closed" on the Wisconsin Department of Commerce computer database, you or your consultant must submit the requested information.

If, in the future, site conditions indicate that the contamination that remains poses a threat, the need for further remediation would be determined and required if necessary. If subsequent information indicates a need to reopen this case, any original claim under the PECFA fund would also reopen and you may apply for assistance to the extent of remaining eligibility.

Page 2

Commerce # 53207-5029-37

A. Pethke Service, Inc. 4337 South Howell Avenue, Milwaukee

Conditional Case Closure

It is important to realize that if the land use conditions change in the future and the contaminated soil is disturbed, appropriate measures must be implemented to assure any residual contamination is managed following all applicable State of Wisconsin regulations and standards.

Thank you for your efforts in the protection of the environment. If you have any additional questions, please call me at 414-220-5373.

Sincerely,



Jennifer Skinner

Hydrogeologist

PECFA Site Review Section

cc: Dean Fenske, Drake Environmental, Inc.  
Case file

DOCUMENT NO.

STATE BAR OF WISCONSIN FORM 1-1982

WARRANTY DEED  
REEL 3582 IMAG 71

THIS SPACE RESERVED FOR SPOUNDED DATA

7100565

REGISTER'S OFFICE } 88  
Milwaukee County, WI

RECORDED AT -8 50.41

JUL 11 1995

REEL 3582 IMAGE 71

REGISTER  
OF DEEDS

Richard A. Frederick  
1840 North Farwell, #301  
Milwaukee, WI 53202

Tax Parcel No: 595-9980-100-D

This Deed, made between **CORSTA CORPORATION**

Grantor,  
and **ALLEN H. PETHKE AND CHRISTINE A. PETHKE**  
Husband and Wife

Witnesseth, That the said Grantor, for a valuable consideration

conveys to Grantor the following described real estate in **MILWAUKEE**  
County, State of Wisconsin:

The South 125 feet of the East 227.46 feet of the East 1/2 of the  
South 1/2 of the North 2/7 of the North 1/2 of the Southeast 1/4  
of Section 20, in Township 6 North, Range 22 East, in the City of  
Milwaukee, County of Milwaukee, State of Wisconsin, except the  
South 20 feet and the East 60 feet.

TRANSFER  
\$ 246.00  
FEE

RECORD 10.00  
RTX 246.00

This is not homestead property.  
(if) (is not)

Together with all and singular the hereditaments and appurtenances thereto belonging:

And **Corsta Corporation**  
warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except any liens or  
encumbrances created by the act or default of Grantor, municipal and zoning ordinances,  
recorded easements for public utilities, recorded building and use restrictions and  
covenants, and general taxes levied in 1988 and subsequent.  
and will warrant and defend the same.

Dated this 11th day of May, 1995

*Patricia B. Zuckerman* (SEAL)  
*Corporate Secretary*

**CORSTA CORPORATION**  
By: *Marvin B. Rowley* (SEAL)  
**VICE PRESIDENT**

**AUTHENTICATION**

Signature(s) \_\_\_\_\_

authenticated this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_

TITLE: MEMBER STATE BAR OF WISCONSIN  
(if not  
authorized by § 706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY  
**Richard A. Frederick**

(Signatures may be authenticated or acknowledged. Both  
are not necessary.)

**ACKNOWLEDGMENT**

STATE OF WISCONSIN **CT**  
*Fairfield* County, **W. DESPOND**

Personally came before me this 11th day of  
May, 1995, the above named  
*Marvin B. Rowley*  
**VICE PRESIDENT OF**  
*Corsta Corporation*

to me known to be the person who executed the  
foregoing instrument and acknowledge the same.

*John M. Mathews*  
**John M. Mathews**  
Notary Public, **Fairfield** County, **WI**  
My Commission Expires: (if not, state expiration  
date: 9/30/98)

\*Names of persons signing in any capacity should be typed or printed below their signatures.

10-20

(d)

Monica Weis  
Wisconsin Department of Commerce  
9316 North 107<sup>th</sup> Street  
Milwaukee, WI 53224

Dear Ms. Weis:

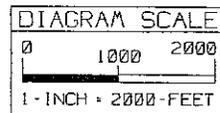
I certify that, to the best of my knowledge, the legal description, which is on the recorded property deed for the property located at 4337 South Howell Avenue, Milwaukee, WI, is accurate and complete.

  
Allen Pethke



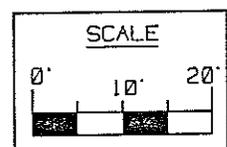
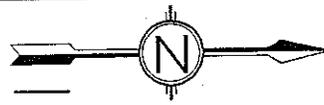
PRINTED FROM TOPOSCOUT (DIGITAL TOPOGRAPHIC DATA ON CD)

GREENDALE - WISCONSIN  
 NE 1/4 SE 1/4 SEC 20 T6N R22E



A. PETHKE SERVICE MONITORING PROGRAM	PROJECT NO. J93150 PA DVF TOPO COPIED DATE: 11/18/98 CHKD BY <i>OWA</i> DATE: 11-18-98 APRVD BY DATE	VICINITY DIAGRAM	FIGURE 1
-----------------------------------------	---------------------------------------------------------------------------------------------------------------	---------------------	-------------

FILE:



ALL DIMENSIONS ON THIS DIAGRAM ARE APPROXIMATE

PROPERTY BOUNDARY

GRASS

WEST MARTIN LANE

SIDEWALK

▲ MONITORING WELL LOCATION

ASPHALT DRIVEWAY

FENCE  
1,000-GALLON WASTE OIL UST

▲ V-5

RETAINING WALL

A. PETHKE SERVICE  
4337 S HOWELL AVE

550-GALLON GASOLINE USTs

WATER AND SEWER UTILITY

UTILITY POLE

CONCRETE PAD

SIDEWALK

1,000-GALLON GASOLINE USTs

▲ W-1

3,000-GALLON GASOLINE UST

550-GALLON GASOLINE USTs

▲ W-3

ASPHALT DRIVEWAY

CONCRETE PAD

550-GALLON GASOLINE/WASTE OIL UST

JAY SEAT COVER AND AUTO GLASS COMPANY INC

SIDEWALK

GRASS

SOUTH HOWELL AVENUE

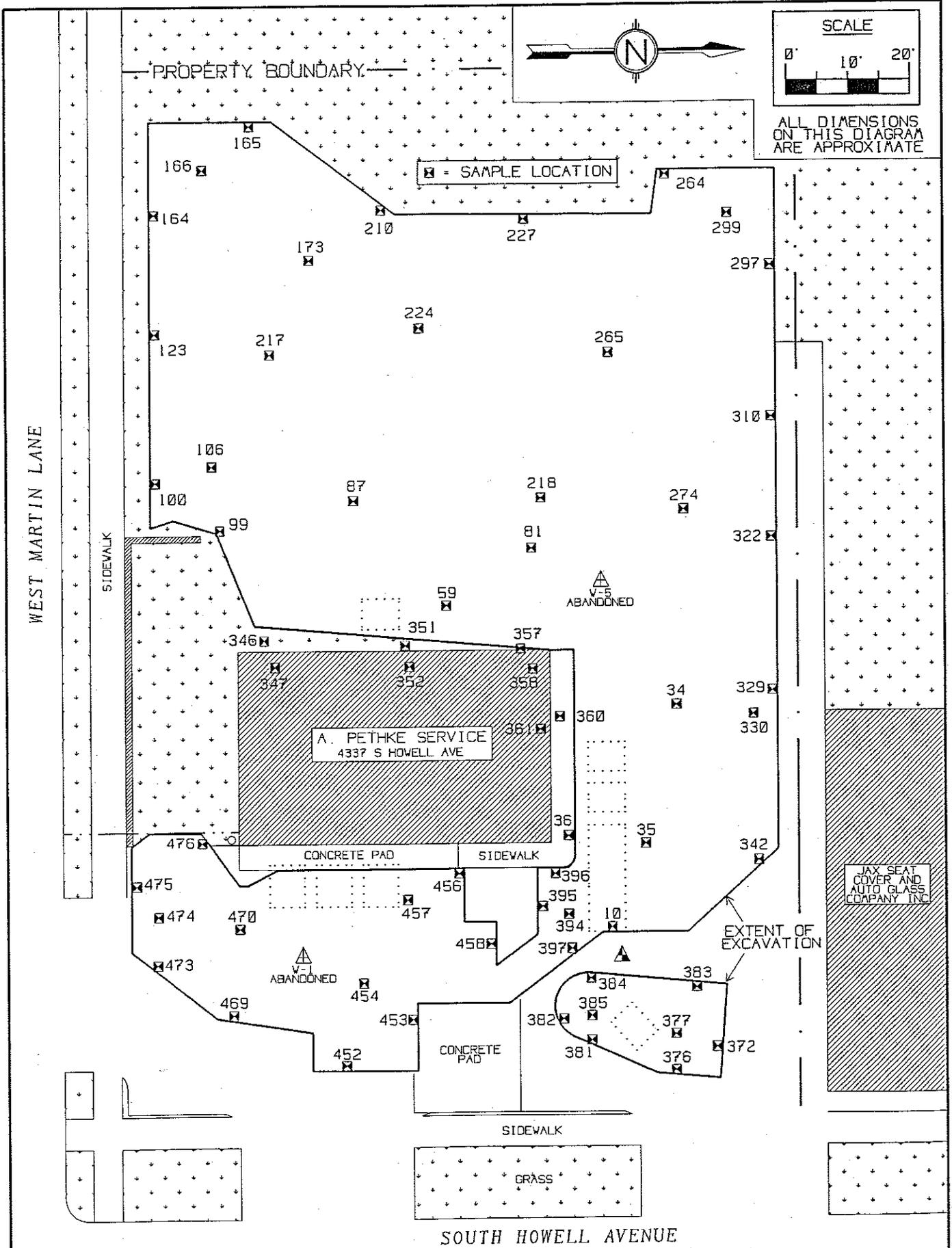
DRAKE ENVIRONMENTAL, INC.

