

# Draft Remedial Investigation Report

for

## Remedial Investigation / Remedial Alternatives Analysis

of

### Martin Aaron Site

Camden City, Camden County, New Jersey



prepared for

State of New Jersey

Department of Environmental Protection

Division of Publicly Funded Site Remediation

Trenton, New Jersey

Volume II

June 2000 ©



L. Robert Kimball & Associates

December 31, 2002

State of New Jersey{PRIVATE }  
Department of Environmental Protection  
Division of Publicly Funded Site Remediation  
401 East State Street - CN413  
Trenton, NJ 08625

Attn: Mr. Craig Wallace  
Site Manager

RE: Final RI Report  
Martin Aaron Site  
Camden City, Camden County, NJ  
# 96-1322-0123

Dear Mr. Wallace:

Enclosed are eight copies of the revised pages for the Final Remedial Investigation Report for the Martin Aaron Site in Camden City, Camden County, New Jersey. Please replace the existing pages with the enclosed. Also, we have enclosed two complete copies of the text (MS Word), tables (MS Excel), and Figures (ACADD, ArcView Project) in digital format (CD ROM). Please see the README.TXT file included on each CD for a list of files submitted and instructions to open the ArcView project. Two complete hardcopies of the final report are currently in reproduction and will be forwarded to you in the near future.

Please contact me if you have any questions or require additional information.

Sincerely,

Juan P. Salguero, PE, CHMM  
Project Manager

cc: D. B. Irwin  
A. E. Sciulli  
W. E. Stenger

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**REMEDIAL INVESTIGATION REPORT**

**FOR**

**MARTIN AARON SITE  
CAMDEN CITY, CAMDEN COUNTY, NEW JERSEY**

**PREPARED FOR:**

**STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF PUBLICLY FUNDED SITE REMEDIATION  
TRENTON, NEW JERSEY**

**PREPARED BY:**

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**EBENSBURG, PENNSYLVANIA**

**TRENTON, NEW JERSEY**

**October, 2000**

**300530**

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## EXECUTIVE SUMMARY

✓ This Remedial Investigation (RI) Report was prepared by L. Robert Kimball and Associates, Inc. (Kimball) for the New Jersey Department of Environmental Protection (NJDEP) Division of Publicly Funded Site Remediation. The RI was conducted to investigate soil and groundwater contamination at the Martin Aaron site located at 1542 South Broadway, Camden City, Camden County, New Jersey.

✓ The Martin Aaron Site (a.k.a. Drum Service of Camden and Rhodes Drum, Inc.) is identified as Lot 1 of Block 460 in the Camden County Tax Assessor records for Camden City. The site presently is a roughly rectangular parcel of about 2.46 acres. Various drum reconditioning operations were conducted within the former Martin Aaron building. Drums were drained, pressure washed with caustic solution, and wash rinsed in the front processing rooms. The residue from drum contents, rinsate runoff, and steam blowdown was collected in drainage tanks and floor drains. Drums were then taken to the paint booth located in the warehouse for final painting according to customer specifications.

✓ An additional property of concern is located west of the Martin Aaron property, at 1535 South Broadway (Lots 15 and 18, Block 458) and owned by South Jersey Port Corporation. This property was formerly leased to operators of the Martin Aaron property, which used it for office space and drum receiving/sorting. Three commercial buildings occupy the lot, with the remaining acreage consisting of paved and unpaved lots.

Anonymous reports have indicated that liquid and solid wastes were routinely buried in the yard area of the site. Anonymous reports also indicate that between 200 and 1000 drums of containerized wastes were buried on the property. Site inspections conducted by the USEPA (1981) and NJDEP (1983) identified roll-off containers used for storage of hazardous waste had leaked onto the site soils. Leaking drums and fumes were observed during inspection of site trailers containing drums (USEPA, 1993). In addition, drums stored within the yard area were observed to contain holes and/or were stored upside down allowing contents to leak onto soils.

Previous sampling events conducted by the NJDEP between 1986 and 1993 identified organic and inorganic constituents in the site sewer basins and drums. Organic contaminants identified included chlorinated and aromatic volatile compounds. Inorganic analytes found at high concentrations in the site drainage system and drums included arsenic, cadmium, mercury, selenium, barium, chromium and lead. In January of 1987, the NJDEP, under search warrant issued by the New Jersey Department of Law and Public Safety, Division of Criminal Justice, collected samples from on-site drums and buried drums exposed in test pits, site soil and sewer basin effluent samples. Compounds detected in drum samples included methylene chloride, toluene, ethylbenzene, xylene and naphthalene. Soil samples were found to contain arsenic, cadmium, mercury, selenium, barium, chromium and lead.

✓ Kimball conducted remedial investigations at the site between May and September 1997 (first investigation phase) between September and November 1998 (second investigation phase) and final delineation investigations between December 1999 and March 2000 (third investigation phase). Investigation activities included site mapping, a comprehensive geophysical investigation and stability analyses of the former Martin Aaron building. Environmental sampling of soil and groundwater was conducted in and around potential contaminant source and disposal areas and in areas which could be or have been impacted by contaminant migration. Investigations included both on-site and off-site areas of the property.

Results of intrusive remedial investigation activities indicate former site operations and disposal practices have resulted in contamination of surface and subsurface soil and shallow groundwater beneath the site. Findings of investigation activities included the following:

The majority of the site is underlain by seven to twelve feet of fill material consisting of ash, cinders, brick, concrete and other debris. The fill layer was found to be fairly consistent beneath the Martin Aaron property with less cinder and ash fill observed beyond the property borders. Similarly, less undifferentiated fill material was identified in borings completed beneath the southern (oldest) portions of the former Martin Aaron building and beneath the central and southern portions of the South Jersey Port property. Results indicate that the fill may be the result of past operations at the site which historical records show once contained several large smoke stacks.

Geophysical surveys completed at the Martin Aaron site identified several areas of possible disposal of drums and other debris. Test pits excavated at interpreted geophysical anomalies generally encountered fill consisting of ash, cinders, brick, concrete, scrap metal, etc., at all excavation locations. Several excavations confirmed historical reports of former buildings. Subsurface disposal areas were confirmed at test pit locations in the north central portion of the site, in the northeast portion of the property and near the east property border. Subsequent activities by the NJDEP (underground storage tank removal) resulted in the discovery of some drums buried in the south central portion of the site. Results of the test pit excavation activities do not support reports of wide spread drum burial at the site.

Results of environmental sampling activities indicate surface and subsurface soil beneath the Martin Aaron building, throughout the yard area and beyond the property borders contain levels of organic and inorganic constituents in excess of the NJDEP soil cleanup criteria. The primary contaminants of concern within the site surface and subsurface soil include chlorinated and aromatic volatile organic compounds; semi-volatile compounds consisting mostly of polyaromatic hydrocarbons (PAH); pesticides/PCBs and metals.

Results indicate volatile contamination above the NJDEP Impact to Groundwater Soil Cleanup Criteria (IGWSCC) in the site near surface and subsurface soil extend beyond the property borders to the northeast, east and possibly the southeast. When compared to the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) and the NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC), the extent of contamination is relatively unchanged extending across the property boundary to the northeast and possibly to the southeast. No volatile organic compounds at concentrations in excess of NJDEP soil cleanup criteria were detected on the South Jersey Port property.

Semivolatile contamination above NJDEP soil cleanup criteria extends to the limits of current sampling. Analysis of total semivolatiles indicate the higher concentrations were identified on the site property extending to the northwest, and on the northern portions of the South Jersey Port Corp. property located across South Broadway. The distribution of semivolatile contamination indicates it is site operations related. Pesticide and PCB contamination is generally confined to the site property extending from the former Martin Aaron building to the north, east and southeast property borders. Only one sample collected from the northern portion of the South Jersey Port property contained pesticides in excess of current NJDEP soil cleanup criteria and no samples contained PCBs in excess of the criteria. Similar to the identified semivolatile contamination, the distribution of pesticide and PCB contamination indicate site operations are the source.

Inorganic contamination in the near and subsurface soil extends to the limit of current sampling completed to date. Analytes of concern include arsenic, barium, beryllium, cadmium, chromium and lead. When compared to the RDCSCC, the horizontal extent of inorganic contamination remains generally the same. However, results indicate that the apparent extent of contamination is disproportionately attributable to arsenic at concentrations above the NRDCSCC. Analysis of specific analytes, namely arsenic, cadmium and lead, indicate the highest concentrations are located on the Martin Aaron property extending to the east and northeast which is consistent with the extent of other organic contaminants.

Results of intrusive investigations indicate that the semivolatile and inorganic contamination identified throughout the area of investigation may be partially associated with the fill (combustion by-products, ash and cinders) observed in soil borings and test pits across the site. The original source of the fill material is unknown but may have been placed as a result of historical site activities which included several large smoke stacks indicative of combustion activities (historic fill). This scenario is supported by the large aerial extent of the identified contamination and apparent lack of significant inorganic and PAH contamination identified beneath the southern (oldest) portions of the former Martin Aaron building and southern portions of the South Jersey Port Corp. property. The identified contaminant distribution and lack of volatile, pesticide and PCB contamination throughout the fill material may indicate the source is partially associated with past filling operations as opposed to drum processing. However, past drum handling activities as the source of the observed contamination, especially in areas of significant inorganic and PAH contamination, has not been ruled out.

The average and maximum concentrations of selected inorganic and PAH compounds representative of the fill material generally fall within the range of concentrations found in typical historic fill in New Jersey. PAH maximum concentrations are less than the maximum concentrations generally found in typical historic fill but the average concentrations are, in most cases, twice the expected values. Inorganic maximum and average concentrations are generally well within the expected values with the exception of arsenic found on the Martin Aaron property in excess of both the average and maximum. In general, the highest average and maximum concentrations are located on the site with lower concentrations identified on the South Jersey Port property.

Shallow groundwater contamination identified at the Martin Aaron site extends across the property and beyond the property borders to the east, south, and west. Based on sampling results, groundwater contamination is more prevalent in the shallow zone near the water table surface as opposed to deeper zones of the aquifer. Contaminant parameters detected in the shallow groundwater at concentrations above NJDEP Groundwater Quality Standards (GQS) include: chlorinated and aromatic volatile compounds; semi-volatile compounds; pesticides/PCBs and metals.

Contaminant parameters detected in the deeper groundwater include chlorinated hydrocarbons and metals but with much fewer compounds and analytes at concentrations above GQS.

**Draft Remedial Investigation Report  
MARTIN AARON SITE  
CAMDEN CITY, CAMDEN COUNTY, NEW JERSEY**

## **1.0 INTRODUCTION**

L. Robert Kimball and Associates (Kimball) is submitting this report for Remedial Investigation (RI) activities at the Martin Aaron site located at 1542 South Broadway, Camden City, Camden County, New Jersey.

To meet the objectives of the RI, a field investigation was performed which included the following major components:

- Site reconnaissance and professional assessment/evaluation of the structural stability of buildings requiring invasive investigation, and the implementation of a monitoring plan to meter stability of said structures during those activities;
- Geophysical Investigation consisting of a comprehensive survey conducted over the yard area of the Martin Aaron property, using complementary geophysical techniques including: magnetics, electromagnetics (EM) and ground penetrating radar (GPR);
- Soil investigation including the drilling and sampling of soil borings and the excavation and sampling of test trenches/pits.
- Hydrogeologic investigation including the installation, development, and sampling of monitoring wells, as well as, Hydropunch® sampling;
- Sediment investigation which included the sampling of an operating skimming basin at the Rhodes Drum facility and an abandoned settling basin inside the former Martin Aaron complex;
- Site mapping and surveying to define site planimetrics, topography and the spatial location of all sampling points.

## 2.0 ENVIRONMENTAL SETTING

The following sections present descriptions of the Martin Aaron site location, historical land uses, current and past site operations, and physical characteristics of surface and subsurface features as they relate to the field activities.

### 2.1 Site Background

The Martin Aaron Site (a.k.a. Drum Service of Camden and Rhodes Drum, Inc.) is located at 1542 South Broadway, Camden City, Camden County, New Jersey. The property is identified as Lot 1 of Block 460 in the Camden County Tax Assessor records for Camden City.

As shown on **Figure 1, Site Location Map**, the site is located in southwestern portion of Camden City at map coordinates 39°55'33" north latitude and 75°07'08" west longitude. The site presently is a roughly rectangular parcel of about 2.46 acres with 309.40 feet adjoining the east line of the sixty six foot wide South Broadway right-of-way and 334.30 feet adjoining the west line of the sixty foot wide Sixth Street right-of-way. The property is situated on relatively level land in mixed industrial and residential zoned properties.

One structure is currently located in the southeastern portion of the property. The former main structure, a three-story industrial building which occupied the southwest corner of the lot, was formerly occupied by the Westfall Ace Drum Company (Wadco) and is identified as the former Martin Aaron Building on **Figure 2, Site Layout and Topography**. The building was demolished (except for the concrete floor) by the City of Camden in November of 1998. Features associated with the former structure at the time of demolition include three underground storage tanks (USTs), located in the processing area immediately north of the former structure and one UST located east of the former structure. The USTs and associated contaminated soil were removed by the New Jersey Department of Environmental Protection (NJDEP) during the spring and summer of 1999. Prior to commencement of RI activities in 1997, five above ground storage tanks (ASTs) were removed by the NJDEP.

The remaining concrete floor of the former building contains a number of drains. The floor drains lead to three former settling basins. Settling basin 1 was located in the processing area of the former building and settling basin 2 is located east of the former building as shown on Figure 2. Settling basin 3 was reportedly located in the vicinity of basin 2. According to former site operators, all three basins reportedly received drum rinsate waters from site operations, and discharged to the Camden County Municipal Authority (CCMUA) sanitary sewer system although the actual discharge for basins 2 and 3 remains unknown. Basin 1 was removed by the NJDEP during UST removal activities in 1999.

The lone remaining structure, located in the southeast portion of the lot, was formerly occupied by Rhodes Drum Company and is identified as such on Figure 2. At the time of the Kimball field investigations, one processing vessel was located along the east side of the building. A single skimming basin (basin 4) was located east of the building. This basin received drum rinsate effluent from Rhodes Drum Co. operations and discharged to the CCMUA sanitary sewer system, posterior to pre-treatment activities. One AST, associated with these activities was located adjacent to basin 4. In the winter of 1999, the above structures associated with the former Rhodes operations were removed by the United States Environmental Protection Agency (USEPA).

The remaining site acreage, historically used for drum storage, consists of paved and unpaved surfaces. These areas are predominately open with most of the stacked drums having been removed by NJDEP. Figure 2 presents the property boundaries, planimetric features and topography for the site entirety.

Figure 2 also shows an additional property of concern located west of the Martin Aaron property, at 1535 South Broadway (Lot 15, Block 458) and owned by South Jersey Port Corporation. This property was formerly leased to Wadco, which used it for office space and drum receiving/sorting. Three commercial buildings occupy the lot, with the remaining acreage consisting of paved and unpaved lots.

#### ✓ 2.1.1 Historical Land Use

Historical mapping and photography indicate the study area had been comprised mostly of light industrial and residential properties as early as the year 1886. These land uses have remained predominate to present day.

Historical records indicate that from 1887 to 1908, the site property was used as a tannery by Kifferty Morocco Manufacturing Co., who specialized in the tanning and glazing of hides and leathers. During this time, the facility's size tripled and adjacent industrial activity also increased.

In 1908, the property was purchased by Castle Kid Company, who retained ownership until 1940. The Castle Kid Company specialized in the manufacture of mat and glazed kid leathers. Sanborn Fire Insurance Mapping indicates that by 1921, the Castle Kid Company facility had developed into a large scale manufacturing complex. Facility expansion included a substantial amount of building construction and the addition of a railroad spur. Other significant additions included: a 200 gal. buried gasoline tank (located in the northeast corner of the site), coal stockpiles, a laboratory, a cafeteria, a liming system complete with four above ground settling tanks (also located in the northeast corner of the site) and an 85,000 gal. suction tank.

Historical mapping indicates that by 1926, the Castle Kid Company's tannery operation was on the decline. Sanborn Fire Insurance mapping represents that the facility had noticeably downsized. This concept is further evidenced by the fact that the site property was seized by the City of Camden for tax delinquency in 1940.

In 1940, the City of Camden sold the confiscated property to Benjamin Schmerling, who subsequently leased portions of the property to H. Preston Lowden Co. (Preston) and American Chain and Cable Company - Pa. Lawn mower Division (AC&C). Preston leased building space in the southwest corner of the property, and used it for a wool and hair blending operation. AC&C leased building space in the southeast corner of the property, and used it for the "physical plant" area of it's manufacturing facility.

Martin Aaron, Inc. purchased the property from Benjamin Schmerling in 1969, and remains owner of record at present. From 1969 to 1985, Martin Aaron operated a drum "recycling" business under the name "Drum Service of Camden". In 1985 the business was sold to a corporation jointly run by Westfall Ace Drum Company (Wadco) and Rhodes Drum Inc. (Rhodes), two major clients of the former Drum Service of Camden. Wadco occupied the majority of the remaining structures on the property, while Rhodes operated from a building in the southeast corner of the property (former AC&C facility). Wadco ceased operations in March of 1995. Operations at Rhodes Drum, Inc. ceased during the fall of 1997 and spring of 1998.

## 2.1.2 Site Production Processes

Drum Service of Camden, and most recently, Westfall Ace Drum Co., Drum Service of Richmond and Rhodes Drum Co. (currently active) all operated steel drum reconditioning facilities on the Martin Aaron property site. Former site operations were as follows according to a Case History prepared by the NJDEP Bureau of Planning and Assessment (NJDEP, 1988):

"Empty" drums were (and still are in Rhodes' case) transported to the facility via tractor trailer. The major transporters of these drums were Drum Service of Richmond and Wadco, who leased their vehicles from Martin Aaron.

As drums were brought into the facility or onto the adjacent property (1535 S. Broadway), they were segregated by type (open lid as opposed to bung-type) and visually/manually inspected to determine the amount of residual material, if any, remained in the drum. If greater than one inch of residue was present, the drum was returned to the customer. If less than one inch remained, the drums were taken into the facility, turned upside down over grate-covered, square-bottomed tanks and allowed to drain. After the residuals had drained, the drums were then pressure washed with a caustic solution which was also allowed to drain. The drums were then washed, rinsed and steamed dry. After drying, the drums were inspected for integrity. Dents were removed pneumatically and the drums were sandblasted with a fine steel pellet grit in preparation for final painting. A dust collection system (baghouse) was utilized during this operation. The drums were then taken to the paint booth where an enamel oil-based paint was applied, with the color being selected by the customer. The floor of the paint booth was reportedly covered with cardboard to facilitate clean-up, and these covers were drummed for disposal. The drums were allowed to dry and were then transported off-site. The estimated generation of hazardous waste from these activities was thirty 55-gallon drums every 60 to 90 days.

The residue from drum contents, rinsate runoff, and steam blowdown was collected in drainage tanks and floor drains which feed to four skimming basins. Basins 1, 2 and 3 collected effluent from the Martin Aaron facility and Basin 4 received effluent from the Rhodes Drum Co. facility. The steam tanks, pump tanks and floor drains/trenches were skimmed periodically, with the sludge being removed and drummed every 2 to 3 months. The water in the vessels was reused with approximately two gallons of caustic added to the steam tanks daily.

Basin 1 was located in the former processing area which was within the former building. The basin consisted of a baffled concrete pit, approximately four feet by eight feet with a depth of approximately five feet. A submersible pump was located in the influent side which activated a wastewater neutralization system when triggered by rising water level. This system was designed to lower the pH of the potential effluent (usually 12 to 14) to the pH limit (6 to 9) mandated by the CCMUA Permit No. 3412-Ca-1 requirements. However, reports indicate that a pipe existed between the baffle walls which might have allowed direct flow of untreated effluent to discharge. Basin 1 has subsequently been removed as part of the NJDEP UST removal actions conducted in the spring and summer of 1999.

Basins 2 and 3 were reportedly connected via pipeline and drained liquids primarily from the "open lid" drum reconditioning section of the former facility. Dye tests, conducted by NJDEP, from the outfalls of these basins did not indicate any connection to the CCMUA storm/sanitary sewer system as reported by site operators. Therefore, it may be construed that the effluent may have discharged directly to the subsurface. Both Basin 2 and 3 have reportedly been sealed with concrete by NJDEP.

Basin 4 was located east of Rhodes Drum Co. and was verified, via dye testing, to receive influent from the floor drains of the same. Construction of Basin 4 also roughly emulates that of Basin 1. The outfall of Basin 4 discharged to the CCMUA storm/sanitary sewer system and was permitted under CCMUA Permit No. 3412-Ca-5. Basin 4 has been removed by the USEPA in the winter of 1999.

In accordance with Community Right To Know Survey data collected in 1988, 1989, 1990 and 1993, the following substances were warehoused and used at the Martin Aaron property site during drum reconditioning procedures: Paint, lacquers, etc. (containing any or all of the following -Isopropanol, Toluene, Methyl Propyl Ketone, Naphtha and Mineral Spirits); No. 2 Fuel Oil; Toluene; Sodium Hydroxide; Hydrogen Chloride; Oxygen; Acetylene; Diethylaminoethanol; Potassium Hydroxide; No. 1 Fuel Oil; Waste Oil; Sulfuric Acid; and Kerosene.

### 2.1.3 Nature of Contamination

The Martin Aaron Inc. property is listed on the NJDEP Known Contaminated Sites In New Jersey (EPA I.D. NJD014623854). Numerous discharges of contaminants and hazardous substances to the soil and the CCMUA combined sanitary/storm water sewer system have been documented on the Martin Aaron Inc. site. Discharges to the soils and groundwater are suspected from buried wastes, underground storage tanks and effluent from sewer basins.

Anonymous reports have indicated that liquid and solid wastes were routinely buried in the yard area of the site. Anonymous reports also indicate that between 200 and 1000 drums of containerized wastes were buried on the property. One former employee of Drum Services of Camden reported his job duties included digging holes throughout the property for the disposal of wastes. Site investigations completed by the NJDEP under search warrant issued by the Division of Criminal Justice confirmed the reports of disposal. Buried drums containing hazardous waste and soils contaminated with hazardous substances were observed in test pits excavated to depths below the local water table.

Site inspections conducted by the USEPA (1981) and NJDEP (1983) identified roll-off containers used for storage of hazardous waste had leaked onto the site soils, and two tractor trailers containing 100 drums each were parked along side the facility. Leaking drums and fumes were observed during inspection of the trailers (USEPA, 1993). In addition, drums stored within the yard area were observed to contain holes and/or were stored upside down allowing contents to leak onto soils.

Extensive dye testing of sewer basins 2 and 3 were unsuccessful in locating an existing outfall. Effluent from the former Wadco/Martin Aaron operations entering these basins is presumed to have been discharged directly to the site soils and/or groundwater. In addition, a discharge pipe located in the influent side of basin 1 was observed to allow untreated waters to discharge prior to pH adjustment.

Seven above ground storage tanks, five constructed of metal and two constructed of polyethylene, were located in the process area outside the north wall of the building. The metal tanks were severely corroded. Concrete containment dikes surround the five metal tanks and the remaining area is covered by concrete pavement. Storm water apparently collects throughout this area and within the containment dikes. An oily sheen was observed on the standing water surrounding the area and within the dikes. Fill pipes leading to three underground storage tanks are located in this area. Discharges to surface runoff, site soils and groundwater are suspected from the USTs and their appurtenances.



Various drum reconditioning operations were conducted within the former Martin Aaron building. Drums were drained, pressure washed with caustic solution, and wash rinsed in the front processing rooms. The residue from drum contents, rinsate runoff, and steam blowdown was collected in drainage tanks and floor drains. Drums were then taken to the paint booth located in the warehouse for final painting according to customer specifications. The processing rooms and warehouse are evaluated as high concern due to these operations. Contaminants, paint residues, and waste water could possibly have been discharged to the site soils through cracks in the building floor and floor drains. Once in the soil, these contaminants may represent a source of contamination to the site shallow groundwater.

The majority of the site and the South Jersey Port property are underlain by up to twelve feet of fill material consisting of ash, cinders, brick, concrete and other debris. Although the exact origin of the fill is unknown, the majority may have been placed as a result of historical site activities which included combustion as evidenced by several large smoke stacks which once occupied the site. The fill material may represent an additional source of inorganic and semivolatile contamination not related to site drum processing activities. Historic fill in New Jersey generally contains levels of inorganic and semivolatile compounds at concentrations in excess of current soil cleanup criteria.

#### 2.1.4 Previous Investigations and Enforcement Actions

Historical reports, inspections and investigations have determined that past site operations may have included improper disposal practices such as surface disposal of liquid wastes, burial of containerized waste and discharges from sewer basins. Inspections conducted by the USEPA (1981) and NJDEP (1983) identified roll-off containers used for storage of hazardous waste had leaked onto the site soils, and two tractor trailers containing 100 drums each were parked along the facility. Leaking drums and fumes were observed during inspection of the trailers (USEPA, 1993).

- Results of previous sampling events were tabulated in a 1988 case history prepared by the NJDEP and are described below. On January 3, 1986, NJDEP personnel collected one effluent sample (sludge) from the on-site drainage system. 1,1,1-trichloroethane (5,900 ppb), toluene (14,000 ppb) and ethyl benzene (3,800 ppb) were detected in the sample. Extractable metals detected included barium (1.6 ppb) and cadmium (0.32 ppb). Sulfide and cyanide reactivity was not detected (NJDEP, 1988).
- On January 9, 1986, NJDEP personnel collected one liquid sample (MH010) from a concrete drainage basin adjacent to South Broadway, one sludge sample (MH011) reportedly from a drainage basin along the south fence line, and one soil sample (MH012) from the northwest property corner. 1,1,1-Trichloroethane (10,000 ppb), trichloroethene (630 ppb), tetrachloroethene (650,000 ppb), toluene (51,000 ppb) and ethyl benzene (28,000 ppb) were detected in the liquid and sludge samples. Metals detected included arsenic, barium, cadmium, chromium, lead, mercury, nickel and selenium. Analytical results of soil sample MH012 showed methylene chloride (6,900 ppb), 1,1,1-trichloroethene (2,100 ppb), trichloroethene (15,000 ppb), tetrachloroethene (5,300 ppb) and toluene (4,700 ppb). Barium (7.2 ppb) was detected in the metal analysis (NJDEP, 1988).
- On February 13, 1986, NJDEP collected one sludge sample from the sewer basin located outside the drum wash area. Petroleum hydrocarbon concentrations up to 10,000,000 ppb were detected. Metals identified included barium (4,400 ppb) and cadmium (1,300 ppb). The sample exhibited a pH of 12.2. No detectable levels of PCB were identified (NJDEP, 1988).

Between January 4 and January 29, 1987, the NJDEP, under search warrant issued by the New Jersey Department of Law and Public Safety, Division of Criminal Justice, collected a total of 40 samples from the site. Samples included twenty-two from on-site drums and buried drums exposed in test pits, eleven soil samples and seven effluent samples. Compounds detected in drum samples included methylene chloride, toluene, ethylbenzene, xylene and naphthalene at concentrations greater than 100,000 ppb and flash points below 75 degrees Fahrenheit. Soil samples were found to contain arsenic, cadmium, mercury, and selenium. including several concentrations of barium, chromium and lead in excess of 100,000 ppb. Effluent samples generally exhibited pH values greater than 12.5 (NJDEP, 1988).

On January 15, 1987, NJDEP collected one liquid and one sludge sample from each of three sewer basins on the site. Analytical results of the liquid samples identified methylene chloride (30,000 ppb), trichloroethene (460 ppb), tetrachloroethene (4,100 ppb), toluene (10,000 ppb), and ethyl benzene (27,000 ppb). Compounds detected in the sludge samples included 1,1,1-trichloroethane, tetrachloroethene, trichloroethene, toluene, ethyl benzene, and xylene at concentrations greater than 100,000 ppb. Metals identified included barium, cadmium, chromium, and lead. Petroleum hydrocarbon concentrations greater than 100,000 ppb were identified (NJDEP, 1988).

On May 13, 1993, NJDEP collected samples from five drums, two roll-off containers and two troughs on site. Analytical results of the drum samples indicated various volatile organic compounds and inorganics. Waste sludge samples collected from the roll-offs were found to contain volatile organics and inorganics including high levels of cadmium. No contaminants were detected in the trough samples.

Possible sources of contamination at the site include residues from steam tanks and floor drains, fallout from the spray painting operations, shot dust from the sand/shot blasting operations, solvents from paint-gun cleaning, and oil changes from vehicles and machinery and improper waste storage and disposal practices.

Prior remedial activities at the Martin Aaron site have been limited to removal of contaminated soil and drums excavated from test pit investigations conducted in January, 1987. Test pits were excavated north of the Rhodes Building and between the Martin Aaron and Rhodes building. Reports indicate that Axon Industries, Inc., a subcontractor to Martin Aaron, performed overpacking and disposal of excavated wastes and drums. Approximately thirty, eighty-five gallon overpacks and fifteen drums were removed from the site as hazardous waste under manifest numbers PAB 4770566 and PAB 4773204.

More recently, the NJDEP (summer and spring of 1999) and the USEPA (winter of 1999) conducted removal actions which included the removal of the USTs and Basin 1 associated with the former Martin Aaron operations and the removal of Basin 4, above ground tanks and piping associated with the former Rhodes operations. In both instances, surface and/or subsurface soil associated with the structures was also removed.

A number of orders, directives and notices of violation have been issued against Martin Aaron, Inc. and the Drum Service of Camden, Inc. (NJDEP, 1988):

A Notice of Violation was issued on 11/28/72 for the installation and operation of two spray paint booths without a permit. A permit was subsequently issued in 1973.

A Complaint, Compliance Order and Notice of Opportunity for Hearing was issued by the EPA on 10/26/81. Violations included leaks in the plastic liner and joint seals of a "roll-off" container, allowing discharge to the ground. Spills were noted in an area around this "roll-off" where drums were emptied into the container. Additionally, three hazardous waste containers were observed to be leaking.

A Notice of Violation was issued in August, 1983 for a negligent release of hydrogen chloride gas from improperly closed drums on the property.

A Notice of Violation (NOV) was issued by NJDEP in February 1984, for the transportation of hazardous wastes without a transporter's license, the acceptance of hazardous wastes from a generator without a manifest and the storage of hazardous wastes in a city street adjacent to the facility.

A Notice of Violation was issued by NJDEP on 03/04/85 for the discharge of hazardous substances for the discharge of hazardous substances, non-notification of spills, and incomplete contingency plans and training of employees.

A NOV was issued by NJDEP on 9/25/85 for the improper storage of waste drums.

A NOV was issued by NJDEP on 1/3/86 for the discharge of hazardous substances and failure to report the incident to the Department.

A NOV was issued by the NJDEP on 1/9/86 for the accumulation of hazardous wastes for more than ninety days and for failure to submit a RCRA Part A and Part B permit.

A NOV was issued by NJDEP on 2/13/86 for not having a EPA identification number, hazardous waste containers not securely closed, wrong or missing generators name on manifests, and no accumulation start dates on stored drums.

A NOV was issued by NJDEP on 5/29/86 for the discharge of hazardous substances into the sewer system. Specific dates of violation were January 9, February 13, February 25, and March 17, 1986.

An Administrative Order was issued by NJDEP on August 14, 1986. Violations included failure to place identification labels on hazardous waste containers, failure to properly store and segregate hazardous waste by type, Failure to place an accumulation start date visibly on containers, inadequate employee training, failure to inform hospitals of on-site wastes, schedule regular inspections by the local fire department, and failure to develop and maintain a contingency plan.

A second Administrative Order and Notice of Civil Administrative Penalty Assessment was issued on 1/13/87 for violations including storage of hazardous waste for greater than 90 days, failure to submit a RCRA Part A and Part B permit application, incorrect generator names on manifests, discharge of waste to the sewer system and failure to properly manage containers.

A NOV was issued by CCMUA on 3/24/87 for non-compliance with discharge permit limitations.

A third Administrative Order and Notice of Civil Administrative Penalty was issued on 6/10/87 for discharge of waste to the sewer system, inadequate employee training, failure to inform hospitals of on-site wastes, schedule inspections by the local fire department, and failure to develop and maintain a contingency plan.

A NOV was issued by NJDEP on 8/3/87 for unauthorized operation of a hazardous waste storage and disposal facility and discharge of hazardous waste.

A NOV was issued by the EPA on 10/30/87 for excessive volatile organic emissions from painting/coating operations.

A NOV was issued by NJDEP on 11/25/87 for not providing proper job descriptions and names of personnel for hazardous waste operations, and the illegal use of an underground waste oil tank. A second NOV was issued on the same date for storage of hazardous wastes for greater than 90 days.

A NOV was issued on 12/12/89 for failure to provide documentation concerning job descriptions, titles, and required training. A second NOV was issued on the same date for failure to forward generator and TSD copies of manifests NJAD0377731 and NJAD340826, and failure to conduct semi-annual drills.

A Directive was issued by NJDEP on 2/24/92 which required soil and groundwater investigations followed by the required remediation.

Two Field Directives were issued on 8/3/92 and 8/12/92 subsequent to site inspections and failure of the property owner to respond to the February Directive. The Field Directives restated the requirements and conditions of the February correspondence.

A Directive and Notice to Insurers was issued by the NJDEP on 11/1/94 requiring payment for the drum removal, remedial investigation and remedial alternatives analysis of the Martin Aaron, Inc. property.

A second Directive and Notice to Insurers was issued by the NJDEP on 4/6/95 requiring payment for the drum removal, remedial investigation and remedial alternatives analysis of the Martin Aaron, Inc. property. Named respondents included Martin Aaron, Inc., Drum Service of Camden, Drum Service of Richmond, Westfall-Ace Drum Company, Inc. (Wadco), and Rhodes Drum, Inc.

The respondents have not entered into an administrative consent order (ACO) with the NJDEP and the case has been transferred to the Bureau of Site Management, Division of Publicly Funded Site Remediation for the initiation of a Remedial Investigation/Remedial Alternatives Analysis.

## 2.2 Soils and Geology

The Martin Aaron site is located in the Atlantic Coastal Plain physiographic province in an area with moderate thicknesses of highly permeable unconsolidated sediment of Pleistocene and Cretaceous deposition which outcrop beneath the site and throughout the Delaware Valley (Kummel, 1940).

Soils in the vicinity of the site are most likely to represent Pleistocene age depositions of the Downer-Woodstown-Dragston soil associations as seen on **Figure 3, General Soil Map** (U.S. Department of Agriculture, 1966). The Downer-Woodstown-Dragston association consists mostly of sand and gravel deposited by streams and rivers. These soils formed from materials of the Cape May, Pennsauken, Cohansey, and Bridgeton geologic formations. The dominant soils in this association are the Downer, Woodstown, and Dragston, all of which are sandy. The Downer series consists of dark grayish-brown, well-drained sandy loam grading to a yellowish-brown sandy loam subsoil. The Woodstown and Dragston series consist of very dark grayish brown, poorly drained sandy loam surface layers. The

subsoil is mottled yellowish brown or light olive brown sandy loam containing slightly more clay than the surface layers. These soils have been greatly disturbed on the site due to past industrial operations.

Intrusive remedial investigative activities conducted onsite indicate that the majority of top and shallow subsoils have been removed from the site and replaced with various fill materials, including: construction debris (bricks, concrete, etc.); ashes and cinders; slag-type materials; and in minor cases, wood and refuse. This fill layer ranges from two to seven feet in thickness and is relatively consistent in its existence over the entire site.

The unconsolidated sediments immediately beneath the Pleistocene deposits consist primarily of sands and gravels with intervals of silts and clays classified as continental, coastal, or marine type deposits of Early to Late Cretaceous age. These deposits make up the Magothy Formation, the Raritan Formation and the Potomac Group of the Coastal Plain. The Cretaceous sediments generally strike northeast-southwest and dip from forty to one hundred feet per mile to the southeast (Langmuir, 1969). In the site vicinity, these sediments form the outcrop area of the Potomac-Raritan-Magothy (PRM) aquifer system which is a major source of potable water within the Coastal Plain of New Jersey. Intensive study of the PRM aquifer system (Farlekas et.al.,1976) show a three aquifer system in Camden County. Five mappable units are defined including three aquifers designated as upper, middle and lower, and two confining beds. The upper aquifer coincides closely with the Magothy Formation, the middle aquifer and confining bed coincides most closely with units of the Raritan Formation, and the lower aquifer and confining bed coincides most closely with units of the Potomac Group (Zapeczka, 1984).

The upper most depositional formation in the site vicinity, immediately underlying the Pleistocene deposits, is the Magothy Formation. The Magothy Formation is a sheet like deposit composed primarily of coarse beach sand and other near-shore marine deposits including light colored cross-stratified sand and lenses of dark clay (Gill and Farlekas, 1976). The Magothy ranges in thickness from 0 to forty five feet in the Camden area, thickening to the east to over two hundred feet (Langmuir, 1969). On-site borings evidence the existence of this formation, which was initially encountered at an approximate depth of ten feet, and ranged in thickness from fifty to fifty two feet. Refer to **Appendix A - Boring Logs** and **Figure 4, Geologic Cross Sections**. The Magothy Formation is considered to be the uppermost water bearing zone under the Martin Aaron site with groundwater under water table conditions. Groundwater within the Magothy Formation becomes effectively confined to the east by the overlying Merchantville Formation and Woodbury Clay.

