

LAW

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**REPORT OF PHASE II ENVIRONMENTAL
SITE ASSESSMENT**

**WESTPARK PLAZA SHOPPING CENTER
MARIETTA, GEORGIA**

prepared for:

PHOENIX HOME LIFE MUTUAL INSURANCE COMPANY

prepared by:

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

396 Plasters Avenue
Atlanta, Georgia 30324

LAW PROJECT NO. 50130-9-2715-01-917

MAY 1999

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1.0 INTRODUCTION

This report presents the findings of environmental consulting services performed for the Westpark Plaza Shopping Center located on Whitlock Avenue, in Marietta, Georgia (refer to Figure 1, Appendix A). Our services were performed substantially as outlined in our proposal to Phoenix Home Life Mutual Insurance Company (LAW Proposal No. 50130-99062) dated March 15, 1999. Our services were authorized by Ms. Janet Krupa of Phoenix Home Life Mutual Insurance Company on March 24, 1999.

2.0 BACKGROUND

LAW initially performed a Groundwater User Survey for the subject site in July 1997. Our initial Groundwater User Survey services were performed for Mr. Gerald Pouncey of the law firm of Morris, Manning and Martin. In summary, information previously gathered during the July 1997 Water Usage Survey, from pertinent regulatory agency sources, failed to confirm the presence of any active groundwater or surface water intakes within a 1-mile radius of the Westpark Plaza Shopping Center. Historic wells within the 1-mile radius of the site were confirmed to be inactive or permanently closed. Similarly, a vehicular reconnaissance of local streets within a 1-mile radius of the site did not identify the presence of any groundwater and/or surface water intakes utilized as a drinking water source. Based upon topography, groundwater flow in the area of the Westpark Shopping Center was interpreted to be in a southerly direction.

A supplemental Water User Survey was conducted for the subject site in May 1998. Our supplemental services included a walking tour of selected portions of the area around the site. Wherever suspect evidence of a well was identified, and when practicable, LAW spoke with an occupant of the residence regarding the source of their drinking water and the possible presence of wells on their property. Where residents were not available, a letter was left requesting that the resident contact LAW if they were aware of the presence or use of a drinking water well on their property or adjacent properties. LAW noted the presence of water meters for all residences along streets where the walking tour was conducted. However, a total of three groundwater wells were identified as being located within a 1-mile radius of the subject site as a result of the detailed reconnaissance. According to interviews performed during the May 1998 Water Usage Survey with persons knowledgeable about the wells, none of the wells found during the survey were currently in use for drinking water purposes (refer to section 3.2.4).

As part of the current assessment activities, LAW was provided a copy of a previous Environmental Inspection Report Update performed by PCI, Inc. for Home Life Insurance Company, dated September 26, 1991. The Update refers to a previous report regarding specific environmental issues associated with the operation of the dry cleaners at the Westpark Plaza Shopping Center. Based upon those "issues", PCI reviewed the State of Georgia files on the Hazardous Waste Generator activities and recent violations cited for the dry-cleaner tenant. In addition, a file review was performed for an adjacent BP gas station that was

identified as a Leaking Underground Storage Tank (LUST) site. As indicated in the PCI report, the file review for the on site dry-cleaner documented non-compliance with proper handling and disposal of hazardous wastes. Review of the Notice of Violation and tenant responses to the specific violations identified by the State of Georgia, indicated that the majority of the issues were associated with proper labeling of filter wastes, disposal documentation, and failure to report hazardous waste activities in accordance with the provisions of the Resources Conservation and Recovery Act (RCRA). PCI determined that the noted violations would not have resulted in significant impacts to the parcel. With respect to the adjacent BP station, a documented release was reported in 1989 as part of a tank upgrade/renovation process. Supplemental testing verified the presence of petroleum hydrocarbons and BTEX in the area of the original tankpit. However, groundwater flow at the subject site was determined to be in a southeasterly direction, away from the Westpark Plaza Shopping Center. PCI determined that the LUST situation at the BP station had not resulted in a significant environmental impact to the subject parcel.