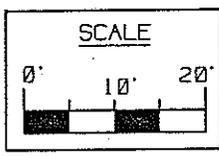
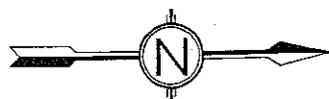
A. PETHKE SERVICE REMEDIATION

PROJECT NUMBER J93150  
DRAWN BY DSP  
DATE: 06/27/94

SITE DIAGRAM

FIGURE 2





PROPERTY BOUNDARY

ALL DIMENSIONS ON THIS DIAGRAM ARE APPROXIMATE

 = ESTIMATED EXTENT OF GRO CONTAMINATION ABOVE 250 PPM  
 = SAMPLE LOCATION

WEST MARTIN LANE

SIDEWALK

320 PPM

290 PPM

A. PETHKE SERVICE  
4337 S HOWELL AVE

2000 PPM

SIDEWALK

1100 PPM  
350 PPM

JAX SEAT COVER AND AUTO GLASS COMPANY INC

CONCRETE PAD

SIDEWALK

GRASS

SOUTH HOWELL AVENUE

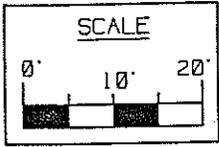
**DRAKE**  
ENVIRONMENTAL, INC.

A. PETHKE SERVICE  
REMEDATION

PROJECT NUMBER J93150  
 DRAWN BY DSP  
 DATE: 06/27/94

ESTIMATED GRO CONTAMINATION  
DIAGRAM

FIGURE  
5



PROPERTY BOUNDARY

ALL DIMENSIONS ON THIS DIAGRAM ARE APPROXIMATE

 - ESTIMATED EXTENT OF DRO CONTAMINATION ABOVE 250 PPM  
 - SAMPLE LOCATION

WEST MARTIN LANE

SIDEWALK

300 PPM  
300 PPM

4200 PPM

A. PETHKE SERVICE  
4337 S HOWELL AVE

SIDEWALK

JAX SEAT COVER AND AUTO GLASS COMPANY INC

CONCRETE PAD

SIDEWALK

GRASS

SOUTH HOWELL AVENUE

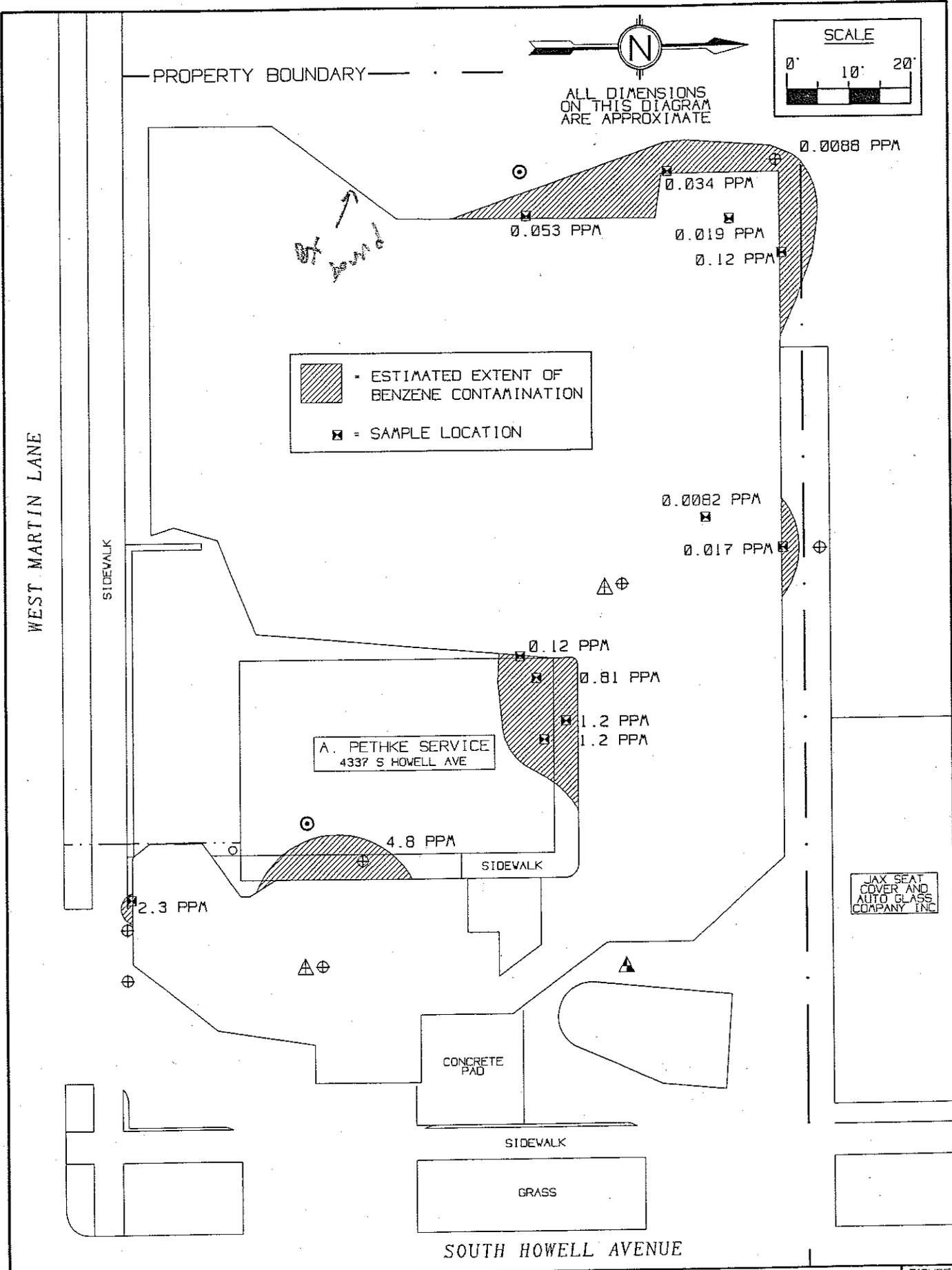
**DRAKE**  
ENVIRONMENTAL, INC.