The Magothy Formation lies unconformably atop the Late Cretaceous Raritan Formation. In the outcrop area of the Delaware Valley, the Raritan Formation consists of fluvial continental deposits including thick interbeds of light colored sands and massive to thick bedded variegated silty clay which make up part of the middle aquifer and confining bed between the middle and upper aquifers of the PRM system (Gill and Farlekas, 1976). Formation thicknesses of over sixty feet have been observed in the site vicinity increasing eastward. A number of distinct sand and clay members within the Raritan have been identified several miles northeast of the Camden area but are indistinguishable beneath the site. This is due to the highly variable nature, horizontally and vertically, of the formations predominantly fluvial character which accounts for abrupt changes in individual sand and clay bed thicknesses over short distances (Langmuir, 1969). The variability is also apparent in formation sand contents which range from 60 to 100 percent. Groundwater within the Raritan Formation is expected to exist under confined or semi-confined conditions.

The oldest group of sediments deposited within the Coastal Plain consists of Cretaceous continental deposits of the Potomac Group. In the site vicinity, the Potomac Group deposits are generally indistinguishable from the overlying Raritan Formation but probably is equivalent to the lower aquifer and confining unit of the PRM aquifer system. The Potomac Group consists of clay, silt, sand, and gravel. As seen in the overlying Raritan Formation, the fluvial depositional history of the Potomac Group sediments account for considerable amounts of silts and clays to be locally interbedded with sands and gravel. Sand contents of the Potomac Group sediments are generally over 70 percent. Thicknesses of the lower aquifer and confining unit of eighty to one hundred feet have been reported in area well logs (Zapeczka, 1984).

The Cretaceous deposits of the PRM system lie unconformably upon the early Paleozoic and Precambrian crystalline basement-bedrock complex. The basement rock erosional surface dips sixty to one hundred feet per mile from the outcrop area west of Camden to the southeast (Langmuir, 1969). In the site vicinity, the bedrock surface is characterized by east and south trending channels carved by the ancient Schuylkill and Delaware Rivers and their tributaries. The upper surface of the bedrock has been weathered into a micaceous residual clay which probably serves as a local confining bed below the Cretaceous unconsolidated sediments (Langmuir, 1969). Bedrock depths in the site area up to three hundred feet have been reported in local well logs.

### 2.3 Hydrogeology

The site is located within the outcrop area of the Potomac-Raritan-Magothy (PRM) aquifer system. Within the PRM aquifer system, five mappable hydrogeologic units are defined. The five units include three aquifers identified as the upper, middle and lower, and two confining beds (Zapeczka, 1984). The PRM system in the site area has been observed to be over three hundred feet thick. The upper aquifer is the most extensive unit of the PRM system and coincides most closely with the Magothy Formation described above. Locally, groundwater within the upper aquifer has been encountered under water table conditions between 3.5 and 12.5 feet below ground surface. The confining bed between the upper and middle aquifers of the PRM system consists of thin- to thick-bedded sequence of micaceous silts and clays (Zapeczka, 1984) with an estimated hydraulic conductivity of  $10^{-6}$  cm/sec. Under the Martin Aaron site, the upper confining bed is expected to be less than twenty (20) feet thick. Intrusive on-site remedial investigative activities encountered what was believed to be the uppermost confining clay layer. The layer is identified as a gray clay with intermittent stringers of fine grained sand. Based on intrusive activities, Kimball has determined that this layer is at least five (5) feet thick and is located at depths between 57 and 63 feet beneath the site. A geotechnical sample obtained from (SB11) this layer (remolded to a density of 106.6 pcf) exhibited a hydraulic conductivity of  $4.1 \times 10^{-8}$  cm/sec. Refer to **Appendix B - Geotechnical Testing Results**

The middle aquifer of the PRM is located within the Raritan Formation described above. Hydraulic conductivities within the middle aquifer have been estimated at  $10^{-4}$  cm/sec (USEPA, 1993). The middle aquifer has been traced within a ten to twelve mile wide band that parallels the outcrop area of the Delaware Valley (Zapeczka, 1984). Down-dip (east) of the site, the middle aquifer cannot be distinguished from other sand beds of the Raritan Formation (Kummel, 1940). Groundwater of the middle aquifer is expected to be encountered under confined or semi-confined conditions beneath the site. The confining bed immediately underlying the middle aquifer consists primarily of very fine grained silt and clay sediment of the Potomac Group and Raritan Formation. Thickness of the middle confining bed below the Martin Aaron site is generally less than fifty feet.

The lower aquifer is located within the Potomac Group described above. Hydraulic conductivities within the lower aquifer have been estimated at  $10^{-4}$  cm/sec. The lower aquifer in the site area covers approximately the same aerial extent as described for the middle aquifer.

Groundwater under water table conditions has been reported to be between 3.5 and 7.5 feet below ground surface on the site property (NJDEP, 1988). Static water levels obtained during remedial investigative activities evidence shallow groundwater levels between 5.25 and 14.40 feet below ground surface, and deeper groundwater levels between 13.83 and 15.43 feet below ground surface. Based on investigation observations and measurements, shallow groundwater flow within the upper aquifer is to the east-southeast. Deeper groundwater flow within the upper aquifer is to the east-southeast along the dip of the local formations. The easterly flow is expected to be additionally enhanced by groundwater withdrawal at various public and industrial supply wells located east of the site. On-site, building foundations and subsurface structures are believed to influence the movement of on-site shallow water.

Groundwater within the confined and semi-confined middle and lower aquifers is expected to flow southeast from the site along the formation dip but is likely to have been altered due to heavy pumping in the area.

Static groundwater levels measured within site monitoring wells mentioned above indicate the potential for vertical (downward) groundwater movement within the upper aquifer of the PRM. Vertical movement of site groundwater between the major aquifer units of the PRM system is expected to be limited based on reported hydraulic conductivities of the confining beds. Water table elevations and potentiometric surfaces measured in wells completed within the middle and lower aquifers indicate a downward vertical gradient exists in the site area. Extensive pumping and water withdrawal in the Camden area has created measurable decreases in the local static water table and potentiometric surfaces which may enhance the vertical migration of shallow waters into the deeper aquifers (Langmuir, 1969).

#### 2.4 Topography/Drainage

Due to extensive urban development throughout the Camden area, surface water courses have experienced significant realignment and partial channeling. The site currently is surrounded by paved roadway surfaces and storm water sewers connected to the CCMUA combined storm/sewer system.

Historical drainage patterns are evident on Sanborn Fire Insurance maps which date back to the turn of the century. These maps indicate surface drainage from the property flowed northward into a lined ditch (Little Newton Creek) which marked the north property boundary. The ditch apparently carried stormwaters east to west along the north property boundary, discharging to the Delaware River. By 1926, the Little Newton Creek is no longer present on the historical mapping.

No industrial effluent is currently produced or processed at the site. Prior effluents were reportedly treated on-site prior to discharge to the sewer. During periods of heavy flow and high dilution, untreated waters may have been discharged (USEPA, 1993). Water entering the storm/sewer system are treated at the CCMUA facility prior to discharge into the Delaware River.

#### 2.5 Surface Water Hydrology

As mentioned above, extensive urban development throughout the Camden area, has significantly altered surface water courses, causing notable realignment and partial channeling. The nearest body of

surface water to the site is the Delaware River located approximately .75 miles west. Additional surface water bodies include Cooper River and Newton Creek located 2 miles north-northeast and 1.5 miles south of the site.

Examination of the National Flood Insurance Program, Flood Insurance Rate Map for Camden County New Jersey (City of Camden, 1989) evidenced that the site is located within the 100 year flood plain of the Delaware River. Episodes of flooding may be of concern due to the documented evidence of surface soil contamination on the property. Refer to **Figure 5, Flood Insurance Rate Map**.

During review of historical site records, a wetlands delineation in the vicinity of the site was not uncovered. The United States Department of the Interior National Wetlands Inventory Map of both the Camden and Philadelphia Quadrangles do not indicate wetland areas on the site (US Depart. of Interior, 1977). (Refer to **Figure 6, National Wetlands Inventory Mapping**) Wetland areas within one mile of the site occur to the southwest and west along the Delaware river. These areas are classified as Riverine, Tidal Open Waters; Riverine, Tidal Flat and Palustrine, Open Waters. Additional wetland areas have been identified along the Delaware River south of the site.



### 3.0 REMEDIAL INVESTIGATION

✓ Remedial investigations at the Martin Aaron site were conducted in three phases. During the first phase (May to September 1997) sampling was conducted in and around potential contaminant source and disposal areas and in areas which could be or have been impacted by contaminant migration. Sampling was biased based upon previous investigation results, geophysical investigation results, visible indicators, environmental conditions, field instrument measurements, sensory characteristics, the location and nature of potential receptors, and other indicators. Soil borings and excavations, sampling from monitoring wells, and direct grab sampling techniques were utilized for the collection of samples.

✓ Soil samples were collected from a total of fifteen building interior test borings, twenty five exterior on-site borings, one exterior off-site boring, thirteen UST area borings, twenty six test pit/trench excavations, two on-site monitoring well borings and two off-site monitoring well borings. Two rounds of groundwater samples were collected from the seven new monitoring wells plus the existing City of Camden Municipal Well No. 7. Two sediment samples were also collected from settling basins 1 and 4, located inside the former Martin Aaron facility and east of the Rhodes facility respectively. Hydropunch® groundwater samples were collected from twelve on-site boring locations.

✓ During the second phase field investigation (September to November 1998) sampling was conducted at off-site areas to delineate the nature and extent of contamination identified during the first phase effort. When possible, sampling was biased towards adjacent properties and property boundaries, and identified "hot spots". Soil borings and well installation and sampling were conducted.

✓ Soil samples were collected from a total of forty-four exterior off-site borings, three building interior borings, five on-site borings, and ten on-site PCB screening borings. One round of groundwater samples were collected from the seven existing monitoring wells installed as part of the first investigation phase, and seven new monitoring wells installed as part of the second phase of investigation. In addition, several soil borings were advanced to re-sample the site due to rejection of laboratory data from the first field effort.

✓ During the third phase field investigation (December 1999 to March 2000) sampling was conducted at and around identified "hot spots", on- and off-site, to delineate the horizontal and vertical extent of worst case conditions and provide better volume estimates for later alternative analysis evaluation. Sampling was also conducted to evaluate conditions in the vicinity and beneath the former Rhodes building. Soil borings and well installation and sampling were conducted.

✓ Soil samples were collected from a total of fourteen pesticide/PCB delineation soil borings, ten semivolatle delineation borings, and sixteen former Rhodes building delineation borings. Two rounds of groundwater samples were collected from the eleven remaining monitoring wells installed as part of the first and second investigation phases, and two new monitoring wells installed as part of the third phase of investigation.

**Table 1 - Sampling Summary Table** provides a summary of the samples collected and **Figure 7, Sample Location Map** shows the sample locations for all three phases of investigation (Refer to **Appendix A - Boring Logs** and **Appendix C: Sampling Logs**).

### 3.1 Phase I Field Investigation Activities (May to September 1997)

#### 3.1.1 Structural Stability Analysis and Monitoring

During the pre-investigation site reconnaissance, Juan Salguero, Kimball Project Manager and licensed professional engineer in the State of New Jersey, conducted a building inspection. Particular attention was given to structural deficiencies of the building deemed potentially hazardous with regard to planned field activities. Components of the building structural integrity inspection included structural soundness, overhead hazards, possible asbestos containing areas, and other areas of concern including integrity of floor drains.

Results of the building inspection were reported to NJDEP by Kimball in the document *Building Safety Inspection Report*, dated August 30, 1996. (Refer to **Appendix D - Building Safety Inspection Report**). The report contained inspection procedures, areas inspected, interpreted results, findings and conclusions and recommendations regarding safety measures and implementation suggestions. Recommendations contained in the inspection report were incorporated into the project Health and Safety Plan (Kimball, 1997) and were implemented prior to any work within the building. Safety measures included:

- performance of a detailed examination of potential overhead hazards (pipes, debris, etc.) including visual inspection of the entire area and destructive/qualitative testing of supporting beams and joists;
- selection of buffer zones encompassing areas directly below overhead hazards, as well as interpreted potential trajectory paths of falling objects, which were subsequently cordoned off and avoided;
- the installation and periodic visual monitoring of fifteen Avanguard Calibrated Crack, Slope and Movement Monitors, to monitor the behavior of the structure during investigative activities.

#### 3.1.2 Geophysical Investigation

A comprehensive geophysical investigation was conducted over the yard area of the Martin Aaron property not containing buildings or other immobile surface objects. The objective of the geophysical surveys was to locate suspected buried drums at the site. Results of the geophysical surveys were used to direct further investigations (drilling, test pits) in an attempt to more efficiently intercept possible site contamination and guide subsurface investigations clear of possible subsurface hazards.

Three complementary geophysical techniques: magnetic; electromagnetic (EM); and ground penetrating radar (GPR) were used at the site. The techniques are non-destructive.

##### 3.1.2.1 Survey Grid

A ten feet by five feet survey grid, used for both the magnetic and EM surveys, was constructed over the survey area. East and west grid perimeters were marked at the profile interval (10 feet) using either wood stakes or marking paint depending on surface conditions. Each stake was labeled with the appropriate profile number. Profile numbers were assigned starting in the northwest corner of the grid with 1001, increasing southward by one to 1025. Two perpendicular baselines were constructed parallel to and at the approximate midpoint between the east and west grid perimeters. Profiles were established by stretching a rope/tape, marked at the station interval (5 feet), perpendicular to and between two corresponding perimeter stakes. Station numbers were assigned starting along the west grid perimeter with 101, increasing to the east by one to 189.

At the conclusion of the geophysical surveys, several perimeter stakes/grid points were surveyed to enable direct correlation between the established survey grid and project base mapping.

### 3.1.2.2 Magnetic Survey

Magnetic measurements were made with a proton precession magnetometer. This instrument simultaneously measures the amplitude of the earth's magnetic total field with a sensor affixed to the top of a staff and the vertical gradient of the total field between the top sensor and a lower one. Total magnetic field data was used to estimate subsurface objects location, size, depth and weight. Vertical gradient data was used to resolve complex or overlapping anomalies and aid in the identification of shallow targets.

Magnetic data were collected by walking along the rope and recording measurements at the station marks (flags on the rope at 5 foot intervals). When one profile was completed, the rope/tape was moved to the next set of perimeter flags and the process repeated. Cultural features were noted relative to the survey grid during data collection. Locations and descriptions of cultural features were used to identify anomalies caused by surface features.

A base station was established remote from any obvious cultural features that could disturb the base readings. Repeated readings at the base station were made at a minimum of every two (2) hours during each survey day. Base loop data was used to correct the raw data for instrument and diurnal drift.

Magnetic data were downloaded to a portable computer for processing. Preliminary contour maps were generated in the field and used to augment the selection of areas requiring more intensive investigation.

### 3.1.2.3 Electromagnetic (EM) Survey

EM data was collected using a Geonics EM-31 Terrain Conductivity Meter. The instrument uses horizontal (vertical dipoles) co-planar coils separated by a known distance. A transmitter coil radiates a continuous, known current into the ground which produces "eddy" currents. A receiver coil detects secondary EM fields produced by the eddy currents. The ratio of the transmitted to received signal is proportional to conductivity.

Data were collected along profiles following procedures described above for the magnetic survey. The EM operator maintained a minimum fifty (50) feet distance from the magnetometer operator so as to eliminate interference between the two instruments. EM measurements were recorded digitally using a Polycorder data logger. EM data were corrected for instrument drift before interpretation.

### 3.1.2.4 Ground Penetrating Radar (GPR) Survey

GPR data were collected using a Geophysical Survey Systems SIR-2 configured with a Model 5103 (400 MHz) antenna. The system radiates repetitive, short-time duration electromagnetic pulses into the earth from a broad-bandwidth antenna placed on the ground surface. Transmitted pulses are partially reflected back to the surface antenna by dielectric discontinuities in the subsurface produced by buried man-made objects or features. Continuous data were collected by towing the surface antenna along the prescribed profiles and recording the reflected signals digitally on magnetic media.

GPR profiles were established at each magnetic anomaly interpreted as representing buried metal. Profiles were located relative to Magnetic and EM survey grid coordinates. Data was collected in two perpendicular directions across each anomaly. A paper record of the reflected signals, produced on site

by means of a portable computer system for real-time interpretation, was used to augment the selection of areas requiring more intensive investigation..

GPR data do not require corrections or further processing for interpretation of results. Data are presented as profiles of reflected signals. Qualitative interpretations of anomaly locations, depth estimates and spatial dimensions were made in real-time.

### 3.1.2.5 Data Interpretation

Each data set was interpreted on it's own merit, then results were combined. Corrected magnetic and EM data was gridded using a minimum curvature program and contoured. Contour maps were overlain on a site base map to identify anomalies thought to be caused by surface features. Remaining anomalies interpreted as representing buried metal were highlighted and prioritized based on probability of containing buried drums. GPR data was processed to the extent required to produce the best quality results. Processing included such things as automatic gain control filtering and other digital filters. Anomalies thought to represent buried metal objects were highlighted on the records and posted on the site base map. Estimates of anomaly dimensions and depth were calculated from the records.

### 3.1.3 Soil Borings

Soil borings were utilized to further characterize site soils and to provide additional information concerning the horizontal and vertical extent of contamination in the unsaturated zone at the Martin Aaron Site. Borings were made using methods outlined in the project QAPP and in accordance with the Substance and Percolation Waters Act, N.J.S.A. 58:A-4.1. During boring activities, qualified Kimball personnel maintained continuous lithology logs, recorded sample and core characteristics, recorded FID readings, noted first encountered water levels and completed detailed monitoring well construction logs. Soil classifications were made in accordance with the Burmeister Soil Classification System. Borings included the following investigations:

- Interior Borings (former Martin Aaron Building Complex)
- Exterior Borings (On-site + Off-site)
- Underground Storage Tank (UST) Borings
- Monitoring Well Borings (On-site + Off-site)

#### 3.1.3.1 Interior Borings

Seventeen interior borings were advanced utilizing Geoprobe® continuous split spoon sampling methods in the main process and warehouse areas inside the Martin Aaron main building complex. One additional boring (SB49) was advanced by split spoon sampling via sledgehammer. These borings were drilled to the first occurrence of groundwater. Three of the borings (SB34, SB35 and SB37) along the drainage trench in the central process area, were not completed, due to the presence of a reinforced concrete sub-floor that could not be penetrated by the Geoprobe® or jackhammer. (Refer to **Appendix A: Boring Logs**). Borings were drilled as follows:

- two borings in the floor drain/trench in the northeastern section of the process area (SB31 and SB32);
- two borings in the pits (one each) located in the southeastern section of the process area (SB38 and SB39);
- two borings in the wash down area in the central process area (SB33 and SB36);

- eight borings placed at strategic intervals throughout the floor of the warehouse area (SB40, SB41, SB42, SB43, SB44, SB45, SB46 and SB47);
- one boring in the process vessel containment area (SB49);
- three borings attempted in the central process area (SB34, SB35 and SB37).

Samples were collected from each completed boring (plus SB35). All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB31, SB32, SB33, SB36, SB38, SB40, SB41, SB42, SB43, SB44, SB45, SB46, SB47 and SB49, two samples per boring were sent to the laboratory and analyzed for Target Compound List (TCL) Volatiles + 10 Tentatively Identified Compounds (TIC), TCL Semivolatiles, Target Analyte List (TAL) Metals, Cyanide and TCL Pesticides/Polychlorinated Biphenyls (PCB). For borings SB35 and SB39, one sample per boring was sent to the laboratory and analyzed for TCL volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide, and TCL Pesticide/PCBs. Boring SB38 was also analyzed for Total Organic Halogens (TOX), Total Organic Carbon (TOC) and Particle Size. Borings SB36, SB38, SB39, SB41, SB44 and SB46 were also analyzed for Dioxin/Furan by USEPA SW-846 method 8290. Upon completion, all borings were grout sealed.

### 3.1.3.2 Exterior Borings

Nineteen exterior borings were drilled, using continuous split spoon sampling methods advanced by a combination of mud rotary and HSA techniques, in strategic locations throughout the open areas of the site. One additional boring (SB29) was drilled on an adjacent property. These borings were drilled to the first occurrence of groundwater, with the exception of boring SB11 (which was advanced to a depth of 63' to delineate the stratigraphy, confining layers and geotechnical properties of the unconsolidated zone in the site area, and borings SB08, SB17, SB19 and SB29 (which were advanced to allow Hydropunch sampling in the strata directly above what was identified as the first confining layer). (Refer to **Appendix A: Boring Logs**). Borings were drilled as follows:

- two borings along the western perimeter of the site (SB01 and SB02);
- four borings along the northern perimeter of the site (SB03, SB06, SB09 and SB14);
- three borings along the eastern perimeter of the site (SB17, SB18 and SB19);
- ten borings placed at strategic intervals throughout the remainder of the open area north of and between the Martin Aaron and Rhodes Drum buildings (SB04, SB05, SB07, SB08, SB10, SB11, SB12, SB13, SB15 and SB16).
- one boring in the mid-eastern portion of the South Jersey Port Corporation property, across the street (S. Broadway) from the site (SB29).

Samples were collected from each boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB01, SB02, SB03, SB04, SB05, SB06, SB07, SB08, SB09, SB10, SB11, SB12, SB13, SB14, SB15, SB16, SB17, SB18, SB19 and SB29, two samples per boring were sent to the laboratory and analyzed for TCL volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide, and TCL Pesticides/PCB. Borings SB01, SB03, SB05, SB07, SB09, SB12, SB13, SB14, SB16 AND SB19 were also analyzed for TOX, TOC and Particle Size. Borings SB02, SB04, SB06, SB08, SB10, SB13, SB14 and SB16 were also analyzed for Dioxin/Furan. Geophysical samples were taken from potential confining layers in borings SB11, SB22 and SB27. Shelby tubes were planned for this activity but could not be taken due to the dense nature of the material (as evidenced by

our failed attempt on SB22). Thus, the samples were collected via split spoon, were homogenized and remolded; and then the composite tested for vertical permeability. (Refer to **Appendix B - Geotechnical Testing Results**). Upon completion, all borings were grout sealed.

### 3.1.3.3 Underground Storage Tank (UST) Borings

Thirteen borings were drilled to investigate the presence of releases from the UST/AST storage tank area located adjacent to the central process portion of the former Martin Aaron main complex building. These borings were drilled to the first occurrence of groundwater, using the continuous split spoon method, advanced by hollow stem auger (HSA). (Refer to **Appendix A: Boring Logs**). Borings were drilled as follows:

- one boring adjacent to containment dike (SB48);
- two borings north of the tank area near the edge of the concrete apron (SB50 and SB60);
- two borings adjacent to the northern wall of UST 2 (SB51 and SB52);
- two borings adjacent to the northern wall of UST 1 (SB53 and SB54);
- one boring adjacent to the western wall of UST1 (SB55);
- one boring adjacent to the southern wall of UST 1 (SB56);
- two borings adjacent to the southern wall of UST 2 (SB57 and SB58);
- one boring south of the 9' diameter AST (SB59);
- one boring north of the 9' diameter AST (SB61).

Samples were collected from each boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB50, SB51, SB52, SB53, SB55, SB56, SB57, SB58, SB59, SB60 and SB61, one sample per boring was sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide, TCL Pesticides/PCB, and Petroleum Hydrocarbons (TPH). For boring SB48, two samples were sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB. For boring SB54, two samples were sent to the laboratory: the first was analyzed for TCL Volatiles+10; the second was analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide, TCL Pesticides/PCB, and TPH. Upon completion, all borings were grout sealed.

### 3.1.3.4 Monitoring Well Borings

Seven additional exterior borings were drilled for the purpose of installing monitoring wells in prescribed locations on and off-site. Shallow borings were performed using continuous split spoon sampling methods advanced by the HSA technique. Deeper borings were advanced using the mud rotary technique. (Refer to **Appendix A: Boring Logs**). Depths of borings were dictated by optimal placement of well screens in ensuing monitoring well installations. Well clusters MW-1, MW-2 and MW-3 were originally intended to have three borings/wells each (shallow, intermediate & deep water bearing zones). However, observed stratigraphy failed to identify suitable confining layers to support the need for deep wells at this time. Consequently, borings SB21, SB25 and SB28 were not performed. Borings were drilled as follows:

- two borings in the northwest corner of the site drilled for the installation of monitoring well cluster MW-1 (SB20 and SB22);
- two borings along the eastern perimeter of the site drilled for the installation of

- monitoring well cluster MW-2 (SB23 and SB24);
- two borings adjacent to the southern perimeter of the site, on the Comarco Products property, drilled for the installation of monitoring well cluster MW-3 (SB26 SB27);
- one boring in the mid-eastern portion of the South Jersey Port Corporation property, across the street (S. Broadway) from the site, drilled for the installation of MW-4S (SB30).

Samples were collected from selected borings. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB20, SB23, SB26 and SB30, two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB.

#### 3.1.4 Test Pits/Excavations

A total of twenty four test pits (including four multi-pit excavations) and two sewer basin excavations were advanced on the Martin Aaron property to investigate anomalies identified by the geophysical investigation and investigate two sewer basins on the property. (Refer to **Appendix E: Test Pit Logs and Photos**). Test pits/excavations were excavated to the depth required to: expose the source of the observed anomalies; collect grab samples from suspect soils; and obtain samples from any drums or buried containers encountered. Excavation/backfilling/grading were performed by a qualified operator using a Bobcat Model 100 trac-excavator (w/dozer blade). The test pits/excavations were:

- one 20'x2'x5' deep excavation, investigating anomalies EM8 and M3, which uncovered construction debris and a concrete pad (TP01);
- one 12'x2'x5.5' deep excavation, investigating anomaly M3, which uncovered construction debris, a steel pipe and a concrete foundation (TP02);
- one 13'x2'x6' deep excavation, investigating anomaly M3, which uncovered construction debris and a concrete/brick foundation (TP03);
- one 12'x2'x3.5' deep excavation, investigating anomaly M5, which uncovered construction debris, a concrete pad and brick foundation (TP04);
- one 10'x2'x4' deep excavation, investigating anomaly M5, which uncovered construction debris and a concrete structure (TP05);
- one 15'x2'x5' deep excavation plus one (1) 4'x4'x5' deep perpendicular excavation, investigating anomaly M9, which uncovered construction debris and what appeared to be a concrete pipe chase (TP06);
- one 20'x2'x6' deep excavation plus one (1) 8'x2'x5' deep branch excavation, investigating anomaly M8, which uncovered black slag and cinders (TP07);
- one 18'x2'x4.5' deep excavation, investigating anomaly EM1, which uncovered construction debris, a concrete slab and a concrete pipe chase (TP08);
- one 14'x2'x4' deep excavation, investigating anomaly EM1, which uncovered construction debris, a concrete slab and a concrete pipe chase (TP09);
- one 17'x2'x5.5' deep excavation, investigating anomalies EM3 and M7, which uncovered construction debris and a concrete footing (TP10);
- one 15'x2'x5.5' deep excavation plus one (1) 8'x2'x5' deep adjacent excavation, investigating anomaly M1, which uncovered tires, construction debris, what appeared to be empty drum liners and a 1' dia. x 3' long concrete cylinder (TP11 & 11A);
- one 15'x2'x5' deep excavation, investigating anomaly M2, which uncovered black slag

- and construction debris (TP12);
- one 15'x2'x5.5' deep excavation, investigating anomalies M2 and EM4, which uncovered black slag and cinders (TP13);
- one 17'x2'x5.5' deep excavation, investigating anomalies M1 and EM5, which uncovered a concrete footing and a 3.5" dia. metal pipe (TP14);
- one 15'x2'x6' deep excavation, investigating anomaly M6, which uncovered a concrete footing and a 2" dia. metal pipe (TP15);
- one 12'x2'x5.5' deep excavation, investigating anomaly M6, which uncovered black and gray cinders and a 2" dia. metal pipe (TP16);
- one 12'x2'x6' deep excavation plus one 10'x2'x5' deep adjacent excavation, investigating anomaly M6, which uncovered black slag and cinders and one crushed metal drum (TP17 & 17A);
- one 10'x2'x5.5' deep excavation, investigating anomaly EM4, which uncovered black and gray slag, a 8" dia. metal pipe and a 3" dia. metal pipe (TP18);
- one 8'x2'x4.5' deep excavation, investigating the southeast corner of the site, which uncovered black and gray cinders and a 4" dia. metal pipe (TP19);
- one 12'x2'x6.5' deep excavation, investigating anomalies M4 and EM7, which uncovered black slag and a concrete/brick foundation (TP20);
- one 13'x2'x5' deep excavation, investigating anomaly M4, which uncovered black slag, plastic buckets, drum liners w/small amount of liquid, drum rings, partial fiber drums, various pieces of scrap metal and a "pocket" of a white powdery substance (TP21);
- one 12'x2'x5.5' deep excavation, investigating anomalies M4 and EM7, which uncovered construction debris and a brick structure (TP22);
- one 13'x2'x5.5' deep excavation, perpendicular to TP21 (M4), which uncovered black slag, plastic buckets, drum liners, wood and pieces of railroad rail (TP23);
- one 12'x3'x4' deep excavation, in concrete apron adjacent to the UST area (M10 and EM10), which uncovered a concrete slab, some conduit pipe and a 10" dia. vertical pipe (TP24);
- one 10'x2'x4' deep excavation, investigating sewer basin 4, which uncovered construction debris and the inlet pipe (SE03);
- one 8'x2'x6' deep excavation and one 6'x2'x4' deep perpendicular excavation, investigating sewer basin 2, which uncovered black cinders, construction debris and a metal outlet pipe (SE01).

Samples were collected from selected test pits/excavations. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. For test pits/excavations TP01, TP06, TP09, TP10, TP13, TP14, TP17, TP18, TP20, TP21, TP24, SE01 and SE03, one sample per location was sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB. For test pit TP05, one sample was sent to the laboratory and analyzed for TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB. One additional sample was collected from a white powder discovered in test pit TP21. This sample was submitted to the laboratory and analyzed for TCL Semivolatiles+20, TAL Metals, Cyanide, TCL Pesticides/PCB and RCRA Compatibility. Sampling procedures followed those outlined in the final QAPP for soil sampling. Upon completion, each test pit/excavation was backfilled by replacing the exhumed material in shallow lifts and compacting it with the excavator bucket. Each location was then finish graded to approximate original contour using the dozer blade of the machine. Excess soils and/or excavated drum parts and liners were overpacked in approved drums pending disposal.



### 3.1.5 Monitoring Well Installations

Seven monitoring wells were installed on and in the vicinity of the Martin Aaron site, to evaluate extent and level of potential groundwater contamination, characterize site hydrogeology and validate the possibility of off-site migration of said contamination. Installations included:

- one monitoring well cluster in the northwest corner of the site consisting of two wells identified as MW-1S (shallow) and MW-1M (intermediate);
- one monitoring well cluster along the eastern perimeter of the site consisting of two wells identified as MW-2S (shallow) and MW-2M (intermediate);
- one monitoring well cluster adjacent to the southern perimeter of the site, on the Comarco Products property, consisting of two wells identified as MW-3S (shallow) and MW-3M (intermediate);
- one monitoring well in the mid-eastern portion of the South Jersey Port Corporation property, across the street (S. Broadway) from the site, identified as MW-4S (shallow).

The monitoring wells were installed in borings advanced for the soils investigation described above. Shallow unconsolidated wells MW-1S, MW-2S, MW-3S and MW-4S were installed in borings SB20, SB23, SB26 and SB30, respectively. Intermediate unconsolidated wells MW-1M, MW-2M and MW-3M were installed in borings SB22, SB24 and SB27, respectively. Well Construction details are provided in **Table 2 - Monitoring Well Construction Details**.

#### 3.1.5.1 Shallow Unconsolidated Wells

Four shallow unconsolidated wells (as described above) were installed on-site and on adjacent properties to obtain near-surface unconsolidated zone physical and hydraulic characteristics plus groundwater quality characteristics. Hollow stem augers (8" outside dia.) were used to extend the boreholes to depths necessary to successfully screen each well across the water table. A four inch dia., schedule 40 polyvinyl chloride (PVC) monitoring well was installed in each boring with a ten feet long four inch dia., .010 slot well screen situated across the water table phreatic surface, with at least two feet of screen above said surface. The well screen and riser were situated in the center of the borehole. A #1 Morie sand gravel pack was placed in the annular space, extending one to two feet above the screened interval. A #00 Morie fine sand pack, one foot in thickness, was placed on top of the gravel pack. The remainder of the annular space was filled with bentonite grout and/or Portland cement.

The monitoring wells were finished with water-tight, flush-mounted protective casings with twelve inch dia. covers. Each cover is clearly marked "Monitoring Well" and is stamped with the corresponding New Jersey Well Permit number. Riser pipes are fitted with water-tight, locking well caps, with locks for which all keyed alike.

After a suitable hiatus (min. 24 hours) allowing the grout in each well to "cure", the wells were developed by pumping until a turbid-free discharge was observed. A minimum of five well volumes were purged from each well. Three measurements of temperature, pH and specific conductivity were recorded during each episode. (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits** and **Appendix G: Well Development Records, Permits**).

### 3.1.5.2 Intermediate Unconsolidated Wells

Three intermediate unconsolidated wells (as described above) were installed on-site and on an adjacent property to obtain unconsolidated zone physical and hydraulic characteristics plus groundwater quality characteristics immediately above the first confining layer beneath the site. Hollow stem augers (8" outside dia.) were used to extend the boreholes to depths necessary to successfully screen each well just above what was identified to be that first continuous confining layer. A four inch dia., schedule 40 polyvinyl chloride (PVC) monitoring well was installed in each boring with a ten feet long four inch dia., .010 slot well screen placed directly above the first evidence of said confining layer. The well screen and riser were situated in the center of the borehole. A #1 Morie sand gravel pack was placed in the annular space, extending to two feet above the screened interval. A #00 Morie fine sand pack, one foot in thickness, was placed on top of the gravel pack. The remainder of the annular space was filled with bentonite grout and/or Portland cement.

The monitoring wells were finished with water-tight, flush-mounted protective casings with twelve inch dia. covers. Each cover is clearly marked "Monitoring Well" and is stamped with the corresponding New Jersey Well Permit number. Riser pipes are fitted with water-tight, locking well caps, with locks for which all keyed alike.

After a suitable hiatus (min. 24 hours) allowing the grout in each well to "cure", the wells were developed by pumping until a turbid-free discharge was observed. A minimum of five well volumes were purged from each well. Three measurements of temperature, pH and specific conductivity were recorded during each episode. (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits** and **Appendix G: Well Development Records**).

### 3.1.6 Groundwater Level Measurements

Two rounds of groundwater synoptic water level measurements were obtained from all newly constructed monitoring wells. The first round was taken on 8/14/97 during the first round of water sampling. The second round was taken on 9/15/97 during the second round of water sampling. (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits** for measurement results). Groundwater level measurements were procured using a decontaminated water level indicator/electronic interface probe. No product interfaces were observed. Water levels were documented in both the field log book and on well sampling logs. (Refer to **Appendix C: Sampling Logs**). Groundwater level measurements and calculated groundwater elevations are provided in **Table 3 – Groundwater Elevation Measurements**. Visual representation of the phreatic surface of groundwater for each round of measurement can be found on **Figure 8, Shallow Groundwater Contour Map – 8/14/97 and 9/15/97** and **Figure 9, Deep Groundwater Contour Map – 8/14/97 and 9/15/97**.

### 3.1.7 Monitoring Well Sampling

Two rounds of monitor well sampling, spaced one month apart, were conducted to evaluate the groundwater quality characteristics of the site and to assess the possibility of migration of contamination from the site. Seven newly installed monitoring wells and one existing City of Camden municipal well, located approximately 3500 feet southeast of the site, were sampled. The monitoring wells were purged using a centrifugal pump (minimum three well volumes removed) and then sampled using disposable teflon bailers. Grab samples were collected directly from the sampling port on the municipal well pump after opening the valve and allowing it to run for approximately five minutes to purge the line. Sampling

procedures followed those outlined in the final QAPP for monitoring well sampling. Monitoring well samples were sent to the laboratory for analysis of TCL Volatiles+30, TCL Semivolatiles+30, TAL Metals and TCL Pesticides/PCB. Municipal well samples were sent to the laboratory for analysis of (USEPA SW846) method 524.2 Volatiles, Low Level Base Neutrals (BN), Low Level Metals and method 508 Pesticide/PCBs. (Refer to **Appendix C: Sampling Logs**).

### 3.1.8 Hydropunch® Sampling

Groundwater screening samples were collected from twelve of the exterior soil borings described in section 3.1.3 above. Samples were collected using a Hydropunch® II sampler. Hydropunch® sample locations were determined in the field based on geophysical investigation findings and field observations. Sample locations (SB01, SB06, SB07, SB08, SB10, SB13, SB14, SB15, SB16, SB17, SB19, and SB29) were chosen based on an expected groundwater flow direction from west to east, to evaluate groundwater in the vicinity of sewer basins, and evaluate groundwater in areas of suspected buried drums.

Soil borings SB01, SB06, SB07, SB10, SB13, SB14, SB15 and SB16 were advanced following procedures outlined in section 3.1.3 above. Once the groundwater table was reached, borings were advanced a minimum of two feet below this depth for the collection of groundwater samples. A Hydropunch® II sampler was driven into the saturated soils for the collection of water samples. The Hydropunch® consists of a hollow, stainless steel tube equipped with a polyethylene screen and drive point. The device is driven into the saturated zone to a sufficient depth as to create adequate hydrostatic head to partially fill the hollow body when the drive point is removed. Once the device is driven to the desired depth, the device is retracted a short distance which exposes the screen. The Hydropunch® was allowed to sit undisturbed for a sufficient amount of time to allow the required amount of formation water to enter the hollow tube. A Teflon bailer was lowered into the hollow tube to collect the water samples.

Soil borings SB08, SB17, SB19 and SB29 were extended to allow collection of a groundwater screening sample from immediately above the first confining layer. Borings will be extended following procedures described above using hollow stem auger drilling techniques. Once the total depth of boring was reached, groundwater samples were collected using the Hydropunch® methodology described above. Two attempts were required at SB19, due to malfunction of the Hydropunch® device during retraction.