✓ LAW also reviewed a Phase I Environmental Site Assessment for the Westpark Plaza Shopping Center performed by ATC Associates for Lennar Partners, Inc., dated March 12, 1997. According to the report, the dry-cleaners maintains an aboveground storage tank (AST) for the storage of tetrachloroethylene (PCE). No spill/overflow containment for the subject AST was noted by ATC. The report noted historical RCRA violations with respect to the handling and reporting of hazardous wastes by the dry-cleaners. ATC stated that dry-cleaning operations had been conducted on-site since 1980 and that questionable handling procedures included the draining of filters overnight, packaging of waste materials in unlabeled drums, and placing of the drums in a solid waste dumpster behind the facility. Other dry-cleaning process wastes were reportedly disposed of through a sink drain located within the tenant space. Based upon these environmental concerns, ATC determined that there existed a potential for subsurface impacts, and recommended that additional assessment be performed. ATC also recommended that further assessment be performed with respect to the adjacent LUST site (BP gas station), as no remediation in response to documented releases had been undertaken.

A Phase II Environmental Site Assessment for the subject site was performed for Lennar Partners, Inc. by Levine-Fricke-Recon, Inc. (LFR), dated April 14, 1997. Laboratory analysis of soil samples collected from two soil borings installed at the base of the dry cleaning machine and PCE tank exhibited concentrations of tetrachloroethylene (898 ppb and 51,800 ppb, respectively), which exceeded the State of Georgia Hazardous Site Response Act (HSRA) Notification Concentration of 180 ppb. In addition, the concentration of trichloroethylene in soil collected from the base of the PCE tank (846 ppb) exceeded the HSRA Notification Concentration of 130 ppb. A groundwater sample collected from a well installed at the southeastern property boundary exhibited a concentration of 1 ppb of tetrachloroethylene (any concentration of a volatile organic compound (VOC) "above background" is considered reportable). In summary, LFR concluded that the soil and groundwater at the subject site had been impacted by the release

of volatile organic compounds (VOCs), likely associated with the historical operation of the on-site dry-cleaners.

In addition to the aforementioned Phase II performed by LFR, LAW also reviewed a Phase II Environmental Site Assessment Report performed for Lennar Partners, Inc. by ATC, dated April 24, 1997. The report documented the installation of a groundwater monitoring well in the area immediately south of the on-site dry-cleaners. Analysis of the groundwater sample indicated concentrations of tetrachloroethylene and trichloroethylene to be 320 ppb and 90 ppb, respectively. ATC subsequently concluded that groundwater at the subject site had been adversely impacted.

3.0 SCOPE OF SERVICES

3.1 PURPOSE

At the request of Phoenix Home Life Mutual Insurance Company (Phoenix), and in accordance with the Scope of Basic Services, as presented in LAW's contract with Phoenix (dated March 24, 1999), LAW performed a Phase II Environmental Site Assessment of the subject property. The purpose of this assessment was to evaluate whether the subject site may have been adversely impacted by historical operations associated with dry-cleaning activities conducted on-site. Our assessment involved the installation of three soil borings to groundwater, with subsequent conversion of each to a Type II groundwater monitoring well, and installation of four hand auger borings within the interior of the dry-cleaner suite. In addition, LAW performed a groundwater elevation survey to establish groundwater flow direction, and updated the previous Groundwater User Survey.

3.2 PROCEDURES

The following discussion presents a summary of the methods and protocols utilized during the course of the assessment.

3.2.1 Groundwater Monitoring Wells- Sampling and Analysis

As previously indicated, LAW installed a total of three soil borings/monitoring wells at the subject site (refer to Figure 2, Appendix A for well locations). One of the borings (MW-1) was installed along the southeast property line of the shopping center. One boring (MW-2) was installed along the southwest property line, along Whitlock Avenue. A third boring (MW-3) was installed immediately south (downgradient) of the existing dry-cleaner suite. MW-1 was located in the same general location as the monitoring well installed by LFR in April 1997. MW-3 was located in the same general location as the monitoring well installed by ATC in April 1997.

Each boring/well was installed by a mechanically driven hollow-stem auger. Soil samples were collected at approximate 5-foot intervals utilizing split spoon sampling techniques.

For each of the identified well locations, the boring was advanced to a depth at which the soil was visibly moist. A soil sample from each split spoon interval was screened for the presence of VOCs utilizing a photoionization detector. The results of the PID screening are presented in Table 1.