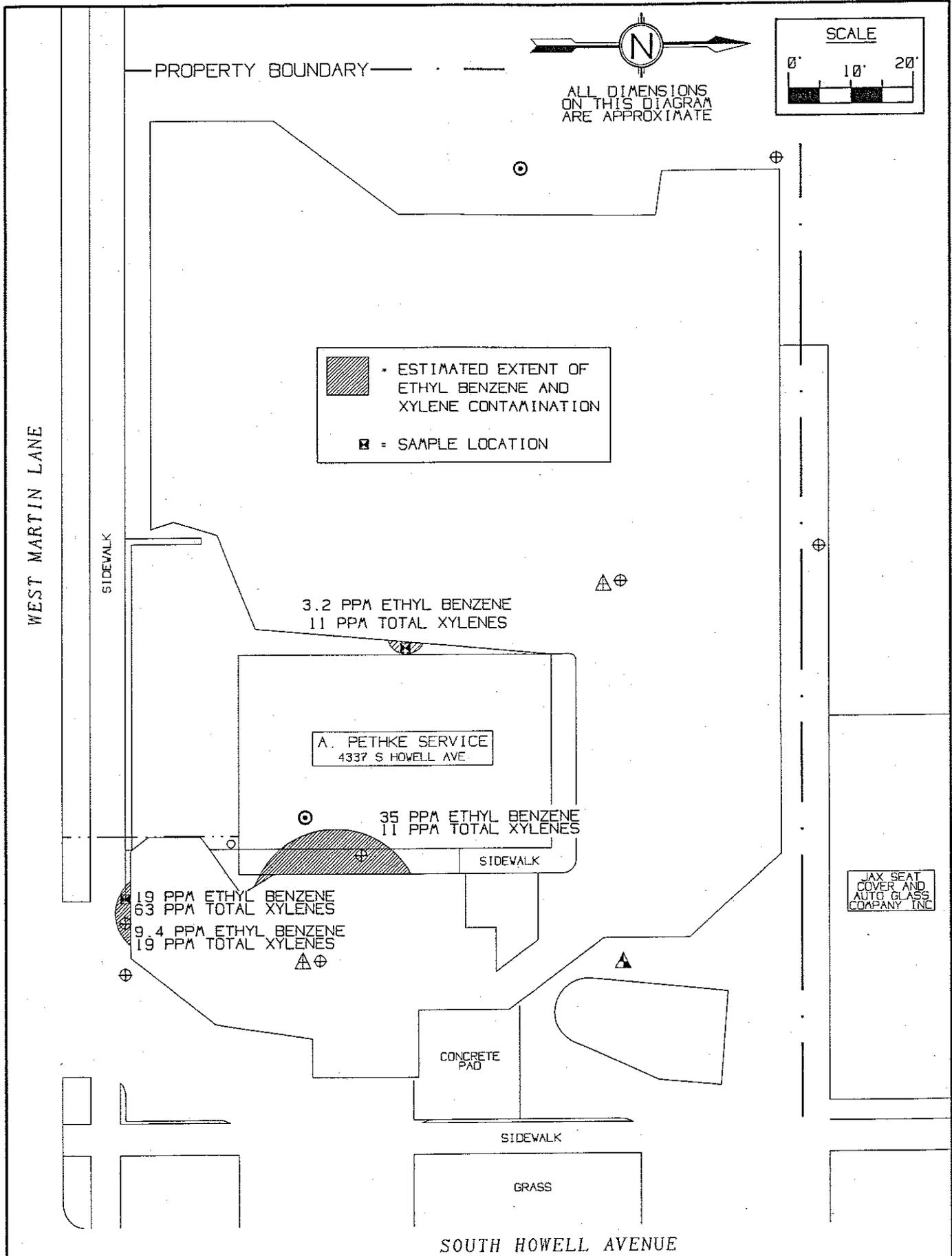
A. PETHKE SERVICE  
REMEDICATION

PROJECT NUMBER J93150
DRAWN BY DSP
DATE: 06/27/94

ESTIMATED DRO CONTAMINATION  
DIAGRAM

FIGURE  
6





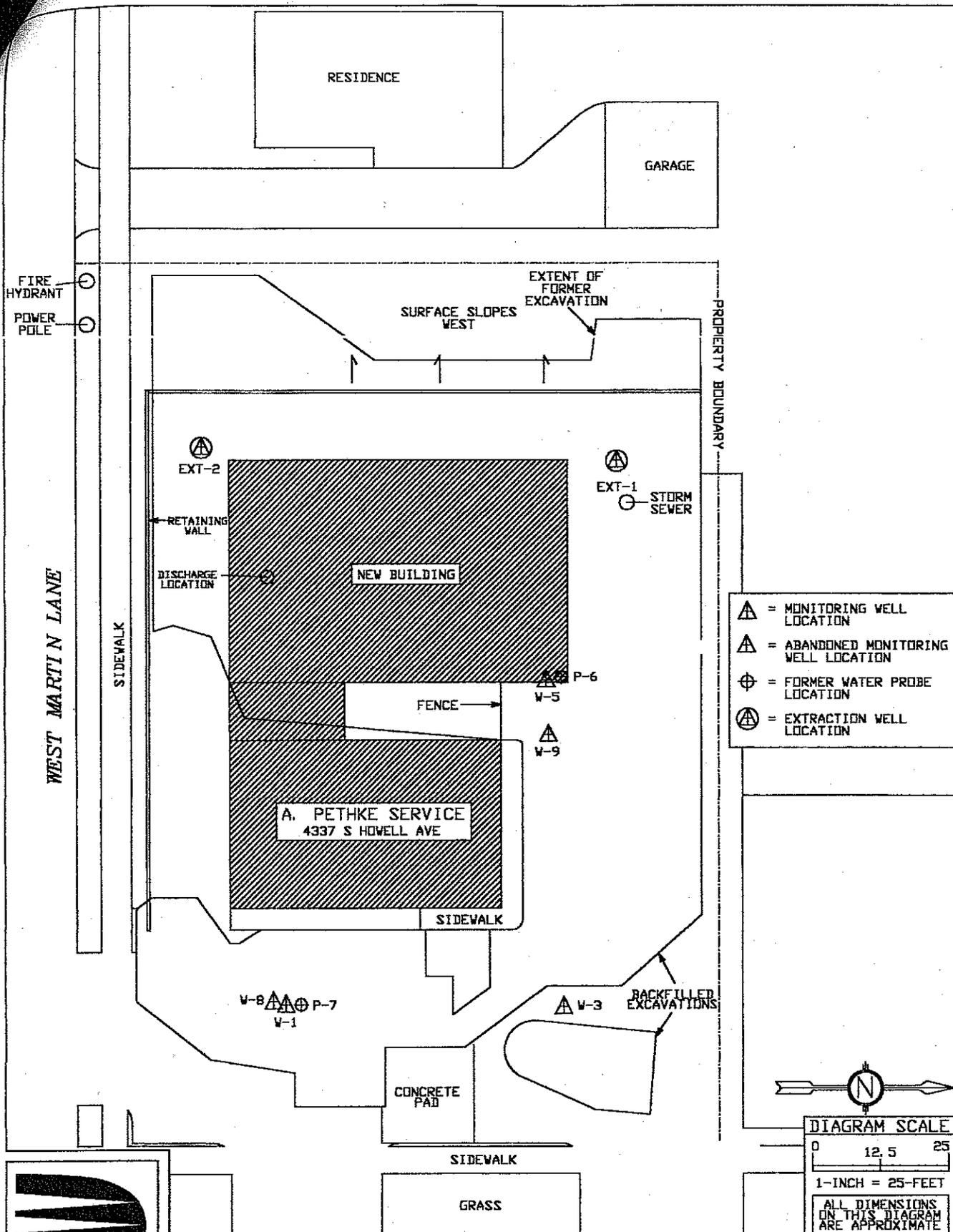
**DRAKE**  
ENVIRONMENTAL, INC.

A. PETHKE SERVICE  
REMEDATION

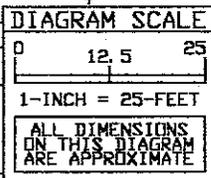
PROJECT NUMBER J93150  
DRAWN BY DSP  
DATE: 06/27/94

ESTIMATED ETHYL BENZENE & XYLENE  
CONTAMINATION  
DIAGRAM

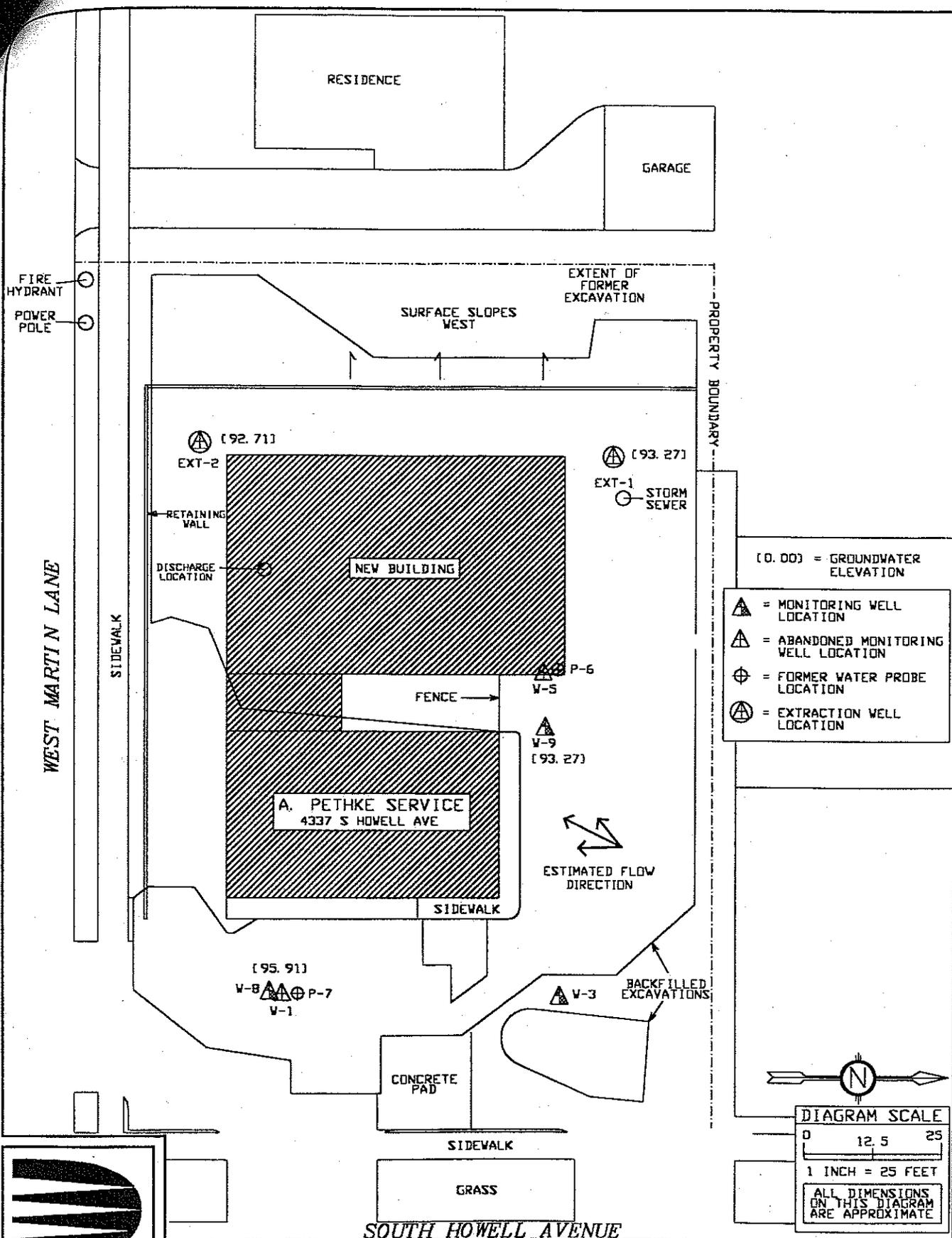
FIGURE  
8



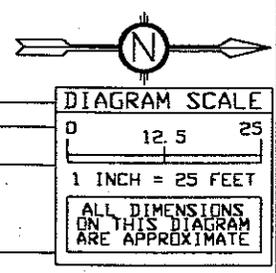
- ▲ = MONITORING WELL LOCATION
- ▲ = ABANDONED MONITORING WELL LOCATION
- ⊕ = FORMER WATER PROBE LOCATION
- ⊕ = EXTRACTION WELL LOCATION