Sampling procedures followed those outlined in the final QAPP for monitoring well sampling. One groundwater screening sample per boring was collected and sent to the laboratory for volatile organic analysis (USEPA SW-846 Method 8240/8260).

### 3.1.9 Sediment Sampling

Grab samples SD01 and SD02 were collected from the sediment material found in sewer basins 1 and 4 respectively. The samples were collected by scooping the sediment from the bottoms of each basin using a stainless steel/high density polyethylene (HDPE) dredging device. Samples collected were sent to the laboratory for analysis of TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB.

## 3.2 Phase II Field Investigation Activities (September to November 1998)

### 3.2.1 Soil Borings

Soil borings were utilized to further characterize site soils and to provide additional information concerning the horizontal and vertical extent of contamination in the unsaturated zone at the Martin Aaron Site. Borings were advanced as described in Section 3.1.3 above using a combination of hollow stem augering, rotary drilling, GeoProbe®, and split spoon sampling and in accordance with the project QAPP. Borings included the following investigations:

- Interior Borings (Former Martin Aaron Building Complex)
- Exterior Borings (On-site + Off-site)
- Monitoring Well Borings (On-site + Off-site)
- Re-sampling Borings (On-site)

#### 3.2.1.1 Interior Borings

Three interior borings were advanced utilizing continuous split spoon sampling methods in the former one story brick structure immediately west of the former processing areas inside the Martin Aaron main building complex. (Refer to **Appendix A: Boring Logs**). Borings were drilled as follows:

- one boring in the southwest corner of the former one-story brick structure (SB111);
- one boring in the northwest corner of the former one-story brick structure (SB111);
- one boring in the eastern portion of the former one-story brick structure (SB112);

Samples were collected from each completed boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. Two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Inorganics, Cyanide and TCL Pesticides/PCBs. Upon completion, all borings were grout sealed.

#### 3.2.1.2 Exterior Borings

Fifty four exterior borings were drilled, using continuous split spoon sampling methods advanced by a combination of Geoprobe® and HSA techniques, in strategic locations in the open areas of the site, at off-site locations surrounding the property border, and on the South Jersey Property located west of the site across Broadway. These borings were advanced to the first occurrence of groundwater (Refer to **Appendix A: Boring Logs**). Borings were advanced as follows:

- Seventeen borings on the South Jersey Port Corporation property, across the street (S. Broadway) and west of the site (SB63 to SB79);
- Five borings just beyond the west property border of the Martin Aaron Site along the east side of South Broadway (SB80 to SB84);
- one boring on property south of the former Martin Aaron Building (SB85);
- ten borings spaced between the north property border and the southern side of Everett Street (SB 86 to SB95).
- nine borings spaced between the east property border and the east side of Sixth Street (SB96 to SB99 and SB105 to SB109).

- two borings north of the former Martin Aaron building and north of the former processing areas (VOA1 and VOA2)
- ten borings strategically located around Total PCB "hot spots" within the yard area of the Martin Aaron property (PCB1 to PCB10)

Samples were collected from each boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB63 to SB99 and SB105 to SB109, two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB. For borings VOA1 and VOA2, two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10. For borings PCB1 to PCB8 and boring PCB10, two samples were collected and field screened for Total PCB utilizing the Ensys Inc. PCB RIS<sup>®</sup> Soil Test System. Due to sample recovery problems, one sample was collected from boring PCB9 and field screened for Total PCB using the above system.

### 3.2.1.3 Monitoring Well Borings

Seven additional exterior borings were drilled for the purpose of installing monitoring wells in prescribed locations on and off-site. Shallow borings were performed using continuous split spoon sampling methods advanced by the HSA technique. Deeper borings were advanced using the mud rotary technique. (Refer to **Appendix A: Boring Logs**). Depths of borings were dictated by optimal placement of well screens in ensuing monitoring well installations. Borings were drilled as follows:

- one boring in the central portion of the yard area north of the former Martin Aaron building for the installation of monitoring well MW5S (SB115);
- one boring in the former processing area north of the former Martin Aaron building and east of the existing under ground storage tanks for the installation of monitoring well MW7S (SB113);
- one boring east of the former processing areas of the former Martin Aaron building for the installation of monitoring well MW6S (SB114);
- one boring in the northwestern corner of the South Jersey Port Corporation property, across the street (S. Broadway) from the site, drilled for the installation of monitoring well MW8S (SB62);
- two borings southeast of the Martin Aaron site on the east side of Sixth Street for the installation of monitoring well cluster MW9 (SB116 and MW9D);
- one boring east of the Martin Aaron site on the east side of Sixth Street for the installation of monitoring well MW10S;

Samples were collected from selected borings. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB62, SB113, SB114, SB115 and SB116, two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB.

### 3.2.1.4 Re-Sampling Borings

Validation of analytical results for samples collected by Kimball between May 12, 1997 and September 16, 1997 indicate all semi-volatile and some volatile results were rejected for not meeting contract

Quality Assurance Requirements as described in Section 4.4.2.1 below. Kimball was directed by the State to present a Corrective Action Plan outlining the method and justification for re-sampling of surface and sub-surface soil. Based on the approved re-sampling plan, fourteen additional soil borings were advanced throughout the yard area and within the warehouse portion of the former Martin Aaron building for the purpose of re-sampling. Borings were advanced as described in Section 3.1.1 above using a combination of GeoProbe®, and split spoon sampling and in accordance with the project QAPP. Borings were advanced as follows:

- three building interior borings within the former three-story warehouse portion of the former Martin Aaron building adjacent to existing soil borings SB42, SB43 and SB46 designated as SB42A, SB43A and SB46A, respectively.
- eleven exterior borings adjacent to existing borings SB01, SB02, SB03, SB09, SB11, SB13, SB15, SB16, SB23, SB19 and existing test pit TP13 designated as SB01A, SB02A, SB03A, SB09A, SB11A, SB13A, SB15A, SB16A, SB23A, SB19A and TP13A, respectively.

Samples were collected from each boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For boring SB01A, two samples were sent to the laboratory and analyzed for TCL Volatiles+10 and TCL Semivolatiles+20. For the remaining borings, two samples per boring were sent to the laboratory and analyzed for TCL Semivolatiles+20.

### 3.2.2 Monitoring Well Installations

Seven monitoring wells were installed on and in the vicinity of the Martin Aaron site, to further evaluate extent and level of potential groundwater contamination, characterize site hydrogeology and validate the possibility of off-site migration of said contamination. Monitoring well construction details are provided in **Table 2**. Installations included:

- one shallow monitoring well in the central portion of the yard area north of the former Martin Aaron building identified as MW5S;
- one shallow monitoring well in the former processing area north of the former Martin Aaron building and east of the existing under ground storage tanks identified as MW7S;
- one shallow monitoring well east of the former processing areas of the former Martin Aaron building identified as MW6S;
- one shallow monitoring well in the northwestern corner of the South Jersey Port Corporation property, across the street (S. Broadway) from the site, identified as MW8S;
- one monitoring well cluster consisting of two wells southeast of the Martin Aaron site on the east side of Sixth Street identified as MW9S (shallow) and MW9D (intermediate);
- one shallow monitoring well east of the Martin Aaron site on the east side of Sixth Street identified as MW10S;

#### 3.2.2.1 Shallow Unconsolidated Wells

Six shallow unconsolidated wells (as described above) were installed on-site and on adjacent properties to obtain near-surface unconsolidated zone physical and hydraulic characteristics plus groundwater quality characteristics. Shallow monitoring wells were installed and developed as described in Section

3.1.5.1 above (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits**).

#### 3.2.2.2 Intermediate Unconsolidated Wells

one intermediate unconsolidated well (as described above) was installed down-gradient of the site to obtain unconsolidated zone physical and hydraulic characteristics plus groundwater quality characteristics immediately above the first confining layer beneath the site. Intermediate monitoring wells were installed and developed as described in Section 3.1.5.2 above (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits** and **Appendix G: Well Development Records**).

#### 3.2.3 Groundwater Level Measurements

One round of groundwater synoptic water level measurements were obtained from all newly constructed monitoring wells and existing monitoring wells installed as part of the first investigation phase. Synoptic water level measurements were taken on 11/10/98 during the groundwater sampling event (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits** for measurement results). Groundwater level measurements were procured using a decontaminated water level indicator/electronic interface probe. No product interfaces were observed. Water levels were documented in both the field log book and on well sampling logs. (Refer to **Table 3** and **Appendix C: Sampling Logs**). Visual representation of the phreatic surface of groundwater for each round of measurement can be found on **Figure 10, Shallow Groundwater Contour Map - 11/10/98** and **Figure 11, Deep Groundwater Contour Map - 11/10/98**.

#### 3.2.4 Monitoring Well Sampling

One round of monitoring well sampling was conducted to further evaluate the groundwater quality characteristics of the site and to assess the possibility of migration of contamination from the site. Seven newly installed monitoring wells and seven existing monitoring wells were sampled. Sampling procedures were as described in Section 3.1.7 above. Monitoring well samples were sent to the laboratory for analysis of TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB (Refer to **Appendix C: Sampling Logs**).

#### 3.2.5 Monitoring Well Abandonment

Two monitoring wells (MW3S and MW3M) located on the property immediately south of the former Martin Aaron building complex and installed as part of the first phase of investigation were abandoned. Well abandonment took place on 11/16/98 and was performed by James C. Anderson Associates, Inc. of Mt. Laurel, New Jersey (JCA). Well abandonment procedures were in accordance with NJDEP Bureau of Water Allocation requirements (Refer to **Appendix F: Monitoring Well Construction Diagrams**).

### 3.3 Phase III Field Investigation Activities (December 1999 to March 2000)

#### 3.3.1 Soil Borings

Soil borings were utilized to further characterize site soils and to provide additional information concerning the horizontal and vertical extent of contamination in the unsaturated zone at the Martin Aaron Site. Borings were advanced as described in Section 3.1.3 above using a combination of hollow stem augering, rotary drilling, GeoProbe®, and split spoon sampling and in accordance with the project

QAPP. Borings included the following investigations:

- Pesticide/PCB Delineation Borings (On-site)
- Semivolatile Delineation Borings (On-site + Off-site)
- Rhodes Building Investigation Borings (On-site + Off-site)
- Monitoring Well Borings (Off-site)

#### 3.3.1.1 Pesticide/PCB Delineation Borings

Fourteen Pesticide/PCB Delineation borings were advanced, utilizing continuous split spoon sampling methods and Geoprobe® techniques, in areas north and east of the former processing areas of the former Martin Aaron main building complex. (Refer to **Appendix A: Boring Logs**). Borings were drilled as follows:

- Four borings in the west-central portion of the yard area around previous boring SB04 (SB144, SB145, SB146, SB147);
- Four borings in the north-central portion of the yard area around previous test pit TP09 (SB148, SB149, SB150, SB151);
- a. Three borings immediately north of the former Martin Aaron building north and east of previous boring SB08 (SB152, SB153, SB154);
- b. Three borings east of the former Martin Aaron building east of previous test pit TP05 (SB155, SB156, SB157);

Samples were collected from each completed boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. Two (2) samples per boring were sent to the laboratory and analyzed for TCL Pesticides/PCBs. Upon completion, all borings were grout sealed.

#### 3.3.1.2 Semivolatile Delineation Borings

Ten Semivolatile Delineation borings were advanced, using continuous split spoon sampling methods and Geoprobe® techniques, along the east property border and at off-site locations on the South Jersey Port Property located west of the site across Broadway and north of the Martin Aaron property (Refer to **Appendix A: Boring Logs**). Borings were advanced as follows:

- Four borings along the east property border around previous boring SB23 (SB134, SB135, SB136, SB137);
- Four borings on the South Jersey Port Corporation property around previous boring SB75 located across the street (S. Broadway) and west of the site (SB138, SB139, SB140, SB141);
- Two borings spaced between the north property border and the southern side of Everett Street near previous boring SB88 (SB142, SB143).

Samples were collected from each boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. Two samples per boring were sent to the laboratory and analyzed for TCL Semivolatiles+20. Upon completion, all borings were grout sealed.



### 3.3.1.3 Rhodes Building Investigation Borings

Sixteen Rhodes Building Investigation borings were advanced, using continuous split spoon sampling methods and Geoprobe® techniques, within the building, adjacent to the building to the east, north and west, along the east and south property borders and at off-site locations southeast of the building along Sixth Street. (Refer to **Appendix A: Boring Logs**). Borings were advanced as follows:

- Eight borings around the perimeter of the former Rhodes building (SB118, SB119, SB120, SB121, SB122, SB123, SB124, SB129);
- Four borings within the former Rhodes building (SB125, SB126, SB127, SB128);
- Two borings along the east property border (SB130, SB131);
- Two borings off-site and southeast of the former Rhodes building along the west side of Sixth Street (SB132, SB133);

Samples were collected from each boring. All samples were screened with a flame-ionization detector (FID) for volatiles and visually inspected for staining. Sampling procedures followed those outlined in the final QAPP for soil sampling. For borings SB118, SB122, SB124, SB126, SB127, SB129, SB130, SB131, SB132, SB133 two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB. For borings SB119, SB120, SB121, SB123, SB125 and SB128, two samples per boring were sent to the laboratory and analyzed for TCL Volatiles+10. Upon completion, all borings were grout sealed.

### 3.3.1.4 Monitoring Well Borings

Two additional borings were drilled for the purpose of installing monitoring wells in prescribed off-site locations. Shallow borings were performed using continuous split spoon sampling methods advanced by the HSA technique. Deeper borings were advanced using the mud rotary technique. (Refer to **Appendix A: Boring Logs**). Depths of borings were dictated by optimal placement of well screens in ensuing monitoring well installations. Borings were drilled as follows:

- Two borings along the south side of Jackson Street approximately 800 feet southeast of the Martin Aaron Property for the installation of monitoring well cluster MW11 (MW11S and MW11M).

### 3.3.2 Monitoring Well Installations

Two monitoring wells were installed in the vicinity of the Martin Aaron site, to further evaluate extent and level of potential groundwater contamination, characterize site hydrogeology and validate the possibility of off-site migration of said contamination. Well construction details are provided in **Table 2**. Installations included:

- one monitoring well cluster consisting of two wells southeast of the Martin Aaron site on the south side of Jackson Street identified as MW11S (shallow) and MW11 (intermediate);

### 3.3.2.1 Shallow Unconsolidated Wells

One shallow unconsolidated well (as described above) was installed off-site and down-gradient to obtain near-surface unconsolidated zone physical and hydraulic characteristics plus groundwater quality characteristics. The shallow monitoring well was installed and developed as described in Section 3.1.5.1 above (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits and Appendix G: Well Development Records, Permits**).

### 3.3.2.2 Intermediate Unconsolidated Wells

One intermediate unconsolidated well (as described above) was installed down-gradient of the site to obtain unconsolidated zone physical and hydraulic characteristics plus groundwater quality characteristics immediately above the first confining layer beneath the site. The intermediate monitoring well was installed and developed as described in Section 3.1.5.2 above (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits and Appendix G: Well Development Records**).

### 3.3.3 Groundwater Level Measurements

Two rounds of groundwater synoptic water level measurements were obtained from both newly constructed monitoring wells and existing monitoring wells (excluding MW3S, MW3M and MW7S which were previously abandoned or removed) installed as part of the first and second investigation phases. Synoptic water level measurements were taken on 1/18/00 during the first groundwater sampling event and 2/17/00 during the second groundwater sampling event (Refer to **Appendix F: Monitoring Well Construction Diagrams, Well Permits** for measurement results). Groundwater level measurements were procured using a decontaminated water level indicator/electronic interface probe. No product interfaces were observed. Water levels were documented in both the field log book and on well sampling logs. (Refer to **Table 3 and Appendix C: Sampling Logs**). Visual representation of the phreatic surface of groundwater for each round of measurement can be found on **Figure 12, Shallow Groundwater Contour Map 1/18/00 and 2/17/00**, and **Figure 13, Deep Groundwater Contour Map 1/18/00 and 2/17/00**.

### 3.3.4 Monitoring Well Sampling

Two rounds of monitoring well sampling were conducted to further evaluate the groundwater quality characteristics of the site and to assess the possibility of migration of contamination from the site. Sampling procedures were as described in Section 3.1.7 above. Monitoring well samples were sent to the laboratory for analysis of TCL Volatiles+10, TCL Semivolatiles+20, TAL Metals, Cyanide and TCL Pesticides/PCB (Refer to **Appendix C: Sampling Logs**). During the first sampling round (1/18/00 to 1/20/00), two newly installed monitoring wells and eleven existing monitoring wells were sampled (all wells but MW3M, MW3S and MW7S which were abandoned or removed). During the second sampling round (2/17/00), only the two new monitoring wells (MW11S and MW11M) were sampled.

## 4.0 QUALITY ASSURANCE

### 4.1 Analytical Methodologies

Soil, water, and sediment samples were analyzed for concentrations of inorganic and organic contaminants using field screening and contract laboratory program procedures. For laboratory analytical procedures, approved EPA/NJDEP methods in combination with standard operating procedures (SOP) for QA/QC were utilized.

Samples collected in the field during the first investigation phase were analyzed by Accredited Laboratories, Inc. of Carteret, NJ and Quanterra Inc. of Knoxville, TN. Samples collected during the second and third investigation phases were analyzed by Ecology and Environment Inc., of Lancaster, NY. **Table 4 - Sample Container, Preservation, Holding Time and Analytical Methodology Requirements** provides a summary by matrix and analytical parameter of the analyses performed, plus containerization requirements, preservation requirements, holding times, and analytical methods.

Full documentation of all handling and analytical procedures and analytical results was included in the laboratory data packages. This information was reviewed by the L. Robert Kimball and Associates project chemist in order to ensure that all procedures were followed.

QA/QC samples were utilized throughout the field operation to ensure the quality and reproducibility of the data. QA/QC field duplicate samples were processed every twenty (20) unique samples per matrix. Additional QA/QC samples were processed if the QA/QC results fell outside the data quality objectives, or if the field chemist determined that additional QA/QC samples were required.

### 4.2 Sample Management

This section details the general procedures followed during collection, packaging, handling, and shipping of samples. Sample management and quality control was initiated at the laboratory during preparation and packaging of sample containers, continued through field investigation and sample preparation activities, and ended when laboratory analyses are validated and accepted.

#### 4.2.1 Field Sample Management

Sample identification was developed relative to sampling matrix, location, and depth. Results of field screening and analyses were recorded in the field log book. A sample label was prepared for each sample and logged both in the field log book and on the chain of custody form. Sample labels included sample identification number, collection date and time, sample type, analyses desired, preservation type, and sampler identification.

Once sample containers were filled and labeled, the samples were packaged in coolers with ice to maintain the desired temperature of four (4) degrees Celsius. Sample coolers were transported to the laboratory separated from potential sources of contamination of external influences, such as fuels. If sampling was completed in one day, the samples were delivered within twenty-four (24) hours of collection to the laboratory. If sampling continued for more than one day, then the samples were shipped to the laboratory within 48 hours of collection, with total handling time not to exceed sixty hours from time of collection.

The field chain of custody form documented control of sample jars from laboratory to field, and samples from field to laboratory. Internal laboratory records then documented the custody of the sample through its final disposition. All sample containers were traceable from initial preparation at the laboratory, through field use, and to final disposal as follows:

1. The field sampler accepted the sample containers from the laboratory, and monitored the care and custody of the environmental samples until custody was properly transferred.
2. Sampling information was entered on the chain of custody form immediately after sample labeling.
3. A separate chain-of-custody form was completed for each shipment. Shipping containers were sealed any time the container was not in the control of the person assigned for custody as designated and documented on the chain-of-custody form.
4. The person relinquishing samples requested the signature of a representative of the party receiving custody of the samples. If a representative was unavailable or refused to sign, the circumstances, location, and time were noted in the "Received by" space and the "Remarks" space of the chain-of-custody form.

#### 4.2.1.1 Sample Preservation

Sample preservation was dependent upon the analytical program specified for each sample. Preservation methodologies were followed as outlined in Table 3. These procedures conformed to those given in Technical Additions to Methods for Chemical Analysis of Water and Wastes, EPA-600/4-82-005 and the NJDEP Field Sampling Procedures Manual, May 1992.

Preservatives were added to the sample bottles by the laboratory prior to shipment to the field. Following collection, samples were maintained at 4°C until analyzed by the contract laboratory.

#### 4.2.1.2 Sample Storage

Sampling and blanks, both in the field and laboratory, were stored in a refrigerated (at 4 degrees Celsius), secure area until required analyses were completed. Field and laboratory storage were the responsibility of the Field Sampling Supervisor and Laboratory Manager, respectively. In general, samples will not be retained longer than six months beyond the completion of analysis, unless otherwise specified.

#### 4.2.1.3 Sample Holding/Handling Times

Sample control was strictly maintained from sample acquisitions through analysis in order to assure that the sample was representative. Maximum holding/handling time requirements are shown in Table 4.

#### 4.2.1.4 Field Sample Custody

The following procedures were enforced to ensure that control of each sample was maintained from collection, during analysis, and through data reduction. The field chain-of-custody form documented

control of sample jars from laboratory to field, and of samples from field to laboratory. Internal laboratory records then documented the custody of the sample through its final disposition.

#### Sample Identification:

Field measurements were recorded directly in the Field Logbook, along with identifying information (project code, station numbers, station location, date, time, samplers), field observations, and remarks. Examples of field measurements included pH, temperature, conductivity, water levels, and FID readings.

Soil and water samples were labeled, packaged and transported from the sample location to the laboratory. The sample label included: sampling location, collection date and time, type of analyses required and preservation notes. The sample label also identified the sample as a grab or a composite sample and identified the sample matrix (water or soil).

#### Field Chain of Custody Procedures:

All samples were traceable from the time the samples were collected until they or their derived data were incorporated into the final report. In order to maintain and document sample possession, the following chain-of-custody procedures were used.

- a) Samples were collected as described in the project QAPP.
- b) The field sampling supervisor was personally responsible for the care and custody of the samples collected until they were properly transferred or dispatched.
- c) During sampling, field blank samples were prepared, as established in the Plan and as appropriate (with and without preservatives).
- d) Logbook pages and other records were signed and dated.
- e) When photographs were taken of the sampling as part of the documentation procedure, the name of the photographer, date, time, site location and site description were entered sequentially in the Logbook as photos were taken. Once developed the photographic prints were serially numbered corresponding to the Logbook descriptions.
- f) Sample labels were completed using waterproof ink unless prohibited by weather conditions, e.g., a logbook notation would explain that a pencil was used to fill out the sample label because a ballpoint pen would not function in freezing weather.
- g) The Site Manager determined whether proper custody procedures were followed during the field work and decided if additional samples were required.
- h) Samples were accompanied by a Chain-of-Custody Record. When transferring the possession of samples, the relinquishing and receiving individuals signed, dated, and noted the item on the Record. This Record documented sample custody transfer from the sampler, often through another person, to the analyst in the laboratory.

- i) Samples were packaged properly for shipment, dispatched to the appropriate laboratory for analysis, and accompanied by a separate custody record for each shipment. Shipping containers were sealed for shipment to the laboratory. The method of shipment, courier name(s), and other pertinent information were entered in the "Remarks" section on the custody record.
- j) All shipments were accompanied by Chain-of-Custody Records which identified their contents. An original Record accompanied each shipment, and a copy was retained by the Sampling Supervisor.
- k) If sent by mail, the package was registered with return receipt requested. If sent by common carrier, proper documentation was maintained.

#### 4.2.2 Laboratory Sample Management

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample labels matched that on the Chain-of-Custody Records. Pertinent information concerning shipment, pickup, courier, etc., was entered in the "Remarks" section. The custodian then entered the sample label information into a bound logbook which was arranged by project code and station number.

The laboratory custodian used the sample label number or assigned a unique laboratory number to each sample label. All samples were transferred to the proper analyst or stored in an appropriate secure area.

#### 4.2.3 Field Documentation

During installation procedures, a detailed record of drilling and sampling operations and geological material was maintained in accordance with the project QAPP. These procedures were obtained from the USEPA Compendium of Methods. All entries were legible, initialed and dated.

### 4.3 Equipment Decontamination

All equipment used for sample collection was properly decontaminated before use to prevent cross-contamination from prior sampling locations. Sample containers used for sample packaging were provided by the laboratory performing the analysis. Field monitoring equipment was wiped with a clean disposable wipe and rinsed with distilled/deionized water. All sampling equipment was cleaned, marked, and wrapped in foil prior to delivery to the field and between uses. Where possible, dedicated sampling equipment was utilized.

#### 4.3.1 Soil Sampling Equipment Decontamination

Field sampling equipment employed to collect or hold non-aqueous samples was decontaminated prior to use as follows:

1. Visible contamination was removed from the equipment using a brush and/or paper towel saturated with potable water and laboratory grade soap.
2. The equipment was rinsed with potable water to remove residual soap and solids.
3. The final equipment rinse was performed with distilled/deionized water.

If the above procedures failed to remove all visible contamination or if gross contamination was suspected at the sampling location, then the equipment was further decontaminated as follows:

4. If metals were to be analyzed, the equipment was rinsed with a 10% nitric acid solution (1% solution for carbon steel equipment to prevent leaching of metals).
5. The equipment was rinsed with distilled/deionized water.
6. If the sample was to be analyzed for organic contaminants, the equipment was rinsed with laboratory grade acetone or methanol, and then air dried.
7. The equipment was rinsed with distilled/deionized water.
8. The equipment was protected from new contamination by wrapping in aluminum foil or it was stored in a polyethylene bag.
9. Decontamination methodology, date, time, and responsible personnel were recorded in the field log book.

#### 4.3.2 Water Sampling Equipment Decontamination

All water sampling equipment was properly decontaminated before each use. For each day of sampling, field sampling equipment was dedicated to a particular sampling point. The field sampling equipment was decontaminated prior to use in the field and between uses as follows:

1. Visible contamination was removed from the equipment using a brush and/or paper towel saturated with potable water and laboratory grade soap.
2. The equipment was rinsed with potable water to remove residual soap and solids.
3. The second equipment rinse was performed with distilled/deionized water.
4. If metals were to be analyzed, the equipment was rinsed with a 10% nitric acid solution (1% solution for carbon steel equipment to prevent leaching of metals).
5. The equipment was rinsed with distilled/deionized water.
6. If the sample was to be analyzed for organic contaminants, the equipment was rinsed with laboratory grade acetone or methanol, and allowed to air dry or cleaned with nitrogen.
7. The equipment was rinsed with distilled/deionized water.
8. The equipment was protected from new contamination by wrapping in aluminum foil or storing in a polyethylene bag. The equipment was labeled or tagged with a number and date and time of cleaning.
9. Decontamination methodology, equipment number, date, time, and responsible personnel were documented in the field log book.

Decontamination liquids and solids were collected in a plastic lined decon pad.

#### 4.3.3 Well Purging Equipment Decontamination

Centrifugal pumps used for well evacuation prior to well sampling were field decontaminated prior to and between each use. New polyethylene (ASTM Grade) tubing was used for each well and did not require decontamination. The new tubing was rinsed/wiped with distilled/deionized water prior to placement in the well. Submersible pumps were decontaminated as follows:

1. Visible contamination was removed from the pump casing and electrical leads using a

- brush and/or paper towel saturated with potable water and laboratory grade soap.
2. The equipment was rinsed with potable water.
3. The pump was flushed with a minimum of 20 gallons of potable water by submerging the pump in a plastic container filled with potable water.
4. The pump casing and electrical leads were again rinsed with distilled/deionized water.
5. The equipment was stored on clear polyethylene sheeting to prevent recontamination.
6. Decontamination methodology, equipment, date, time and responsible personnel were documented in the field log book.

Decontamination liquids/solids were collected in a plastic lined decon pad.

#### 4.3.4 Heavy Equipment Decontamination

Heavy equipment (excavator/drill rigs) were steam cleaned prior to arrival on-site. Cleaning was also done between drilling/excavation locations using the first two steps of the decontamination procedure in Section 4.3.1. Items which required decontamination between locations included the backhoe bucket, extension arm, tracks, drill auger flights, drill rods and drill bits.

#### 4.4 Laboratory Data Deliverables

This section describes the deliverables and procedures employed in evaluating, reporting, and using the results of environmental sample analyses and quality assurance program analyses. NJDEP standard formats were used for all data deliverables.

##### 4.4.1 Analytical Report Deliverables

Analytical results, quality assurance data, and raw data were provided in NJDEP approved format noted in Appendix A of the Proposed Technical Requirements for Site Remediation NJAC 7:26E. Analytical data packages were provided as Full Laboratory Data Deliverables - USEPA/CLP method for all analysis except Methods 524.2 and 508. Full Laboratory Data Deliverables -Non USEPA/CLP Methods were provided for samples analyzed by Methods 524.2 and 508.

##### 4.4.2 Data Reduction and Reporting

NJDEP is currently in the process of reviewing data packages, validating the laboratory compliance with standard operating procedures and project plans, and providing summaries of environmental and QA results in their report of findings.

###### 4.4.2.1 Data Validation

###### 4.4.2.1.1 First Investigation Phase (May 1997 to September 1997)

Data validation has been completed for all data collected and analyzed from the first investigation phase. Results reported in the following sections have been edited to reflect validation comments, qualifiers, and corrections. The following presents a summary of validation results:



- Results of data validation of data collected during the first investigation phase indicate that all (100 percent) semivolatile results including soil, groundwater, sediment and associated blanks have been rejected and deemed unusable due to improper initial calibrations during analysis. Results presented in the following sections only contain semivolatile results from the second and third investigation phases. Where applicable, semivolatile results from the first investigation phase have been flagged with an "R" qualifier and the result omitted.
- Eight soil samples submitted for analysis of TCL volatiles +10 have been rejected and deemed unusable (SB01-2, SB01-4, SB07-2, SB07-3, SB29-2, SB29-3, SB48-2, and SB60-1) due to a rejected continuing calibration (% D exceeded the limit of 40%) and internal standard areas below limits without associated re-analysis.
- Results of data validation of groundwater data collected during the first investigation phase indicate that all (100 percent) metals results from the first sampling round including associated blanks have been rejected and deemed unusable due to expired Linear Range Analysis determinations and expired Detection Limit determinations.
- Two samples submitted for volatile organics (USEPA 524.2) and one sample submitted for pesticides/PCB have been rejected for holding time exceedances and retention time exceedances, respectively.
- For data collected during the second round of groundwater sampling, four samples submitted for volatile organic analysis were rejected due to a rejected continuing calibration. One sample submitted for pesticide/PCB analysis was rejected for retention time exceedances.
- Several other analytes and compounds were qualified, negated, and/or rejected based on a variety of quality assurance issues. Results presented in the remaining sections of this report have been corrected based on validation results. All validation results can be found in reports completed by Environmental Quality Associates, Inc., Quality Specialists and Environmental Analysts, Inc. , and the NJDEP.

#### 4.4.2.1.2 Second Investigation Phase (September 1998 to November 1998)

Data validation has been completed for all data collected and analyzed from the second investigation phase. Results reported in the following sections have been edited to reflect validation comments, qualifiers, and corrections. The following presents a summary of validation results:

- Several analytes and compounds were qualified, negated, and/or rejected based on a variety of quality assurance issues. Results presented in the remaining sections of this report have been corrected based on validation results. All validation results can be found in reports completed by Environmental Quality Associates, Inc., Quality Specialists and Environmental Analysts, Inc. , and the NJDEP.

#### 4.4.2.1.3 Third Investigation Phase (December 1999 to March 2000)

As of the date of this report, NJDEP data validation has not been complete for this investigation phase. Reported concentrations, findings and conclusions reach in this report must therefore be regarded as qualitative until the validation process is complete.

#### 4.4.2.2 Data Reduction

As part of the data validation process, the analytical results were reduced to include only positive results. These data tables included all qualifier codes and were cross-checked against the analytical results by an individual other than the author to ensure accuracy. In addition to positive results and qualifier codes, the data tables included sampling location and date and laboratory identification numbers. Data were presented according to matrix type (i.e., soil and sediments, groundwater and surface water, etc.).

#### 4.4.2.3 Reporting

Data generated in the field was logged into the field log book, saved on field data loggers where appropriate, and noted on field logs. The field log book will be kept in project files as a hard copy documentation of field conditions, observations, and findings. Sampling and drill logs were prepared to present field data and are included in this report.

## 5.0 FINDINGS

The following sections describe findings of each of the three investigation phases for the Martin Aaron Site. Detailed findings for the Remedial Investigation are presented in the following appendices:

- Appendix A - Boring Logs
- Appendix B - Geotechnical Testing Results
- Appendix C - Sampling Logs
- Appendix D - Building Safety Inspection Report
- Appendix E - Test Pit Logs and Photos
- Appendix F - Monitoring Well Construction Diagrams, Well Permits
- Appendix G - Well Development Records
- Appendix H - Geophysical Data

### 5.1 Remedial Investigation Activities

#### 5.1.1 Structural Stability Monitoring

Qualified Kimball personnel performed a detailed examination of potential overhead hazards (pipes, debris, etc.) including visual inspection of the entire area and destructive/qualitative testing of supporting beams and joists. Buffer zones encompassing areas directly below overhead hazards, as well as interpreted potential trajectory paths of falling objects, were subsequently cordoned off and avoided. Fifteen Avonguard Calibrated Crack, Slope and Movement Monitors, were installed at predetermined locations to monitor the behavior of the structure during investigative activities. These devices were visually monitored periodically throughout the entire term of interior investigative activities. Said visual monitoring evidenced that investigative activities did not contribute to the degradation of structural integrity of the Martin Aaron building. The activities were executed without incident.

#### 5.1.2 Geophysical Survey Results

A ten feet by five feet survey grid, used for both the magnetic and EM surveys, was constructed over the survey area. East and west grid perimeters were marked at the profile interval (10 feet) using either wood stakes or marking paint depending on surface conditions. Each stake was labeled with the appropriate profile number. Profile numbers were assigned starting in the northwest corner of the grid with 1001, increasing southward by one. Two perpendicular baselines were constructed parallel to and at the approximate midpoint between the east and west grid perimeters. The baselines were marked at ten foot intervals across the site. Profiles were established by stretching a rope/tape, marked at the station interval (5 feet), perpendicular to and between two corresponding perimeter stakes. Station numbers were assigned starting along the west grid perimeter with 101, increasing to the east by one. (Refer to **Figure 14 - Geophysical Survey Area**).

#### Magnetic Survey

A Total of eleven primary magnetic anomalies thought to represent buried metal objects were identified. **Figure 15, Magnetic Total Field Contour Map**, presents the location of each magnetic anomaly identified as M1 through M11. In addition, five secondary anomalous areas were identified. Secondary locations were selected based on proximity to primary anomalies and their probability of representing buried metal. Secondary locations are not identified but were considered during investigations.

Each of the eleven primary magnetic anomalies is described below:

- M1- Approximately 35 x 40 feet located in the northeast corner of the site. Anomaly is located in area previously excavated by the Department of Justice. Large amplitude magnetic anomaly indicating large mass of ferrous metal.
- M2- Approximately 25 x 40 feet also located in the northeast corner of the site. Similar to M1 in amplitude. Magnetic gradient data indicate this anomaly may represent a distinct burial separate from anomaly M1.
- M3 - Approximately 75 x 25 feet located between the Martin Aaron and Rhodes buildings. Anomaly is located in area previously excavated by the Department of Justice. Consists of two (2) large amplitude magnetic lows. Secondary anomaly located to the north. Secondary location is very close to the former waste storage concrete pad and should be investigated if drums found at anomaly M3.
- M4 - Approximately 75 x 45 feet located east of the Rhodes building. Anomaly consists of many large amplitude magnetic highs and lows. Some of the anomaly may be due to the building and the perimeter fence. Previous reports of drum burial activities identify this area as a possible location.
- M5 - Approximately 35 x 15 feet located against the east wall of the Martin Aaron building. Some surface metal in this area. Previous inspections by the NJDEP noted this area as possibly being a "fresh" excavation with little vegetation and disturbed surface soil.
- M6 - Approximately 45 x 40 feet located immediately north of the Rhodes building. Characterized by very large amplitude magnetic low and several medium amplitude magnetic highs. Secondary locations identified to the west and south east of anomaly M6. These areas should be investigated if M6 is found to contain drums.
- M7 - Approximately 20 x 15 feet located northwest of M6. Medium amplitude magnetic dipole located in surface depression. May indicate previous excavation activity.
- M8 - Approximately 25 x 20 feet located near the center of the site. Also within surface depression. Consists of a large amplitude magnetic low.
- M9 - Approximately 25 x 30 feet located near the northwest corner of the site. Similar to M6 but a bit smaller. Located in a slight surface depression characterized by a very large amplitude magnetic low.
- M10- Approximately 35 x 30 located north of the Martin Aaron building. Very similar to M9 and M6 in amplitude. Located under existing concrete surface which probably makes this location unlikely for previous drum burial.
- M11- Similar to anomaly M8 located near the center of the site. Secondary to M8. To be excavated if drums found at M8.

## Electromagnetic Survey

A total of ten primary electromagnetic anomalies thought to represent buried metal objects and or disposal pits/trenches were identified. **Figure 16, Conductivity Contour Map**, presents the location of each electromagnetic anomaly identified as EM1 through EM10..