TABLE 1: PID SCREENING RESULTS (MONITOR WELL INSTALLATIONS)

Sample ID	Sample Depth (feet BLS)	PID Reading (ppm)	Observations	Odor
MW-1	5.0	1.4	Silty fine sand	None
	10.0	1.2	Silty fine sand	None
MW-2	5.0	1.8	Silty clayey fine to med. sand	None
	10.0	1.9	Clayey silty fine sand	None
MW-3	5.0	2.5	Silty fine to med. Sand	None
	10.0	3.5	Silty fine sand	None

Notes:

ppm-parts per million

Once visibly moist soils were encountered, the auger was advanced an additional ten feet (total well depth of 15 feet bls) before termination. The three boreholes were converted to a Type II groundwater monitoring well by installing a 2-inch diameter PVC pipe to the surface, with the bottom ten feet consisting of 0.01-inch slotted PVC. A filter pack consisting of bagged quartz sand was placed around the well screen. A two-foot thick bentonite seal was placed above the filter pack. The remainder of the borehole annulus was filled with a bentonite slurry. The wells were completed with the installation of flush mount covers and locking well caps. All soil cuttings, development water and purge waters were transferred to 55-gallon drums, and remain on-site for subsequent disposal classification.

A summary of pertinent information relative to the installation of the groundwater monitoring wells is presented in Table 2. A copy of the boring logs for each monitoring well is attached as Appendix B. In general, we note that groundwater flow is in a southerly direction across the subject site (refer to Figure 2).

TABLE 2: GROUNDWATER ELEVATIONS

Well Number	Date Measured	Top of Casing Elev. (ft)	Depth of Well (ft.)	Depth of Screened Interval (ft)	Water Depth (ft)	Groundwater Elev. (ft)
J.B. # 4A	04/05/99	1058.10 (Benchmark Elev.)	N/A	N/A	N/A	N/A
MW-1	04/05/99	1049.13	15.00	10	7.17	1041.96
MW-2	04/05/99	1052.31	15.00	10	10.01	1042.30
MW-3	04/05/99	1060.91	15.00	10	8.85	1052.06

Benchmark: Reference original site plan from David A. Burre Engineers & Surveyors, Inc. (dated September 17, 1991) for known elevation (Junction Box J.B. #4A).

Following installation, each well was developed to remove particles of soil and rock that might have entered during construction. Upon completion of development, the well was allowed to recover with fresh formation water entering the casing. Groundwater samples were subsequently collected utilizing a pre-cleaned disposable bailer. The water samples were placed into pre-cleaned, laboratory provided containers, packed on ice and transported under Chain-of-Custody to the laboratory. Each groundwater sample was analyzed by Analytical Services, Inc. (ASI) of Norcross, Georgia for Volatile Organic Compounds in accordance with EPA Method 8260.

Analytical results for the groundwater samples submitted to the laboratory are summarized in Table 3, and are shown in Figure 3. Copies of the analytical datasheets, Chain-of-Custody and QA/QC data are provided in Appendix C.

**TABLE 3: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
(parts per billion)**

Volatile Organic Compound	MW-1	MW-2	MW-3	HSRA Notification Conc.
Tetrachloroethylene	ND	ND	10,000	Footnote 1
Trichloroethylene	ND	ND	1,600	Footnote 1
Cis-1,2-dichloroethylene	ND	ND	430	Footnote 1
Trans-1,2-dichloroethylene	ND	ND	ND	Footnote 1
1,1-dichloroethylene	ND	ND	ND	Footnote 1
Chloroform	ND	ND	ND	Footnote 1

ND – Not Detected above laboratory detection limit

1 – The presence of organic compounds in groundwater at concentrations in excess of laboratory detection limits is a notifiable occurrence.

3.2.2 Hand-Auger Borings – Sampling and Analysis

For areas interior of the building, LAW utilized a concrete coring device to install a 4-inch diameter core through the existing floor slab. A total of four coring locations were established (refer to Figure 4 for

boring locations). Two corings (HA-1 and HA-2) were installed adjacent to the existing dry-cleaning machine, one coring (HA-3) was installed adjacent to the tetrachloroethylene filter assembly, and the fourth coring (HA-4) was installed in the immediate area of the existing aboveground storage tank (AST) utilized for the storage of tetrachloroethylene.

Once the coring of each location was complete, LAW utilized a stainless steel hand auger to collect subsurface soil samples at various intervals below the bottom of the floor slab. For each soil boring location, LAW advanced the hand auger a minimum of 8 feet below the top of the existing floor slab. Sample intervals were established at depths of 1, 4.5 and 8-foot depths.

Screening of the soil samples was conducted utilizing a photoionization detector (PID) to assess for the presence of volatile organic compounds (VOCs). The results of the field screening are presented in Table 4.