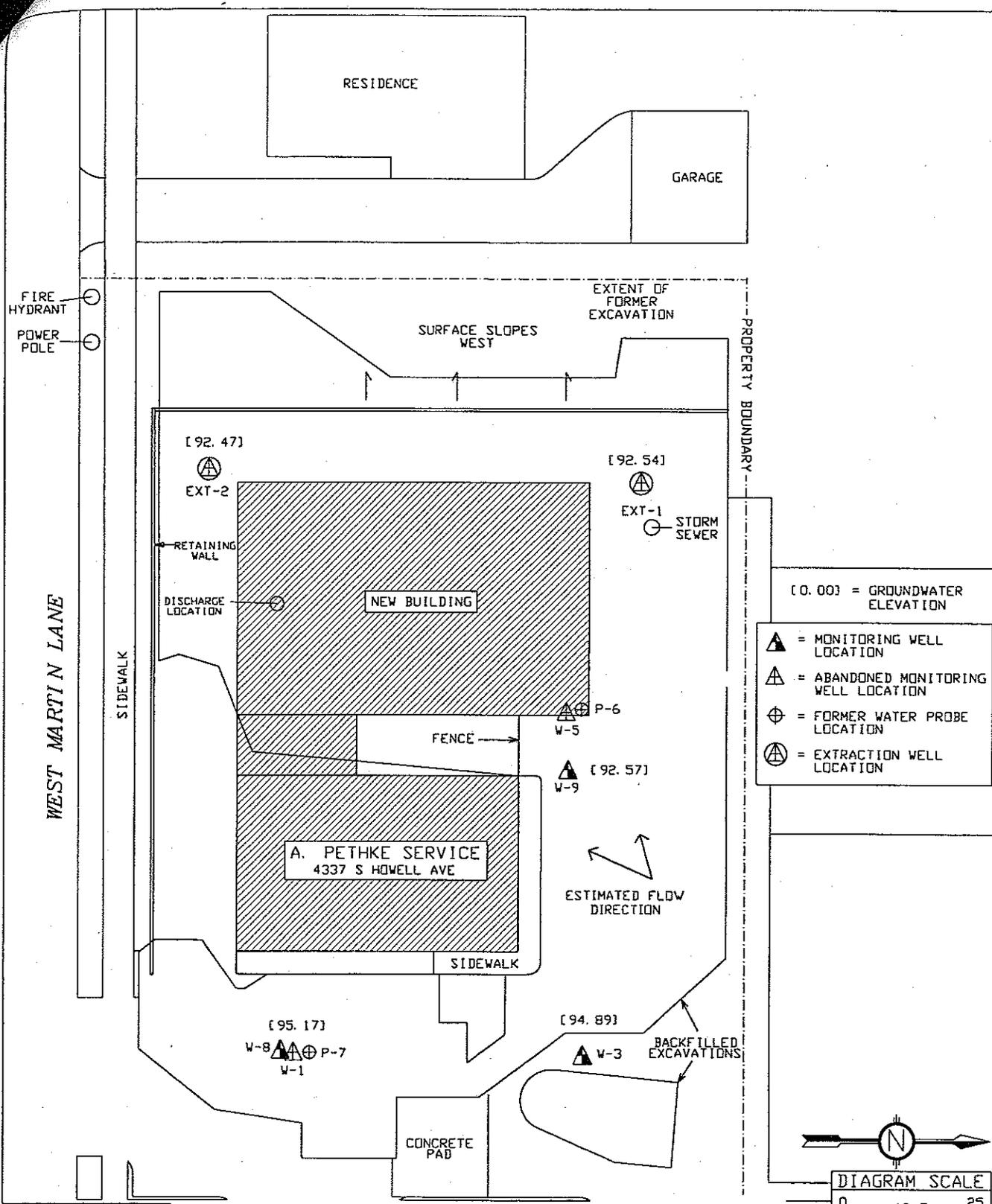
A. PETHKE SERVICE MONITORING PROGRAM	PROJECT NO. J93150   PH DVF	MONITORING WELL AND EXTRACTION WELL LOCATIONS DIAGRAM	FIGURE 2
	DRAWN BY JMM REV. RV 3/13/00		
	CHECKED BY JH / DATE 6-2-00		
	APPRVD BY      DATE		



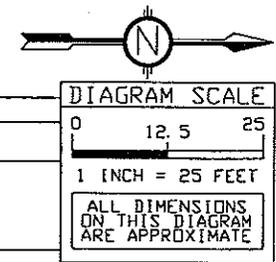
- (0.00) = GROUNDWATER ELEVATION
- = MONITORING WELL LOCATION
  - = ABANDONED MONITORING WELL LOCATION
  - = FORMER WATER PROBE LOCATION
  - = EXTRACTION WELL LOCATION



A. PETHKE SERVICE MONITORING PROGRAM	PROJECT NO. J93150   PM DWF	GROUNDWATER ELEVATIONS DIAGRAM (JUNE 1999)	FIGURE 5
	DRAWN BY JMM REV: RV 3/15/00		
	CHECKED BY <i>[Signature]</i> DATE: 6/12/00		
	APPRVD BY _____ DATE: _____		



- [0.00] = GROUNDWATER ELEVATION
- ▲ = MONITORING WELL LOCATION
  - △ = ABANDONED MONITORING WELL LOCATION
  - ⊕ = FORMER WATER PROBE LOCATION
  - ⊗ = EXTRACTION WELL LOCATION



A. PETHKE SERVICE MONITORING PROGRAM	PROJECT NO. J93150 PM DWF	GROUNDWATER ELEVATIONS DIAGRAM (SEPTEMBER 1999)	FIGURE  6
	DRAWN BY JMM REV: RV 3/15/00		
	CHECKED BY <i>guf</i> DATE: 6-16-00		
	APPRVD BY DATE:		

**TABLE 3**  
**PVOC Results — Soil Samples**

**Soils Left In Place**

Sample No.	10	34	35	36	59	210	218	224	227	Proposed Standard
*Sample Location	<u>East Wall</u>	<u>Base</u>	<u>Base</u>	<u>North Wall of Building</u>	<u>Base</u>	<u>West Wall</u>	<u>Base</u>	<u>Base</u>	<u>West Wall</u>	
PID Reading (no units)	1	2	2	407	5	1	2	1	5	NS
GRO (ppm)	<1.2	1.9	<1.1	77	2.5	<1.2	1.5	1.9	9.9	250
DRO (ppm)	NA	NA	NA	NA	NA	NA	<6	NA	NA	250
<b>PVOCs (ppm)</b>										
Benzene	<0.0024	<0.0024	<0.0022	<0.026	<0.0022	<0.0024	<0.0024	<0.0022	<b>0.053</b>	0.0055
Ethylbenzene	<0.006	<0.006	<0.0055	0.3	<0.0055	<0.006	<0.006	<0.0055	<0.0065	2.9
Methyl tert-butyl ether	<0.06	<0.06	<0.055	<0.65	<0.055	<0.06	<0.06	<0.055	<0.065	NS
Toluene	0.02	0.0097	0.014	<0.065	0.015	0.017	0.011	0.009	0.075	1.5
1,2,4-Trimethylbenzene	<0.012	0.042	<0.011	1.8	0.042	<0.012	0.019	0.022	<0.013	NS
1,3,5-Trimethylbenzene	<0.012	<0.012	<0.011	1.4	<0.011	<0.012	<0.012	<0.011	<0.013	NS
Total xylenes	<0.018	<0.018	<0.017	0.6	<0.017	<0.018	<0.018	<0.017	<0.02	4.1

\*The sample locations are in reference to the main excavation.

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

TABLE 3 (cont.)  
 PVOC Results — Soil Samples

Soils Left In Place

Sample No.	264	265	274	297	299	310	322	329	330	Proposed Standard
*Sample Location	<u>West Wall</u>	<u>Base</u>	<u>Base</u>	<u>North Wall</u>	<u>Base</u>	<u>North Wall</u>	<u>North Wall</u>	<u>North Wall</u>	<u>Base</u>	
PID Reading (no units)	28	4	9	180	21	137	355	39	5	NS
GRO (ppm)	9.2	<1.2	<1.2	36	<1.2	1.6	7	7.2	<1.2	250
DRO (ppm)	NA	NA	NA	NA	NA	NA	NA	NA	NA	250
<u>PVOCs (ppm)</u>										
Benzene	<b>0.034</b>	0.0038	<b>0.0082</b>	<b>0.12</b>	<b>0.019</b>	<0.0024	<b>0.017</b>	0.0036	<0.0024	0.0055
Ethylbenzene	<0.013	<0.006	0.0086	0.16	<0.006	0.031	0.023	0.016	<0.006	2.9
Methyl tert-butyl ether	<0.13	<0.06	<0.06	<1.2	<0.06	<0.06	<0.05	<0.06	<0.06	NS
Toluene	0.025	0.011	0.02	<0.12	0.016	0.016	0.016	0.029	0.013	1.5
1,2,4-Trimethylbenzene	<0.026	<0.012	0.015	3.6	0.021	0.032	0.13	0.098	<0.012	NS
1,3,5-Trimethylbenzene	0.032	<0.012	<0.012	0.45	<0.012	<0.012	0.025	0.036	<0.012	NS
Total xylenes	0.039	<0.018	0.026	0.73	<0.018	<0.018	0.021	0.044	<0.018	4.1

\*The sample locations are in reference to the main excavation.