Each of the ten primary electromagnetic anomalies is described below:

- EM1, EM2, EM3 - Located near the center of the site thought to represent possible burial trenches. Each anomaly is approximately 60 x 15 feet oriented north- south. Similar sizes and parallel orientation may indicate trench excavation. No magnetic anomalies observed in these locations indicating the absence of significant buried ferrous metal.
- EM4 - Approximately 180 x 15 feet located in the eastern portion of the site. Anomaly is oriented north-south extending from the front of the Rhodes building to the northern fence. Similar in appearance to anomalies EM1, EM2, and EM3. Long linear length may indicate buried utility. Possibly former drainage to the former surface ditch along the north property border.
- EM5, EM6 - Approximately 60 x 15 feet each oriented north south and located north of the Rhodes building near EM4. Very similar in appearance to EM1 through EM3. No corresponding Magnetic anomaly may indicate the absence of significant ferrous metal (steel drums). If investigations of anomalies EM1 through EM3 find buried waste, this anomaly should be investigated.
- EM7- Approximately 35 x 40 feet located east of the Rhodes building. Corresponds with magnetic anomaly M4 described above. Possible buried metal (drums).
- EM8, EM9- Located between the Martin Aaron and Rhodes buildings. Correspond with magnetic anomaly M3 and secondary magnetic anomaly north of M3. Possible buried metal. In area of previous test pits conducted by the Department of Justice.
- EM10- Approximately 20 x 20 located north of the Martin Aaron building and overlapping magnetic anomaly M10. Located under existing concrete which probably makes this location unlikely for previous drum burial.

## Ground Penetrating Radar Survey

Ground Penetrating radar data were collected over the majority of geophysical anomalies interpreted from the magnetic and electromagnetic data. In addition, GPR was used to evaluate the location of underground storage tanks north and east of the former Martin Aaron building.

In general, GPR was found to be ineffective in delineating the horizontal extent of subsurface objects thought to represent the cause of observed anomalies. Reasons for failure of the GPR method include the very high conductivity of the site soil as observed in the electromagnetic data. Radar penetration depth is very limited in high soil conductivities. Also, the existence of construction debris, rubble, and other subsurface structures throughout the site limits the ability to interpret the extent of possible burial areas. Interpretations are generally qualitative in nature using visual interpretation of the reflected

signal. If the entire subsurface returns reflections characteristic of burial pits or buried debris, delineations of the target objects cannot be made.

For specific data and visual representation of the geophysical survey results refer to **Appendix H - Geophysical Data** and **Figure 17, Geophysical Survey Composite Results**.

### 5.1.3 Building Interior Soil Borings

Seventeen interior (Former Martin Aaron Main Complex) soil borings were drilled (or attempted), via split spoon advanced by Geoprobe®, from June 16, 1997 to June 19, 1997, by James C. Anderson Associates, Inc. of Mt. Laurel, New Jersey (JCA). Successful borings encountered groundwater at six to ten feet below grade. Flame-ionization detector (FID) screening detected volatile organics in all borings except SB39 and SB41. Volatiles were detected in a range from the surface to fourteen feet below grade.

On October 8, 1998, an additional six interior (Former Martin Aaron Main Complex) soil borings were drilled via split spoon advanced by electric jackhammer by JCA. Three borings were advanced within the former one story brick structure west of the processing areas of the building and three borings were advanced within the former three story warehouse portion of the building (Re-sampling borings). FID screening detected volatile organics in all borings to approximately eight feet below grade. Borings within the former one story brick structure encountered cinders and other combustion by-products to depths of at least six feet below grade. Borings within the former three-story warehouse encountered similar material as was found during the initial investigation phase. (Refer to **Appendix A: Boring Logs**).

No building interior (Martin Aaron Main Building Complex) soil borings were advanced during the third investigation phase.

### 5.1.4 Exterior Soil Borings

Twenty exterior soil borings were drilled, via split spoon advanced by a combination of mud rotary and HSA techniques, from June 24, 1997 to July 18, 1997, by JCA. Borings encountered groundwater at five to 7.5 feet below grade. All borings, with the exception of SB07, SB11 and SB17, contained what were classified as cinders and/or a slag-type material. A strong product (fuel) odor was associated with borings SB03, SB05, SB07, SB12, SB17 and SB19. FID screening detected volatile organics (VOC) in all borings except SB13. Significant levels of VOCs were detected in a range from the surface to nineteen feet below grade. (Refer to **Appendix A: Boring Logs**).

Between September 29, 1998 and October 8, 1998, an additional fifty-four exterior soil borings and eleven re-sampling soil borings were drilled via split spoon advanced by Geoprobe® by JCA. Exterior borings completed on the South Jersey Port Corp. property (SB63 to SB79) encountered groundwater at depths ranging from six to twelve feet below grade, with the deeper groundwater observed in the borings located in the west and southwestern portions of the property (SB64, SB65, SB66, SB71, and SB72). Cinders and/or slag-type material were again reported in the majority of the South Jersey Port Corp. property borings. Soil borings completed around the site perimeter (SB80 to SB99 and SB105 to SB109) encountered groundwater at depths ranging from five to nine feet below grade with the deeper groundwater identified in areas south and southeast of the Martin Aaron property. All borings encountered some degree of cinders/slag type material with only limited amounts reported in borings

located along South Broadway (SB81 to SB84). The remaining borings advanced within the yard area of the Martin Aaron property encountered similar subsurface conditions as found during the initial investigation phase (Refer to **Appendix A: Boring Logs**).

Exterior soil borings advanced during the third investigation phase are described in Sections 5.1.6 and 5.1.7 below.

#### 5.1.5 UST Soil Borings

Thirteen UST soil borings were drilled, via split spoon advanced by HSA, from July 21, 1997 to July 23, 1997, by JCA. Borings encountered groundwater at six to eight feet below grade. All borings evidenced black staining (oily sheen) and a product (fuel) odor. FID screening detected VOCs in all borings in a range from the surface to sixteen feet below grade (maximum depth advanced). No additional UST borings were advanced during the second or third investigation phases. (Refer to **Appendix A: Boring Logs**).

#### 5.1.6 Delineation Soil Borings

Between December 1, 2000 and December 9, 2000, twenty-four delineation borings (pesticide/PCB and semivolatile) were advanced via split spoon sampling and Geoprobe® techniques by JCA. Delineation borings were advanced within close proximity to previous borings advanced during the first and second investigation phases. All borings encountered similar subsurface conditions as found during the first and second investigation phases.

#### 5.1.7 Rhodes Building Delineation Borings

Between December 1, 2000 and December 9, 2000, sixteen Rhodes Building Delineation borings were advanced via split spoon sampling and Geoprobe® techniques by JCA. Delineation borings were advanced around the perimeter of and beneath the former Rhodes building. Borings within the Rhodes building (SB125 to SB128) encountered approximately four feet of void space beneath a double concrete slab floor (two 4-inch slabs separated by a few inches of void space). Beneath the void space, borings generally encountered two to four feet of fill (cinders and slag) underlain by silt, silty sand and clayey silt. Groundwater was generally encountered between nine and twelve feet below the concrete floor. FID/PID screening detected volatile organics (VOC) in all borings.

The remaining borings were advanced around the building perimeter (SB118 to SB124 and SB129), along the east property border (SB130 and SB131), and at off-site locations southeast of the former Rhodes building (SB132 and SB133). All borings encountered similar subsurface conditions as found during the first and second investigation phases. On-site borings encountered fill material consisting of cinders, slag, brick, and other debris extending six to ten feet below the ground surface. FID/PID screening detected volatile organics (VOC) in all borings except off-site borings SB131 and SB132. A product (fuel) odor was associated with borings SB120, SB121, and SB129.

#### 5.1.8 Monitoring Well Borings

Seven monitoring well borings were drilled, via split spoon advanced by a combination of mud rotary and HSA techniques, from June 25, 1997 to July 8, 1997, by JCA. Borings encountered groundwater at 5.5 to ten feet below grade. All borings, with the exception of SB30, contained what were classified as

cinders and/or a slag-type material. A product (fuel) odor was associated with borings SB22, SB23 and SB24. FID screening detected VOCs in all borings except SB20 and SB26. Significant levels of VOCs were detected in a range from the surface to thirty seven feet below grade. (Refer to **Appendix A: Boring Logs**).

Between October 12, 1998 and October 16, 1998, an additional seven monitoring well borings were drilled by JCA via a combination of HSA and mud rotary techniques. Borings encountered groundwater between six and eighteen feet below grade with the deeper groundwater observed east and southeast of the Martin Aaron Property (MW10S and MW9S (SB116)). FID screening detected VOCs in all borings with significant levels encountered in boring MW7S (SB113). A strong product (fuel) odor was reported while advancing MW7S.

Between December 27, 1999 and December 29, 1999, an additional two monitoring well borings were drilled by JCA via a combination of HSA and mud rotary techniques. Borings encountered groundwater at sixteen feet below grade. FID/PID screening did not detect VOCs in the borings.

#### 5.1.9 Test Trenches/Pits

Twenty four test pits (including four multi-pit excavations) and two sewer basin excavations were dug, via a track-excavator, from August 4, 1997 to August 13, 1997, by Kimball. A few test pits encountered groundwater at five ½ (5.5) to ten (10) feet below grade. Most test pits contained fill material comprised mainly of ashes, cinders, sand and construction debris (pieces of brick and concrete). TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP22, TP23 and TP24 also contained a metallic slag-type material. TP04 contained orange sand and large pieces of concrete and brick. TP05 contained black stained sand, large pieces of concrete and purple stained soil. Drum lids, bungs and pieces of crushed drums were observed just below the surface at test pits TP09, TP13, TP17, TP18 and TP21. Drum liners were observed in test pits TP11, TP21 and TP23. A cache of an unidentified white powder was observed in test pit TP21 at a level of 3.5-5' below the ground surface. Various articles of personal protective equipment (PPE), such as rubber boots and gloves, were observed in test pits TP08 and TP11. FID screening detected VOCs in all test pits/trenches except TP04, TP05, TP15 and TP20. Significant levels of VOCs were detected in a range from the surface to six feet below grade (maximum excavation depth). (Refer to **Appendix E: Test Pit Logs**). Test pits were not excavated during the second and third investigation phases.

#### 5.1.10 Monitor Well Sampling

During the first investigation phase, monitor well sampling was conducted from August 14, 1997 to August 15, 1997 (Event #1) and again on September 15, 1997 (Event #2), by Kimball. Both events included the sampling of the newly install monitoring wells and the Camden City Well #7. During both events, all wells (with the exception of the City Well) were checked with an interface probe for presence of product, none of which yielded positive results. However, a strong product odor and discoloration was noted in both MW-2S and MW-2M. While purging of the monitoring wells during event #1, the following parameters were checked: temperature; specific conductivity; % dissolved oxygen; and pH. The range of results for wells checked during Event #1 are as follows:



{PRIVATE Well	Temperature (°C)	Specific Conductivity (us)	Dissolved Oxygen (%)	PH
{PRIVATE	19.53	----	14.4	7.47
MW-1M	16.68	----	18.3	6.76
MW-2M	17.03	----	21.3	6.67
MW-3S	17.04	----	29.2	6.99
MW-3M	15.78	----	32.7	6.68
MW-4S	21.25	----	24.4	6.66

The results for wells checked during Event #2 are as follows:

{PRIVATE Well	Temperature (°C)	Specific Conductivity (us)	Dissolved Oxygen (%)	PH
MW-1S	19.80	----	9.0	7.15
MW-1M	16.40	----	31.2	7.06
MW-3S	18.01	----	40.6	6.87
MW-3M	16.53	----	71.3	6.76
MW-4S	20.11	----	77.8	6.85

(Refer to **Appendix C: Sampling Logs**). Due to the delicate nature of the analytical device utilized in collecting the above-mentioned data, Kimball believed it inadvisable to immerse it in the odorous and discolored purge water from MW-2S (Events 1 & 2) and MW-2M (Event 2), thus, no data was recorded or is presented. In addition, specific conductance was not recorded due to a malfunction of the recording equipment.

During the second investigation phase, monitor well sampling was conducted from November 10 1998 to November 11, 1998, by Kimball. The second investigation phase groundwater sampling included the sampling of the seven (7) existing monitoring wells installed as part of the first investigation phase, and the seven (7) new monitoring wells installed during the second investigation phase. All wells were checked with an interface probe for presence of product, none of which yielded positive results. However, a strong product odor and discoloration was noted in monitoring wells MW-2S, MW-2M, and MW7S. While purging of the monitoring wells the following parameters were checked: temperature; specific conductivity; % dissolved oxygen; and pH. The range of results are as follows:

{PRIVATE Well	Temperature (°C)	Specific Conductivity (us)	Dissolved Oxygen (%)	PH
{PRIVATE	17.22	4650	26.8	8.10
MW-1M	15.83	1451	48.9	7.71
MW-2M	15.78	1430	17.17	7.28
MW-3S	16.35	1088	9.4	7.39
MW-3M	14.82	1242	9.9	6.45
MW-4S	17.16	1213	26.2	7.09
MW-5S	19.60	4052	15.9	8.15
MW-6S	16.51	2810	14.0	7.48
MW-7S	15.73	1368	18.6	7.78
MW-8S	17.30	2556	27.2	6.95
MW-9S	16.41	1491	17.7	6.83
MW-9D	15.86	1377	8.2	6.81
MW-10S	21.41	1657	18.7	7.40

During the third investigation phase, monitor well sampling was conducted from January 18, 2000 to January 19, 2000 (Event #1) and again on February 17, 2000 (Event #2), by Kimball. The first event included the sampling of the remaining wells installed during the first two investigation phases and the two new monitoring wells installed as part of the third investigation phase. During both events, each well was checked with an interface probe for presence of product, none of which yielded positive results. However, a strong product odor and discoloration was noted in both MW-2S and MW-2M. While purging of the monitoring wells during event #1, the following parameters were checked: temperature; specific conductivity; % dissolved oxygen; and pH. The range of results for wells checked during Event #1 are as follows:

{PRIVATE Well	Temperature (°C)	Specific Conductivity (us)	Dissolved Oxygen (%)	PH
{PRIVATE	15.57	2474	19.44	7.16
MW-1M	15.37	932	47.4	6.19
MW-2M	15.55	1050	39.2	6.17
MW-5S	15.70	3368	34.81	7.54
MW-6S	14.70	3124	39.74	6.88
MW-8S	15.73	1365	23.71	6.48
MW-9S	15.27	1326	11.99	7.00
MW-9D	15.34	1616	14.03	7.18
MW-10S	16.33	1755	10.47	7.44
MW-11S	14.49	1484	19.72	7.30
MW-11M	14.52	2110	7.74	7.10

The results for wells checked during Event #2 are as follows:

{PRIVATE Well	Temperature (°C)	Specific Conductivity (us)	Dissolved Oxygen (%)	PH
MW-11S	15.32	1575	15.53	7.15
MW-11M	15.50	2432	11.73	7.06

#### 5.1.11 Hydropunch® Sampling

Twelve groundwater screening samples were collected, via a Hydropunch® II sampler, from July 9, 1997 to July 17, 1997, by JCA / Kimball. No notable discoloration or odor were observed during sampling. Refer to **Appendix A: Boring Logs** for locations and depths of Hydropunch® samples. No Hydropunch sampling was conducted during the second and third investigation phases.

#### 5.1.12 Sediment Sampling

Two sediment samples were collected, via stainless steel/HDPE dredging device, on August 14, 1997, by Kimball. Both samples emitted a strong odor (reminiscent of paint sludge or solvents) and produced a noticeable sheen (Refer to **Appendix C: Sampling Logs**). No sediment sampling was conducted during the second and third investigation phases.

### 5.2 Remedial Investigation Analytical Results

The following sub-sections describe sampling results based on sample matrix, media disposition and analytical parameters. Results discussed are positive concentrations observed from each type of sample. The attached tables show positive analytical results only. **Table 5 – Analysis Qualifiers**, presents an explanation of data qualifiers and shading used on the ensuing result tables and qualifiers used on the result figures.

As of the date of this report, NJDEP validation of the analytical data submitted for the third investigation phase has not been completed. For reporting purposes, all data are assumed to be valid. The data, results, and conclusions should be considered as qualitative at this time.

#### 5.2.1 Soil and Sediment Samples

##### 5.2.1.1 Surface Soil Samples

##### 5.2.1.1.1 Volatiles

Analytical results from surface soil samples (0-2' depth) report positive concentrations of twenty seven volatile parameters. Twelve of these parameters were measured at concentrations exceeding NJDEP's Impact to Groundwater Soil Cleanup Criteria (IGWSCC). The most common compounds detected at concentrations in excess of the IGWSCC include 1,2-dichloroethene (16 samples), tetrachloroethene (PCE) (30 samples), and trichloroethene (TCE) (21 samples). Other compounds detected at

concentrations above the IGWSCC but at a lesser frequency include 1,1-dichloroethane (1 sample), 1,2-dichloroethane (1 sample), benzene (4 samples), chlorobenzene (3 samples), chloroform (4 samples), cis-1,2-dichloroethene (2 samples), methylene chloride (7 samples), toluene (1 sample), and xylene (total) (7 samples). 1,2-Dichloroethene (total) concentrations range from below detection limit to a maximum of 180 mg/kg in sample SB05-2. PCE concentrations range from below method detection limit to a maximum of 2400 mg/kg in sample SB05-2. TCE concentrations range from below method detection limit to a maximum of 1800 mg/kg in sample SB31-2. Maximum concentrations for the remaining compounds detected in excess of the IGWSCC are as follows: 1,1-dichloroethane (98 mg/kg, SB31-2), 1,2-dichloroethane (4.2 mg/kg, SB31-2 sample), benzene (19 mg/kg, SB54-1), chlorobenzene (21 mg/kg, SB05-2), chloroform (14 mg/kg, SB129A2), cis-1,2-dichloroethene (7.1 mg/kg, SB120-1), methylene chloride (18 mg/kg, SB33-2), toluene (1800 mg/kg, SB31-2), and xylene (total) (190 mg/kg, SB08-2)

Of the twenty-seven parameters with reported positive concentrations, six were detected at concentrations in excess of the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) (1,2-dichloroethene (total), benzene, tetrachloroethene, toluene, trichloroethene, and vinyl chloride) and four (4) were detected above the NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) (benzene, tetrachloroethene, toluene, and trichloroethene). Results indicate twenty-one samples contain one or more compounds at concentrations above the RDCSCC and seventeen samples, collected from borings located mainly within and near the processing areas of the former Martin Aaron building, contain one or more compounds at concentrations above the NRDCSCC. The most common compound detected at concentrations above the RDCSCC and/or NRDCSCC was tetrachloroethene which exceeded both criteria in each of the seventeen samples.

Total volatile concentrations ranged from less than 2 mg/kg in sample SB15-2 to 4567 mg/kg in sample SB31-2. Three samples exceeded the NJDEP criteria for total volatiles (1,000 mg/kg). Total volatile concentrations in excess of the NJDEP criteria (1,000 mg/kg) were detected in samples SB05-2 (3421 mg/kg), SB31-2 (4567 mg/kg), and SB33-2 (1630 mg/kg) collected from borings located within and near the processing areas of the former Martin Aaron building.

A complete listing of volatile positive analytical results, including results above NJDEP soil cleanup criteria, can be found in **Table 6 - Surface Soil Samples - Positive Analytical Results - Volatiles**. Results are also shown on **Figure 18, Soil Results Above Criteria - Volatiles**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above each of the NJDEP soil cleanup criteria.

#### 5.2.1.1.2 Semi-Volatiles

Analytical results from surface soil samples (0-2' depth) report positive concentrations of thirty eight semi-volatile parameters. Seven of these parameters were measured at concentrations exceeding one or more of the three NJDEP soil cleanup criteria (IGWSCC, RDCSCC, NRDCSCC). One compound (benzo(b)fluoranthene) was measured at concentrations in excess of the IGWSCC. Sample SB88-1 contained benzo(b)fluoranthene at a concentration of 82 mg/kg which exceeds the IGWSCC of 50 mg/kg.

Of the thirty eight compounds with reported positive concentrations, seven were detected at concentrations above the RDCSCC. The most common compounds detected above the RDCSCC include benzo(a)anthracene (46 samples), benzo(a)pyrene (56 samples), benzo(b)fluoranthene (48

samples) and benzo(k)fluoranthene (46 samples). Other compounds detected at concentrations above the RDCSCC, but at a lesser frequency, include chrysene (6 samples), dibenz(a,h)anthracene (10 samples) and indeno(1,2,3-cd)pyrene (21 samples). Maximum concentrations of the most common compounds detected above the RDCSCC were found in sample SB88-1 as follows: benzo(a)anthracene (61 mg/kg), benzo(a)pyrene (75 mg/kg), benzo(b)fluoranthene (82 mg/kg) and benzo(k)fluoranthene (69,mg/kg). Results indicate fifty four samples contain one or more compounds at concentrations above the RDCSCC.

Each of the seven compounds detected above the RDCSCC were also detected above the NRDCSCC. The most common compounds detected above the NRDCSCC were again benzo(a)anthracene (16 samples), benzo(a)pyrene (56 samples), benzo(b)fluoranthene (14 samples) and benzo(k)fluoranthene (13 samples). Other compounds detected at concentrations above the NRDCSCC, but at a lesser frequency, include chrysene (1 samples), dibenz(a,h)anthracene (10 samples) and indeno(1,2,3-cd)pyrene (5 samples). Results indicate fifty four samples contain one or more compounds above the NRDCSCC.

Total semi-volatile concentrations ranged from less than 2 mg/kg to 743 mg/kg in sample SB88-1 located north of the site property along the southern side of Everett Street. The highest on-site total semi-volatile concentration was detected in sample SB129A1 (437 mg/kg) located along the southeast side of the former Rhodes building.

A complete listing of semi-volatile positive analytical results, including results above action levels, can be found in **Table 7 Surface Soil Samples - Positive Analytical Results - Semi-Volatiles**. Results are also shown on **Figure 19, Soil Results Above Criteria - Semivolatiles**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above each of the NJDEP soil cleanup criteria.

#### 5.2.1.1.3 TAL Metals

Analytical results from surface soil samples (0-2' depth) report positive concentrations of twenty four analytes. Eleven of these analytes were measured at concentrations exceeding the NJDEP RDCSCC. The most common analytes detected at concentrations above the RDCSCC include arsenic (62 samples), barium (52 samples), cadmium (45 samples) and lead (29 samples). Other analytes detected above the RDCSCC, but at a lesser frequency, include antimony (8 samples), beryllium (6 samples), chromium (1 sample), copper (3 samples), thallium (2 samples), mercury (1 sample) and zinc (10 samples). Arsenic concentrations range from 3.1 mg/kg to a maximum of 1640 mg/kg in sample SB133-1. Barium concentrations range from below method detection limits to 25,300 mg/kg in sample SB20-1. Concentrations of cadmium range from below detection limits to 21.4 mg/kg in sample SB129-1. Maximum lead concentrations were found in sample SB116-1 at 6620 mg/kg. Maximum concentrations detected for the remaining analytes above the RDCSCC are as follows: antimony (106 mg/kg, SB48-1), beryllium (2 mg/kg, SB33-1), chromium (845 mg/kg, SB133-1), copper (1260 mg/kg, SB129-1), thallium (19.6 mg/kg, SB129-1), mercury (16 mg/kg, SB36-1), and zinc (4470 mg/kg, SB106-1). Results indicate seventy three samples contain one or more analytes at concentrations above the RDCSCC.

Of the eleven analytes detected at concentrations above the RDCSCC, seven were also detected at concentrations in excess of the NRDCSCC (arsenic, beryllium, chromium, copper, lead, thallium and zinc). The most common analyte detected above the NRDCSCC was arsenic (62 samples). Beryllium

was detected at concentrations in excess of the NRDCSCC in six samples. Chromium was detected above NRDCSCC in one sample. Copper was detected above NRDCSCC in three samples. Lead was detected above the NRDCSCC in twenty two samples. Thallium was detected above NRDCSCC in two samples. Zinc was detected above NRDCSCC in ten samples. Results indicate sixty six samples contain one or more analytes at concentrations in excess of the NRDCSCC.

A complete listing of TAL metal positive analytical results, including results above criteria, can be found in **Table 8 - Surface Soil Samples - Positive Analytical Results - Metals**. Results are also shown on **Figure 22, Soil Results Above Criteria - Metals**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of analytes detected above each of the NJDEP soil cleanup criteria.

#### 5.2.1.1.4 Pesticides/Polychlorinated Biphenyls (PCBs)

Analytical results from surface soil samples (0-2' depth) report positive concentrations of twenty three (23) pesticide/PCB parameters. Three (3) of these parameters were measured at concentrations exceeding the NJDEP RDCSCC. One (1) sample (SB08-1) exceeds the criteria for 4,4-DDE with a concentration of 6.9 mg/kg. Ten (10) samples exceed the criteria for Aldrin with the highest concentration from sample SB04-1 (45 mg/kg). Six (6) samples exceed the criteria for Dieldrin with the highest concentration from sample SB16-1 (4 mg/kg). Results indicate nineteen samples contain one or more pesticide parameters at concentrations in excess of the RDCSCC.

Of the pesticide compounds detected at concentrations in excess of the RDCSCC, aldrin (7 samples) and dieldrin (3 samples) were also detected in excess of the NRDCSCC. Results indicate nine samples submitted for laboratory analysis (SB03-1, SB04-1, SB05-1, SB08-1, SB16-1, SB17-1, SB19-1, SB144-1, SB157-1) contain either aldrin or dieldrin at concentrations above the NRDCSCC. No pesticide compounds were detected at concentrations in excess of the NJDEP IGWSCC.

Thirty seven samples submitted for laboratory analysis exceed the RDCSCC for total PCBs with the highest concentration from sample SB08-1 (65 mg/kg). Of the thirty seven samples containing total PCBs at concentrations in excess of the RDCSCC, twenty two also exceed the NJDEP NRDCSCC. Results indicate one (1) sample (SB08-1) located immediately north of the former Martin Aaron building processing areas contains total PCBs (65 mg/kg) in excess of the NJDEP IGWSCC. The result of 65 mg/kg identified in sample SB08-1 is also an exceedance of Toxic Substance Control Act (TSCA) levels for PCBs indicating the presence of regulated waste.

A complete listing of pesticide/PCB positive analytical results, including results above each of the three NJDEP soil cleanup criteria, can be found in **Table 9 - Surface Soil Samples - Positive Analytical Results - Pesticide/PCBs**. Results are also shown on **Figure 20, Soil Results Above Criteria - Pesticides**, and **Figure 21, Soil Results Above Criteria - Total PCB**, which show sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above each of the NJDEP soil cleanup criteria for pesticides and PCBs, respectively.

Screening of total PCB was also completed during the second investigation phase using the Ensyst Inc. PCB RIS<sup>®</sup> Soil Test System. Severe matrix interference was reported by the Kimball chemist with final extracted solutions resulting in a variety of colors. Based on these reports, the test kit data have been designated as highly suspect and such are not presented. Subsequent Phase III soil borings and samples provide a more accurate and reliable source of PCB delineation described in Section 6.0 below.

#### 5.2.1.1.5 Dioxin/Furan

Analytical results from surface soil samples (0-2' depth) report positive concentrations of twenty five Dioxin/Furan parameters. Nine (9) of these parameters were measured at concentrations exceeding 1000 pg/g (1 ppb). USEPA toxic equivalency factors were applied to the dioxin/furan results to obtain the equivalent amount of 2,3,7,8 tetrachlorodibenzodioxin represented by the other compounds resulting in a total toxic equivalent value for each sample. Toxic equivalent results ranged from 0.492 pg/g in sample 46-1 to 280.691 pg/g in sample SB16-1. A complete listing of dioxin/furan positive analytical results can be found in **Table 10 - Soil Samples - Positive Analytical Results - Dioxin/Furan**. Results are also shown on **Figure 23, Dioxin/Furan Toxic Equivalent Results - Soil**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected.

#### 5.2.1.2 Subsurface Soil Samples

##### 5.2.1.2.1 Volatiles

Analytical results from subsurface soil samples (below 2' depth) report positive concentrations of thirty four volatile parameters. Fifteen of these parameters were measured at concentrations exceeding NJDEP IGWSCC. Compounds detected above criteria generally compare to compounds detected in surface samples with the addition of 2-butanone, ethylbenzene and vinyl chloride detected above the IGWSCC in subsurface samples. The most common compounds detected above IGWSCC in the subsurface soil were identical to surface soil results and include 1,2-dichloroethene (total) (31 samples), tetrachloroethene (35 samples), and trichloroethene (27 samples). Other compounds detected above the IGWSCC, but at a lesser frequency, include 1,1-dichloroethane (2 samples), 1,2-dichloroethane (6 samples), 2-butanone (2 samples), benzene (17 samples), chlorobenzene (3 samples), chloroform (12 samples), cis-1,2-dichloroethene (2 samples), ethylbenzene (3 samples), methylene chloride (13 samples), toluene (2 samples), vinyl chloride (2 samples) and xylene (total) (24 samples). 1,2-Dichloroethene (total) concentrations range from below detection limit to a maximum of 900 mg/kg in sample SB33-4. PCE concentrations range from below method detection limit to a maximum of 1500 mg/kg in sample SB32-2. TCE concentrations range from below method detection limit to a maximum of 390 mg/kg in sample SB33-4. Maximum concentrations for the remaining compounds detected in excess of the IGWSCC are as follows: 1,1-dichloroethane (74 mg/kg, TP13-1), 1,2-dichloroethane (360 mg/kg, SB32-2), 2-butanone (160 mg/kg, SB10-3), benzene (78 mg/kg, SB52-1), chlorobenzene (18 mg/kg, SB33-4), chloroform (15 mg/kg, SB32-2), cis-1,2-dichloroethene (46 mg/kg, SB129A3), ethylbenzene (320 mg/kg, SB51-1), methylene chloride (33 mg/kg, SB33-4), toluene (700 mg/kg, SB51-1), vinyl chloride (19 mg/kg, SB52-1) and xylene (total) (2000 mg/kg, SB51-1). Results indicate sixty one samples contain one or more compounds at concentrations above the IGWSCC.

Of the thirty four parameters with reported positive concentrations, nine were detected at concentrations in excess of the RDCSCC (1,2-dichloroethane, 1,2-dichloroethene (total), 1,2-dichloropropane, benzene, styrene, tetrachloroethene, trichloroethene, vinyl chloride and xylene (total)) and seven were detected above the NRDCSCC (1,2-dichloroethane, 1,2-dichloropropane, benzene, tetrachloroethene, trichloroethene, vinyl chloride, and xylene (total)). Results indicate thirty two samples contain one or more compounds at concentrations above the RDCSCC and twenty four samples, collected from borings located mainly within and near the processing areas of the former Martin Aaron building, contain one or more compounds at concentrations above the NRDCSCC. The most common

compound detected at concentrations above the RDCSCC and/or NRDCSCC was tetrachloroethene which exceeded both criteria in twenty one samples.

Total volatile concentrations ranged from less than 1 mg/kg to 3303 mg/kg in sample SB51-1. Nine (9) samples exceeded the NJDEP criteria for total volatiles (1,000 mg/kg). Total volatile concentrations in excess of the NJDEP criteria (1,000 mg/kg) were detected in samples collected immediately north and southeast of the Rhodes building (SB16-3 (1110 mg/kg), SB129A3 (1111 mg/kg)), beneath the processing area of the former Martin Aaron building (SB32-2 (2499 mg/kg), SB32-3 (1248 mg/kg), SB33-4 (2573)) and around the underground storage tanks located north of the Martin Aaron building (SB50-1 (1556 mg/kg), SB51-1 (3303 mg/kg), SB52-1 (2201), SB56-2 (2419 mg/kg) and SB59-1 (1223 mg/kg)).

A complete listing of volatile positive analytical results, including results above criteria, can be found in **Table 11 - Subsurface Soil Samples - Positive Analytical Results - Volatiles**. Results are also shown on **Figure 18, Soil Results Above Criteria - Volatiles**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above each of the NJDEP soil cleanup criteria

#### 5.2.1.2.2 Semi-Volatiles

Analytical results from subsurface soil samples (below 2' depth) report positive concentrations of thirty nine semi-volatile parameters. Twelve of these parameters were measured at concentrations exceeding one or more of the three NJDEP soil cleanup criteria (IGWSCC, RDCSCC, NRDCSCC). Five compounds (acenaphthene, benzo(b)fluoranthene, fluoranthene naphthalene, and pyrene) were measured at concentrations in excess of the IGWSCC. Sample SB112-3 contains benzo(b)fluoranthene (65 mg/kg), fluoranthene (170 mg/kg) and pyrene (130 mg/kg) at concentrations which exceed the IGWSCC. Sample SB23A-2 contains naphthalene (1900 mg/kg) in excess of the IGWSCC. Sample SB75-3 contains pyrene (120 mg/kg) in excess of the IGWSCC. Sample SB132A3 contains acenaphthene (120 mg/kg), fluoranthene (120 mg/kg), and naphthalene (130 mg/kg) in excess of the IGWSCC. Sample SB137-2 contains naphthalene (360 mg/kg) in excess of IGWSCC.

Of the thirty nine compounds with reported positive concentrations, nine were detected at concentrations above the RDCSCC. Similar to the surface soil results, the most common compounds detected above the RDCSCC include benzo(a)anthracene (23 samples), benzo(a)pyrene (24 samples), benzo(b)fluoranthene (22 samples) and benzo(k)fluoranthene (21 samples). Other compounds detected at concentrations above the RDCSCC, but at a lesser frequency, include bis(2-ethylhexyl)phthalate (1 sample), chrysene (9 samples), dibenz(a,h)anthracene (11 samples), indeno(1,2,3-cd)pyrene (17 samples) and naphthalene (2 samples). Maximum concentrations of the most common compounds detected above the RDCSCC were as follows: benzo(a)anthracene (97 mg/kg, SB112-3), benzo(a)pyrene (73 mg/kg, SB112-3), benzo(b)fluoranthene (65 mg/kg, SB112-3) and benzo(k)fluoranthene (26 mg/kg, SB75-3). Results indicate twenty eight samples contain one or more compounds at concentrations above the RDCSCC.

Seven of the nine compounds detected above the RDCSCC were also detected above the NRDCSCC. The most common compounds detected above the NRDCSCC were again benzo(a)anthracene (16 samples), benzo(a)pyrene (24 samples), benzo(b)fluoranthene (15 samples) and benzo(k)fluoranthene (14 samples). Other compounds detected at concentrations above the NRDCSCC, but at a lesser frequency, include chrysene (1 samples), dibenz(a,h)anthracene (11 samples) and indeno(1,2,3-



cd)pyrene (4 samples). Results indicate twenty five samples contain one or more compounds above the NRDCSCC.

Total semi-volatile concentrations ranged from less than 2 mg/kg to 6800 mg/kg in sample SB140-2 located across S. Broadway on the South Jersey Port property. The highest on-site total semi-volatile concentration is 3601 mg/kg in sample SB23A-2 located near the east property border.

A complete listing of semi-volatile positive analytical results, including results above each NJDEP cleanup criteria, can be found in **Table 12 - Subsurface Soil Samples - Positive Analytical Results - Semi-Volatiles**. Results are also shown on **Figure 19, Soil Results Above Criteria - Semivolatiles**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above each of the NJDEP soil cleanup criteria.

#### 5.2.1.2.3 TAL Metals

Analytical results from subsurface soil samples (below 2' depth) report positive concentrations of twenty four (24) TAL metal parameters. Twelve of these parameters were measured at concentrations exceeding the RDCSCC. Analytes detected above criteria generally compare to surface soil results with the addition of nickel (1 sample). Similar to the surface soil findings, the most common analytes detected above the RDCSCC include arsenic (91 samples), barium (72 samples), cadmium (59 samples) and lead (41 samples). Other analytes detected above the RDCSCC, but at a lesser frequency, include antimony (21 samples), beryllium (8 samples), chromium (12 samples), copper (3 samples), mercury (2 samples), thallium (2 samples) and zinc (21 samples). Arsenic concentrations range from 1.4 mg/kg to a maximum of 14,000 mg/kg in sample SB23-6. Barium concentrations range from below method detection limits to 28,400 mg/kg in sample SB92-3. Concentrations of cadmium range from .07 mg/kg to 231 mg/kg in sample SB75-3. Maximum lead concentrations were found in sample SB106-3 at 8,960 mg/kg. Maximum concentrations detected for the remaining analytes above the RDCSCC are as follows: antimony (198 mg/kg, SB30-3), beryllium (3.2 mg/kg, SB08-3), chromium (16,000 mg/kg, TP13-1), copper (1240 mg/kg, SB64-4), mercury (25.6 mg/kg, SB126-1), nickel (295 mg/kg, SE03-1), thallium (3 mg/kg, SB118-3), and zinc (15,200 mg/kg, SB69-3). Results indicate one-hundred ten samples contain analytes above the RDCSCC.

Of the twelve analytes detected at concentrations above the RDCSCC, eight were also detected at concentrations in excess of the NRDCSCC (arsenic, beryllium, cadmium, chromium, copper, lead, thallium and zinc). The most common analyte detected above the NRDCSCC was arsenic (91 samples). Beryllium was detected at concentrations in excess of the NRDCSCC in eight samples. Cadmium was detected above NRDCSCC in one sample. Chromium was detected above NRDCSCC in twelve samples. Copper was detected above NRDCSCC in three samples. Lead was detected above the NRDCSCC in twenty nine samples. Thallium was detected above NRDCSCC in two samples. Zinc was detected above NRDCSCC in twenty one samples. Results indicate ninety four samples contain one or more analytes at concentrations in excess of the NRDCSCC.

A complete listing of TAL metal positive analytical results, including results above each NJDEP soil cleanup criteria, can be found in **Table 13 - Subsurface Soil Samples - Positive Analytical Results - Metals**. Results are also shown on **Figure 22, Soil Results Above Criteria - Metals**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above each of the three NJDEP soil cleanup criteria.