TABLE 4: PID SCREENING RESULTS (HAND AUGER LOCATIONS)

Sample ID	Sample Depth (feet BLS)	PID Reading (ppm)	Observations	Odor
HA-1	1.0	6.9	Silty fine to med. sand	None
	4.5	13.6	Silty fine to med. sand	None
	8.0	18.6*	Clayey fine sand	None
HA-2	1.0	13.9	Silty fine to med. Sand	None
	4.5	11.9	Silty fine to med. Sand	None
	8.0	108*	Fine sandy	None
HA-3	1.0	18.9	Silty fine to med. Sand	None
	4.5	146*	Silty fine to med. Sand	None
	8.0	93.7	Clayey fine to coarse sand	None
HA-4	1.0	9.1	Med. To fine sandy silt	None
	4.5	178	Clayey silt	None
	8.0	212*	Silty clay (wet)	None

Notes:

ppm-parts per million

* - Sample selected for laboratory testing

With respect to the submittal of soil samples for laboratory analysis, LAW selected the sample interval which exhibited the highest field screening reading for each of the boring locations. For each sample submitted, LAW collected a total of three soil sampling syringes for analysis of VOCs via EPA Method 8260. All samples were placed on ice for preservation, and forwarded to the Accura Laboratories, Inc. under chain-of-custody protocol.

A summary of the analytical data for the soil samples collected from the hand auger locations is presented in Table 5 and shown in Figure 4. Copies of the analytical datasheets are provided in Appendix C.

TABLE 5: SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS (ug/kg or ppb)

Volatile Organic Compound	HA-1 (8-ft.)	HA-2 (8-ft.)	HA-3 (4.5-ft.)	HA-4 (8-ft.)	HSRA Notification Concentration
Tetrachloroethene	850	8,900	5,000	4,200	180
Trichloroethene	590	310	640	670	130
Cis-1,2-dichloroethylene	650	270	840	500	530 (N.O.S.)
Trans-1,2-dichloroethylene	7.5	11	38	13	530 (N.O.S.)
1,1-Dichloroethylene	ND	5.2	7.7	ND	530 (N.O.S.)
Chlorobenzene	ND	ND	9.6	ND	4,180
Chloroform	ND	ND	ND	13	680

Notes:

ug/kg-microgram per kilogram

ppb-parts per billion

ND-Not Detected above laboratory detection limit

(N.O.S.) – Not Otherwise Specified

Groundwater User Survey Update

LAW completed an update review of readily available information and performed an area reconnaissance relative to the previously completed Groundwater User Survey (LAW Project No. 50136-7-0637, dated July 9, 1997) and Supplemental Services (LAW Project No. 50139-8-0637, dated May 22, 1998).

3.2.3. Agency File Review

LAW assessed the potential presence of drinking water wells or springs within a 3-mile radius of the Westpark Plaza Shopping Center using readily available sources of pertinent information, which included:

- U.S. Geological Survey (USGS) Water Well Inventory Records, Norcross, Georgia office;
- Georgia Environmental Protection Division (EPD, Underground Storage Tank Management Program (USTMP) Office, "Public Water Systems Sources");
- State of Georgia, Hazardous Site Response Act (HSRA) Notification files.

After reviewing the information, as noted above, LAW identified no additional drinking water wells or springs other than those initially documented within our previous reports. The recorded locations of the public/private wells identified within those reports are presented in Table 6 and shown in Figure 5.

TABLE 6: PUBLIC/PRIVATE WELLS WITHIN A 3-MILE RADIUS

Well ID	Owners Name	Street Address	Depth of Well	Water Use	Miles From Site	Topographic relation relative to subject site
9FF6	T & C Investment	1106 Mossy Rock Rd.	155	Domestic	2.17	Separate watershed
9FF7	David Field	1389 Bells Ferry Rd.	180	Domestic	2.56	Separate watershed
670003	Cobb Cty-Marietta	Cobb County	Unk.	Public	2.2	Separate watershed
670005	Cobb Cty-Marietta	Marietta	Unk.	Public	1.61	Separate watershed

3.2.4 Area Reconnaissance

We note that a previous reconnaissance conducted by LAW on May 22, 1998 identified the presence of three groundwater wells within 1-mile, as follows:

- 360 Manning Road – Ms. Manning stated that she receives drinking water from the City of Marietta, and that the well located on her property is utilized for irrigation purposes only. The well is located approximately 3500 feet southwest of the subject site. According to the City of Marietta Public School System, the 360 Manning Road parcel has recently been purchased for construction of a new high school. A representative for the Marietta Public Schools further stated that M.B. Khan Construction Company is directing the project management for construction of the new facility. LAW attempted to contact M.B. Khan regarding future plans for the existing well. LAW's phone calls have not been returned. We will continue in our efforts to contact M.B. Khan Construction Company regarding the future disposition of the subject well.
- 475 Whitlock Avenue – Mr. Charles Henderson stated that he receives drinking water from the City of Marietta and that the well located on his property is covered and not in use. Well is located approximately 2500 feet southeast of the subject site.
- 900 Burnt Hickory – LAW observed a well in front of an abandoned house adjacent to this address. Mr. Melvin Gresham, neighbor, indicated that the adjacent residence, owned by Wanita Thomas, was vacant and that the subject well had been filled with dirt and cement. The well is located approximately 1250 feet west of the subject site.

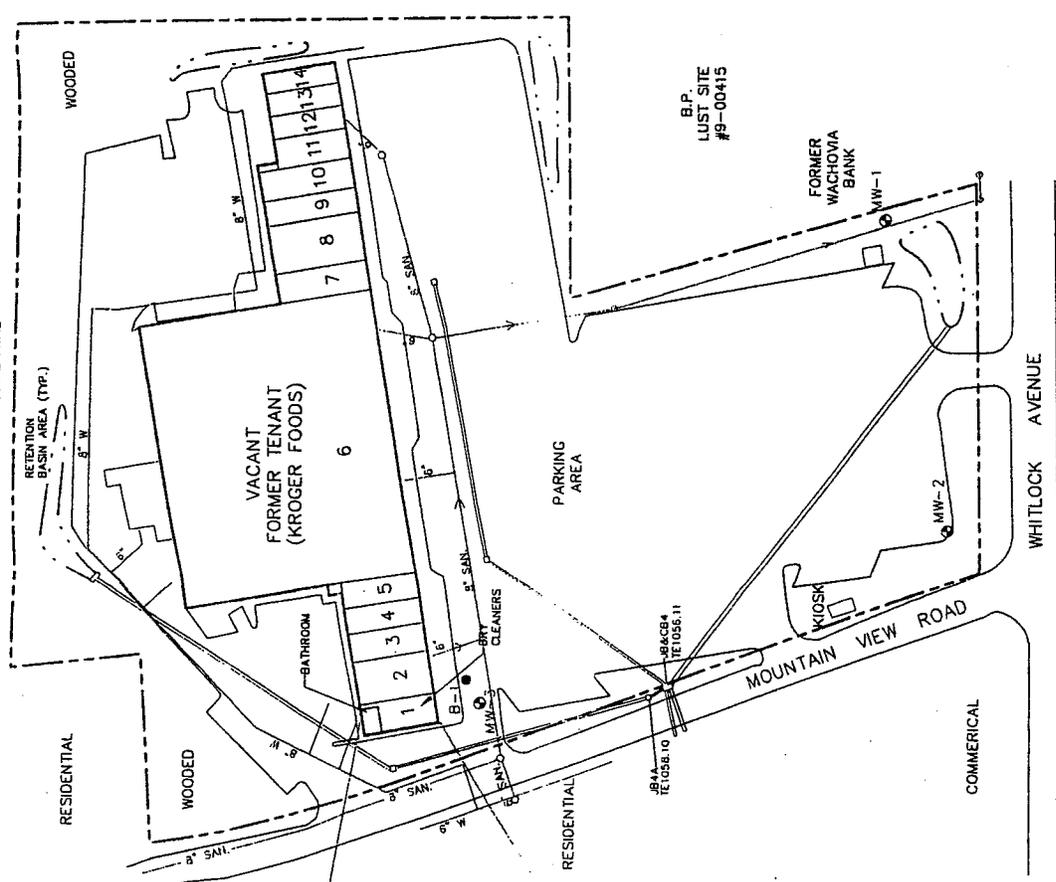
On April 5, 1999, LAW conducted an area reconnaissance for a 1-mile radius of the subject site to document visual observations from roadways of any pumphouses, wellheads or other structures, which may be associated with the use of groundwater as a drinking water or irrigation source. Based upon the reconnaissance, no additional groundwater users were identified.