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 3 (cont.)  
PVOC Results — Soil Samples**

**Soils Left In Place**

Sample No.	342	346	347	351	352	357	358	360	361	Proposed
*Sample Location	<u>North Wall</u>	<u>West Wall of Building</u>	<u>**Beneath Building</u>	<u>West Wall of Building</u>	<u>**Beneath Building</u>	<u>West Wall of Building</u>	<u>**Beneath Building</u>	<u>North Wall of Building</u>	<u>**Beneath Building</u>	<u>Standard</u>
PID Reading (no units)	<1	442	441	631	624	535	468	340	430	NS
GRO (ppm)	<1.2	69	<b>320</b>	<b>290</b>	150	62	160	62	160	250
DRO (ppm)	NA	<b>300</b>	<b>300</b>	<b>4,200</b>	75	NA	NA	NA	NA	250
<b>PVOCs (ppm)</b>										
Benzene	<0.0024	<0.12	<0.13	<0.13	<0.13	<b>0.12</b>	<b>0.81</b>	<b>1.2</b>	<b>1.2</b>	0.0055
Ethylbenzene	<0.006	0.64	<0.32	<b>3.2</b>	<0.32	<0.25	<0.3	0.25	0.4	2.9
Methyl tert-butyl ether	<0.06	<3.1	<3.2	<3.2	<3.2	<2.5	<3	<2.5	<2.5	NS
Toluene	0.013	<0.31	<0.32	<0.32	<0.32	<0.25	<0.3	<0.25	<0.25	1.5
1,2,4-Trimethylbenzene	<0.012	3.1	8.4	14	3.8	0.9	1.4	3	9.9	NS
1,3,5-Trimethylbenzene	<0.012	<0.62	11	10	4.3	<0.5	2.8	0.7	2	NS
Total xylenes	<0.018	<0.93	<0.95	<b>11</b>	2.2	<0.75	1.2	1.2	3	4.1

\*The sample locations are in reference to the main excavation unless otherwise noted.

\*\*Soil sample collected from horizontal boring drilled with hand auger.

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 3 (cont.)  
PVOC Results — Soil Samples**

**Soils Left In Place**

Sample No.	372	376	377	381	382	383	384	385	394	Proposed Standard
*Sample Location	<u>North Wall</u>	<u>East Wall</u>	<u>Base</u>	<u>East Wall</u>	<u>South Wall</u>	<u>West Wall</u>	<u>West Wall</u>	<u>Base</u>	<u>Base</u>	
PID Reading (no units)	2	1	4	1	1	2	2	1	2	NS
GRO (ppm)	<1.2	<1.1	5.1	<1.2	<1.2	<1.2	<1.2	<1.1	<1.2	250
DRO (ppm)	<5.8	<6.1	<6	<5.8	<6	<5.9	<5.9	<5.7	NA	250
<b><u>PVOCs (ppm)</u></b>										
Benzene	<0.0023	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0022	<0.0024	0.0055
Ethylbenzene	<0.0058	<0.006	<0.006	<0.006	<0.006	<0.006	<0.0059	0.0098	<0.006	2.9
Methyl tert-butyl ether	<0.058	<0.06	<0.06	<0.06	<0.06	<0.06	<0.059	<0.055	<0.06	NS
Toluene	<0.0058	<0.006	<0.006	<0.006	<0.006	<0.006	<0.0059	<0.0055	<0.006	1.5
1,2,4-Trimethylbenzene	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	NS
1,3,5-Trimethylbenzene	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	NS
Total xylenes	<0.017	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.017	<0.018	4.1

\*The sample locations are in reference to the gasoline/waste oil UST excavation, except for sample no. 394, which was collected from the main excavation.

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 3 (cont.)  
PVOC Results — Soil Samples**

**Soils Left In Place**

Sample No.	395	396	397	398	452	453	454	456	457	Proposed Standard
*Sample Location	<u>South Wall</u>	<u>East Wall of Building</u>	<u>East Wall</u>	<u>Stockpiled Soils</u>	<u>East Wall</u>	<u>North Wall</u>	<u>Base</u>	<u>East Wall of Building</u>	<u>Base</u>	
PID Reading (no units)	5	78	2	3	1	1	1	138	5	NS
GRO (ppm)	<1.2	12	<1.2	<1.2	<1.2	<1.2	<1.2	2.6	<1.2	250
DRO (ppm)	NA	NA	NA	NA	NA	NA	NA	NA	NA	250
<u>PVOCs (ppm)</u>										
Benzene	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	0.0055
Ethylbenzene	<0.006	<0.06	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	2.9
Methyl tert-butyl ether	<0.06	<0.6	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	NS
Toluene	<0.006	<0.06	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	1.5
1,2,4-Trimethylbenzene	<0.012	0.23	<0.012	<0.012	<0.012	<0.012	0.019	<0.012	<0.012	NS
1,3,5-Trimethylbenzene	<0.012	<0.12	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	NS
Total xylenes	<0.018	<0.18	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	4.1

\*The sample locations are in reference to the main excavation.

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 3 (cont.)  
PVOC Results — Soil Samples**

**Soils Left In Place**

Sample No.	458	469	470	473	474	475	476	Proposed
*Sample Location	<u>North Wall</u>	<u>East Wall</u>	<u>Base</u>	<u>East Wall</u>	<u>Base</u>	<u>South Wall</u>	<u>West Wall</u>	<u>Standard</u>
PID Reading (no units)	3	6	7	20	3	716	620	NS
GRO (ppm)	<1.2	3.1	<1.2	10	<1.2	<b>1,100</b>	62	250
DRO (ppm)	NA	NA	NA	NA	NA	NA	NA	250
<u>PVOCs (ppm)</u>								
Benzene	<0.0024	<0.0024	<0.0024	<0.0026	<0.0024	<b>2.3</b>	<0.024	0.0055
Ethylbenzene	<0.006	<0.006	<0.006	<0.0065	<0.006	<b>19</b>	2.2	2.9
Methyl tert-butyl ether	<0.06	<0.06	<0.06	<0.065	<0.06	<12	<0.6	NS
Toluene	<0.006	<0.006	<0.006	0.014	<0.006	<1.2	0.78	1.5
1,2,4-Trimethylbenzene	<0.012	<0.012	<0.012	0.27	<0.012	120	1.6	NS
1,3,5-Trimethylbenzene	<0.012	<0.012	<0.012	0.058	<0.012	34	0.84	NS
Total xylenes	<0.018	<0.018	<0.018	0.026	<0.018	<b>63</b>	<0.18	4.1

\*The sample locations are in reference to the main excavation.

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 3 (cont.)  
PVOC Results — Soil Samples**

**Soils Left In Place — Geoprobe and Hand-Augered Boring Locations**

Sample No.	<u>HA-4:S-5</u>	<u>HA-5:S-9</u>	<u>P-1:S-6</u>	<u>P-2:S-4</u>	<u>P-3:S-5</u>	<u>P-4:S-5</u>	<u>P-5:S-3</u>	<u>Proposed Standard</u>
PID Reading (no units)	<1	293	421	<1	<1	393	3	NS
GRO (ppm)	<1.2	79	<b>350</b>	<1.1	<1.2	<b>2,000</b>	5.7	250
DRO (ppm)	9.4	NA	130	<5.7	24	24	<5	250
<u>PVOCs (ppm)</u>								
Benzene	0.0038	<0.0026	<0.0024	<b>0.0088</b>	0.0024	<b>4.8</b>	<0.0026	0.0055
Ethylbenzene	<0.006	<0.0065	<b>9.4</b>	<0.0055	<0.006	<b>35</b>	0.079	2.9
Methyl tert-butyl ether	<0.06	<0.065	<0.06	<0.055	<0.06	<0.06	<0.065	NS
Toluene	<0.006	<0.0065	<0.006	0.013	<0.006	<0.006	<0.0065	1.5
1,2,4-Trimethylbenzene	<0.012	<0.013	<0.012	<0.011	<0.012	67	0.072	NS
1,3,5-Trimethylbenzene	<0.012	<0.013	<0.012	<0.011	<0.012	16	<0.013	NS
Total xylenes	<0.018	<0.02	<b>19</b>	<0.017	<0.018	<b>11</b>	0.11	4.1

NS = No standard established

NA = Parameter was not analyzed

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 3 (cont.)**  
**VOC Results — Soil Samples**  
(Only the detected VOC parameters are presented.)

**Soils Left In Place**

Sample No.	81	87	99	100	106	123	164	165	166	173	217	Proposed Standard
*Sample Location	<u>Base</u>	<u>Base</u>	<u>East Wall</u>	<u>South Wall</u>	<u>Base</u>	<u>South Wall</u>	<u>South Wall</u>	<u>West Wall</u>	<u>Base</u>	<u>Base</u>	<u>Base</u>	
PID Reading (no units)	4	4	191	42	6	472	17	2	1	3	4	NS
GRO (ppm)	2.6	<1.1	76	<1.2	<1.1	4.9	1.4	<1.2	<1.2	<1.2	2.5	250
DRO (ppm)	<5.8	<5.7	53	5.8	<5.7	7.4	<5.9	<5.9	<6	<6	<5.7	250
<b>VOCs (ppm)</b>												
n-Butylbenzene	0.019	<0.0058	0.28	0.034	<0.0058	0.16	0.02	<0.0059	<0.006	<0.006	0.014	NS
sec-Butylbenzene	0.017	<0.0058	0.21	0.03	<0.0058	0.047	<0.0059	<0.0059	<0.006	<0.006	0.016	NS
tert-Butylbenzene	0.016	<0.0058	0.17	0.021	<0.0058	0.08	0.012	<0.0059	<0.006	<0.006	0.013	NS
Ethyl Benzene	0.011	<0.0058	<0.13	<0.0058	<0.0058	0.0065	<0.0059	<0.0059	<0.006	<0.006	0.0078	2.9
Isopropylbenzene	<0.0058	<0.0058	<0.13	<0.0058	<0.0058	<0.0058	<0.0059	<0.0059	<0.006	<0.006	<0.0057	NS
p-Isopropyltoluene	<0.0058	<0.0058	<0.13	0.015	<0.0058	0.024	<0.0059	<0.0059	<0.006	<0.006	<0.0057	NS
Naphthalene	<0.029	<0.029	0.72	0.12	<0.029	0.11	0.12	<0.03	<0.03	<0.03	<0.029	NS
n-Propylbenzene	<0.0058	<0.0058	<0.13	0.013	<0.0058	<0.0058	<0.0059	<0.0059	<0.006	<0.006	0.015	NS
Toluene	0.0069	<0.0058	<0.13	<0.0058	<0.0058	<0.0058	<0.0059	0.0067	<0.006	<0.006	<0.0057	1.5
1,2,4-Trimethylbenzene	<0.012	<0.012	<0.26	0.021	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.02	NS
1,3,5-Trimethylbenzene	0.028	<0.012	<0.26	<0.012	<0.012	0.066	<0.012	<0.012	<0.012	<0.012	0.027	NS
Total xylenes	<0.017	<0.017	<0.4	<0.017	<0.017	0.019	<0.018	<0.018	<0.18	<0.18	<0.017	4.1

\*The sample locations are in reference to the main excavation.