#### 5.2.1.2.4 Pesticides/PCBs

Analytical results from subsurface soil samples (below 2' depth) report positive concentrations of twenty three pesticide/PCB parameters. Three of these parameters were measured at concentrations exceeding the NJDEP RDCSCC. Thirteen samples exceed the RDCSCC for Aldrin with the highest concentration from sample SB05-3 (11 mg/kg). Six samples exceed the criteria for Dieldrin with the highest concentration from sample SB49-2 (0.92 mg/kg). Two samples exceed the criteria for heptachlor with the highest concentration from sample SB114-3 (4.5 mg/kg). Results indicate seventeen samples contain one or more pesticides at concentrations in excess of the RDCSCC.

Of the pesticide compounds detected at concentrations in excess of the RDCSCC, aldrin (6 samples), dieldrin (3 samples) and heptachlor (2 samples) were also detected in excess of the NRDCSCC. No pesticide compounds were detected at concentrations in excess of the NJDEP IGWSCC.

Thirty samples submitted for laboratory analysis exceed the RDCSCC for total PCBs with concentrations above criteria ranging from 0.63 mg/kg in sample SB38-3 to 107 mg/kg in sample TP05-1. Of the thirty samples containing total PCBs at concentrations in excess of the RDCSCC, sixteen also exceed the NJDEP NRDCSCC. Results indicate two samples, TP05-1 and TP09-1, contain total PCBs in excess of the NJDEP IGWSCC. The result of 107 mg/kg identified in sample TP05-1, and 83 mg/kg identified in sample TP09-1 are also an exceedance of Toxic Substance Control Act (TSCA) levels for PCBs indicating the presence of regulated waste.

A complete listing of pesticide/PCB positive analytical results, including results above each of the three NJDEP soil cleanup criteria, can be found in **Table 14 - Subsurface Soil Samples - Positive Analytical Results - Pesticide/PCBs**. Results are also shown on **Figure 20, Soil Results Above Criteria - Pesticides**, and **Figure 21, Soil Results Above Criteria - Total PCB**, which show sample locations, sample identifications, sample depths, and concentrations and distribution of compounds detected above the each of the NJDEP soil cleanup criteria for pesticides and PCBs, respectively.

Screening of total PCB was also completed during the second investigation phase using the Ensysis Inc. PCB RIS<sup>®</sup> Soil Test System. Severe matrix interference was reported by the Kimball chemist with final extracted solutions resulting in a variety of colors. Based on these reports, the test kit data have been designated as highly suspect and such are not presented. Subsequent Phase III soil borings and samples provide a much more accurate and reliable source of PCB delineation data described in Section 6.0 below.

#### 5.2.1.2.5 Total Petroleum Hydrocarbons (TPH)

Analytical results from subsurface soil samples (below 2' depth) report positive concentrations of Total Petroleum Hydrocarbons. One sample (SB59-1) exceeds the NJDEP's cleanup criteria for total organics with a concentration of 19,000 mg/kg. A complete listing of TPH positive analytical results, including results above criteria, can be found in **Table 15 - Soil Samples - Positive Analytical results - TPH**. Results are also shown on **Figure 24, Petroleum Hydrocarbon Positive Results**, which shows sample locations, sample identifications, depths, and concentrations compounds detected.

#### 5.2.1.2.6 Additional Analyses

Eleven subsurface soil samples were also analyzed for Particle Size, Total Organic Carbon (TOC) and Total Organic Halogen (TOX). None of these samples exceed the NJDEP's most stringent cleanup criteria for TOC or TOX. A complete listing of analytical results can be found in **Table 16 - Particle Size Analysis**.

#### 5.2.1.2.7 Product (Unidentified Solid) Sample

A single product sample (white powdery substance) was recovered from TP21 at a depth of 4-5 feet. Analytical results from this sample report positive concentrations of: fourteen TAL metal parameters; and four pesticides/PCBs parameters. None of these parameters were measured at concentrations exceeding any of the three NJDEP soil cleanup criteria. Semivolatile results from the product sample collected during the first investigation phase were rejected and deemed unusable by the data validation process as described in section 4.0 above. Therefore, semivolatile results are not reported. A complete listing of these positive analytical results, as well as compatibility testing results, can be found in **Table 17 - Solid Waste Sample - Positive Analytical Results**.

#### 5.2.1.3 Sediment Samples

##### 5.2.1.3.1 Volatiles

Analytical results from sediment samples (sewer basins) report positive concentrations of seventeen VOC parameters. Thirteen of these parameters were measured at concentrations exceeding the NJDEP IGWSCC. The most common compounds detected above the IGWSCC include styrene, PCE, toluene, TCE, and xylene (total) identified in both sample SD01-1 and sample SD02-1. Other compounds detected at concentrations above the IGWSCC include 1,1,1-trichloroethane (140 mg/kg), 1,1-dichloroethane (21 mg/kg), 1,2-dichloroethene (total) (880 mg/kg), and chlorobenzene (7.4 mg/kg) in sample SD01-1, and 1,2-dichloropropane (63 mg/kg), 2-butanone (190 mg/kg), acetone (110 mg/kg), and chloroform (4.7 mg/kg) in sample SD02-1.

Seven of the thirteen compounds detected at concentrations in excess of the IGWSCC were also detected at concentrations above the RDCSCC and four compounds were detected above the NRDCSCC. Compounds detected above either the RDCSCC or NRDCSCC and their maximum concentrations include 1,1-dichloroethene (total) (880 mg/kg), 1,2-dichloropropane (63 mg/kg), styrene (39 mg/kg), PCE (2700 mg/kg), toluene (5500 mg/kg), TCE (340 mg/kg), and xylene (total) (680 mg/kg). A complete listing of volatile compound positive analytical results, including results above the NJDEP soil cleanup criteria, can be found in **Table 18 - Sewer Basin Samples - Positive Analytical Results**.

##### 5.2.1.3.2 Semi-Volatiles

Semi-volatile results from sediment samples (sewer basins) collected during the first investigation phase were rejected and deemed unusable by the data validation process as described in section 4.0 above. Therefore, results are not reported.

### 5.2.1.3.3 TAL Metals

Analytical results from sediment samples (sewer basins) report positive concentrations of twenty three TAL metal parameters. Seven of these parameters were measured at concentrations exceeding the NJDEP RDCSCC. The most common analytes detected above the RDCSCC and the corresponding maximum concentrations include antimony (26.5 mg/kg, SD02-1), cadmium (29.3 mg/kg, SD01-1), lead (2710 mg/kg, SD02-1) and zinc (3110 mg/kg, SD02-1) identified in both sample SD01-1 and sample SD02-1. Other analytes identified at concentrations in excess of the RDCSCC include arsenic (38.7 mg/kg, SD02-1), barium (1980 mg/kg, SD02-1), and nickel (819 mg/kg, SD02-1). Of the analytes detected above the RDCSCC, three (3) were also detected at concentrations above the NRDCSCC. Analytes detected above the NRDCSCC include arsenic, lead, and zinc. A complete listing of TAL metal positive analytical results, including results above the NJDEP soil cleanup criteria, can be found in **Table 18 - Sewer Basin Samples - Positive Analytical Results**.

### 5.2.1.3.4 Pesticides/PCBs

Analytical results from sediment samples (sewer basins) report positive concentrations of five pesticide/PCB parameters. None of these parameters were measured at concentrations exceeding any of the three NJDEP soil cleanup criteria. (Comparison was made to soils cleanup criteria to develop a contrast between sewer basin sediments and on-site soil contaminants identified above.) A complete listing of pesticide/PCB positive analytical results can be found in **Table 18 - Sewer Basin Samples - Positive Analytical Results**.

## 5.2.2 Groundwater Samples

### 5.2.2.1 Shallow Monitoring Well/Hydropunch® Samples

#### 5.2.2.1.1 Volatiles

Analytical results from shallow monitoring well/Hydropunch® groundwater samples report positive concentrations of thirty two volatile parameters. Nine of these parameters were measured at concentrations exceeding NJDEP's Groundwater Quality Standard (GQS). Two samples exceed the standard for 1,2-dichloroethane with the highest concentration from sample MW6S-4 (12 ug/l). One sample (SB07-4) exceeds the standard for cis-1,2-dichloroethene (total) with a concentration of 73 ug/l. One sample (MW9S-3) exceeds the standard for 1,2-dichloropropane (with a concentration of 2 ug/l). One (1) sample (MW2S-1) exceeds the standard for Acetone with a concentration of 1400 ug/l. Ten samples exceed the standard for benzene with the highest concentration from sample SB07-5 (560 ug/l) and monitoring well sample MW5S-4 (360 ug/l). Three samples exceed the standard for tetrachloroethene with the highest concentrations from sample SB10-4 (4 ug/l) and monitoring well sample MW9S-3 (2 ug/l). Four samples exceed the standard for trichloroethene with the highest concentration from samples MW9S-3 and MW6S-4 (3 ug/l). One sample (MW3S-3) exceeds the standard for vinyl chloride with a concentration of 13 ug/l. Two (2) samples exceed the standard for Xylene (total) with the highest concentration from sample SB07-5 (3280 ug/l).

A complete listing of volatile positive analytical results, including results above GQS, can be found in **Table 19- Shallow Groundwater Samples - Positive Analytical Results - Volatiles**. Results are also shown on **Figure 25, Groundwater Results Above GQS - Organics**, which shows sample locations, identifications, depths and concentrations of organic compounds detected above NJDEP GQS.

#### 5.2.2.1.2 Semi-Volatiles

Analytical results from shallow monitoring well groundwater samples report positive concentrations of twenty six semi-volatile compound parameters. Two (2) of these parameters (n-nitrosodiphenylamine (1) and naphthalene) were measured at concentrations exceeding NJDEP's GQS. Both compounds were detected at concentrations in excess of the GQS in samples collected from wells MW1S and MW2S. The highest concentration of each compound was found in well MW2S during the 11/10/98 and 1/19/00 sampling events. Maximum concentrations of n-nitrosodiphenylamine (1) were found in samples MW2S-3 (390 ug/l) and MW2S-4 (440 ug/l). Maximum concentrations of naphthalene were found in the same two samples (12000 ug/l and 9800 ug/l, respectively). Concentrations detected in MW1S ranged from 24 ug/l to 17 ug/l n-nitrosodiphenylamine and 3700 ug/l to 1800 ug/l naphthalene. No semivolatile compounds were detected above the method detection limit in sample MW10S-3.

In addition, well MW2S was found to contain 2-methylphenol, 4-methylphenol, and phenol at concentrations in excess of the interim generic criteria for non-carcinogenic organic compounds of 100 ug/l. The maximum concentration of 2-methylphenol (2100 ug/l) was found during the 11/10/98 sampling event. Concentrations of 4-methylphenol ranged from 3100 ug/l to 3800 ug/l over the 11/10/98 and 1/19/00 sampling events. Over the same sampling events, phenol concentrations ranged from 2600 ug/l to 3100 ug/l.

A complete listing of semi-volatile positive analytical results, including results above GQS, can be found in **Table 20 - Shallow Groundwater Samples - Positive Analytical Results - Semi-Volatiles**. Results are also shown on **Figure 25**.

#### 5.2.2.1.3 TAL Metals

Analytical results from shallow monitoring well groundwater samples report positive concentrations of twenty three TAL metal parameters. Twelve of these parameters were measured at concentrations exceeding NJDEP's GQS. Iron was detected above GQS in each sample submitted for analysis with concentrations ranging from 1600 ug/l in sample MW9S-4 to 104000 ug/l in sample MW8S-4. Aluminum and manganese were detected above GQS in all but one samples submitted (MW5S-4) with the highest concentrations recorded in samples MW1S-2 (51,800 ug/l) and MW8S-3 (1840 ug/l), respectively. Arsenic and lead were the next most frequently detected analytes exceeding GQS in nineteen samples. The maximum arsenic concentration was detected in sample MW1S-2 (9800 ug/l). The maximum lead concentration was found in sample MW8S-4 (1470 ug/l). Other analytes detected at concentrations in excess of the GQS include sodium (12 samples), chromium (12 samples), barium (7 samples), cadmium (6 samples), nickel (1 sample) and mercury (1 sample). Maximum concentrations for these analytes are as follows: sodium (572,000 ug/l, MW7S-3), chromium (1090 ug/l, MW1S-2), barium (16,100, MW2S-4), cadmium (55.5 ug/l, MW8S-4), nickel (135 ug/l, MW8S-4 ) and mercury (2.7 ug/l, MW4S-3).

A complete listing of TAL metal positive analytical results, including results above GQS, can be found in **Table 21 - Shallow Groundwater Samples - Positive Analytical Results - Metals**. Results are also shown on **Figure 26, Groundwater Results Above GQS - Inorganics**, which shows sample locations, sample identifications, sample depths, and concentrations and distribution of inorganic analytes detected above NJDEP GQS.

#### 5.2.2.1.4 Pesticides/PCBs

Analytical results from shallow monitoring well groundwater samples report positive concentrations of thirteen pesticide/PCB parameters. Two of these parameters, aldrin and dieldrin were measured at concentrations exceeding NJDEP's GQS. Aldrin was detected at a concentration of 0.13 ug/l in sample MW6S-4, while dieldrin was detected at a concentration of 0.056 ug/l in sample MW11S-5.

In addition, one sample (MW6S-4) was found to contain a total PCB concentration of 5.4 ug/l which exceeds the NJDEP GQS. It should be noted that up until the Phase III sampling events, no pesticide parameters had been detected above GQS in any of the wells sampled. Furthermore, no aroclors had been detected above the method detection limits. A complete listing of pesticide/PCB positive analytical results, including results above GQS, can be found in **Table 22 - Shallow Groundwater Samples - Positive Analytical Results - Pesticide/PCBs**. Results are also shown on **Figure 25**.

#### 5.2.2.2 Deep Monitoring Well/Hydropunch Samples

##### 5.2.2.2.1 Volatiles

Analytical results from deep monitoring well/Hydropunch® groundwater samples report positive concentrations of eleven volatile parameters. One of these parameters was measured at a concentration exceeding NJDEP's GQS. One sample (MW1M-2) exceeds the standard for tetrachloroethene (PCE) with a estimated concentration of 8 µg/l. The result is evaluated as suspect because a duplicate of this sample (MW1M-1) did not report PCE above the detection limit. Also, subsequent samples of the same well (MW1M-3, MW1M-5, MW1M-5D and MW1M-6) reported no PCE above the method detection limits. No other compounds were detected at concentrations above GQS.

A complete listing of volatile positive analytical results, including results above GQS, can be found in **Table 23 - Deep Groundwater Samples - Positive Analytical Results - Volatiles**. Results are also shown on **Figure 25, Groundwater Results Above GQS - Organics**, which shows sample locations, sample identifications, depths, and concentrations of compounds detected above GQS.

##### 5.2.2.2.2 Semi-Volatiles

Analytical results from deep monitoring well groundwater samples report positive concentrations of nine semi-volatile compound parameters. Only one compound (bis(2-ethylhexyl)phthalate) was detected at a concentration in excess of the NJDEP GQS. The compound was detected in new (Phase III) off-site well MW11M at a concentration of 32 ug/l (sample MW11M-5). It should be noted that the duplicate sample (MW11M-6) from this well indicates a estimated concentration of 1 ug/l. In addition, the previous sample collected approximately one month prior (MW11M-4) did not detect bis(2-ethylhexyl)phthalate above the detection limit. No other parameters were measured at concentrations exceeding NJDEP's GQS. A complete listing of semi-volatile positive results, including results above GQS, can be found in **Table 24 - Deep Groundwater Samples - Positive Analytical Results - Semi-Volatiles**. Results are also shown on **Figure 25**.

##### 5.2.2.2.3 TAL Metals

Analytical results from deep monitoring well groundwater samples report positive concentrations of twenty one TAL metal parameters. Six of these parameters were measured at concentrations exceeding

NJDEP's GQS. Seven samples exceed the standard for Aluminum with the highest concentration from sample MW1M-4 (3240  $\mu\text{g/l}$ ). Nine samples exceed the standard for Arsenic with the highest concentration from sample MW2M-4 (528  $\mu\text{g/l}$ ). Fourteen samples exceed the standard for Iron with the highest concentration from sample MW2M-4 (20,900  $\mu\text{g/l}$ ). Two samples exceed the standard for lead with the highest concentrations in samples MW2M-3 (11.9  $\text{ug/l}$ ) and MW9D-3 (11.8  $\text{ug/l}$ ). Sixteen samples exceed the standard for Manganese with the highest concentration from sample MW11M-4 (2390  $\mu\text{g/l}$ ). Six samples exceed the standard for sodium with the highest concentration in sample MW11M-4 (117000  $\text{ug/l}$ ).

A complete listing of TAL metal positive analytical results, including results above GQSs, can be found in **Table 25 - Deep Groundwater Samples - Positive Analytical Results - Metals**. Results are also shown on **Figure 26, Groundwater Results Above GQS - Inorganics**, which shows sample locations, sample identifications, sample depths and concentrations and distribution of inorganic compounds detected above NJDEP GQS.

#### 5.2.2.2.4 Pesticides/PCBs

Analytical results from deep monitoring well groundwater samples report positive concentrations of six pesticide/PCB parameters. None of these parameters were measured at concentrations exceeding NJDEP's GQS. A complete listing of pesticide/PCB positive analytical results can be found in **Table 26 - Deep Groundwater Samples - Positive Analytical Results - Pesticides/PCBs**.

#### 5.2.2.3 Development/Purge Water Holding Tank Samples

A single water sample (HTANK-1) was recovered from the holding tank used to store the development/purge water from the installation, and subsequent sampling, of the new monitoring wells during the first investigation phase. Analytical results from this sample report positive concentrations of: two volatile parameters (1,2-dichloroethene (total), methylene chloride) and zero pesticides/PCBs parameters. None of these parameters were measured at concentrations exceeding NJDEP's GQS. Based on this report of low-level contamination, NJDEP instructed L. Robert Kimball and Associates, Inc. to discharge the contents of the holding tank on-site. The tank was allowed to slowly discharge so as not to allow any effluent to leave the site area or to create a "ponding" situation. The discharge was performed without incident.

A complete listing of positive analytical results, including results above action levels, can be found in **Table 27 - Holding Tank Sample - Positive Analytical Results**. All semivolatile and TAL metal analysis results were rejected and deemed unusable by the data validation process as described in section 4.0 above. Therefore, semivolatile and TAL metal results are not reported.

#### 5.2.2.4 Camden City Well #7 Samples

Potable water samples (prior to treatment) were recovered, during two (2) sampling events of the first investigation phase, from Camden City Well #7, located approximately 3500 feet southeast of the site. Analytical results from this sample report positive concentrations of: two volatile parameters (chloromethane and methylene chloride) and one pesticides/PCBs parameter (dieldrin). None of these parameters were measured at concentrations exceeding NJDEP's GQS. Analytical results from these samples also report positive concentrations of nine TAL metal parameters. Two of these parameters (iron (19300  $\text{ug/l}$ ) and manganese (327  $\text{ug/l}$ )) were measured exceeding NJDEP's GQS.

A complete listing of positive analytical results, including results above action levels, can be found in **Table 28 - City Well Number 7 Samples - Positive Analytical Results**. All semivolatile results and results from two samples submitted for TAL metal and volatile organics analysis were rejected and deemed unusable by the data validation process as described in section 4.0 above. Therefore, no semivolatile results and only one set of TAL metal and volatile organic results are reported.



## 6.0 NATURE AND EXTENT OF CONTAMINATION

Results of intrusive remedial investigation activities indicate former site operations and disposal practices have resulted in contamination of site surface and subsurface soil and shallow groundwater beneath the site. Intrusive activities found the majority of the yard area of the site consists of fill (ash, cinders, demolition rubble) with indications of possible former disposal areas containing drum liners, skimmer belts, buckets and other miscellaneous debris. Results of environmental sampling activities indicate surface and subsurface soil beneath the Martin Aaron building, throughout the yard area and beyond the property borders contain levels of organic and inorganic constituents in excess NJDEP soil cleanup criteria. The primary contaminants of concern within the site surface and subsurface soil include chlorinated and aromatic volatile organic compounds; semi-volatile compounds consisting mostly of polycyclic aromatic hydrocarbons (PAH); pesticides/PCBs and metals.

Hydrogeologic investigation results indicate organic and inorganic constituents are present at concentrations in excess of the NJDEP Groundwater Quality Standards within the shallow and deep groundwater zones beneath the site. The primary constituents of concern within the site shallow groundwater zone include chlorinated and aromatic volatile compounds; semi-volatile compounds (PAH); pesticide/PCBs; and metals. Deep groundwater zone constituents of concern include metals and, to a lesser degree, chlorinated volatile compounds.

### 6.1 Physical Geology/Hydrogeology Assessment

Intrusive remedial investigative activities conducted onsite indicate that the majority of top and shallow subsoils have been removed from the site and replaced with various fill materials, including: construction debris (bricks, concrete, etc.); ashes and cinders; slag-type materials; and in minor cases, wood and refuse. This fill layer ranges from two to seven feet in thickness and is relatively consistent in its existence over the entire site.

The unconsolidated sediments immediately beneath the fill consist primarily of sands and gravels with intervals of silts and clay (Magothy Formation). On-site borings evidence the existence of this formation, which was initially encountered at an approximate depth of ten feet, and ranged in thickness from fifty to fifty two feet.

Under the Martin Aaron site, the upper confining bed between the upper and middle aquifers of the PRM system was expected to be located approximately 40 feet below ground surface and to be less than twenty feet thick. Intrusive on-site remedial investigative activities encountered what was believed to be the uppermost confining clay layer at depths ranging from approximately 57 to 63 feet. Intrusive activities at the site indicate this layer is at least five feet thick. A geotechnical sample obtained from (SB11) this layer (remolded to a density of 106.6 pcf) exhibited a hydraulic conductivity of  $4.1 \times 10^{-8}$  cm/sec. Reports indicate the upper most confining bed consists of thin- to thick-bedded sequence of micaceous silts and clays (Zapeczka, 1984) with an estimated hydraulic conductivity of  $10^{-6}$  cm/sec.

Static water levels obtained during remedial investigative activities evidence shallow groundwater levels between 5.25 and 14.40 feet below ground surface, and deeper groundwater levels between 13.83 and 15.43 feet below ground surface. Measured groundwater elevations in the shallow and deep wells indicate a potential for vertical groundwater movement. Shallow groundwater flow within the upper aquifer is to the east and southeast based on groundwater elevations measured in site monitoring wells. However, based on observations during test pit excavation and soil boring activities, building

foundations and subsurface structures are believed to influence the movement of on-site shallow water creating local mounds and sinks. Secondary flow patterns, due to the observed mounds and sinks, may exist within the site boundaries resulting in migration (horizontal and/or vertical) pathways and/or velocities different than predicted from static water elevation measurements.

The relatively shallow groundwater evidenced in the northwestern portion of the site (MW1S) and extending west onto the South Jersey Port Corp. property (MW4S and MW8S) may be representative of a local perched groundwater zone (Refer to Figure 10 and Figure 12, Section 3 above). Soil borings completed in the south and southwestern portions of the South Jersey Port Corp. property during the second investigation phase evidenced the first groundwater at depths of 10 to 12 feet below ground surface indicating a possible southern extent to this shallow perched water. Data indicate that the shallow groundwater static levels approach levels recorded in the deeper wells on the eastern portions of the site and south east of the site at monitoring wells MW9S, MW9D, MW11S and MW11D.

Deeper groundwater flow within the upper aquifer is to the east and southeast along the dip of the local formations. The easterly flow is expected to be additionally enhanced by groundwater withdrawal at various industrial and public supply wells located east of the site.

## 6.2 Former Disposal Practice Assessment

Magnetic and electromagnetic induction surveys completed at the Martin Aaron site identified several areas of possible drum and other debris disposal. Data quality was generally good considering the extensive cultural noise features at the site (buildings, fence, Rhodes Drum operations). Later excavation activities confirmed that several interpreted geophysical anomalies were probably caused by subsurface structures including footings, concrete pads, pipe runs and other subsurface utilities.

Ground Penetrating Radar (GPR) surveys conducted over the interpreted geophysical anomalies were not effective in delineating the horizontal extent of buried objects. Penetration depths were limited due to the extremely high conductivity of the site soils observed in the electromagnetic induction survey. In addition, the abundance of subsurface structures at the site prohibited identification of burial pits as opposed to construction debris. However, GPR surveys were effective in delineating the actual location of USTs north of the former Martin Aaron building and one UST east of the building.

Test pits excavated at interpreted geophysical anomalies generally encountered fill consisting of ash, cinders, brick, concrete, scrap metal, etc., at all excavation locations. Several excavations confirmed historical reports of former buildings with the discovery of subsurface footings, pipe runs, and other subsurface structures including a subsurface concrete pad or possible vault and vertical 8- inch diameter pipe (possible former well) at test pit TP24. The majority of test pits revealed the probable cause of observed geophysical anomalies. Subsurface disposal areas were confirmed at test pit locations TP08 located in the north central portion of the yard area, TP11 located in the northeast portion of the property and TP21 located just east of the Rhodes operations with the discovery of buried drum rings, boots, and gloves in test pit TP08, drum liners, gloves and drum rings in test pit TP11 and skimmer belts, drum liners, buckets, and solid product (white solid) in test pits TP21 and TP23.

Results of the test pit excavation activities and recent removal activities conducted by the NJDEP indicate that past subsurface disposal practices are evident and containerized wastes are buried at the site. Drums were excavated by the NJDEP in the vicinity of geophysical anomaly M3 in the summer of 1999. However, findings of the intrusive investigation do not support reports of widespread burial.

### 6.3 Sewer Basin Assessment

Excavations around sewer basin numbers 2 (east of former Martin Aaron building) and former basin 4 east of Rhodes Drum building exposed the basin walls and associated piping. Basin number 3 (reportedly between the former Martin Aaron building and Rhodes Drum building) could not be located but a test pit (TP01) was excavated in the reported vicinity.

Except for some loose bricks encountered near the top of sewer basin 4, both basins appeared to be competent and intact to the depth excavated. No leaks were evident from the piping exposed. Soil adjacent to basin 2 was observed to be stained and exhibited a strong odor. It is uncertain whether observed staining is the direct result of discharges from the basin or general site operations. Results of soil sampling (SE01-1) from the excavation adjacent to sewer basin 2 indicates chlorinated hydrocarbons (1,2-dichloroethene (total), 1,2-dichloroethane, trichloroethene) and aromatics (xylene (total)) at concentrations in excess of the IGWSCC. These results are similar to results found in soil beneath the entire processing area of the former Martin Aaron building complex. Soil adjacent to basin 4 also exhibited a slight odor but no staining was evident. Extensive construction debris (bricks and concrete) were identified in soil adjacent to Basin 4.

Sediment samples collected from former basin numbers 1 (within the former Martin Aaron building) and 4 were found to contain chlorinated and aromatic volatile compounds, and metals at concentrations above NJDEP soil cleanup criteria. Compounds and analytes detected are consistent with constituents found in the site soil and groundwater. As mentioned above, chlorinated and aromatic volatile compounds and metals have been identified throughout the property. Results of soil sampling adjacent to Basins 2 and 4 do not indicate that the basins are major sources of the site contamination, relative to results of sampling within the process areas, but probably are contributing.

### 6.4 Underground Storage Tank Assessment

Soil and groundwater investigations conducted in the vicinity of the underground storage tanks (USTs) located immediately north (three known USTs) and east (one UST) of the former Martin Aaron building found evidence of impacts attributable to past leaks and spills. During the Summer of 1999, the NJDEP completed a removal action of all on-site USTs and associated soil. The following assessment is based on data collected prior to the removal actions.

Investigations around the three former USTs located north of the Martin Aaron building evidenced strong fuel odors from two to three feet below ground surface up to a maximum depth of sixteen feet below ground surface. At depths between six and eight feet below ground surface, an oily sheen was observed in the site soil. Analytical results of samples collected from soil borings advanced around the USTs located north of the building (SB50 to SB61) evidenced some of the highest total volatile organic contamination beneath the site, with results above 1000 mg/kg ranging from 1223 mg/kg (SB59) to 3303 mg/kg (SB51). Five of the eleven borings advanced to investigate the USTs contained total volatiles in excess of 1000 mg/kg.

Based on the investigation activities, the impacts from the USTs located north of the building extend north to at least boring VOA1, to the west no further than boring SB02, and to the south no further than boring SB112. These limits were established based on the absence of aromatic hydrocarbons (benzene, toluene, xylene, etc.) at concentrations above NJDEP soil cleanup criteria in these borings. To the east,

aromatic hydrocarbons are present above NJDEP soil cleanup criteria in borings SB33 and SB31 advanced within the former building, SB05 and SB08 advanced just north of the building, and SB12, SE01, and TP01 located east of the building. This trend in contamination, which corresponds closely to the shallow groundwater gradient, probably indicates the extent of impacts attributable to the USTs. A more definite delineation of the eastern extent of impacts is hindered by the presence of elevated levels of chlorinated hydrocarbons beneath the former building.

Aromatic compounds were detected at concentrations above NJDEP GQS in shallow groundwater monitoring wells MW7S (formerly located adjacent to the USTs), MW6S located east of the tank area, MW5S located northeast of the tank area, and MW2S located along the east property border. The highest aromatic hydrocarbon concentrations were observed in wells MW7S and MW5S (both containing benzene at greater than 300 ug/l). Based on the current data, contamination in wells MW5S, MW7S and MW6s is interpreted as being attributable to the UST area. Contamination found in well MW2S is probably due to a more local source as described in subsequent Sections below. Aromatic hydrocarbons at concentrations above the NJDEP GQS were not found in any other wells including the deep monitoring wells.

Investigations completed around the one UST formerly located east of the former Martin Aaron building found no evidence of impacts attributable to the UST.

#### 6.5 Type and Distribution of Soil Contamination

Near surface and subsurface soil contamination is wide spread throughout the site and extends beyond the site property borders. Contaminant parameters detected in excess of NJDEP soil cleanup criteria include: chlorinated and aromatic volatile organic compounds; semi-volatile compounds consisting mostly of polyaromatic hydrocarbons (PAH); metals; and pesticides/PCBs.

##### 6.5.1 Volatile Organics

Volatile organic contamination is widespread across the Martin Aaron property and was found to extend beyond the property borders to the northeast, east and possibly to the southeast. Seventeen volatile organic compounds were detected in site surface and/or subsurface soil at concentrations in excess of at least one of the three NJDEP soil cleanup criteria. Volatile compounds of concern include 1,2-dichloroethane, 1,2-dichloroethene (total), 1,2-dichloropropane, benzene, styrene, tetrachloroethene, toluene, trichloroethene, vinyl chloride and xylene (total) found in site surface and/or subsurface soil at concentrations in excess of the NJDEP RDCSCC. Volatile compounds detected at concentrations in excess of the NJDEP NRDCSCC include 1,2-dichloroethane, 1,2-dichloropropane, benzene, tetrachloroethene, toluene, trichloroethene, vinyl chloride and xylene (total). In general, volatile compound concentrations in site soil were found to decrease with depth across the site. However, the frequency of occurrence and number of compounds detected generally increase with depth.

Shaded and hatched areas on **Figure 18, Soil Results Above Criteria - Volatiles**, represent the estimated extent of volatile organic contamination in excess of the IGWSCC, RDCSCC and NRDCSCC beneath the Martin Aaron site. Concentrations in excess of cleanup criteria were most frequently observed within and around processing areas of the site (near buildings and underground tank areas). Volatile organic concentrations observed in samples collected from the yard area (north of the buildings) probably are a result of former surface and subsurface disposal practices.

As shown on **Figure 18**, results of sampling activities indicate the extent of volatile organic contamination at concentrations in excess of the NJDEP IGWSCC has been delineated to the north, northwest, west, southwest, and southeast with contamination extending only to the property borders in each direction. To the northeast, volatile organic concentrations in excess of the IGWSCC were identified across the property border (SB95) and extending across Sixth Street to boring SB105. To the east, volatile contamination above IGWSCC was identified in surface soil across the property border at boring SB98. No volatile organic contamination was identified further east across sixth Street. To the south ( property adjacent to the former Rhodes building), the extent of possible soil contamination in excess of the IGWSCC remains unknown but was found to extend at least to the south property borders.

When compared to the NJDEP RDCSCC, and as shown on **Figure 18**, the extent of volatile organic contamination falls completely within the IGWSCC delineation with contamination extending across the property borders to the northeast and possibly to the south (south of the Rhodes building). Only two off-site boring locations (SB95 and SB105) were found to contain volatile organic contamination in excess of the RDCSCC. The lack of sample information on the property south of and adjacent to the Rhodes Drum facility does not allow for delineation to the south, however, results of samples collected from soil borings SB132 and SB133 southeast of the property did not contain volatile compounds above the RDCSCC. When compared to the NRDCSCC, the extent of volatile organic contamination is virtually identical to the extent in excess of the RDCSCC with the exception of the northeast portion of the site where contamination extends only to boring SB95 and areas northeast of the former Rhodes building. Delineation of the extent of soil contamination to the south of the former Rhodes building is again limited by the lack of sampling information on the adjacent property.

**Figure 27, Total Volatiles - Surface Soil** and **Figure 28, Total Volatiles - Subsurface Soil**, present the distribution of total volatile concentrations. Increased total volatile results are presented through increased symbol size. Total volatile concentrations in excess of NJDEP criteria for total volatile compounds (1000 ppm) were identified in surface and subsurface soil beneath the northern portions of the Martin Aaron building (processing area) and the yard area just north of the building, and in subsurface soil immediately north and east of the former Rhodes building. The eastern most sample containing total volatiles above 1000 mg/kg was collected along the south property border (SB129). Shaded areas on Figures 27 and 28 present the estimated extent of total volatiles in surface and subsurface soil, respectively, in excess of 1000 mg/kg.

Volatile organic contamination within the site surface and subsurface soil consists mainly of chlorinated volatile compounds and aromatic volatile compounds. Based on sampling results, chlorinated volatile compounds detected at concentrations in excess of either the IGWSCC, RDCSCC or NRDCSCC are present across the entire Martin Aaron property and extend beyond the property boundaries to the northeast (SB95), east (SB98), and possibly south. Aromatic hydrocarbon compounds detected at concentrations in excess of NJDEP soil cleanup criteria are generally located in two areas: around the former underground storage tanks immediately north of the former Martin Aaron building (soil borings SB50 to SB60) extending east beneath the processing area of the building to test pit TP01 and an area northeast of the Rhodes Drum building defined by soil borings SB16, SB23, SB120, SB123 and test pit TP21. In general, aromatic hydrocarbon contamination does not extend beyond the property borders.

The most common chlorinated compounds detected include 1,2-dichloroethene (total), tetrachloroethene and trichloroethene. The highest concentrations of chlorinated volatile compounds were detected in the vicinity of soil borings SB31, SB32 and SB33 located in the northeast portion of the former Martin Aaron building and areas adjacent to and north of the building at soil boring location SB05. These

results are consistent with a source of volatile contamination originating from drum processing areas within the building. South of the source area, chlorinated volatile compound concentrations generally decrease to below NJDEP cleanup criteria at boring locations SB42, SB45, and SB26 marking a probable southern extent of migration. To the west, no chlorinated hydrocarbons at concentrations in excess of NJDEP soil cleanup criteria were identified in borings located along South Broadway, marking a western limit of migration.

To the north and northeast, contaminant concentrations vary across the site. A second area of elevated chlorinated hydrocarbon concentrations was identified at test pit TP13 located near the northeast corner of the site and boring SB95 located just beyond the northeast property border. Elevated concentrations of chlorinated compounds at test pit TP13 (3-4 feet depth) and SB95 (surface and subsurface) may indicate an area of past subsurface disposal as opposed to a limit of migration.

To the east and southeast, chlorinated compounds in site soil at concentrations greater than NJDEP soil cleanup criteria extend across the property to at least borings SB130 and SB131 located along the east property boundary and SB19 located in the southeast corner of the property. Phase III investigations confirmed the presence of chlorinated hydrocarbons above all three NJDEP soil cleanup criteria beneath the former Rhodes building. Only one sample (SB98-1) collected from soil borings advanced east of the property border contains chlorinated hydrocarbons in excess of NJDEP soil cleanup criteria. Waste encountered while excavating test pit TP21 indicates an area of past subsurface disposal as opposed to an extent of contaminant migration. To the west, chlorinated volatile compound contamination in site surface and subsurface soil extends at least to soil boring locations SB02 and SB01. No chlorinated hydrocarbon concentrations in excess of NJDEP soil cleanup criteria were identified beyond the north, northwest, west, or southwest property borders or on the South Jersey Port. Corp. property located across South Broadway.

Aromatic hydrocarbon contamination in site soil consists mainly of benzene, toluene, and xylene (total). Contamination identified around the underground storage tanks located just north of the former Martin Aaron building is probably due to spills and leaks associated with the tanks. Strong odors and a distinctive sheen were observed during advancement of soil borings around the tanks. As mentioned in Section 6.4, above, the eastern portion of this area may be an indication of contaminant migration to the east and southeast beneath the building or may be representative of drum processing operations. The latter scenario is supported by the presence of aromatic hydrocarbon contamination in soil adjacent to sewer basin No. 2 (test pit SE01), which accepted washdown water from operations within the northeast portion of the building, and in soil encountered in test pit TP01 located in the reported vicinity of sewer basin No. 3 (unknown location) which is believed to have received the effluent of Basin No. 2.

Aromatic hydrocarbon contamination in site soil located north and northeast of the Rhodes Drum facility is probably associated with past surface and subsurface disposal practices at the site based on waste encountered in test pit TP21 which included used skimmer belts, 5-gallon buckets and other debris. Aromatic hydrocarbons including xylene (total) (680 mg/kg) and toluene (5500 mg/kg) were detected in sample SD02 collected from former sewer basin No. 4 (east of Rhodes facility). Results indicate that aromatic hydrocarbon contamination detected in the eastern portion of the site has not migrated beyond the eastern property border.