4.0 CONCLUSIONS

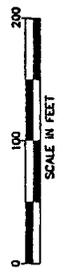
LAW has completed a Limited Phase II Environmental Site Assessment of the subject property relative to the potential impacts to soil and groundwater resulting from the long-term operation of an on-site dry-cleaners. Our assessment involved the installation of three groundwater monitoring wells and four soil borings within the interior of the dry-cleaners suite. Soil and groundwater samples collected from each sample location were analyzed for Volatile Organic Compounds (VOCs). VOC concentrations in groundwater collected from two wells installed at the property boundaries were below laboratory detection limits. However, concentrations of tetrachloroethylene and products of its degradation (trichloroethylene and dichloroethylene) in the groundwater sample collected from the well installed immediately downgradient of the dry-cleaners indicate that a release of hazardous substances, by definition, has occurred at the site. Similarly, soil sample analyses from each of the four interior borings indicated concentrations of tetrachloroethylene and products of its degradation which constitute a release.

The State of Georgia, under the Hazardous Site Response Act (HSRA), considers the presence of organic compounds in groundwater at concentrations in excess of the laboratory detection limit to be a notifiable occurrence. With respect to soils, the exceedence of chemical specific "Notification Concentrations" is considered a notifiable occurrence. Therefore, in accordance with the Rules of the Georgia Department of Natural Resources (Chapter 391-3-19, Hazardous Site Response Act), the owner of the subject property is required to submit appropriate "Release Notification" documentation within 30 days from the date of owner's discovery. The HSRA program will then evaluate the conditions in relation to the site setting and determine whether the site will be listed on the state's Hazardous Site Inventory (HSI).

Based on the results of the water user survey and LAW's preliminary calculations utilizing the Reportable Quantities Screening Method (RQSM), we do not believe that the site will be listed due to the groundwater pathway, if notification is submitted at this time. However, because of the proximity of nearby residences (within 300'), the question of whether the site will be included on the HSI with regard to the on-site "soil" pathway will be determined by EPD's evaluation of "Access" to the site. Should EPD determine that the site is fully accessible, the site may be listed based upon the on-site soil pathway. Should EPD determine that the site has limited access, (because the soil contamination is covered by a permanent concrete building pad or and asphalt pavement), the site would not likely be listed on the EPD inventory.



LEGEND
 ○ GROUNDWATER MONITORING WELL
 ● PREVIOUS MONITORING WELL (LEVINE-FRICKE, 1987)



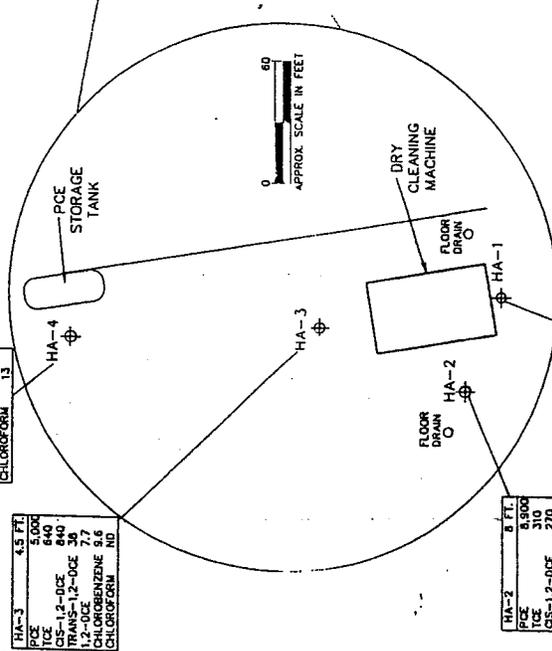
SUMMARY OF SOIL ANALYTICAL RESULTS

JOB NO. 50130-9-2715.01 DATE: APR. 99 FIGURE: 4

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WESTPARK PLAZA
 WHITLOCK AVENUE
 MARIETTA, GEORGIA

NOTE: ALL CONCENTRATIONS ARE IN PARTS PER BILLION



HA-4	8 FT.
PCE	4.20
TCE	670
CIS-1,2-DCE	560
TRANS-1,2-DCE	13
1,2-DCE	ND
CHLOROBENZENE	ND
CHLOROFORM	13

HA-3	4.5 FT.
PCE	5.00
TCE	640
CIS-1,2-DCE	640
TRANS-1,2-DCE	37
1,2-DCE	ND
CHLOROBENZENE	5.6
CHLOROFORM	ND

HA-2	8 FT.
PCE	8.90
TCE	310
CIS-1,2-DCE	ND
TRANS-1,2-DCE	11
1,2-DCE	ND
CHLOROBENZENE	ND
CHLOROFORM	ND

HA-1	8 FT.
PCE	650
TCE	590
CIS-1,2-DCE	650
TRANS-1,2-DCE	ND
1,2-DCE	ND
CHLOROBENZENE	ND
CHLOROFORM	ND

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