NS = No standard established

ppm = parts per million

Notes: Concentrations in bold are at or above the proposed standard/interim guideline limit.

**TABLE 5**  
**PAH Results — Soil Samples**  
(Only the detected PAH parameters are presented.)

**Soils Left In Place**

Sample No.	87	100	106	164	173	217	346	347	351	352
*Sample Location	<u>Base</u>	<u>South Wall</u>	<u>Base</u>	<u>South Wall</u>	<u>Base</u>	<u>Base</u>	<u>West Wall of Building</u>	<u>**Beneath Building</u>	<u>West Wall of Building</u>	<u>**Beneath Building</u>
PID Reading (no units)	4	42	6	17	3	4	442	441	631	624
GRO (ppm)	<1.1	<1.2	<1.1	1.4	<1.2	2.5	69	320	290	150
DRO (ppm)	<5.7	5.8	<5.7	<5.9	<6	<5.7	300	300	4,200	75
<u>PAHs (ppm)</u>										
Benzo[a]anthracene	0.00059	<0.0006	<0.0006	<0.0006	<0.0006	<0.00055	0.0022	<0.06	<0.0006	<0.0006
Benzo[a]pyrene	<0.0058	<0.0006	<0.0006	<0.0006	<0.0006	<0.00055	0.00079	<0.06	<0.0006	<0.0006
Fluoranthene	<0.058	<0.06	<0.06	<0.06	<0.06	<0.055	0.27	1.9	0.59	0.32
Fluorene	<0.0058	<0.006	<0.006	<0.006	<0.006	<0.0055	0.059	0.16	0.15	0.1
1-methyl Naphthalene	<0.058	<0.06	<0.06	<0.06	<0.06	<0.055	0.26	0.56	2.0	1.4
2-methyl Naphthalene	<0.058	<0.06	<0.06	<0.06	<0.06	<0.055	0.28	0.55	1.9	2.1
Phenanthrene	<0.0058	<0.006	<0.006	<0.006	<0.006	<0.0055	0.069	0.2	0.28	0.16

\*The sample locations are in reference to the main excavation unless otherwise noted.

\*\*Soil sample collected from horizontal boring drilled with hand auger.

ppm = parts per million

**TABLE 6**  
**Total Lead Results — Soil Samples**  
**Soils Left In Place**

<u>Sample No.</u>	<u>*Representative Location</u>	<u>Total Lead (ppm)</u>
10	East wall	7.3
34	Base	5.9
35	Base	6.4
36	North wall of building	14.0
59	Base	6.1
87	Base	7.5
100	South wall	6.4
106	Base	6.0
164	South wall	6.5
173	Base	6.7
217	Base	9.0
227	West wall	9.9
264	West wall	16.0
297	North wall	9.5
322	North wall	8.2
330	Base	6.9
346	West wall of building	16.0
347	**Beneath building	8.9
351	West wall of building	10.0
352	**Beneath building	6.9
357	West wall of building	13.0
***372	North wall	7.2
***377	Base	6.5
***384	West wall	7.5
395	South wall	6.5
396	East wall of building	7.8
456	East wall of building	9.5
457	Base	6.6
475	South wall	13.0
476	West wall	6.0

\*The sample locations are in reference to the main excavation unless otherwise noted.

\*\*Soil sample collected from horizontal boring drilled with hand auger.

\*\*\*The sample locations are in reference to the gasoline/waste oil excavation.

S-1	Landfilled soils	110.0
11	Landfilled soils	9.4
37	Landfilled soils	13.0
42	Landfilled soils	9.4
90	Landfilled soils	12.0
91	Landfilled soils	14.0
108	Landfilled soils	14.0
191	Landfilled soils	14.0
209	Landfilled soils	18.0
234	Landfilled soils	10.0
273	Landfilled soils	6.6
374	Landfilled soils	7.3

\*\*Soil sample collected from horizontal boring drilled with hand auger

ppm = parts per million

Note: The proposed standard/interim guideline limit for total lead in soils is 250 ppm.

**TABLE 2 (Page 1 of 6)**  
**Analytical Results — Groundwater Samples**  
**A. Pethke Service Property**

<u>Parameter</u>	<u>MW-1</u> <u>11-22-93</u>	<u>P-7</u> <u>8-11-94</u>	<u>*P-7</u> <u>8-11-94</u>	<u>MW-5</u> <u>11-22-93</u>	<u>*MW-5</u> <u>11-22-93</u>	<u>P-6</u> <u>8-11-94</u>	<u>PAL</u>	<u>ES</u>
GRO (ppb)	<50	640	730	1,200	1,200	190	NL	NL
DRO (ppb)	NA	2,300	1,900	NA	NA	1,800	NL	NL
<b>PVOCs (ppb)</b>								
Benzene	<0.5	<b>3.7</b>	<b>4.2</b>	<b><u>640</u></b>	<b><u>630</u></b>	<b><u>12</u></b>	0.5	5
1,2-Dichloroethane	<b><u>12</u></b>	<1.0	<0.5	<b><u>5</u></b>	<b><u>6.6</u></b>	<1.0	0.5	5
Ethylbenzene	<0.5	2.0	1.9	7.1	6.7	3.8	140	700
MTBE	<5	<10	<5.0	8	6.7	<10.0	12	60
Naphthalene	<1	<b>38</b>	<b>25</b>	1.2	2.3	<b><u>92</u></b>	8	40
Toluene	19	2.5	3.2	46	35	2.7	68.6	343
TMBs	0.59	11.4	9.8	25	25	6.5	96	480
Total xylenes	<0.5	8.5	7.9	44	42	15	124	620
Lead (ppb)	<5	NA	NA	<b>7.2</b>	<5	NA	1.5	15

\*duplicate sample

ppb = parts per billion

MTBE = methyl tert-butyl ether

TMBs = Combined 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations

PAL = Preventive Action Limit

ES = Enforcement Standard

NL = No established limit

NA = Not analyzed

- Notes:
- Parameter concentrations that exceed their respective PALs are in bold type.
  - Parameter concentrations that exceed their respective ESs are in bold type and underlined.
  - Sample P-6 was collected from the vicinity of former monitoring well MW-5.
  - Sample P-7 was collected from the vicinity of former monitoring well MW-1.

**TABLE 2 (Page 2 of 6)**  
**Analytical Results — Groundwater Samples**  
**A. Pethke Service Property**

<u>Parameter</u>	<u>MW-3</u> <u>1-11-94</u>	<u>MW-3</u> <u>1-31-97</u>	<u>MW-3</u> <u>12-23-97</u>	<u>MW-3</u> <u>3-17-98</u>	<u>MW-3</u> <u>9-10-99</u>	<u>PAL</u>	<u>ES</u>
<b>GRO (ppb)</b>	<50	<50	<50	<50	<0.05	NL	NL
<b>DRO (ppb)</b>	NA	824	128	262	100	NL	NL
<b>PVOCs(ppb)</b>							
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	5
1,2-Dichloroethane	<0.5	NA	NA	NA	NA	0.5	5
Ethylbenzene	<0.5	<1.0	<1.0	<1.0	<0.5	140	700
MTBE	<5	<1.0	<1.0	<1.0	<0.2	12	60
Naphthalene	<1	<1.0	<1.0	<1.0	<2.0	8	40
Toluene	2.4	<1.0	<1.0	<1.0	<0.5	68.6	343
TMBs	<1.0	<2.0	<2.0	<2.0	<2.0	96	480
Total xylenes	<0.5	<2.0	<2.0	<2.0	0.67	124	620
<b>Lead (ppb)</b>	<5	NA	NA	NA	NA	1.5	15

ppb = parts per billion

MTBE = methyl tert-butyl ether

TMBs = Combined 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations

PAL = Preventive Action Limit

ES = Enforcement Standard

NL = No established limit

NA = Not analyzed

Notes: Parameter concentrations that exceed their respective PALs are in bold type.

Parameter concentrations that exceed their respective ESs are in bold type and underlined.