Only one off-site soil boring (SB105) located northeast of the site and across Sixth Street was found to contain aromatic hydrocarbons, specifically benzene, at concentrations in excess of NJDEP soil cleanup criteria. Benzene in SB105 were found at concentrations in excess of both the NJDEP IGWSCC and

RDCSCC. No other samples in the vicinity of SB105 contain aromatic hydrocarbons in excess of NJDEP soil cleanup criteria. Based on this observation, the contamination identified in boring SB105 is interpreted as not site related.

### 6.5.2 Semi-Volatile Organics

Semi-volatile organic contamination appears to be widespread across the Martin Aaron property and extends beyond the property boundaries to the north, east, southeast, and west. Twelve semi-volatile organic compounds were detected in site surface and/or subsurface soil at concentrations in excess of one or more of the three NJDEP soil cleanup criteria. Semi-volatile compounds of concern include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene and naphthalene detected at concentrations above the RDCSCC. Each of these nine compounds, excluding naphthalene, were also detected above the NRDCSCC. Five compounds (acenaphthalene, benzo(b)fluoranthene, fluoranthene naphthalene, and pyrene) were detected at concentrations above IGWSCC.

Shaded and hatched areas on **Figure 19, Soil Results Above Criteria - Semivolatiles**, represent the estimated extent of semi-volatile organic (PAH) contamination in excess of each NJDEP soil cleanup criteria. Contaminant concentrations in excess of soil cleanup criteria were most frequently observed within the yard area of the Martin Aaron property north of the former and existing buildings, and in the northern half of the South Jersey Port. Corp. property across South Broadway. The apparent lack of significant semi-volatile contamination observed beneath the oldest portions of the former Martin Aaron building may indicate the source is associated with past disposal/filling operations as opposed to drum processing although contamination due to site operations has not been ruled out.

As shown on **Figure 19**, the horizontal extent of semi-volatile organic contamination at concentrations in excess of both the RDCSCC and NRDCSCC possibly emanating from the site extends to the limit of current sampling. Semi-volatile contamination at concentrations in excess of the NJDEP IGWSCC was identified at soil borings SB75 located in the northeast corner of the South Jersey Port Corp. property, SB88 located north of the site along Everett Street, SB112 located in the former one-story brick structure of the Martin Aaron building complex, SB23A located on the property along the east border and at one off-site location, boring SB132, located southeast of the property along sixth street. Phase III soil borings were advanced at strategic locations near and around the majority of the areas above the IGWSCC in an attempt to provide additional delineation. Based on the Phase III results, the estimated areas impacted above the IGWSCC were reduced and are shown as hatched areas on **Figure 19**.

Semi-volatile compounds detected at concentrations in excess of the most stringent NJDEP cleanup criteria within the site surface and subsurface soil consists mainly of polyaromatic hydrocarbons (PAH) which are generally associated with combustion and combustion by-products. Results indicate that the PAH contamination may be associated with the observed combustion by-products (ash and cinders) apparently used as fill across the site. This scenario is supported by the apparent lack of contamination identified beneath the southern portions of the former Martin Aaron building and southern portions of the South Jersey Port Corp. property where less combustion by-products were observed in the subsurface. The lack of contamination beneath the older (southern) portions of the former building may indicate the placement of the combustion products was probably after the original site buildings were constructed. Intrusive activities conducted as part of this investigation indicate the observed combustion product fill extends beyond the property borders in all directions. Past operations at the site may be the source of the combustion product. Several large smoke stacks were once located on the property.

**Figure 29, Total Semivolatiles - Surface Soil** and **Figure 30, Total Semivolatiles - Subsurface Soil**, present the distribution of total semivolatile concentrations. Increased total semivolatile results are presented through increased symbol size. These figures show that the majority of total semivolatile results in excess of 150 mg/kg were identified on the Martin Aaron property extending beyond the property border to the northeast, and in the northern portions of the South Jersey Port Corp. property. This distribution of semivolatile contamination supports the former use of the property for contaminant disposal and former use of the South Jersey Port Corp. Property.

### 6.5.3 Pesticides

Pesticide contamination, relative to semi-volatile and volatile contamination described above, appears to be less widespread across the Martin Aaron property. Four pesticide compounds were detected in site surface and/or subsurface soil at concentrations in excess of either the IGWSCC, RDCSCC or NRDCSCC. Pesticide compounds of concern include aldrin, dieldrin and heptachlor found in site surface and subsurface soil at concentrations in excess of NJDEP NRDCSCC. No pesticide compounds were detected at concentrations above IGWSCC.

Shaded and hatched areas on **Figure 20, Soil Results Above Criteria - Pesticides**, presents the estimated extent of pesticide contamination in excess of each NJDEP soil cleanup criteria. Based on sampling results, pesticides detected at concentrations in excess of the RDCSCC are generally confined to the site with the exception of surface and subsurface soil at soil boring location SB91 just across the north property border, and subsurface soil at soil boring SB69 located in the northern portions of the South Jersey Port property. The extent of contamination to the south of the Rhodes building cannot be determined due to a lack of sampling information on the southern adjacent property. However, no pesticides above NJDEP soil cleanup criteria were identified in Phase III borings advanced southeast of the site. The highest pesticide concentrations were identified in soil borings located immediately north and east of the former Martin Aaron building (SB04, SB05, SB08 and SB114) and immediately north of the Rhodes building (SB16) with contamination in soil borings SB04, SB05 and SB08 in excess of 100 times the current RDCSCC. Phase III delineation borings and sampling results indicate that the extent of contamination in excess of 100 times the RDCSCC is limited to the immediate area of these borings.

Contamination at soil boring SB91 is probably due to migration from the Martin Aaron property based on results of additional borings further north. Contamination identified on the South Jersey Port property may be indicative of former Martin Aaron operation activities on that property as discussed in Section 6.5.2 above.

When compared to the NRDCSCC, pesticide contamination is completely within the site property borders with the highest frequency of positive concentrations associated with the former buildings. Away from the buildings, pesticides in excess of the NRDCSCC are generally confined to surface soil.

### 6.5.4 PCB

Total PCB contamination within the site surface and subsurface soil extends across the Martin Aaron site. The horizontal extent of contamination is similar to the extent described for the pesticide contamination above. Shaded areas on **Figure 21, Soil Results Above Criteria - PCB**, presents the estimated extent of total PCB contamination in excess of each NJDEP soil cleanup criteria.



Based on sampling results, and as shown on **Figure 21**, total PCB contamination in excess of the RDCSCC extends from beneath the former processing areas of the former building north to the northern property line, northeast and east to the east and northeast property borders, and southeast to the southeast property border. Results indicate total PCB contamination in excess of the RDCSCC extends across the east and northeast property borders (surface soil) to at least soil boring SB106 located on the east side of Sixth Street. No other soil borings on the east side of sixth street contain total PCB in excess of the RDCSCC. One additional soil boring (SB89) located north of the property contains subsurface soil at concentrations in excess of the RDCSCC. Delineation of total PCB contamination in excess of the RDCSCC across the southern property border south of the former Rhodes building could not be accomplished due to the lack of sample information on the adjacent property. However, Phase III soil borings advanced southeast of the site along Sixth Street do not contain total PCBs in excess of NJDEP soil cleanup criteria.

When compared to the NRDCSCC, the extent of total PCB contamination in the site surface and subsurface soil is generally confined to the Martin Aaron property with the exception of one soil boring location (SB99, surface soil) located just beyond the east property border. Total PCB contamination at concentrations in excess of the NRDCSCC was most frequently identified adjacent to and north of the former and existing site structures with the highest concentrations at sample locations SB05, SB08, SB12, SE01 and TP05.

Total PCB concentrations in excess of the IGWSCC were detected at three sampling locations (TP05, SB08, TP09) on the Martin Aaron property. Results of field test kits were used in an attempt to delineate total PCB concentrations in excess of 50 mg/kg (TSCA regulated waste). Field test kit data experienced extreme matrix interference as reported by the Kimball chemist. Therefore, additional Phase III soil borings and associated laboratory analysis of soil samples were used to better delineate the extent of contamination in excess of 50 mg/kg. Phase III sampling and analysis has resulted in a better delineation of total PCBs in excess of 50 mg/kg and indicate that these areas are generally confined to the three sampling locations mentioned above. Hatched areas on **Figure 21** present the estimated extent of soil containing total PCBs in excess of 50 mg/kg.

The distribution of total PCB contamination presented in **Figure 21** suggests site process operations and past surface and subsurface disposal practices are the source. The distribution of observed concentrations away from the processing areas of the building suggest a combination of contaminant migration, filling operations and possible isolated disposal areas (north and east property borders) as the source of contamination across the site.

Total PCB concentrations in excess of the NJDEP soil cleanup criteria were not detected in samples collected from the South Jersey Port Corp. property.

#### 6.5.5 Metals

Metals contamination is widespread across the Martin Aaron property extending beyond the property boundaries to the north, south, east, southeast, and west. Twelve analytes were detected in site surface and/or subsurface soil at concentrations in excess of the RDCSCC. The most common analytes detected above the RDCSCC, include arsenic, barium, cadmium, lead, antimony, beryllium and chromium. Analytes of additional concern include arsenic, beryllium, cadmium, chromium, copper, lead, thallium and zinc found in site and off-site surface and subsurface soil in excess of NJDEP NRDCSCC.

**Figure 22, Soil Results Above Criteria - Metals**, presents the estimated extent of metal contamination in excess of each NJDEP soil cleanup criteria. In general, metal contamination in excess of either the RDCSCC or NRDCSCC extends to the limits of current sampling. Based on current data, and as presented on **Figure 22**, the horizontal extent of metals contamination possibly emanating from the site has not been delineated to the west, north, east, south or southeast. When compared to NJDEP NRDCSCC, the extent of near surface and subsurface metal contamination is relatively unchanged. However, the extent of contamination above the NRDCSCC was found to be disproportionately attributed to high levels of arsenic and lead (over 150 and 51 surface and subsurface samples, respectively) with levels of other constituents found at concentrations above the NRDCSCC in only a fraction of the samples submitted (beryllium-14 samples, cadmium-1 sample, chromium-13 samples, copper-4 samples, thallium-4 samples, and zinc-31 samples).

Results indicate that the metal contamination may be associated with the observed fill (combustion by-products, ash and cinders) observed in soil borings and test pits across the site. This scenario is supported by the apparent lack of metal contamination at concentrations above NJDEP soil cleanup criteria, besides arsenic, identified beneath the southern portions of the former Martin Aaron building. With the exception of a few outlying analytes (barium and beryllium), contamination observed beneath the former Martin Aaron building generally consists of arsenic while contamination beneath the yard areas north of the building consists of a range of analytes including arsenic, barium, cadmium, lead, antimony, beryllium and chromium. The apparent lack of contamination, other than arsenic, beneath the building and the similarity of the distribution of the other analytes to the distribution of observed semi-volatile contamination may indicate the metals are associated with the fill material.

**Figure 31 Arsenic Distribution - Surface Soil**, and **Figure 32 Arsenic Distribution - Subsurface Soil**, present the distribution of arsenic identified by increasing symbol size. As shown on these figures, the distribution of arsenic relative to all sample locations indicates the highest concentrations in both the surface and subsurface soil are present on the site property extending across the north and east property border. Results indicate the arsenic contamination is site related and not a result of fill material. Shaded areas on **Figures 31** and **32** represent the estimated extent of surface and subsurface arsenic contamination in excess of 1000 mg/kg, respectively. This analysis shows that the arsenic contamination is much more prevalent in the subsurface soil with only one sample exceeding 1000 mg/kg in the surface soil.

#### 6.5.6 Dioxin/Furan

No Dioxin/Furan analytes were detected at or above one mg/kg in soil samples submitted. **Figure 23, Dioxin/Furan Total Toxic Equivalent Results**, presents the sample locations and total toxic equivalent values for samples collected.

#### 6.5.7 Tentatively Identified Compounds (TIC)

Tentatively Identified Compounds (TIC) were reported for the volatile and semi-volatile fractions of soil samples submitted for analysis. **Table 29 – Volatile TIC Frequency** and **Table 30 – Volatile TIC Maximum Concentrations**, present the most frequently observed and the maximum concentrations of soil volatile fraction TICs, respectively. Likewise, **Table 31 – Semi-Volatile TIC Frequency** and **Table 32 – Semi-Volatile TIC Maximum Concentrations**, present the most frequently observed and the maximum concentrations of soil semi-volatile fraction TICs, respectively.

In general, the most frequently reported TICs at the highest concentrations in the volatile fraction were unknown hydrocarbons, unknown aromatic hydrocarbons and ethyl-methyl-, trimethyl-, and dichloro-benzene isomers. The maximum TIC concentrations were generally found in soil samples collected in the former UST area north of the Martin Aaron building, the former processing areas of the building, and immediately north of the former Rhodes building.

The most frequently reported and highest concentrations in the semi-volatile fraction were unknown PAHs, unknown hydrocarbons, and various PAH isomers such as anthracene, naphthalene, and phenanthrene. The maximum TIC concentrations were generally found in the northeast portion of the South Jersey Port property and along the eastern border of the site.

## 6.6 Type and Distribution of Groundwater Contamination

Groundwater contamination was detected in both shallow (water table) and deep monitoring wells installed at the Martin Aaron site. Based on sampling results, groundwater contamination appears to be more prevalent in the shallow zone near the water table surface as opposed to deeper zones of the aquifer. Contaminant parameters detected in the shallow groundwater at concentrations above NJDEP Groundwater Quality Standards (GQS) include: chlorinated and aromatic volatile compounds; semi-volatile compounds; pesticides/PCBs and metals. Contaminant parameters detected in the deeper groundwater include chlorinated hydrocarbons, semi-volatiles and metals but with much fewer compounds and analytes at concentrations above GQS. Contaminants detected in the site groundwater generally correspond to but are not totally representative of the identified soil contaminants.

### 6.6.1 Volatile Organics

Volatile contamination within the shallow portion of the aquifer consists of a combination of aromatic compounds (benzene and xylene) and chlorinated hydrocarbons (tetrachloroethene and trichloroethene, and 1,2-dichloroethene) and is present to at least the west, east, and south property boundaries with low levels of chlorinated hydrocarbons found in downgradient well MW9S. It should be noted that more recent Phase III sampling of well MW9S did not identify any volatile compounds above NJDEP GQS. Aromatic compounds were found at highest levels in hydropunch sample location SB07 and monitoring wells MW5S, MW7S, and MW2S while the highest level of chlorinated hydrocarbons were again detected in hydropunch sample location SB07 and monitoring wells MW7S and MW5S. Although high levels were detected in hydropunch SB07, the results from new near-by monitoring well MW5S are considered more representative of site groundwater. Although a high concentration of vinyl chloride (13 ug/l) was detected in well MW3S, previous sampling of this well did not identify vinyl chloride above method detection limits and the results is considered suspect. No volatile compounds at concentrations above GQS were identified in apparent upgradient well MW1S, down-gradient well MW11S, or wells installed on the South Jersey Port Corp. property (MW4S and MW8S).

Results indicate a source of aromatic hydrocarbon contamination in the vicinity of shallow wells MW7S, MW5S, and MW6S, probably the underground tanks located just north of the former Martin Aaron building. Aromatic hydrocarbon contamination at concentrations above GQS was not identified in down-gradient wells MW10S, MW9S, MW3S or MW11S. Aromatic contamination in the site groundwater has not migrated to the off-site wells. Aromatic contamination identified in monitoring well MW2S may be the result of a secondary source given its distance from the underground tank area and presence of aromatic contamination in the near-by soil described in the previous sections.

Chlorinated hydrocarbon contamination identified in site wells MW7S and MW6S may be migrating south and southeast beyond the site borders as evidenced by contamination identified in monitoring wells MW3S and MW9S.

Only one volatile organic compound (tetrachloroethene) at a concentration above NJDEP GQS was identified in the deeper groundwater samples. Tetrachloroethene was detected in one sample (MW1M-2) from apparent upgradient monitoring well MW1M at an estimated concentration of 8 ug/l. This result is considered suspect due to the fact that results of analysis of a duplicate sample (MW1M-1) reported no tetrachloroethene above the method detection limit. Also, subsequent Phase III sampling results report no volatile compounds in excess of the NJDEP GQS. Results of analysis indicate detectable concentrations of cis-1,2-dichloroethene at levels below the current NJDEP GQS in wells MW1M, MW2M, MW3M and at hydropunch sample locations SB08 and SB09. Results indicate volatile concentrations are consistent across the site in the direction of apparent groundwater flow (northwest to southeast), suggesting the observed concentrations of cis-1,2-dichloroethene represent background conditions and/or a distant up-gradient source. This conclusion may be further justified by the fact that 1,2-dichloroethene represents a degradation product of tetrachloroethene. No volatile compounds at concentrations above GQS were detected in samples collected from monitoring well MW3M or hydropunch location SB29 located on the South Jersey Port Corp. property or from monitoring wells MW9D and MW11M located southeast of the property in the down-gradient direction.

**Figure 25, Groundwater Results Above GQS - Organics**, present sample locations and results of analysis above NJDEP GQS for all sampling events.

#### 6.6.2 Semi-Volatile Organics

Semi-volatile contamination detected in the shallow groundwater consists mainly of naphthalene detected in up-gradient site well MW1S and down-gradient site well MW2S. Although naphthalene is present within the site soils, the fact that only these two wells contain this compound at levels above GQS and the wells are located at the western and eastern site property boundaries, respectively, no conclusions are drawn as to the relation of the observed contamination. Because the wells are separated by over 400 feet, the data indicate separate source areas. Naphthalene was also detected in well MW2M but at levels below GQS. The presence of the naphthalene may be an explanation of observed odor in both wells described in Section 5.0 above.

Only one semi-volatile compound was detected above GQS in the deeper groundwater samples. Down-gradient well MW11M was found to contain bis(2-ethylhexyl)phthalate at concentrations above the NJDEP GQS during the 2/17/00 sampling event. No other deep monitoring wells, including MW11M in the 1/18/00 sampling event, were found to contain semi-volatiles at concentrations above the NJDEP GQS. **Figure 25**, presents sample locations and results of analysis above NJDEP GQS.

#### 6.6.3 Metals

Consistent with findings of the soil investigation, metals at concentrations above GQS were detected in each monitoring well sampled (shallow and deep) during each sampling round. In general, metals at concentrations above GQS were found to be more prevalent and at higher concentrations in the shallow groundwater zone. The most common analytes detected above GQS include aluminum, arsenic, iron, lead and manganese. Each of these analytes were found to be wide spread in the site surface and

subsurface soil. Results indicate the highest levels of individual metals in the shallow groundwater are within site wells MW1S, MW5S, MW7S, MW6S, and MW2S with lesser concentrations in apparent up-gradient wells MW8S and MW4S indicating an on-site source of contamination. Concentrations are also lower in down-gradient monitoring wells MW3S, MW9S and MW11S with concentrations of arsenic in wells MW9S and MW11S below the method detection limit. Results from down-gradient well MW10S indicate migration of contamination off-site to the east in the direction of apparent groundwater flow.

Analytes detected above GQS in the deeper groundwater zone consist of aluminum, arsenic, iron manganese and lead. Arsenic levels are highest in well MW2M (down-gradient) and is also present in well MW1M but at lesser levels indicating an on-site source of arsenic contamination. Arsenic was not detected above GQS in wells MW3M, MW9D and MW11M. Lead at concentrations above GQS was also detected in down-gradient wells MW2M and MW9D during the 11/10/98 sampling event, possibly indicating an on-site source. However, during the most recent Phase III sampling, lead was not detected above GQS in either well.

**Figure 26, Groundwater Results Above GQS - Inorganics**, presents sample locations and results of analysis above NJDEP GQS for all sampling events.

#### 6.6.4 Pesticides/PCB

Pesticide and PCB contamination in the site shallow groundwater is limited to one occurrence of aldrin in well MW6S, one occurrence of dieldrin in down-gradient well MW11S, and one occurrence of total PCBs in well MW6S. Pesticide and PCB contamination identified during the Phase III sampling of site well MW6S could represent a mobilization of these contaminants as no other occurrences have been identified during the RI. The well is located along the east side of the former Martin Aaron building and near an identified area of elevated total PCB and pesticide soil contamination. Because of the wells location southeast of the site, the pesticide contamination identified in one of two sampling rounds of well MW11S is interpreted as being non-site related. **Figure 25**, presents sample locations and results of analysis above NJDEP GQS.

No pesticide/PCB compounds were detected above GQS in the site or off-site deep groundwater.

#### 6.6.5 Off-site Production Well

Analytical results of samples collected from Camden City Well No. 7 found no volatile, semi-volatile, or pesticide/PCB compounds above GQS. Metals detected at concentrations above GQS include Iron and Manganese. Although these analytes are present in site soil and at concentrations above GQS in shallow and deep groundwater beneath the site, the distance between the City Well and the site prohibits the development of a relationship between observed contamination and site contamination at this time.

#### 6.6.6 Tentatively Identified Compounds (TIC)

Tentatively Identified Compounds (TIC) were reported for the volatile and semi-volatile fractions of groundwater samples submitted for analysis. **Table 33 – Volatile TIC Frequency** and **Table 34 – Volatile TIC Maximum Concentrations**, present the most frequently observed and the maximum concentrations of groundwater volatile fraction TICs, respectively. Likewise, **Table 35 – Semi-Volatile TIC Frequency** and **Table 36 – Semi-Volatile TIC Maximum Concentrations**, present the most

frequently observed and the maximum concentrations of groundwater semi-volatile fraction TICs, respectively.

In general, the most frequently reported TICs at the highest concentrations in the volatile fraction were unknown oxygenated hydrocarbons, naphthalene isomers, butylbenzene isomers and chloro-, dichloro- and trimethyl benzene isomers. The maximum TIC concentrations were generally found in shallow groundwater samples collected along the east property border (MW2S) and in areas east and north of the former Martin Aaron building (MW5S and MW6S). The most frequently reported and highest concentrations in the semi-volatile fraction were unknown oxygenated hydrocarbons, unknown carboxylic acids, and trimethyl benzene isomers. The maximum TIC concentrations were generally found near the east property border (MW2S) and in well MW8S on the South Jersey Port property.

As shown in **Tables 34** and **36**, several volatile and semi-volatile fraction TICs were detected at concentrations above the NJDEP interim generic ground water quality criteria of 100 ug/l. The most frequently reported volatile fraction TICs at concentrations above the interim criteria include unknown oxygenated hydrocarbons (170 ug/l), naphthalene (2200 ug/l), trimethyl benzene isomers (150 ug/l), and unknown terpene (1300 ug/l). Compounds detected at concentrations in excess of the criteria were generally found in shallow monitoring wells MW2S, MW5S and MW6S. In the semi-volatile fraction, the most frequently reported TICs at concentrations above the interim criteria include unknowns (1300 ug/l), unknown oxygenated hydrocarbons (1100 ug/l), unknown carboxylic acid (270 ug/l), n-hexadecanoic acid (1300 ug/l), and trimethyl benzene isomers (120 ug/l). Semivolatile TICs detected at concentrations in excess of the interim criteria were generally found in shallow monitoring wells MW2S, MW6S and MW8S.

#### 6.7 Areas of Concern

Based on the findings discussed in Section 5.0 and the analyses of the nature and extent of contamination above, Kimball has identified areas of environmental concern for the Martin Aaron site.

##### 1. Martin Aaron Property

This Area of Concern (AOC) includes the entire yard area of the Martin Aaron property, the remaining site buildings and other structures remaining. Near surface and subsurface soils throughout the yard area and extending beyond the site property borders contain organic and inorganic contamination in excess of NJDEP soil cleanup criteria. Contaminant concentrations vary greatly across the site with the areas of highest concentrations located near the site processing areas (buildings and former underground tanks).

The nature and extent of contamination across the site indicate possible sources may include migration from former site processes within the buildings, migration from source areas near and beneath the buildings, fill material (combustion by-products) apparently used across the property, and/or past surface and subsurface disposal practices (especially along the north and east property borders). Intrusive activities identified possible former disposal areas throughout the yard area of the site containing drum liners, drum rings, partial drums, used protective equipment, 5-gallon buckets, and skimmer belts. Former disposal areas were confirmed along the north and east property borders at sample locations TP08, TP09, TP11, TP21 and TP24. One additional disposal area was identified near magnetic anomaly M3 between the former Rhodes and Martin Aaron buildings where buried containerized wastes were confirmed by the NJDEP. Extensive drum burial, as previously reported, was not evidenced in current excavations.

Results indicate organic constituents in the site near surface and subsurface soil at concentrations in excess of NJDEP soil cleanup criteria extend at least to the property borders and across property borders to the east, northeast, and probably south. Organic contaminants found at concentrations in excess of NJDEP soil cleanup criteria include chlorinated and aromatic volatile compounds, semi volatile compounds consisting of polyaromatic hydrocarbons (PAH), pesticides, and PCBs. The site property is evaluated as high environmental concern due to the extent of identified contamination.

Inorganic contamination in the near and subsurface soil at concentrations above NJDEP soil cleanup criteria extends to the limit of current sampling completed to date. However, results indicate that the apparent extent of contamination is disproportionately attributable to arsenic at concentrations above the NRDCSCC. This fact is also evident beneath the former Martin Aaron building and south where the majority of the inorganic contamination is the result of arsenic.

Based on the results of the RI, the following specific Areas of Concern within the Martin Aaron property AOC have been identified:

- a. **Volatile Organic Hot Spots** – This area of concern includes the shaded areas shown on **Figures 27** and **28** which represent the estimated extent of total volatile organic contamination in excess of 1000 mg/kg in site surface and subsurface soil, respectively. These areas are of high concern in regard to possible source areas for continued groundwater contamination. A portion of this area has already been addressed as part of UST removal actions completed by the NJDEP in the summer of 1999.
- b. **Semi-Volatile Organic Hot Spots** – This area of concern includes the hatched areas on **Figure 19**, which represents the estimated extent of surface and subsurface semi-volatile contamination in excess of the NJDEP IGWSCC. These areas are of high concern in regard to possible source areas for continued groundwater contamination.
- c. **Pesticide Hot Spots** – This area of concern includes surface and subsurface soil in the immediate vicinity of soil borings SB04, SB05 and SB08 where pesticide concentrations exceed 100 times the current RDCSCC.
- d. **PCB Hot Spots** – This area of concern includes the hatched areas on **Figure 21** which represent the estimated extent of surface and subsurface soil total PCB contamination in excess of 50 mg/kg. Total PCB concentrations in excess of 50 mg/kg represent Toxic Substance Control Act [TSCA] regulated waste.
- e. **Inorganic Hot Spots** – This area of concern includes the shaded areas shown on **Figure 32** which represents the estimated extent of arsenic contamination at concentrations above 1000 mg/kg. These areas are of high concern in regard to possible source areas for continued groundwater contamination and also as an indicator of the most highly contaminated areas of the site with regard to inorganic parameters.
- f. **Test Pit 24** – This area of concern is represented by test pit 24 (TP24) located west of the former UST area and north of the former Martin Aaron building. A vertical 8-inch diameter pipe (possible former well) was identified during the test pit excavation. This structure is of high concern with regard to vertical migration of site contamination.
- g. **Buried Containerized Waste** – This area of concern is located between the former Rhodes and Martin Aaron buildings within magnetic anomaly M3. Some buried containers were discovered during the NJDEP UST removal actions in 1999. This area is considered a high concern in as a continuing source of soil and groundwater contamination.

## 2. South Jersey Port Corporation Property

This area of concern includes the South Jersey Port Corporation property (Block 458, Lot 15) located west of the Martin Aaron property on the west side of Broadway. Soil sampling completed on this property has identified soil contamination thought to be representative of former drum handling activities by the Martin Aaron operations. Organic contamination consists mainly of semi-volatile compounds similar to those identified on the Martin Aaron property (PAH). Inorganic contamination in the area soil is similar to contamination identified on the Martin Aaron property consisting of arsenic, barium, cadmium and lead at concentrations above NJDEP cleanup criteria. Analysis of the total semivolatile concentrations and individual metal concentrations indicate higher contamination levels are more frequently observed in the northern portions of the property. The South Jersey Port Corporation property is evaluated as high concern with respect to the contamination identified in the northern portions of the site and the extent of contamination on the property due to past drum storage and drum transfer use. Of particular concern is the area of semi-volatile contamination at concentrations in excess of the IGWSCC. This area is represented by the hatched pattern presented on **Figure 19**.

## 3. Study Area Groundwater

Shallow groundwater contamination identified at the Martin Aaron site extends across the property and beyond the property borders to the east, south, and west. Based on sampling results, groundwater contamination is more prevalent in the shallow zone near the water table surface as opposed to deeper zones of the aquifer. Contaminant parameters detected in the shallow groundwater at concentrations above NJDEP Groundwater Quality Standards (GQS) include: chlorinated and aromatic volatile compounds; semi-volatile compounds; and metals. Both semi-volatile compounds and metals were detected in apparent up-gradient well MW1S indicating a possible off-site source or local point source of contamination in this well. Contaminants detected in the site shallow groundwater generally correspond to but are not totally representative of the identified soil contaminants. The shallow groundwater is evaluated as medium concern based on the limited down-gradient migration of observed contamination and as a possible mechanism for site contamination horizontal migration and vertical migration to deeper groundwater.

Contaminant parameters detected in the deeper groundwater include chlorinated hydrocarbons and metals but with much fewer compounds and analytes at concentrations above GQS. Deep groundwater beneath the site is evaluated as low environmental concern because impacts of site contamination (except for metals) are not readily apparent.



## 7.0 CONCLUSIONS AND RECOMMENDATIONS

### 7.1 Conclusions

Based on the findings presented in Section 5.0 and the analyses of the nature and extent of contamination presented in Section 6.0, Kimball has developed the following conclusions:

#### A. Site Geology/Hydrogeology

The majority of the top and subsoils on the Martin Aaron property have been removed and replaced with various fill materials including construction debris, ashes and cinders, slag type material, and in some cases, wood and other refuse.

The unconsolidated sediments immediately beneath the fill consist primarily of sands and gravels with intervals of silts and clay (Magothy Formation). On-site borings evidence the existence of this formation, which was initially encountered at an approximate depth of ten (10) feet, and ranged in thickness from fifty (50) to fifty two (52) feet.

Shallow groundwater flow within the upper aquifer is believed to be to the east and southeast. However, building foundations and subsurface structures are believed to influence the movement of on-site shallow water. Secondary flow patterns may exist within the site boundaries resulting in migration (horizontal and/or vertical) pathways and/or velocities different than predicted from static water elevation measurements. Deeper groundwater flow within the upper aquifer appears to be to the southeast along the dip of the local formations. Static groundwater elevations indicate the potential for vertical groundwater migration beneath the site.

#### B. Former Disposal Practices

Test pits excavated at interpreted geophysical anomalies generally encountered fill consisting of ash, cinders, brick, concrete, scrap metal, etc., at all excavation locations. Several excavations confirmed historical reports of former buildings with the discovery of subsurface footings, pipe runs, and other subsurface structures including a subsurface concrete pad or possible vault and vertical 8- inch diameter pipe (possible former well) at test pit TP24. The majority of test pits revealed the probable cause of observed geophysical anomalies. Subsurface disposal areas were confirmed at test pit locations TP08 located in the north central portion of the yard area, TP11 located in the northeast portion of the property and TP21 located just east of the Rhodes operations with the discovery of buried drum rings, boots, and gloves in test pit TP08, drum liners, gloves and drum rings in test pit TP11 and skimmer belts, drum liners, buckets, and solid product (white solid) in test pits TP21 and TP23.

Results of the test pit excavation activities and recent removal activities conducted by the NJDEP indicate that past subsurface disposal practices are evident and containerized wastes are buried at the site. Some drums were excavated by the NJDEP in the vicinity of geophysical anomaly M3 in the summer of 1999. However, findings of the intrusive investigation do not support reports of widespread drum burial.

### C. Sewer Basins

Except for some loose bricks encountered near the top of sewer basin 4, both basins appeared to be competent and intact to the depth excavated. No leaks were evident from the piping exposed. Soil adjacent to basin 2 was observed to be stained and exhibited a strong odor. It is uncertain whether observed staining is the direct result of discharges from the basin or general site operations. Results of soil samples from the excavation adjacent to sewer basin 2 indicates chlorinated hydrocarbons and aromatics at concentrations in excess of the IGWSCC. These results are similar to results found in soil beneath the entire processing area of the former Martin Aaron building complex.

Sediment samples collected from former basin numbers 1 (within the former Martin Aaron building) and 4 were found to contain chlorinated and aromatic volatile compounds, and metals at concentrations above NJDEP soil cleanup criteria. Compounds and analytes detected are consistent with constituents found in the site soil and groundwater. As mentioned above, chlorinated and aromatic volatile compounds and metals have been identified throughout the property. Results of soil sampling adjacent to Basins 2 and 4 do not indicate that the basins are major sources of the site contamination, relative to results of sampling within the process areas, but probably are contributing.

### D. Underground Storage Tanks

Soil and groundwater investigations conducted in the vicinity of the underground storage tanks (USTs) located immediately north (three known USTs) and east (one UST) of the former Martin Aaron building found evidence of impacts attributable to past leaks and spills. During the Summer of 1999, the NJDEP completed a removal action of all on-site USTs and associated soil. The following assessment is based on data collected prior to the removal actions.

Investigations around the three former USTs located north of the Martin Aaron building evidenced strong fuel odors from two to three feet below ground surface up to a maximum depth of sixteen feet below ground surface. At depths between six and eight feet below ground surface, an oily sheen was observed in the site soil. Based on the investigation activities, the impacts from the USTs located north of the building extend north to at least boring VOA1, to the west no further than boring SB02, and to the south no further than boring SB112. To the east, aromatic hydrocarbons are present above NJDEP soil cleanup criteria in borings SB33 and SB31 advanced within the former building, SB05 and SB08 advanced just north of the building, and SB12, SE01, and TP01 located east of the building. This trend in contamination, which corresponds closely to the shallow groundwater gradient, probably indicates the extent of impacts attributable to the USTs.

Aromatic compounds were detected at concentrations above NJDEP GQS in shallow groundwater monitoring wells MW7S (formerly located adjacent to the USTs), MW6S located east of the tank area, MW5S located northeast of the tank area, and MW2S located along the east property border. Based on the current data, contamination in wells MW5S, MW7S and MW6S is interpreted as being attributable to the UST area. Contamination found in well MW2S is probably due to a more local source as described in subsequent Sections below.

Investigations completed around the one UST formerly located east of the former Martin Aaron building found no evidence of impacts attributable to the UST.

## E. Soil Contamination

### 1. Volatile Organics

Volatile organic contamination is widespread across the Martin Aaron property and was found to extend beyond the property borders to the northeast, east and possibly to the southeast. Seventeen volatile organic compounds were detected in site surface and/or subsurface soil at concentrations in excess of at least one of the three NJDEP soil cleanup criteria. Volatile compounds of concern include 1,2-dichloroethane, 1,2-dichloroethene (total), 1,2-dichloropropane, benzene, styrene, tetrachloroethene, toluene, trichloroethene, vinyl chloride and xylene (total) found in site surface and/or subsurface soil at concentrations in excess of the NJDEP RDCSCC. Volatile compounds detected at concentrations in excess of the NJDEP NRDCSCC include 1,2-dichloroethane, 1,2-dichloropropane, benzene, tetrachloroethene, toluene, trichloroethene, vinyl chloride and xylene (total). In general, volatile compound concentrations in site soil were found to decrease with depth across the site. However, the frequency of occurrence and number of compounds detected generally increase with depth.

Based on sampling results, chlorinated volatile compounds detected at concentrations in excess of either the IGWSCC, RDCSCC or NRDCSCC are present across the entire Martin Aaron property and extend beyond the property boundaries to the northeast, east, and possibly south. Aromatic hydrocarbon compounds detected at concentrations in excess of NJDEP soil cleanup criteria are generally located in two areas: around the former underground storage tanks immediately north of the former Martin Aaron building extending east beneath the processing area of the building and an area northeast of the Rhodes Drum building. Aromatic hydrocarbon soil contamination does not extend beyond the property borders.

Total volatile concentrations in excess of NJDEP criteria for total volatile compounds (1000 ppm) were identified in surface and subsurface soil beneath the northern portions of the Martin Aaron building (processing area) and the yard area just north of the building, and in subsurface soil immediately north and east of the former Rhodes building. The eastern most sample containing total volatiles above 1000 mg/kg was collected along the south property border.

### 2. Semi-Volatile Organics

Semi-volatile organic contamination appears to be widespread across the Martin Aaron property and extends beyond the property boundaries to the north, east, southeast, and west. Twelve semi-volatile organic compounds were detected in site surface and/or subsurface soil at concentrations in excess of one or more of the three NJDEP soil cleanup criteria. Semi-volatile compounds of concern generally include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene and naphthalene detected at concentrations above the RDCSCC. Each of these nine compounds, excluding naphthalene, were also detected above the NRDCSCC. Five compounds (acenaphthalene, benzo(b)fluoranthene, fluoranthene naphthalene, and pyrene) were detected at concentrations above IGWSCC.

The horizontal extent of semi-volatile organic contamination at concentrations in excess of both the RDCSCC and NRDCSCC possibly emanating from the site extends to the limit of current sampling. Semi-volatile contamination at concentrations in excess of the NJDEP IGWSCC was identified in the northeast corner of the South Jersey Port Corp. property, north of the site along Everett Street, in the former one-story brick structure of the Martin Aaron building complex, on the property along the east border and at one off-site location located southeast of the property along sixth street.