**TABLE 2 (Page 3 of 6)**  
**Analytical Results — Groundwater Samples**  
**A. Pethke Service Property**

<u>Parameter</u>	<u>MW-8</u> <u>2-27-95</u>	<u>MW-8</u> <u>8-28-95</u>	<u>*MW-8</u> <u>8-28-95</u>	<u>MW-8</u> <u>3-8-96</u>	<u>MW-8</u> <u>1-31-97</u>	<u>MW-8</u> <u>12-23-97</u>	<u>MW-8</u> <u>3-17-98</u>	<u>MW-8</u> <u>6-18-98</u>	<u>MW-8</u> <u>9-16-98</u>	<u>MW-8</u> <u>12-17-98</u>	<u>MW-8</u> <u>3-17-99</u>	<u>MW-8</u> <u>6-15-99</u>	<u>MW-8</u> <u>9-10-99</u>	<u>PAL</u>	<u>ES</u>
GRO (ppb)	230	150	190	360	288	338	290	380	240	380	350	280	170	NL	NL
DRO (ppb)	980	600	760	770	8,120	1,670	1,360	1,400	400	880	<100	<100	4,000	NL	NL
<b>PVOCs (ppb)</b>															
Benzene	<u>14</u>	<b>3.5</b>	<b>3.6</b>	<u>14</u>	<u>15.2</u>	<u>14.2</u>	<u>10.1</u>	<0.5	<u>11.0</u>	<u>13</u>	<u>12</u>	<u>6.4</u>	<u>11</u>	0.5	5
Ethylbenzene	6.8	1.8	1.9	8.2	8.27	11.5	8.12	9.7	9.3	13	11	4.9	8.8	140	700
MTBE	<5	<5	<5	<5	<1.0	<1.0	<1.0	<0.2	0.20	<1.0	0.95	3.1	<0.2	12	60
Naphthalene	<b>79</b>	<b>160</b>	<b>120</b>	<b>140</b>	<b>140</b>	<b>148</b>	<b>144</b>	<b>73</b>	1.0	<b>140</b>	<b>110</b>	<b>97</b>	<2.0	8	40
Toluene	4.0	3.0	2.7	4.6	4.2	4.61	4.51	4.0	4.2	5.6	4.4	3.3	3.9	68.6	343
TMBs	16.6	7	7.4	18.2	16.56	24.77	16.66	19.6	14.9	26.2	21.3	10.1	17.2	96	480
Total xylenes	31	13	13	39	36.91	54.3	34.92	40	37	51	44	18	35	124	620
Lead (ppb)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	15

\*duplicate sample

ppb = parts per billion

MTBE = methyl tert-butyl ether

TMBs = Combined 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations

PAL = Preventive Action Limit

ES = Enforcement Standard

NL = No established limit

NA = Not analyzed

Notes:

Parameter concentrations that exceed their respective PALs are in bold type.

Parameter concentrations that exceed their respective ESs are in bold type and underlined.

W-8 was constructed in the vicinity of former monitoring well MW-1.

TABLE 2 (Page 4 of 6)  
Analytical Results — Groundwater Samples  
A. Pethke Service Property

Parameter	MW-9 2-27-95	*MW-9 2-27-95	MW-9 8-28-95	MW-9 3-8-96	*MW-9 3-8-96	MW-9 1-31-97	*MW-9 1-31-97	MW-9 12-23-97	MW-9 3-17-98	MW-9 6-18-98	MW-9 9-16-98	MW-9 12-17-98	MW-9 3-17-99	MW-9 6-15-99	MW-9 9-10-99	PAL	ES
GRO (ppb)	270	240	260	510	460	515	434	281	217	230	180	630	260	230	140	NL	NL
DRO (ppb)	1,400	850	1,500	2,400	2,400	9,670	9,930	5,880	4,240	700	430	650	<100	430	1,600	NL	NL
<b>PVOCs (ppb)</b>																	
Benzene	<u>13</u>	<u>12</u>	<u>12</u>	<u>14</u>	<u>13</u>	<u>7.48</u>	<u>9.51</u>	<0.5	<u>7.14</u>	<u>5.6</u>	4.1	4.2	3.6	3.4	3.2	0.5	5
Ethylbenzene	6.5	5.9	6.5	9.9	8.5	12.7	10.6	<1.0	4.84	4.2	4.7	5.9	3.8	3.7	4.5	140	700
MTBE	<5	<5	<5	<10	<10	<1.0	<1.0	<1.0	<1.0	<0.2	1.1	1.3	0.9	1.3	<0.2	12	60
Naphthalene	<b>44</b>	<b>22</b>	<b>22</b>	<b>25</b>	<b>20</b>	<b>31.80</b>	<b>29.6</b>	<b>34.9</b>	<b>33.91</b>	<b>18</b>	<b>25</b>	<b>25</b>	<b>32</b>	<b>24</b>	<b>24</b>	8	40
Toluene	26	28	41	73	47	2.57	2.31	<1.0	2.2	1.8	1.8	2.1	1.6	1.7	1.9	68.6	343
TMBs	17.4	16	20.4	29.1	25	32.4	28.8	<2.0	25.57	24.7	23.7	26.5	22.3	20.0	22.2	96	480
Total xylenes	20	18	16	24	21	24.18	21.02	<2.0	13.0	11	11	12	9.1	8.8	14	124	620
Lead (ppb)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	15

\*duplicate sample

ppb = parts per billion

MTBE = methyl tert-butyl ether

TMBs = Combined 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations

PAL = Preventive Action Limit

ES = Enforcement Standard

NL = No established limit

NA = Not analyzed

Notes: Parameter concentrations that exceed their respective PALs are in bold type.

Parameter concentrations that exceed their respective ESs are in bold type and underlined.

MW-9 was constructed in the vicinity of former monitoring well MW-5.

**TABLE 2 (Page 5 of 6)**  
**Analytical Results — Groundwater Samples**  
**A. Pethke Service Property**

<u>Parameter</u>	<u>WS-1</u> <u>10-3-97</u>	<u>EXT-1</u> <u>6-19-97</u>	<u>EXT-1</u> <u>9-29-97</u>	<u>EXT-1</u> <u>12-23-97</u>	<u>EXT-1</u> <u>3-17-98</u>	<u>EXT-1</u> <u>6-18-98</u>	<u>EXT-1</u> <u>9-16-98</u>	<u>EXT-1</u> <u>12-17-98</u>	<u>EXT-1</u> <u>3-17-99</u>	<u>EXT-1</u> <u>6-15-99</u>	<u>EXT-1</u> <u>9-10-99</u>	<u>PAL</u>	<u>ES</u>
GRO (ppb)	599	236	331	385	463	380	240	230	190	200	120	NL	NL
DRO (ppb)	15,200	7,730	8,580	8,812	7,700	2,000	920	1,300	<100	950	2,100	NL	NL
<b>PVOCs (ppb)</b>													
Benzene	<b>2.59</b>	<b>3.28</b>	<b>2.68</b>	1.71	<b>2.04</b>	<2.5	1.2	<b>5.7</b>	<b>0.81</b>	<b>0.75</b>	1.7	0.5	5
Ethylbenzene	1.86	<5.0	1.56	1.88	1.79	<2.5	1.5	3.3	1.0	1.0	1.2	140	700
MTBE	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	0.24	<1.0	<0.2	<0.2	<0.2	12	60
Naphthalene	<b><u>62.6</u></b>	<b><u>243</u></b>	<b><u>258</u></b>	<b><u>192</u></b>	<b><u>300</u></b>	<b><u>230</u></b>	<b><u>160</u></b>	<b><u>180</u></b>	<b><u>91</u></b>	<b><u>87</u></b>	<b><u>130</u></b>	8	40
Toluene	3.64	<5.0	4.46	3.69	3.82	4.0	2.9	5.5	1.5	1.9	2.2	68.6	343
TMBs	13.78	7.88	12.87	13.24	13.05	11	10.3	21.9	9.5	7.9	10.1	96	480
Total xylenes	8.62	6.07	9.15	7.71	9.62	9.5	8.0	17	5.5	5.2	6.2	124	620
Lead (ppb)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	15

ppb = parts per billion

MTBE = methyl tert-butyl ether

TMBs = Combined 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations

PAL = Preventive Action Limit

ES = Enforcement Standard

NL = No established limit

NA = Not analyzed

Notes: Parameter concentrations that exceed their respective PALs are in bold type.

Parameter concentrations that exceed their respective ESs are in bold type and underlined.

Sample WS-1 was collected from the water seeping off site at the southwest corner of the property.

**TABLE 2 (Page 6 of 6)**  
**Analytical Results — Groundwater Samples**  
**A. Pethke Service Property**

Parameter	EXT-2 6-19-97	*EXT-2 6-19-97	EXT-2 9-29-97	*EXT-2 9-29-97	EXT-2 12-23-97	*EXT-2 12-23-97	EXT-2 3-17-98	*EXT-2 3-17-98	EXT-2 6-18-98	*EXT-2 6-18-98	EXT-2 9-16-98	EXT-2 12-17-98	EXT-2 3-17-99	EXT-2 6-15-99	EXT-2 9-10-99	PAL	ES
GRO (ppb)	833	810	499	525	538	572	726	627	320	310	290	270	380	180	88	NL	NL
DRO (ppb)	34,800	31,600	16,600	9,420	12,800	25,300	17,400	13,500	1,600	2,100	1,210	1,800	<100	1,200	4,800	NL	NL
<b>PVOCs (ppb)</b>																	
Benzene	<b>2.7</b>	<b>2.76</b>	<b>4.06</b>	<b>3.01</b>	<b>3.39</b>	<b>3.36</b>	<b>3.99</b>	<b>3.39</b>	<b>4.3</b>	<b>4.1</b>	<u>17</u>	<b>3.2</b>	<b>3.6</b>	<b>2.0</b>	<b>2.8</b>	0.5	5
Ethylbenzene	2.04	2.16	1.67	1.76	2.77	3.14	2.57	2.46	2.3	2.5	2.3	1.8	2.0	0.97	0.74	140	700
MTBE	358.0	361.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	17	<0.2	0.34	0.74	0.23	1.1	<0.2	12	60
Naphthalene	<b>56.8</b>	<b>53.2</b>	<b>55.0</b>	<b>55.1</b>	<b>75.3</b>	<b>73.1</b>	<b>57.2</b>	<b>51.9</b>	<b>34</b>	<b>29</b>	<b>31</b>	<b>3.2</b>	<b>41</b>	<b>17</b>	<b>20</b>	8	40
Toluene	5.05	5.22	4.46	5.35	5.55	5.54	5.47	5.28	5.2	5.5	5.3	5.4	4.6	2.5	2.3	68.6	343
TMBs	14.98	15.32	13.74	14.61	17.16	17.64	18.57	19.56	20.6	22.2	14	14.1	15.1	7	6.2	96	480
Total xylenes	14.88	12.5	9.37	9.59	10.51	10.79	11.22	11.37	11	12	15	9.9	9.2	5.1	4.8	124	620
Lead (ppb)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	15

duplicate sample

ppb = parts per billion

MTBE = methyl tert-butyl ether

TMBs = Combined 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene concentrations

PAL = Preventive Action Limit

ES = Enforcement Standard

NL = No established limit

NA = Not analyzed

Notes: Parameter concentrations that exceed their respective PALs are in bold type.