Semi-volatile compounds detected at concentrations in excess of the most stringent NJDEP cleanup criteria within the site surface and subsurface soil consists mainly of polyaromatic hydrocarbons (PAH) which are generally associated with combustion and combustion by-products. Results indicate that the PAH contamination may be associated with the observed combustion by-products (ash and cinders) apparently used as fill across the site. This scenario is supported by the apparent lack of contamination identified beneath the southern portions of the former Martin Aaron building and southern portions of the South Jersey Port Corp. property where less combustion by-products were observed in the subsurface. The lack of contamination beneath the older (southern) portions of the former building may indicate the placement of the combustion products was probably after the original site buildings were constructed. Intrusive activities conducted as part of this investigation indicate the observed combustion product fill extends beyond the property borders in all directions. Past operations at the site may be the source of the combustion product. Several large smoke stacks were once located on the property as evidenced in historical aerial photos and Sanborne maps.

The majority of total semivolatile results in excess of 150 mg/kg were identified on the Martin Aaron property extending beyond the property border to the northeast, and in the northern portions of the South Jersey Port Corp. property. This distribution of semivolatile contamination supports the former use of the property for contaminant disposal and former use of the South Jersey Port Corp. Property.

### 3. Pesticides

Pesticide contamination, relative to semi-volatile and volatile contamination described above, appears to be less widespread across the Martin Aaron property. Four pesticide compounds were detected in site surface and/or subsurface soil at concentrations in excess of either the IGWSCC, RDCSCC or NRDCSCC. Pesticide compounds of concern include aldrin, dieldrin and heptachlor found in site surface and subsurface soil at concentrations in excess of NJDEP NRDCSCC. No pesticide compounds were detected at concentrations above IGWSCC.

Pesticides detected at concentrations in excess of the RDCSCC are generally confined to the site with the exception of surface and subsurface soil just across the north property border, and subsurface soil located in the northern portions of the South Jersey Port property. The highest pesticide concentrations were identified in soil borings located immediately north and east of the former Martin Aaron building and immediately north of the Rhodes building with contamination in excess of 100 times the current RDCSCC.

When compared to the NRDCSCC, pesticide contamination is completely within the site property borders with the highest frequency of positive concentrations associated with the former buildings. Away from the buildings, pesticides in excess of the NRDCSCC are generally confined to surface soil.

### 4. PCB

Total PCB contamination within the site surface and subsurface soil extends across the Martin Aaron site. The horizontal extent of contamination is similar to the extent described for the pesticide contamination above

Total PCB contamination in excess of the RDCSCC extends from beneath the former processing areas of the former building north to the northern property line, northeast and east to the east and northeast

property borders, and southeast to the southeast property border. Results indicate total PCB contamination in excess of the RDCSCC extends across the east and northeast property borders (surface soil) to at least the east side of Sixth Street.

When compared to the NRDCSCC, the extent of total PCB contamination in the site surface and subsurface soil is generally confined to the Martin Aaron property with the exception of one soil boring location just beyond the east property border. Total PCB contamination at concentrations in excess of the NRDCSCC was most frequently identified adjacent to and north of the former and existing site structures

Total PCB concentrations in excess of the IGWSCC were detected at three sampling locations on the Martin Aaron property. The distribution of total PCB contamination suggests site process operations and past surface and subsurface disposal practices are the source. The distribution of observed concentrations away from the processing areas of the building suggest a combination of contaminant migration, filling operations and possible isolated disposal areas (north and east property borders) as the source of contamination across the site.

Total PCB concentrations in excess of the NJDEP soil cleanup criteria were not detected in samples collected from the South Jersey Port Corp. property.

## 5. Metals

Metals contamination is widespread across the Martin Aaron property extending beyond the property boundaries to the north, south, east, southeast, and west. The most common analytes detected above the RDCSCC, include arsenic, barium, cadmium, lead, antimony, beryllium and chromium. Analytes of additional concern include arsenic, beryllium, cadmium, chromium, copper, lead, thallium and zinc found in site and off-site surface and subsurface soil at concentrations in excess of NJDEP NRDCSCC.

Metal contamination in excess of either the RDCSCC or NRDCSCC extends to the limits of current sampling. The horizontal extent of metals contamination possibly emanating from the site has not been delineated to the west, north, east, south or southeast. When compared to NJDEP NRDCSCC, the extent of near surface and subsurface metal contamination is relatively unchanged. However, the extent of contamination above the NRDCSCC was found to be disproportionately attributed to high levels of arsenic and lead (over 150 and 51 surface and subsurface samples, respectively) with levels of other constituents found at concentrations above the NRDCSCC in only a fraction of the samples submitted.

Results indicate that the metal contamination may be associated with the observed fill (combustion by-products, ash and cinders) observed in soil borings and test pits across the site. This scenario is supported by the apparent lack of metal contamination at concentrations above NJDEP soil cleanup criteria, besides arsenic, identified beneath the southern portions of the former Martin Aaron building. The distribution of arsenic relative to all sample locations indicates the highest concentrations in both the surface and subsurface soil are present on the site property extending across the north and east property border. Results indicate the arsenic contamination is site related and not a result of fill material.

## 6. Dioxin/Furan

No Dioxin/Furan analytes were detected at or above one mg/kg in soil samples submitted

## F. Groundwater Contamination

### 1. Volatile Organics

Volatile contamination within the shallow portion of the aquifer consists of a combination of aromatic compounds (benzene and xylene) and chlorinated hydrocarbons (tetrachloroethene and trichloroethene, and 1,2-dichloroethene) and is present to at least the west, east, and south property boundaries with low levels of chlorinated hydrocarbons found in downgradient well MW9S. Aromatic compounds were found at highest levels in monitoring wells MW5S, MW7S, and MW2S while the highest level of chlorinated hydrocarbons were detected in monitoring wells MW7S and MW5S. No volatile compounds at concentrations above GQS were identified in apparent upgradient well MW1S, down-gradient well MW11S, or wells installed on the South Jersey Port Corp. property (MW4S and MW8S).

Results indicate a source of aromatic hydrocarbon contamination in the vicinity of shallow wells MW7S, MW5S, and MW6S, probably the former underground tanks located just north of the former Martin Aaron building. Aromatic hydrocarbon contamination at concentrations above GQS was not identified in down-gradient wells MW10S, MW9S, MW3S or MW11S. Aromatic contamination in the site groundwater has not migrated to the off-site wells. Aromatic contamination identified in monitoring well MW2S may be the result of a secondary source given its distance from the underground tank area and presence of aromatic contamination in the near-by soil described in the previous sections.

Chlorinated hydrocarbon contamination identified in site wells MW7S and MW6S may be migrating south and southeast beyond the site borders as evidenced by contamination identified in monitoring wells MW3S and MW9S.

Only one volatile organic compound (tetrachloroethene) at a concentration above NJDEP GQS was identified in the deeper groundwater samples. No volatile compounds at concentrations above GQS were detected in samples collected from down-gradient monitoring wells MW3M, MW9D and MW11M.

### 2. Semi-Volatile Organics

Semi-volatile contamination detected in the shallow groundwater consists mainly of naphthalene detected in up-gradient site well MW1S and down-gradient site well MW2S. Although naphthalene is present within the site soils, the fact that only these two wells contain this compound at levels above GQS and the wells are located at the western and eastern site property boundaries, respectively, no conclusions are drawn as to the relation of the observed contamination. Because the wells are separated by over 400 feet, the data indicate separate source areas.

Only one semi-volatile compound was detected above GQS in the deeper groundwater samples. Down-gradient well MW11M was found to contain bis(2-ethylhexyl)phthalate at concentrations above the NJDEP GQS during the 2/17/00 sampling event. No other deep monitoring wells, including MW11M in the 1/18/00 sampling event, were found to contain semi-volatiles at concentrations above the NJDEP GQS.

### 3. Metals

Consistent with findings of the soil investigation, metals at concentrations above GQS were detected in each monitoring well sampled (shallow and deep) during each sampling round. In general, metals at concentrations above GQS were found to be more prevalent and at higher concentrations in the shallow groundwater zone. The most common analytes detected above GQS include aluminum, arsenic, iron, lead and manganese. Each of these analytes were found to be wide spread in the site surface and subsurface soil. Results indicate the highest levels of individual metals in the shallow groundwater are within site wells MW1S, MW5S, MW7S, MW6S, and MW2S with lesser concentrations in apparent up-gradient wells MW8S and MW4S indicating an on-site source of contamination. Concentrations are also lower in down-gradient monitoring wells MW3S, MW9S and MW11S with concentrations of arsenic in wells MW9S and MW11S below the method detection limit. Results from down-gradient well MW10S indicate migration of contamination off-site to the east in the direction of apparent groundwater flow.

Analytes detected above GQS in the deeper groundwater zone consist of aluminum, arsenic, iron manganese and lead. Arsenic levels are highest in well MW2M (down-gradient) and is also present in well MW1M but at lesser levels indicating an on-site source of arsenic contamination. Arsenic was not detected above GQS in wells MW3M, MW9D and MW11M. Lead at concentrations above GQS was also detected in down-gradient wells MW2M and MW9D during the 11/10/98 sampling event, possibly indicating an on-site source.

### 4. Pesticides/PCB

Pesticide and PCB contamination in the site shallow groundwater is limited to one occurrence of aldrin in well MW6S, one occurrence of dieldrin in down-gradient well MW11S, and one occurrence of total PCBs in well MW6S.

No pesticide/PCB compounds were detected above GQS in the site or off-site deep groundwater.

### 5. Off-site Production Well

Analytical results of samples collected from Camden City Well No. 7 found no volatile, semi-volatile, or pesticide/PCB compounds above GQS

## G. Areas of Concern

### 1. Martin Aaron Property

This Area of Concern (AOC) includes the entire yard area of the Martin Aaron property, the remaining site buildings and other structures remaining. Near surface and subsurface soils throughout the yard area and extending beyond the site property borders contain organic and inorganic contamination in excess of NJDEP soil cleanup criteria

Based on the results of the RI, the following specific Areas of Concern within the Martin Aaron property AOC have been identified:

- a. **Volatile Organic Hot Spots** – This area of concern includes the estimated extent of total volatile organic contamination in excess of 1000 mg/kg in site surface and subsurface soil, respectively.
- b. **Semi-Volatile Organic Hot Spots** – This area of concern includes the estimated extent of surface and subsurface semi-volatile contamination in excess of the NJDEP IGWSCC.
- c. **Pesticide Hot Spots** – This area of concern includes surface and subsurface soil in the immediate vicinity of soil borings SB04, SB05 and SB08 where pesticide concentrations exceed 100 times the current RDCSCC.
- d. **PCB Hot Spots** – This area of concern includes the estimated extent of surface and subsurface soil total PCB contamination in excess of 50 mg/kg.
- e. **Inorganic Hot Spots** – This area of concern includes the estimated extent of arsenic contamination at concentrations above 1000 mg/kg.
- f. **Test Pit 24** – This area of concern is represented by a vertical 8-inch diameter pipe (possible former well) identified during the test pit excavation.
- g. **Buried Containerized Waste** – This area of concern consists of some buried containers discovered during the NJDEP UST removal actions in 1999.

## 2. South Jersey Port Corporation Property

This area of concern includes the South Jersey Port Corporation property (Block 458, Lot 15) located west of the Martin Aaron property on the west side of Broadway. Soil contamination thought to be representative of former drum handling activities by the Martin Aaron operations is present on the property. Organic contamination consists mainly of semi-volatile compounds and inorganic contamination is similar to contamination identified on the Martin Aaron property consisting of arsenic, barium, cadmium and lead. Of particular concern is the area of semi-volatile contamination at concentrations in excess of the IGWSCC.

## 3. Study Area Groundwater

Shallow groundwater contamination identified at the Martin Aaron site extends across the property and beyond the property borders to the east, south, and west. The shallow groundwater is evaluated as medium concern based on the limited down-gradient migration of observed contamination and as a possible mechanism for site contamination horizontal migration and vertical migration to deeper groundwater.

Contaminant parameters detected in the deeper groundwater include chlorinated hydrocarbons and metals but with much fewer compounds and analytes at concentrations above GQS. Deep groundwater beneath the site is evaluated as low environmental concern because impacts of site contamination (except for metals) are not readily apparent.

## 7.2 Recommendations

Based on the conclusions of this investigation, the following recommendations are presented for the Martin Aaron site:



## Soil

1. Because inorganic and organic contamination has not been delineated across the south property border, an additional five soil borings should be advanced on the property south of the former Rhodes building (Block 460, Lot 29) as originally planned during the second investigation phase. Two samples should be collected from each boring and submitted for analysis of TCL volatiles +10, TCL semi-volatiles+20, pesticide/PCB, and TAL metals.

This additional investigation is required to fully delineate the extent of contamination migrating beyond the property borders to the south. The additional investigation should take place prior to final selection of a Remedial Alternative for the Martin Aaron site. However, based on current sampling and contamination delineation, delays in the performance of this sampling should not delay the evaluation of site remedies.

2. Because the extent of site soil contamination has generally been delineated (except as described above) and hot spots identified, no further site soil investigations are recommended at this time.

3. Remedial alternative should be evaluated for the site soil contamination with emphasis on the identified hot spots.

## Groundwater

1. Because identified site groundwater contamination is generally contained to the on-site wells, with the exception of low level organics and metals, no further groundwater investigations are recommended at this time. Monitoring wells MW11S and MW11M should be used as future sentinel wells for the evaluation of possible contaminant migration and monitoring of remediation activities.

2. Remedial alternatives should be evaluated for the site shallow groundwater contamination with emphasis on the remediation of soil hot spots evaluated as continuing sources of groundwater contamination.

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
<b>Soil Samples, Soil Borings and Test Pits</b>																				
SB40	SB40-1	soil	2	2.5	6/16/97					1	1									1
SB40	SB40-2	soil	2.5	3	6/16/97						1									
SB40	SB40-3	soil	9.5	10	6/16/97					1	1	1								1
SB42	SB42-1	soil	0.5	1	6/16/97					1	1									1
SB42	SB42-2	soil	0.5	1	6/16/97					1	1									1
SB42	SB42-3	soil	1.5	2	6/16/97						1									
SB42	SB42-4	soil	1.5	2	6/16/97						1									
SB42	SB42-5	soil	3.5	4	6/16/97					1	1	1								1
SB43	SB43-1	soil	0.5	1	6/16/97					1	1									1
SB43	SB43-2	soil	1	1.5	6/16/97						1									
SB43	SB43-3	soil	3.5	4	6/16/97					1	1									1
SB43	SB43-4	soil	6.5	7	6/16/97						1									
SB45	SB45-1	soil	0.5	1	6/16/97					1	1									1
SB45	SB45-2	soil	1.5	2	6/16/97						1									
SB45	SB45-3	soil	7.5	8	6/16/97					1	1									1
SB45	SB45-4	soil	8	8.5	6/16/97						1									
SB47	SB47-1	soil	0.5	1	6/17/97					1	1									1
SB47	SB47-2	soil	1.5	2	6/17/97						1									
SB47	SB47-3	soil	6.5	7	6/17/97						1									
SB47	SB47-4	soil	7.5	8	6/17/97					1	1									1
SB31	SB31-1	soil	1	1.5	6/17/97					1	1									1
SB31	SB31-2	soil	1	1.5	6/17/97						1									
SB31	SB31-3	soil	4	5	6/17/97					1	1	1								1
SB32	SB32-1	soil	1	1.5	6/17/97					1	1									1
SB32	SB32-2	soil	2.5	3	6/17/97						1									
SB32	SB32-3	soil	3.5	4	6/17/97					1	1	1								1
SB46	SB46-1	soil	0.5	1	6/17/97				1	1	1									1
SB46	SB46-2	soil	1.5	2	6/17/97						1									
SB46	SB46-3	soil	7	7.5	6/17/97					1	1	1								1
SB44	SB44-1	soil	0.5	1.5	6/17/97				1	1	1									1
SB44	SB44-2	soil	1.5	2	6/17/97						1									
SB44	SB44-3	soil	5.5	6	6/17/97					1	1	1								1

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LL.TAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TP11	VOA 8240
SB41	SB41-1	soil	1.5	2	6/18/97			1	1	1						1				
SB41	SB41-3	soil	2	2.5	6/18/97						1									
SB41	SB41-4	soil	4.5	5	6/18/97				1	1	1									
SB35	SB35-1	soil	1	1.5	6/18/97				1	1	1									
SB39	SB39-1	soil	2	3	6/19/97			1	1	1	1									
SB38	SB38-1	soil	0.5	1	6/19/97			1	1	1										
SB38	SB38-2	soil	1.5	2	6/19/97						1									
SB38	SB38-3	soil	5	6	6/19/97				1	1	1			1		1	1	1		
SB36	SB36-1	soil	0.5	1	6/19/97			1	1	1										
SB36	SB36-2	soil	0.5	1	6/19/97			1	1	1										
SB36	SB36-3	soil	1.5	2	6/19/97						1									
SB36	SB36-4	soil	1.5	2	6/19/97						1									
SB36	SB36-6	soil	5.5	6	6/19/97				1	1	1									
SB33	SB33-1	soil	0.5	1	6/19/97				1	1										
SB33	SB33-2	soil	1.5	2	6/19/97						1									
SB33	SB33-4	soil	5.5	6	6/19/97				1	1	1									
SB49	SB49-1	soil	2	3	6/19/97				1	1	1									
SB49	SB49-2	soil	5	5.5	6/19/97				1	1	1									
SB11	SB11-1	soil	0	0.5	6/24/97				1	1										
SB11	SB11-2	soil	1	1.5	6/24/97						1									
SB11	SB11-3	soil	3	3.5	6/24/97				1	1	1									
SB26	SB26-1	soil	0	0.5	7/7/97				1	1										
SB26	SB26-2	soil	1	2	7/7/97						1									
SB26	SB26-3	soil	7	8	7/7/97				1	1	1									
SB20	SB20-1	soil	0	0.5	7/8/97				1	1										
SB20	SB20-2	soil	1	2	7/8/97						1									
SB20	SB20-3	soil	5	6	7/8/97				1	1	1									
SB23	SB23-1	soil	0	0.5	7/8/97				1	1										
SB23	SB23-2	soil	0	0.5	7/8/97				1	1										
SB23	SB23-3	soil	1	2	7/8/97						1									
SB23	SB23-4	soil	1	2	7/8/97						1									
SB23	SB23-5	soil	3	4	7/8/97						1									
SB23	SB23-6	soil	5	6	7/8/97				1	1										

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Table  
**Sample Summary Table**  
**Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB30	SB30-1	soil	2	2.5	7/8/97				1	1						1				
SB30	SB30-2	soil	2.5	4	7/8/97						1									
SB30	SB30-3	soil	7	8	7/8/97				1	1	1					1				
SB29	SB29-1	soil	0	0.5	7/9/97				1	1						1				
SB29	SB29-2	soil	1	2	7/9/97						1									
SB29	SB29-3	soil	5	6	7/9/97				1	1	1					1				
SB01	SB01-1	soil	0	0.5	7/10/97				1	1						1				
SB01	SB01-2	soil	1	2	7/10/97						1									
SB01	SB01-3	soil	5	6	7/10/97				1	1				1		1	1	1		
SB01	SB01-4	soil	7	7.5	7/10/97						1									
SB07	SB07-1	soil	0	0.5	7/10/97				1	1						1				
SB07	SB07-2	soil	1	2	7/10/97						1									
SB07	SB07-3	soil	5	6	7/10/97				1	1	1			1		1	1	1		
SB05	SB05-1	soil	0.5	1	7/10/97				1	1						1				
SB05	SB05-2	soil	1	2	7/10/97						1									
SB05	SB05-3	soil	5	6	7/10/97				1	1	1			1		1	1	1		
SB03	SB03-1	soil	0	0.5	7/10/97				1	1						1				
SB03	SB03-2	soil	1	2	7/10/97						1									
SB03	SB03-3	soil	5	6	7/10/97				1	1	1			1		1	1	1		
SB12	SB12-1	soil	0	0.5	7/10/97				1	1						1				
SB12	SB12-2	soil	1	2	7/10/97						1									
SB12	SB12-3	soil	5	6	7/10/97				1	1	1			1		1	1	1		
SB18	SB18-1	soil	0	0.5	7/14/97				1	1						1				
SB18	SB18-2	soil	0	0.5	7/14/97				1	1						1				
SB18	SB18-3	soil	1.5	2	7/14/97						1									
SB18	SB18-4	soil	1.5	2	7/14/97						1									
SB18	SB18-5	soil	6	7	7/14/97				1	1						1				
SB18	SB18-6	soil	7	7.5	7/14/97						1									
SB09	SB09-1	soil	0	0.5	7/14/97				1	1						1				
SB09	SB09-2	soil	1.5	2	7/14/97						1									
SB09	SB09-3	soil	3	5	7/14/97				1	1	1			1		1	1	1		
SB15	SB15-1	soil	0	0.5	7/14/97				1	1						1				
SB15	SB15-2	soil	1.5	2	7/14/97						1									

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Sample Summary Table  
Martin Aaron Site RI/RAA

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB15	SB15-3	soil	4	6	7/14/97				1	1						1				
SB15	SB15-4	soil	6	6.5	7/14/97						1									
SB06	SB06-1	soil	0	0.5	7/15/97			1	1	1						1				
SB06	SB06-2	soil	0	0.5	7/15/97			1												
SB06	SB06-3	soil	1.5	2	7/15/97						1									
SB06	SB06-4	soil	5	6	7/15/97				1	1	1					1				
SB10	SB10-1	soil	0	0.5	7/15/97			1	1	1						1				
SB10	SB10-2	soil	1.5	2	7/15/97						1									
SB10	SB10-3	soil	4	6	7/15/97				1	1	1					1				
SB14	SB14-1	soil	0	0.5	7/15/97			1	1	1						1				
SB14	SB14-2	soil	1.5	2	7/15/97						1									
SB14	SB14-3	soil	6	8	7/15/97				1	1	1				1	1	1	1		
SB16	SB16-1	soil	0	0.5	7/15/97			1	1	1						1				
SB16	SB16-2	soil	1.5	2	7/15/97						1									
SB16	SB16-3	soil	6	7	7/15/97				1	1	1				1	1	1	1		
SB13	SB13-3	soil	5	6	7/15/97				1	1	1				1	1	1	1		
SB13	SB13-1	soil	0	0.5	7/16/97			1	1	1						1				
SB13	SB13-2	soil	1.5	2	7/16/97						1									
SB02	SB02-1	soil	0.5	1	7/16/97			1	1	1						1				
SB02	SB02-2	soil	1.5	2	7/16/97						1									
SB02	SB02-3	soil	6.5	7.5	7/16/97				1	1	1					1				
SB04	SB04-1	soil	0	0.5	7/16/97			1	1	1						1				
SB04	SB04-2	soil	1.5	2	7/16/97						1									
SB04	SB04-3	soil	3	4	7/16/97				1	1	1					1				
SB08	SB08-1	soil	0.5	1	7/16/97			1	1	1						1				
SB08	SB08-2	soil	1.5	2	7/16/97						1									
SB08	SB08-3	soil	3	4	7/16/97				1	1	1					1				
SB17	SB17-1	soil	0	0.5	7/17/97				1	1						1				
SB17	SB17-2	soil	1.5	2	7/17/97						1									
SB17	SB17-3	soil	5	6	7/17/97				1	1	1					1				
SB19	SB19-1	soil	0	0.5	7/17/97				1	1						1				
SB19	SB19-2	soil	1.5	2	7/17/97						1									
SB19	SB19-3	soil	5	6	7/17/97				1	1	1				1	1	1	1		

300630

**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB55	SB55-1	soil	3.5	4	7/21/97					1	1	1				1				
SB55	SB55-2	soil	6.5	7	7/21/97															1
SB54	SB54-1	soil	1.5	2	7/21/97						1									
SB54	SB54-2	soil	7.5	8	7/21/97					1	1	1				1				1
SB53	SB53-1	soil	3.5	4	7/21/97					1	1	1				1				1
SB53	SB53-2	soil	7.5	8	7/21/97															1
SB52	SB52-1	soil	5	5.5	7/21/97					1	1	1				1				1
SB51	SB51-1	soil	5.5	6	7/21/97					1	1	1				1				1
SB50	SB50-1	soil	5.5	6	7/21/97						1									1
SB60	SB60-1	soil	3.5	4	7/21/97					1	1	1				1				1
SB56	SB56-2	soil	6.5	7	7/22/97					1	1	1				1				1
SB57	SB57-1	soil	6.5	7	7/22/97					1	1	1				1				1
SB57	SB57-2	soil	6.5	7	7/22/97					1	1	1				1				1
SB58	SB58-1	soil	5.5	6	7/22/97					1	1	1				1				1
SB48	SB48-1	soil	0.5	1	7/22/97					1	1					1				
SB48	SB48-2	soil	1.5	2	7/22/97						1									
SB48	SB48-4	soil	7	7.5	7/22/97					1	1	1				1				
SB59	SB59-1	soil	5.5	6	7/22/97					1	1	1				1				1
SB61	SB61-1	soil	3.5	4	7/22/97					1	1	1				1				1
TP01	TP01-1	soil	3	4	8/4/97					1	1	1				1				
SE01	SE01-1	soil	2	3	8/5/97					1	1	1				1				
SE01	SE01-2	soil	2	3	8/5/97					1	1	1				1				
TP05	TP05-1	soil	3	4	8/5/97					1	1					1				
TP06	TP06-1	soil	3	4	8/6/97					1	1	1				1				
TP09	TP09-1	soil	3	4	8/7/97					1	1	1				1				
TP10	TP10-1	soil	4	5	8/7/97					1	1	1				1				
TP13	TP13-1	soil	3	4	8/8/97					1	1	1				1				
TP14	TP14-1	soil	3	4	8/8/97					1	1	1				1				
TP17	TP17-1	soil	4	5	8/11/97					1	1	1				1				
TP18	TP18-1	soil	4	5	8/11/97					1	1	1				1				
TP20	TP20-1	soil	3.5	4.5	8/12/97					1	1	1				1				
TP21	TP21-2	soil	4	5	8/12/97					1	1	1				1				
SE03	SE03-1	soil	4	5	8/12/97					1	1	1				1				

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
TP24	TP24-1	soil	3	4	8/13/97					1	1	1				1				
SB78	SB78-1	Soil	0	1	9/29/98					1	1					1				
SB78	SB78-2	Soil	1	1.5	9/29/98						1									
SB78	SB78-3	Soil	6.5	7.5	9/29/98					1	1	1				1				
SB70	SB70-1	Soil	0	1	9/29/98					1	1					1				
SB70	SB70-2	Soil	1.5	2	9/29/98						1									
SB70	SB70-3	Soil	6.5	7.5	9/29/98					1	1	1				1				
SB68	SB68-1	Soil	0	1	9/29/98					1	1					1				
SB68	SB68-2	Soil	1.5	2	9/29/98						1									
SB68	SB68-3	Soil	6.5	7	9/29/98					1	1	1				1				
SB64	SB64-1	Soil	0.5	1	9/29/98					1	1					1				
SB64	SB64-2	Soil	1	1.5	9/29/98						1									
SB64	SB64-3	Soil	1	1.5	9/29/98						1									
SB64	SB64-4	Soil	6	6.5	9/29/98					1	1	1				1				
SB63	SB63-1	Soil	0.5	1	9/29/98					1	1					1				
SB63	SB63-2	Soil	0.5	1	9/29/98					1	1					1				
SB63	SB63-3	Soil	1	1.5	9/29/98						1									
SB63	SB63-4	Soil	3.5	4	9/29/98					1	1	1				1				
SB62	SB62-1	Soil	0.5	1	9/29/98					1	1					1				
SB62	SB62-2	Soil	1.5	2	9/29/98						1									
SB62	SB62-3	Soil	5	5.5	9/29/98					1	1	1				1				
SB67	SB67-1	Soil	0.5	1	9/29/98					1	1					1				
SB67	SB67-2	Soil	1.5	2	9/29/98						1									
SB67	SB67-3	Soil	5.5	6	9/29/98					1	1	1				1				
SB69	SB69-1	Soil	0.5	1	9/29/98					1	1					1				
SB69	SB69-2	Soil	1.5	2	9/29/98						1									
SB69	SB69-3	Soil	6	7	9/29/98					1	1	1				1				
SB75	SB75-1	Soil	0.5	1	9/29/98					1	1					1				
SB75	SB75-2	Soil	1.5	2	9/29/98						1									
SB75	SB75-3	Soil	6.5	7	9/29/98					1	1	1				1				
SB73	SB73-1	Soil	0	1	9/30/98					1	1					1				
SB73	SB73-2	Soil	1.5	2	9/30/98						1									
SB73	SB73-3	Soil	7	8	9/30/98					1	1	1				1				

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB71	SB71-1	Soil	0	1	9/30/98					1	1					1				
SB71	SB71-2	Soil	1	1.5	9/30/98						1									
SB71	SB71-3	Soil	4	5	9/30/98					1	1	1				1				
SB65	SB65-1	Soil	0	1	9/30/98					1	1					1				
SB65	SB65-2	Soil	1.5	2	9/30/98						1									
SB65	SB65-3	Soil	6	7	9/30/98					1	1	1				1				
SB66	SB66-1	Soil	0	1	9/30/98					1	1					1				
SB66	SB66-2	Soil	1	1.5	9/30/98						1									
SB66	SB66-3	Soil	6.5	7	9/30/98					1	1	1				1				
SB72	SB72-1	Soil	0	1	9/30/98					1	1					1				
SB72	SB72-2	Soil	1	1.5	9/30/98						1									
SB72	SB72-3	Soil	9	10	9/30/98					1	1	1				1				
SB74	SB74-1	Soil	0	1	9/30/98					1	1					1				
SB74	SB74-2	Soil	1	1.5	9/30/98						1									
SB74	SB74-3	Soil	6	7	9/30/98					1	1	1				1				
SB79	SB79-1	Soil	0	1	9/30/98					1	1					1				
SB79	SB79-2	Soil	1.5	2	9/30/98						1									
SB79	SB79-3	Soil	6.5	7.5	9/30/98					1	1	1				1				
SB79	SB79-4	Soil	6.5	7.5	9/30/98					1	1	1				1				
SB76	SB76-1	Soil	0	1	10/1/98					1	1					1				
SB76	SB76-2	Soil	1	1.5	10/1/98						1									
SB76	SB76-3	Soil	4	5	10/1/98					1	1	1				1				
SB77	SB77-1	Soil	0	1	10/1/98					1	1					1				
SB77	SB77-2	Soil	1	1.5	10/1/98						1									
SB77	SB77-3	Soil	6	7	10/1/98					1	1	1				1				
SB82	SB82-1	Soil	0.5	1	10/1/98					1	1					1				
SB82	SB82-2	Soil	1	1.5	10/1/98						1									
SB82	SB82-3	Soil	4	5	10/1/98					1	1	1				1				
SB81	SB81-1	Soil	0.8	1.3	10/1/98					1	1					1				
SB81	SB81-2	Soil	1.3	1.5	10/1/98						1									
SB81	SB81-3	Soil	5	6	10/1/98					1	1	1				1				
SB80	SB80-1	Soil	0.5	1	10/1/98					1	1					1				
SB80	SB80-2	Soil	1	1.5	10/1/98						1									

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB80	SB80-3	Soil	4.5	5.5	10/1/98					1	1	1				1				
SB86	SB86-1	Soil	0	1	10/1/98					1	1					1				
SB86	SB86-2	Soil	1	1.5	10/1/98						1									
SB86	SB86-3	Soil	6.5	7.5	10/1/98					1	1	1				1				
SB87	SB87-1	Soil	0.5	1	10/1/98					1	1					1				
SB87	SB87-2	Soil	1.5	2	10/1/98						1									
SB87	SB87-3	Soil	4	5	10/1/98					1	1	1				1				
SB88	SB88-1	Soil	0.5	1	10/2/98					1	1					1				
SB88	SB88-2	Soil	1	1.5	10/2/98						1									
SB88	SB88-3	Soil	6	7	10/2/98					1	1	1				1				
SB89	SB89-1	Soil	0.5	1	10/2/98					1	1					1				
SB89	SB89-2	Soil	1.5	2	10/2/98						1									
SB89	SB89-3	Soil	4	5	10/2/98					1	1	1				1				
SB90	SB90-1	Soil	0.5	1	10/2/98					1	1					1				
SB90	SB90-2	Soil	1	1.5	10/2/98						1									
SB90	SB90-3	Soil	7	7.5	10/2/98					1	1	1				1				
SB96	SB96-1	Soil	0.5	1	10/2/98					1	1					1				
SB96	SB96-2	Soil	1	1.5	10/2/98						1									
SB96	SB96-3	Soil	4	5	10/2/98					1	1	1				1				
SB96	SB96-4	Soil	4	5	10/2/98					1	1	1				1				
SB97	SB97-1	Soil	0	1	10/2/98					1	1					1				
SB97	SB97-2	Soil	1.5	2	10/2/98						1									
SB97	SB97-3	Soil	4	5	10/2/98					1	1	1				1				
SB98	SB98-1	Soil	0	1	10/2/98					1	1					1				
SB98	SB98-2	Soil	1	1.5	10/2/98						1									
SB98	SB98-3	Soil	4	5	10/2/98					1	1	1				1				
SB99	SB99-1	Soil	0	1	10/2/98					1	1					1				
SB99	SB99-2	Soil	1	1.5	10/2/98						1									
SB99	SB99-3	Soil	7	7.5	10/2/98					1	1	1				1				
SB107	SB107-1	Soil	0.5	1	10/2/98					1	1					1				
SB107	SB107-2	Soil	1	1.5	10/2/98						1									
SB107	SB107-3	Soil	5	6	10/2/98					1	1	1				1				
SB83	SB83-1	Soil	0.5	1.5	10/5/98					1	1					1				

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240	
SB83	SB83-2	Soil	1.5	2	10/5/98						1										
SB83	SB83-3	Soil	4	5	10/5/98					1	1	1									1
SB84	SB84-1	Soil	0.5	1.5	10/5/98					1	1										1
SB84	SB84-2	Soil	1.5	2	10/5/98						1										
SB84	SB84-3	Soil	4.5	5.5	10/5/98					1	1	1									1
SB105	SB105-1	Soil	0.5	1.5	10/5/98					1	1										1
SB105	SB105-2	Soil	1.5	2	10/5/98						1										
SB105	SB105-3	Soil	4	5	10/5/98					1	1	1									1
SB106	SB106-1	Soil	0.5	1.5	10/5/98					1	1										1
SB106	SB106-2	Soil	1.5	2	10/5/98						1										
SB106	SB106-3	Soil	4	5	10/5/98					1	1	1									1
SB116	SB116-1	Soil	0	1	10/5/98					1	1										1
SB116	SB116-2	Soil	1.5	2	10/5/98						1										
SB116	SB116-3	Soil	4.4	5.1	10/5/98					1	1	1									1
SB109	SB109-1	Soil	0	1	10/5/98					1	1										1
SB109	SB109-2	Soil	1.5	2	10/5/98						1										
SB109	SB109-3	Soil	4.5	5.5	10/5/98					1	1	1									1
SB108	SB108-1	Soil	0	1	10/5/98					1	1										1
SB108	SB108-2	Soil	1.5	2	10/5/98						1										
SB108	SB108-3	Soil	5	6	10/5/98					1	1	1									1
SB85	SB85-1	Soil	0	1	10/5/98					1	1										1
SB85	SB85-2	Soil	1	1.5	10/5/98						1										
SB85	SB85-3	Soil	6.5	7.5	10/5/98					1	1	1									1
SB115	SB115-1	Soil	0	0.5	10/6/98					1	1										1
SB115	SB115-2	Soil	1.5	2	10/6/98						1										
SB115	SB115-3	Soil	6.7	7	10/6/98					1	1	1									1
SB91	SB91-1	Soil	0	0.5	10/6/98					1	1										1
SB91	SB91-2	Soil	1	1.5	10/6/98						1										
SB91	SB91-3	Soil	5	6	10/6/98					1	1	1									1
SB92	SB92-1	Soil	0	1	10/6/98					1	1										1
SB92	SB92-2	Soil	1.5	2	10/6/98						1										
SB92	SB92-3	Soil	6	7	10/6/98					1	1	1									1
SB93	SB93-1	Soil	0	1	10/6/98					1	1										1

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240	
SB93	SB93-2	Soil	1	1.5	10/6/98						1										
SB93	SB93-3	Soil	4	5	10/6/98					1	1	1					1				
SB95	SB95-1	Soil	0	1	10/6/98					1	1						1				
SB95	SB95-2	Soil	1	1.5	10/6/98						1										
SB95	SB95-3	Soil	4.5	5.5	10/6/98					1	1	1					1				
SB95	SB95-4	Soil	4.5	5.5	10/6/98					1	1	1					1				
SB94	SB94-1	Soil	0.5	1	10/6/98					1	1						1				
SB94	SB94-2	Soil	1.5	2	10/6/98							1									
SB94	SB94-3	Soil	4.5	5.5	10/6/98					1	1	1					1				
SB113	SB113-1	Soil	0.5	1.5	10/6/98					1	1						1				
SB113	SB113-2	Soil	1.5	2	10/6/98							1									
SB113	SB113-3	Soil	3	4	10/6/98					1	1	1					1				
SB02A	SB02A-1	Soil	0.5	1	10/6/98						1										
SB02A	SB02A-2	Soil	6.5	7.5	10/6/98						1										
SB01A	SB01A-1	Soil	0.5	1	10/6/98						1	1									
SB01A	SB01A-2	Soil	5	6	10/6/98						1	1									
SB03A	SB03A-1	Soil	0	1	10/6/98						1										
SB03A	SB03A-2	Soil	5	6	10/6/98						1										
SB11A	SB11A-1	Soil	0	0.5	10/6/98						1										
SB11A	SB11A-2	Soil	3	3.5	10/6/98						1										
SB09A	SB09A-1	Soil	0	0.5	10/6/98						1										
SB09A	SB09A-2	Soil	4	5	10/6/98						1										
SB114	SB114-1	Soil	0	0.5	10/7/98					1	1						1				
SB114	SB114-2	Soil	1	1.5	10/7/98							1									
SB114	SB114-3	Soil	4	5	10/7/98					1	1	1					1				
SB114	SB114-4	Soil	4	5	10/7/98					1	1	1					1				
SB13A	SB13A-1	Soil	0	0.5	10/7/98						1										
SB13A	SB13A-2	Soil	5	6	10/7/98						1										
SB15A	SB15A-1	Soil	0	0.5	10/7/98						1										
SB15A	SB15A-2	Soil	5	6	10/7/98						1										
TP13A	TP13A-1	Soil	0	0.5	10/7/98						1										
TP13A	TP13A-2	Soil	3	4	10/7/98						1										
SB16A	SB16A-1	Soil	0	0.5	10/7/98						1										