Parameter concentrations that exceed their respective ESs are in bold type and underlined.

**TABLE 3 (Page 1 of 3)**  
**Natural Attenuation Measurements**  
**A. Pethke Service Property**

<u>Parameter</u>	<u>MW-3</u> <u>1-31-97</u>	<u>MW-3</u> <u>12-23-97</u>	<u>MW-3</u> <u>3-17-98</u>	<u>MW-3</u> <u>3-17-99</u>	<u>MW-3</u> <u>6-15-99</u>	<u>MW-3</u> <u>9-10-99</u>
Nitrate (ppm)	<0.3	0.423	1.68	NA	NA	2.5
Sulfate (ppm)	506	414	438	NA	NA	300
Methane (ppm)	NA	NA	NA	NA	NA	<7.2
*DO (ppm)	1.3	0.7	3.35	3.93	2.32	2.46
*ORP (mV)	81	258	242	310	216	266
*Dissolved Iron (ppm)	0.9	<1.0	<1.0	NA	<1.0	<1.0
*pH (std. units)	11.5	6.68	4.37	7.14	7.27	7.13
*Conductivity	951	2,328	2,047	1265	1,917	1,797
*Temperature (°C)	12.2	13.61	10.66	11.47	13.59	17.90

<u>Parameter</u>	<u>MW-8</u> <u>1-31-97</u>	<u>MW-8</u> <u>12-23-97</u>	<u>MW-8</u> <u>3-17-98</u>	<u>MW-8</u> <u>6-18-98</u>	<u>MW-8</u> <u>9-16-98</u>	<u>MW-8</u> <u>12-17-98</u>	<u>MW-8</u> <u>3-17-99</u>	<u>MW-8</u> <u>6-15-99</u>	<u>MW-8</u> <u>9-10-99</u>
Nitrate (ppm)	0.849	5.3	0.711	0.69	0.89	<0.05	1.3	<0.05	<0.05
Sulfate (ppm)	5.28	5.37	14.8	<10	<5.0	<10	<10	<10	<10
Methane (ppm)	NA	NA	NA	0.52	0.49	0.51	0.84	0.4	0.34
*DO (ppm)	1.35	0.46	0.54	0.64	0.93	2.01	3.15	2.16	0.57
*ORP (mV)	154	11	80	93	47	12	27	-7	35
*Dissolved Iron (ppm)	0.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
*pH (std. units)	12.11	12.45	5.89	8.98	10.30	12.51	12.56	12.76	12.63
*Conductivity	2,100	1,144	1,160	1,152	1,102	1,220	1,254	1,330	1,065
*Temperature (°C)	10.9	14.12	10.30	14.68	NM	16.17	10.57	14.44	19.06

\*Field measurement  
 ppm = parts per million  
 DO = Dissolved oxygen  
 ORP = Oxygen-reduction potential  
 mV = millivolts  
 NA = Not analyzed  
 NM = Not measured

**TABLE 3 (Page 2 of 3)**  
**Natural Attenuation Measurements**  
**A. Pethke Service Property**

<u>Parameter</u>	<u>MW-9</u> <u>1-31-97</u>	<u>MW-9</u> <u>12-23-97</u>	<u>MW-9</u> <u>3-17-98</u>	<u>MW-9</u> <u>6-18-98</u>	<u>MW-9</u> <u>9-16-98</u>	<u>MW-9</u> <u>12-17-98</u>	<u>MW-9</u> <u>3-17-99</u>	<u>MW-9</u> <u>6-15-99</u>	<u>MW-9</u> <u>9-10-99</u>
Nitrate (ppm)	<0.3	<0.3	<0.3	0.10	<0.05	<0.05	0.4	0.4	0.07
Sulfate (ppm)	6.21	7.56	6.42	26	7.1	27	18	27	38
Methane (ppm)	NA	NA	NA	6.4	5.1	3.9	4.7	2.5	2.4
*DO (ppm)	0.21	0.35	0.28	0.91	0.52	2.53	2.64	1.71	0.50
*ORP (mV)	72	-22	-16	-51	-162	-87	-136	-240	-105
*Dissolved Iron (ppm)	0.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
*pH (std. units)	12.35	12.40	6.65	9.59	11.36	12.10	12.10	12.40	12.21
*Conductivity	1,740	4,289	4,049	3,754	3,774	3,953	4,014	3,810	3,377
*Temperature (°C)	11.0	12.75	9.74	13.58	NM	14.25	10.61	12.25	16.25

<u>Parameter</u>	<u>EXT-1</u> <u>12-23-97</u>	<u>EXT-1</u> <u>3-17-98</u>	<u>EXT-1</u> <u>6-18-98</u>	<u>EXT-1</u> <u>9-16-98</u>	<u>EXT-1</u> <u>12-17-98</u>	<u>EXT-1</u> <u>3-17-99</u>	<u>EXT-1</u> <u>6-15-99</u>	<u>EXT-1</u> <u>9-10-99</u>
Nitrate (ppm)	<0.3	<0.3	4.5	0.072	<0.05	1.2	2.3	0.07
Sulfate (ppm)	4.95	3.99	<10	<5.0	<10	<10	16	10
Methane (ppm)	NA	NA	5.6	5.3	3.6	2.8	1.9	2.8
*DO (ppm)	0.42	0.28	0.35	0.36	2.58	2.02	1.55	0.49
*ORP (mV)	21	85	93	-90	-30	-83	-197	-91
*Dissolved Iron (ppm)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
*pH (std. units)	12.59	5.89	8.82	10.87	12.30	12.36	12.64	12.38
*Conductivity	5,626	5,901	5,349	4,805	4,726	5,168	5,023	4,613
*Temperature (°C)	11.54	7.82	11.25	NM	13.50	8.68	10.75	15.42

\*Field measurement  
 ppm = parts per million  
 DO = Dissolved oxygen  
 ORP = Oxygen-reduction potential  
 mV = millivolts  
 NA = Not analyzed  
 NM = Not measured

**TABLE 3 m(Page 3 of 3)**  
**Natural Attenuation Measurements**  
**A. Pethke Service Property**

<b>Parameter</b>	<b>EXT-2 12-23-97</b>	<b>EXT-2 3-17-98</b>	<b>EXT-2 6-18-98</b>	<b>EXT-2 9-16-98</b>	<b>EXT-2 12-17-98</b>	<b>EXT-2 3-17-99</b>	<b>EXT-2 6-15-99</b>	<b>EXT-2 9-10-99</b>
<b>Nitrate (ppm)</b>	<0.3	0.167	1.0	<0.05	0.058	1.0	1.1	<0.05
<b>Sulfate (ppm)</b>	18.45	13.05	76	22	15	11	11	<10
<b>Methane (ppm)</b>	NA	NA	1.8	2.1	1.7	3.3	2.3	2.3
<b>*DO (ppm)</b>	0.29	NM	0.30	0.40	2.24	2.71	1.44	0.59
<b>*ORP (mV)</b>	19	NM	-8	-124	-87	-120	-231	-92
<b>*Dissolved Iron (ppm)</b>	<1.0	NM	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>*pH (std. units)</b>	12.59	NM	9.44	10.84	12.26	12.33	12.51	12.29
<b>*Conductivity</b>	6,582	NM	5,243	4,897	4,786	5,089	4,604	3,870
<b>*Temperature (°C)</b>	12.09	NM	13.15	NM	15.58	9.02	13.31	17.15

\*Field measurement

ppm = parts per million

DO = Dissolved oxygen

ORP = Oxygen-reduction potential

mV = millivolts

NA = Not analyzed

NM = Not measured

**TABLE 1**  
**Groundwater Elevations**  
**A. Pethke Service Property**

<u>Well Location</u>	<u>*Top of PVC Pipe Elevation (ft.)</u>	<u>Groundwater Elevations (ft.)</u>												
		<u>2-27-95</u>	<u>8-28-95</u>	<u>3-8-96</u>	<u>1-31-97</u>	<u>6-19-97</u>	<u>12-23-97</u>	<u>3-17-98</u>	<u>6-18-98</u>	<u>9-16-98</u>	<u>12-17-98</u>	<u>3-17-99</u>	<u>6-15-99</u>	<u>9-10-99</u>
MW-3	102.59	95.20	95.06	93.33	93.38	NM	93.42	94.31	95.18	NM	NM	NM	NM	94.89
MW-8	101.12	94.33	95.05	94.49	94.57	NM	94.82	93.47	94.99	94.93	94.66	95.53	95.91	95.17
MW-9	101.44	93.42	95.37	92.87	92.95	NM	92.48	93.35	91.23	90.82	90.64	92.20	93.27	92.57
EXT-1	101.13	—	—	—	—	93.02	92.45	93.32	91.18	90.79	90.62	92.39	93.27	92.54
EXT-2	101.38	—	—	—	—	92.94	92.37	93.14	NM	NM	88.68	91.99	92.71	92.47

\*Elevation referenced to a temporary benchmark with an assumed elevation of 100 feet: the north upper flange bolt on a fire hydrant located at the southeast corner of North M South Howell Avenue.

— = Well not yet constructed

NM = Well not measured

Note: Monitoring wells MW-3, MW-8, and MW-9 were resurveyed 6-19-97 following construction of the monitoring sumps/wells. Groundwater elevations for MW-3, MW-8, and MW-9 were recalculated for the first four rounds of sampling based on the new PVC pipe elevations.