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB16A	SB16A-2	Soil	6	7	10/7/98					1										
SB23A	SB23A-1	Soil	0	0.5	10/7/98					1										
SB23A	SB23A-2	Soil	5	6	10/7/98					1										
SB19A	SB19A-1	Soil	0	0.5	10/7/98					1										
SB19A	SB19A-2	Soil	5	6	10/7/98					1										
SB110	SB110-1	Soil	0	0.5	10/8/98					1	1						1			
SB110	SB110-2	Soil	0.5	1	10/8/98						1									
SB111	SB111-3	Soil	2	3	10/8/98					1	1	1					1			
SB111	SB111-4	Soil	4	5	10/8/98					1	1	1					1			
SB110	SB110-3	Soil	3	4	10/8/98					1	1	1					1			
SB112	SB112-1	Soil	0	0.5	10/8/98					1	1						1			
SB112	SB112-2	Soil	0.5	1	10/8/98						1									
SB112	SB112-3	Soil	2	3	10/8/98					1	1	1					1			
SB46A	SB46A-1	Soil	0.5	1	10/8/98					1										
SB46A	SB46A-2	Soil	3	4	10/8/98					1										
SB43A	SB43A-1	Soil	0.5	1	10/8/98					1										
SB43A	SB43A-2	Soil	3.5	4	10/8/98					1										
SB42A	SB42A-1	Soil	0.5	1	10/8/98					1										
SB42A	SB42A-2	Soil	3.5	4.5	10/8/98					1										
SB118	SB118-1	Soil	0.5	1	12/1/99														1	
SB118	SB118-3	Soil	8	8.5	12/1/99														1	
SB132	SB132-1	Soil	1	1.5	12/1/99														1	
SB132	SB132-3	Soil	7.5	8.5	12/1/99														1	
SB132	SB132-4	Soil	7.5	8.5	12/1/99														1	
SB133	SB133-1	Soil	0.5	1	12/1/99														1	
SB133	SB133-3	Soil	6	6.5	12/1/99														1	
SB122	SB122-1	Soil	0.5	1	12/7/99														1	
SB122	SB122-3	Soil	6.5	7	12/7/99														1	
SB127	SB127-1	Soil	5	6	12/7/99														1	
SB127	SB127-3	Soil	8.5	9	12/7/99														1	
SB126	SB126-1	Soil	5	5.5	12/7/99														1	
SB126	SB126-3	Soil	7.5	8	12/7/99														1	
SB131	SB131-1	Soil	0	1	12/7/99					1									1	

300637

Table 1  
**Sample Summary Table**  
**Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB131	SB131-3	Soil	6	6.5	12/7/99											1				
SB130	SB130-1	Soil	0	1	12/7/99											1				
SB130	SB130-3	Soil	6	6.5	12/7/99											1				
SB129	SB129-1	Soil	0	1	12/8/99											1				
SB129	SB129-3	Soil	7	7.5	12/8/99											1				
SB129	SB129-4	Soil	7	7.5	12/8/99											1				
SB124	SB124-1	Soil	0	1	12/8/99											1				
SB124	SB124-3	Soil	6.5	7	12/8/99											1				
SB144	SB144-1	Soil	0	1	2/14/00					1										
SB144	SB144-2	Soil	7.5	8	2/14/00					1										
SB145	SB145-1	Soil	0	1	2/14/00					1										
SB145	SB145-2	Soil	5	6	2/14/00					1										
SB146	SB146-1	Soil	0	1	2/14/00					1										
SB146	SB146-2	Soil	4	5	2/14/00					1										
SB147	SB147-1	Soil	0	1	2/14/00					1										
SB147	SB147-2	Soil	5.5	6	2/14/00					1										
SB147	SB147-3	Soil	0	1	2/14/00					1										
SB148	SB148-1	Soil	0.5	1	2/14/00					1										
SB148	SB148-2	Soil	5	5.5	2/14/00					1										
SB149	SB149-1	Soil	0.5	1	2/14/00					1										
SB149	SB149-2	Soil	6	6.5	2/14/00					1										
SB150	SB150-1	Soil	0.5	1	2/14/00					1										
SB150	SB150-2	Soil	5.5	6	2/14/00					1										
SB151	SB151-1	Soil	0	1	2/14/00					1										
SB151	SB151-2	Soil	6	7	2/14/00					1										
SB152	SB152-1	Soil	0	1	2/14/00					1										
SB152	SB152-2	Soil	4	5	2/14/00					1										
SB153	SB153-1	Soil	0.5	1	2/14/00					1										
SB153	SB153-2	Soil	6	6.5	2/14/00					1										
SB154	SB154-1	Soil	0	1	2/14/00					1										
SB154	SB154-2	Soil	5.5	6	2/14/00					1										
SB155	SB155-1	Soil	0.5	1	2/14/00					1										
SB155	SB155-2	Soil	5.5	6	2/14/00					1										

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Sample Summary Table  
Martin Aaron Site RI/RAA

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB156	SB156-1	Soil	0.5	1	2/14/00				1											
SB156	SB156-2	Soil	3.5	4	2/14/00				1											
SB157	SB157-1	Soil	0.5	1	2/14/00				1											
SB157	SB157-2	Soil	6	7	2/14/00				1											
SB136	SB136-1	Soil	0	1	2/14/00				1											
SB136	SB136-2	Soil	6	7	2/14/00				1											
SB134	SB134-1	Soil	0	1	2/14/00				1											
SB134	SB134-2	Soil	5	6	2/14/00				1											
SB135	SB135-1	Soil	0	1	2/14/00				1											
SB135	SB135-2	Soil	4.5	5.5	2/14/00				1											
SB137	SB137-1	Soil	0	1	2/14/00				1											
SB137	SB137-2	Soil	4.5	5.5	2/14/00				1											
SB142	SB142-1	Soil	0.5	1	2/14/00				1											
SB142	SB142-2	Soil	6	7	2/14/00				1											
SB120	SB120-1	Soil	1	1.5	2/15/00					1										
SB120	SB120-2	Soil	5.5	6	2/15/00					1										
SB121	SB121-1	Soil	1	1.5	2/15/00					1										
SB121	SB121-2	Soil	7	7.5	2/15/00					1										
SB122	SB122A1	Soil	0.5	1	2/15/00				1	1										
SB122	SB122A2	Soil	1	1.5	2/15/00					1										
SB122	SB122A3	Soil	6.5	7	2/15/00				1	1	1									
SB123	SB123-1	Soil	1.5	2	2/15/00					1										
SB123	SB123-2	Soil	6.5	7	2/15/00					1										
SB124	SB124A1	Soil	0	1	2/15/00				1	1										
SB124	SB124A2	Soil	1.5	2	2/15/00					1										
SB124	SB124A3	Soil	6.5	7	2/15/00				1	1	1									
SB129	SB129A1	Soil	0	1	2/15/00				1	1										
SB129	SB129A2	Soil	1	1.5	2/15/00					1										
SB129	SB129A3	Soil	7	7.5	2/15/00				1	1	1									
SB129	SB129A4	Soil	7	7.5	2/15/00				1	1	1									
SB130	SB130A2	Soil	1.5	2	2/15/00					1										
SB130	SB130A3	Soil	6	6.5	2/15/00				1	1	1									
SB131	SB131A1	Soil	0	1	2/15/00				1	1										

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Sample Summary Table  
Martin Aaron Site RI/RAA

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240	
SB131	SB131A2	Soil	1.5	2	2/15/00						1										
SB131	SB131A3	Soil	6	6.5	2/15/00					1	1	1									
SB132	SB132A1	Soil	1	1.5	2/15/00					1	1										
SB132	SB132A2	Soil	1.5	2	2/15/00						1										
SB132	SB132A3	Soil	7	8	2/15/00					1	1	1									
SB133	SB133A1	Soil	0.5	1	2/15/00					1	1										
SB133	SB133A2	Soil	1.5	2	2/15/00						1										
SB133	SB133A3	Soil	6	6.5	2/15/00					1	1	1									
SB138	SB138-1	Soil	5	1	2/15/00						1										
SB138	SB138-2	Soil	6	7	2/15/00						1										
SB139	SB139-1	Soil	0.5	1	2/15/00						1										
SB139	SB139-2	Soil	6	7	2/15/00						1										
SB118	SB118A1	Soil	0.5	1	2/16/00					1											
SB118	SB118A2	Soil	1.5	2	2/16/00						1										
SB118	SB118A3	Soil	7	8	2/16/00					1	1										
SB118	SB118A4	Soil	7	8	2/16/00					1	1										
SB119	SB119-1	Soil	1.5	2	2/16/00						1										
SB119	SB119-2	Soil	4.5	5.5	2/16/00						1										
SB130	SB130A1	Soil	0	1	2/16/00					1	1										
SB127	SB127A1	Soil	0	1	2/16/00					1											
SB127	SB127A2	Soil	1.5	2	2/16/00						1										
SB127	SB127A3	Soil	7.5	8	2/16/00					1	1										
SB128	SB128-1	Soil	5.5	6.5	2/16/00						1										
SB128	SB128-2	Soil	7.5	8.5	2/16/00						1										
SB126	SB126A1	Soil	5	5.5	2/16/00					1											
SB126	SB126A2	Soil	5.5	6	2/16/00						1										
SB126	SB126A3	Soil	7.5	8	2/16/00					1	1										
SB125	SB125-1	Soil	5.5	6	2/16/00						1										
SB125	SB125-2	Soil	7.5	8	2/16/00						1										
SB143	SB143-1	Soil	0	1	3/23/00						1										
SB143	SB143-2	Soil	6	6.5	3/23/00						1										
SB140	SB140-1	Soil	0.5	1	3/23/00						1										
SB140	SB140-2	Soil	5	6	3/23/00						1										

300640

Table 1  
**Sample Summary Table**  
**Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
SB141	SB141-1	Soil	0.5	1	3/23/00					1										
SB141	SB141-2	Soil	5.5	6	3/23/00					1										
SB118	SB118B1	Soil	0.5	1	3/23/00					1										
SB118	SB118B3	Soil	7	8	3/23/00					1										
SB118	SB118B4	Soil	7	8	3/23/00					1										
SB127	SB127B1	Soil	0	1	3/23/00					1										
SB127	SB127B3	Soil	7.5	8	3/23/00					1										
SB126	SB126B1	Soil	5	5.5	3/23/00					1										
SB126	SB126B3	Soil	7.5	8	3/23/00					1										
SB01	SB01-5	Soil	5	9	7/10/97															1
<b>Sediment and Solid Samples-Sewer Basins and Test Pits</b>																				
SD01	SD01-1	sediment	0	0	8/14/97					1	1	1							1	
SD02	SD02-1	sediment	0	0	8/14/97					1	1	1							1	
TP21	TP21-1	solid	4	5	8/12/97					1	1					1	1			
<b>Total Soil, Sediment and Solids Samples</b>						0	0	16	270	289	255	0	0	11	1	241	11	11	14	1
<b>QAQC Samples-Soil Field, Trip &amp; Ambient Blanks</b>																				
VOA1	VOA1-1	Soil	1.5	2	10/7/98						1									
VOA1	VOA1-2	Soil	4	4.5	10/7/98						1									
VOA2	VOA2-1	Soil	1.5	2	10/7/98						1									
VOA2	VOA2-2	Soil	6.5	7	10/7/98						1									
SB45	SB45-AB	Blank	0	0	6/16/97						1									
FB06	FB06-17	Blank	0	0	6/17/97					1	1	1							1	
FB06	FB06-18	Blank	0	0	6/18/97			1		1	1	1							1	
TB06	TB06-19	Blank	0	0	6/19/97						1									
SB33	SB33-AB	Blank	0	0	6/19/97						1									
FB06	FB06-19	Blank	0	0	6/19/97					1	1	1							1	
TB06	TB06-24	Blank	0	0	6/24/97						1									
SB26	SB26-AB	Blank	0	0	7/7/97						1									
TB07	TB07-09	Blank	0	0	7/8/97						1									
FB07	FB07-08	Blank	0	0	7/8/97					1	1								1	

300641

**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
FB07	FB07-10	Blank	0	0	7/10/97					1	1					1				1
TB07	TB07-11	Blank	0	0	7/11/97						1									1
SB18	SB18-AB	Blank	0	0	7/14/97						1									
TB07	TB07-15M	Blank	0	0	7/15/97						1									
FB07	FB07-15	Blank	0	0	7/15/97			1		1	1					1				1
FB07	FB07-17	Blank	0	0	7/17/97					1	1					1				
TB07	TB07-18	Blank	0	0	7/18/97						1									
TB07	TB07-21	Blank	0	0	7/21/97						1									
FB07	FB07-21	Blank	0	0	7/21/97					1	1					1			1	
TB07	TB07-22	Blank	0	0	7/22/97						1									
SB56	SB56-AB	Blank	0	0	7/22/97						1									
FB07	FB07-22	Blank	0	0	7/22/97					1	1					1				
TB08	TB08-6	Blank	0	0	8/6/97						1									
FB08	FB08-6	Blank	0	0	8/6/97					1	1					1				
TB08	TB08-8	Blank	0	0	8/8/97						1									
TP13	TP13-AB	Blank	0	0	8/8/97						1									
TB08	TB08-13	Blank	0	0	8/12/97						1									
FB08	FB08-12	Blank	0	0	8/12/97					1	1					1				
TB08	TB08-14	Blank	0	0	8/14/97						1									
TB08	TB08-15	Blank	0	0	8/14/97						1									
SD01	SD01-AB	Blank	0	0	8/14/97						1									
FB	FB929	Blank	0	0	9/29/98					1	1					1				
TB	TB929	Blank	0	0	9/29/98						1									
FB	FB1001	Blank	0	0	10/1/98					1	1					1				
TB	TB	Blank	0	0	10/1/98						1									
FB	FB1002	Blank	0	0	10/2/98					1	1					1				
TB	TB1002	Blank	0	0	10/2/98						1									
SB99	SB99-AB	Blank	0	0	10/2/98						1									
FB	FB1005	Blank	0	0	10/5/98					1	1					1				
TB	TB1005	Blank	0	0	10/5/98						1									
FB	FB1006	Blank	0	0	10/6/98					1	1					1				
FB	FB1007	Blank	0	0	10/7/98					1	1					1				
TB	TB1007	Blank	0	0	10/7/98						1									

300642

**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
FB	FB1008	Blank	0	0	10/8/98					1	1					1				
TB	TB1008	Blank	0	0	10/8/98						1									
FB	FB1201	Blank	0	0	12/1/99											1				
FB	FB1207	Blank	0	0	12/7/99											1				
FB	FB0214	Blank	0	0	2/14/00					1	1									
TB	TB0215	Blank	0	0	2/15/00						1									
FB	FB0215	Blank	0	0	2/15/00					1	1									
TB	TB0216	Blank	0	0	2/16/00						1									
FB	FB0216	Blank	0	0	2/16/00					1	1									
FB	FB0323	Blank	0	0	3/23/00					1										
TB06	TB06-17	Blank	0	0	6/17/97						1									
FB	FB930	Blank	0	0	9/30/98					1	1					1				
<b>QAQC Samples -Soil Field, Trip and Ambient Blanks</b>						0	0	2	22	23	37	0	0	0	0	21	0	0	1	3
<b>Groundwater Samples-Monitoring Wells</b>																				
MW1S	MW1S-1	Ground water	4	14	8/14/97					1	1	1				1				
MW1M	MW1M-1	Ground water	50	60	8/14/97					1	1	1				1				
MW1M	MW1M-2	Ground water	50	60	8/14/97					1	1	1				1				
MW3S	MW3S-1	Ground water	6	16	8/15/97					1	1	1				1				
MW3M	MW3M-1	Ground water	47	57	8/15/97					1	1	1				1				
MW4S	MW4S-1	Ground water	4	14	8/15/97					1	1	1				1				
MW2M	MW2M-1	Ground water	53	63	8/15/97					1	1	1				1				
MW2S	MW2S-1	Ground water	6	16	8/15/97					1	1	1				1				
MW4S	MW4S-2	Ground water	4	14	9/16/97					1	1	1				1				
MW3S	MW3S-2	Ground water	6	16	9/16/97					1	1	1				1				
MW3M	MW3M-2	Ground water	47	57	9/16/97					1	1	1				1				
MW2S	MW2S-2	Ground water	6	16	9/16/97					1	1	1				1				
MW2M	MW2M-2	Ground water	53	63	9/16/97					1	1	1				1				
MW1S	MW1S-2	Ground water	4	14	9/16/97					1	1	1				1				
MW1M	MW1M-3	Ground water	50	60	9/16/97					1	1	1				1				
MW1M	MW1M-4	Ground water	50	60	9/16/97					1	1	1				1				
MW3M	MW3M-3	Ground water	47	57	9/30/98					1	1	1				1				
MW3S	MW3S-3	Ground water	6	16	9/30/98					1	1	1				1				

300643

**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
MW1M	MW1M-5	Ground water	50	60	11/10/98					1	1	1				1				
MW1M	MW1M-5D	Ground water	50	60	11/10/98					1	1	1				1				
MW1S	MW1S-3	Ground water	4	14	11/10/98					1	1	1				1				
MW2S	MW2S-3	Ground water	6	16	11/10/98					1	1	1				1				
MW2M	MW2M-3	Ground water	53	63	11/10/98					1	1	1				1				
MW5S	MW5S-3	Ground water	6	16	11/10/98					1	1	1				1				
MW6S	MW6S-3	Ground water	6	16	11/10/98					1	1	1				1				
MW7S	MW7S-3	Ground water	6	16	11/10/98					1	1	1				1				
MW8S	MW8S-3	Ground water	4	14	11/10/98					1	1	1				1				
MW4S	MW4S-3	Ground water	4	14	11/10/98					1	1	1				1				
MW9D	MW9D-3	Ground water	44	54	11/11/98					1	1	1				1				
MW9S	MW9S-3	Ground water	16	26	11/11/98					1	1	1				1				
MW10S	MW10S-3	Ground water	8	18	11/11/98					1	1	1				1				
MW11M	MW11M-4	Ground water	0	0	1/18/00					1	1	1				1				
MW11S	MW11S-4	Ground water	0	0	1/18/00					1	1	1				1				
MW9D	MW9D-4	Ground water	0	0	1/18/00					1	1	1				1				
MW9S	MW9S-4	Ground water	0	0	1/18/00					1	1	1				1				
MW10S	MW10S-4	Ground water	0	0	1/18/00					1	1	1				1				
MW1M	MW1M-6	Ground water	0	0	1/19/00					1	1	1				1				
MW1S	MW1S-4	Ground water	0	0	1/19/00					1	1					1				
MW2M	MW2M-4	Ground water	0	0	1/19/00					1	1	1				1				
MW2M	MW2M-4D	Ground water	0	0	1/19/00					1	1	1				1				
MW2S	MW2S-4	Ground water	0	0	1/19/00					1	1	1				1				
MW5S	MW5S-4	Ground water	0	0	1/19/00					1	1	1				1				
MW6S	MW6S-4	Ground water	0	0	1/19/00					1	1	1				1				
MW8S	MW8S-4	Ground water	0	0	1/19/00					1	1	1				1				
MW4S	MW4S-4	Ground water	0	0	1/19/00					1	1	1				1				
MW11M	MW11M-5	Ground water	0	0	2/17/00					1	1	1				1				
MW11M	MW11M-6	Ground water	0	0	2/17/00					1	1	1				1				
MW11S	MW11S-5	Ground water	0	0	2/17/00					1	1	1				1				
<b>Groundwater Samples - Hydropunch</b>																				
SB29	SB29-4	Ground water	47	50	7/9/97															

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**Sample Summary Table  
Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240		
SB07	SB07-4	Ground water	6	10	7/10/97																1	
SB07	SB07-5	Ground water	6	10	7/10/97																	1
SB15	SB15-5	Ground water	5	10	7/14/97																	1
SB06	SB06-5	Ground water	6	11	7/15/97																	1
SB10	SB10-4	Ground water	6	11	7/15/97																	1
SB14	SB14-4	Ground water	5	10	7/15/97																	1
SB16	SB16-4	Ground water	6	11	7/15/97																	1
SB13	SB13-4	Ground water	10	15	7/15/97																	1
SB08	SB08-4	Ground water	34	37.5	7/16/97																	1
SB17	SB17-4	Ground water	48	51	7/17/97																	1
SB19	SB19-4	Ground water	55	58	7/17/97																	1
<b>Groundwater Samples - Purge Water Holding Tank</b>																						
HTANK	HTANK-1	Ground water	0	0	8/15/97					1	1	1									1	
<b>Groundwater Samples - City Well 7</b>																						
CW7	CW7-1	Ground water	0	0	8/15/97	1	1					1	1									
CW7	CW7-2	Ground water	0	0	8/15/97	1	1					1	1									
CW7	CW7-3	Ground Water	0	0	9/16/97	1	1					1	1									
<b>Total Groundwater Samples</b>						<b>3</b>	<b>3</b>	<b>0</b>	<b>49</b>	<b>49</b>	<b>48</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	
<b>QAQC - Samples Groundwater Field Blanks and Trip Blanks</b>																						
TB07	TB07-15A	Blank	0	0	7/15/97																1	
FB08	FB08-14	Blank	0	0	8/14/97					1	1	1										1
TB815	TB815-W	Blank	0	0	8/15/97		1				1											
FB08	FB08-15	Blank	0	0	8/15/97					1	1	1										1
TB0916	TB0916-W	Blank	0	0	9/16/97						1											
TB0916	TB0916-W2	Blank	0	0	9/16/97		1															
FB09	FB09-16	Blank	0	0	9/16/97					1	1	1										1
FB	FBW930	Blank	0	0	9/30/98					1	1	1										1
TB	TBW930	Blank	0	0	9/30/98						1											
FB	FB1111	Blank	0	0	11/11/98					1	1	1										1

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**Sample Summary Table**  
**Martin Aaron Site RI/RAA**

Sample Location	Field ID	Matrix	Top Depth	Bottom Depth	Sample Date	508	524_2	8290	CLPPEST	CLP SVO	CLP VOA	LLBN	LLTAL	PART SIZE	RCRA COMP	TAL MET	TOC	TOX	TPH	VOA 8240
FB	FB1110	Blank	0	0	11/11/98				1	1	1					1				
TB	TB1111	Blank	0	0	11/11/98						1									
TB	TB0118	Blank	0	0	1/18/00						1									
FB	FB0118	Blank	0	0	1/18/00				1	1	1					1				
TB	TB0119	Blank	0	0	1/19/00						1									
FB	FB0119	Blank	0	0	1/19/00				1	1	1					1				
TB	TB0217	Blank	0	0	2/17/00						1									
FB	FB0217	Blank	0	0	2/17/00				1	1	1					1				
<b>Total QAQC - Groundwater</b>						<b>0</b>	<b>2</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

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**Table 2**  
**Well Construction Details**

Well Identification	Installation Date	Well Diameter (inch)	Total Depth (feet)	Top of PVC Elevation (feet amsl)	Sreen Length (feet)	Screen Slot Size	Designation	Easting NAD 83	Northing NAD 83	Comments
MW1S	7/8/97	4	14.00	9.94	10.00	0.01	Shallow	318428.489	398667.744	
MW1M	6/26/97	4	60.00	9.70	10.00	0.01	Deep	318423.546	398666.784	
MW2S	7/8/97	4	16.00	9.47	10.00	0.01	Shallow	318825.009	398613.924	
MW2M	6/27/97	4	62.00	9.45	10.00	0.01	Deep	318825.654	398609.197	
MW3S	7/7/97	4	16.00	10.41	10.00	0.01	Shallow	318534.957	398357.634	Abandoned 1998
MW3M	7/2/97	4	57.00	10.69	10.00	0.01	Shallow	318541.089	398358.316	Abandoned 1998
MW4S	7/8/97	4	14.00	9.44	10.00	0.01	Shallow	318143.638	398629.654	
MW5S	10/12/98	4	16.00	11.46	10.00	0.01	Shallow	318584.704	398615.089	
MW6S	10/12/98	4	16.00	12.28	10.00	0.01	Shallow	318604.356	398477.615	
MW7S	10/13/98	4	16.00	10.90	10.00	0.01	Shallow	318523.292	398514.363	Removed 1999
MW8S	10/13/98	4	14.00	9.89	10.00	0.01	Shallow	317908.256	398717.694	
MW9S	10/13/98	4	24.00	10.63	10.00	0.01	Shallow	318888.028	398325.729	
MW9D	10/15/98	4	54.50	10.53	10.00	0.01	Deep	318888.495	398319.173	
MW10S	10/14/98	4	18.00	9.64	10.00	0.01	Shallow	318892.227	398577.678	
MW11S	12/27/99	4	21.00	6.09	10.00	0.01	Shallow	319132.634	398095.735	
MW11M	12/28/09	4	56.00	6.19	10.00	0.01	Deep	319125.444	398095.088	

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**Table 3**  
**Groundwater Elevations**

Well	Top of PVC	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Easting	Northing
Identification	Elevation	8/14/97	8/14/97	9/15/97	9/15/97	11/10/98	11/10/98	1/18/00	1/18/00	2/17/00	2/17/00	NAD 83	NAD 83
	(feet amsl)	(feet)	(feet amsl)	(feet)	(feet amsl)	(feet)	(feet amsl)	(feet)	(feet amsl)	(feet)	(feet amsl)		
MW1S	9.94	5.54	4.40	5.90	4.04	6.48	3.46	5.85	4.09	5.81	4.13	318428.489	398667.744
MW1M	9.7	13.84	-4.14	13.83	-4.13	14.34	-4.64	13.58	-3.88	14.22	-4.52	318423.546	398666.784
MW2S	9.47	13.28	-3.81	13.65	-4.18	14.20	-4.73	12.85	-3.38	13.49	-4.02	318825.009	398613.924
MW2M	9.45	14.00	-4.55	14.12	-4.67	14.43	-4.98	13.70	-4.25	14.40	-4.95	318825.654	398609.197
MW3S	10.41	10.98	-0.57	11.64	-1.23	12.52	-2.11	----	----	----	----	318534.957	398357.634
MW3M	10.69	15.24	-4.55	15.38	-4.69	15.71	-5.02	----	----	----	----	318541.089	398358.316
MW4S	9.44	5.25	4.19	5.58	3.86	6.15	3.29	5.43	4.01	5.16	4.28	318143.638	398629.654
MW5S	11.46	----	----	----	----	12.35	-0.89	6.93	4.53	6.82	4.64	318584.704	398615.089
MW6S	12.28	----	----	----	----	14.40	-2.12	13.48	-1.20	13.70	-1.42	318604.356	398477.615
MW7S	10.9	----	----	----	----	12.96	-2.06	----	----	----	----	318523.292	398514.363
MW8S	9.89	----	----	----	----	6.83	3.06	5.76	4.13	5.45	4.44	317908.256	398717.694
MW9S	10.63	----	----	----	----	15.53	-4.90	14.63	-4.00	15.23	-4.60	318888.028	398325.729
MW9D	10.53	----	----	----	----	15.43	-4.90	14.76	-4.23	15.39	-4.86	318888.495	398319.173
MW10S	9.64	----	----	----	----	13.82	-4.18	12.93	-3.29	13.34	-3.70	318892.227	398577.678
MW11S	6.09	----	----	----	----	----	----	13.23	-7.14	13.75	-7.66	319132.634	398095.735
MW11M	6.19	----	----	----	----	----	----	13.25	-7.06	13.83	-7.64	319125.444	398095.088

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**Table 4**  
**Sample Container, Preservation, Holding Time and Analytical Methodology Requirements**  
**Martin Aaron Remedial Investigation**


Analysis	Matrix	Sample Container <sup>(1)</sup>	Preservation	Maximum Holding Time (Field)	Maximum Holding Time Until Extraction	Maximum Holding Time Until Analysis	Analytical Method(s)
CLP Volatiles	Soil	4 oz CWM	cool 4°C, dark	48 hrs.	—	10 days	OLM03.2
CLP Volatiles	Water	40 ml GV	cool 4°C, dark/ HCL	48 hrs.	—	14 days	OLM03.2
CLP Semi-Volatiles	Soil	8 oz. CWM	cool 4°C, dark	48 hrs.	7 days	40 days	OLM03.2
CLP Semi-Volatiles	Water	2.5 L. AG	cool 4°C, dark	48 hrs.	7 days	40 days	OLM03.2
TAL Metals <sup>(2)</sup>	Soil	4 oz CWM	cool 4°C, dark	48 hrs.	—	180 days (Hg, 28 days)	ILM04.0 <sup>(2)</sup>
TAL Metals <sup>(2)</sup>	Water	500 ml HPDE	cool 4°C, dark pH<2 HNO3	48 hrs.	—	180 days (Hg, 28 days)	ILM04.0 <sup>(2)</sup>
Pest/PCBs	Soil	1 L AG	cool 4°C, dark	48 hrs.	7 days	40 days	OLM03.2
Pest/PCBs	Water	1 L AG	cool 4°C, dark	48 hrs.	7 days	40 days	OLM03.2
Cyanide, total	Soil	8 oz CWM	cool 4°C, dark	48 hrs.	—	14 days	ILM04.0
Total Organic Halogen	Soil	1 L CWM	cool 4°C, dark	48 hrs.	—	7 days	9020
Total Organic Carbon	Soil	4 oz. CWM	cool 4°C, dark	48 hrs.	—	28 days	9060
Particle Size	Soil	8 oz. CWM	cool 4°C, dark	—	—	—	—
Dioxin/Furan	Soil	4 oz. CWM	cool 4°C, dark	48 hrs.	7 days	40 days	8280,8290
524.2 Volatiles	Water	40 ml GV	cool 4°C, dark/ HCL	48 hrs.	—	14 days	524.2
Low Level Base Neutrals	Water	500 ml HDPE	cool 4°C, dark	48 hrs.	—	180 days (Hg, 28 days)	OLC01.0
Low Level Metals <sup>(2)</sup>	Water	500 ml HDPE	cool 4°C, dark pH<2 HNO3	48 hrs.	—	180 days (Hg, 28 days)	ILC01.0 <sup>(2)</sup>
508 Pest/PCBs	Water	1 L AG	cool 4°C, dark	48 hrs.	7 days	40 days	508

Notes: (1) CWM = clear wide-mouth jar  
 GV = 40 ml glass vial with teflon-lined septa lid  
 AG = amber-colored glass jar  
 P = plastic (polyethylene)

(2) Ag, Al, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Sb, V, Zn by ICP  
 As, Pb, Se, Tl by Graphite Furnace  
 Hg by Cold Vaport

**Table 5**  
**Analysis Qualifiers**


**ORGANIC ANALYSIS QUALIFIER EXPLANATION**

-  - Compound exceeds Impact to Groundwater Soil Cleanup Criteria
- 1000* - Compound exceeds Non-Residential Direct Contact Soil Cleanup Criteria
- 1000** - Compound exceeds Residential Direct Contact Soil Cleanup Criteria
- U - Indicates compound was analyzed for but not detected
- J - Indicates an estimated value
- B - Used when the analyte is found in the associated blank as well as in the sample
- E - Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis
- D - Identifies all compounds identified in an analysis at a secondary dilution factor
- R- Indicates that the Quality Assurance decision was to reject the data

**DIOXIN/FURAN ANALYSIS QUALIFIER EXPLANATION**

- B - Analyte found in associated laboratory method blank
- Q - Estimated maximum possible concentration
- S - Possible ion suppression indicated by PFK mass intensity
- J - Estimate only, below instrument calibration
- U - Not detected at the level reported
- R- Indicates that the Quality Assurance decision to reject the data

**INORGANIC ANALYSIS QUALIFIER EXPLANATION**

-  - Compound exceeds Impact to Groundwater Soil Cleanup Criteria
- 1000* - Compound exceeds Non-Residential Direct Contact Soil Cleanup Criteria
- 1000** - Compound exceeds Residential Direct Contact Soil Cleanup Criteria
- B - Reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL)
- E - Reported value is estimated because of the presence of interference
- N - Spiked sample recovery not within control limits
- S - Reported value was determined by the Method of Standard Additions (MSA)
- \* - Duplicate analysis not within control limits
- + - Correlation coefficient for the MSA is less than 0.995
- R- Indicates that the Quality Assurance decision was to reject the data

6  
Surface Soil Samples

Positive Analytical Results - Volatiles

Sample Location	Residential	Non-Residential	Impact to	SB01A	SB02	SB03	SB04	SB05	SB06	SB08	SB09	SB10
Sample ID	Direct	Direct	Groundwater	SB01A-1	SB02-2	SB03-2	SB04-2	SB05-2	SB06-3	SB08-2	SB09-2	SB10-2
Lab ID	Contact	Contact	Soil	16496	9712934	9712252	9712937	9712249	9712635	9712940	9712627	9712639
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/6/98	7/16/97	7/10/97	7/16/97	7/10/97	7/15/97	7/16/97	7/14/97	7/15/97
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	1.5-2	1-2	1.5-2	1-2	1.5-2	1.5-2	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.2 U	1.7 U	2.2	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
1,1-Dichloroethane	570	1000	10	1.2 U	1.7 U	3.6	2.5 U	1.4 UJ	1.6 U	1.3 J	1.7 U	2 U
1,1-Dichloroethene	8	150	10	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
1,2-Dichloroethene (total)	79	1000	1	1 J	1.7 U	8.2	2.5 U	180 DJ	1.6 U	1.3 J	1.7 U	2 U
2-Butanone	1000	1000	50	6.6	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
4-Methyl-2-Pentanone	1000	1000	50	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
Acetone	1000	1000	100	1.3	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
Benzene	3	13	1	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
Carbon Tetrachloride	2	4	1	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
Chlorobenzene	37	680	1	1.2 U	1.7 U	1.5 U	2.5 U	21 DJ	1.6 U	0.19 J	1.7 U	2 U
Chloroform	19	28	1	1.2 U	1.7 U	2.7	2.5 U	1.4 UJ	0.54 J	0.44 J	1.7 U	2 U
Chloromethane	520	1000	10	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	0.18 J	1.7 U	1.5 U	2.5 U	19 DJ	0.56 J	40 EJ	1.2 J	2 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.2 U	1.6 JB	0.81 JB	2.6 B	76 JDB	0 R	1.7 JB	1.2 B	1.2 B
Styrene	23	97	100	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
Tetrachloroethene	4	6	1	1.3	23	25	2.5 U	2400 DJ	0.39 J	2.6 J	0.74 J	1.1 J
Toluene	1000	1000	500	0.35 J	1.7 U	1.5 U	0.56 J	140 DJ	1.5 J	17	1.7 J	2 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.6	0.98 J	19	2.5 U	240 DJ	6.2	0.36 J	0.64 J	0.36 J
Vinyl Chloride	2	7	10	1.2 U	1.7 U	1.5 U	2.5 U	1.4 UJ	1.6 U	1.4 U	1.7 U	2 U
Xylene (total)	410	1000	10	1.1 J	1.7 U	1.5 U	2.5 U	150 DJ	3.9	190 EJ	2.8	2 U

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Surface Soil Samples

Positive Analytical Results - Volatiles

Sample Location	Residential	Non-Residential	Impact to	SB11	SB13	SB14	SB15	SB16	SB17	SB18	SB18	SB19
Sample ID	Direct	Direct	Groundwater	SB11-2	SB13-2	SB14-2	SB15-2	SB16-2	SB17-2	SB18-3	SB18-4	SB19-2
Lab ID	Contact	Contact	Soil	9711025	9712932	9712643	9712630	9712647	9712944	9712622	9712623	9712948
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	6/24/97	7/16/97	7/15/97	7/14/97	7/15/97	7/17/97	7/14/97	7/14/97	7/17/97
Depth (feet)	Criteria	Criteria	Criteria	1-1.5	1.5-2	1.5-2	1.5-2	1.5-2	1.5-2	1.5-2	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5
1,1-Dichloroethane	570	1000	10	1.3 U	1.7 U	0.82 J	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
1,1-Dichloroethene	8	150	10	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
1,2-Dichloroethene (total)	79	1000	1	0.37 J	1.7 U	7.6	0.53 J	1.4 U	1.4 U	1.3 U	1.5 U	1.9
2-Butanone	1000	1000	50	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
4-Methyl-2-Pentanone	1000	1000	50	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Acetone	1000	1000	100	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.8	1.5 U
Benzene	3	13	1	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Carbon Tetrachloride	2	4	1	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Chlorobenzene	37	680	1	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Chloroform	19	28	1	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Chloromethane	520	1000	10	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	6	1.7 U	0.62 J	1.5 U	0.16 J	1.4 U	0.2 J	1.5 U	1.5 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.8 B	1.5 JB	1.2 B	0 R	1.4 B	2 JB	0.82 B	0.81 B	1.7 JB
Styrene	23	97	100	0.32 J	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Tetrachloroethene	4	6	1	1.8	0.5 J	1.2 J	1.5 U	0.18 J	1.4 U	1.2 J	1.2 J	33 EJ
Toluene	1000	1000	500	5.5	0.21 J	5.5	0.31 J	1.1 J	0.49 J	0.82 J	0.34 J	0.2 J
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	0.4 J	1.7 U	4	0.51 J	1.4 U	0.34 J	0.25 J	0.16 J	0.63 J
Vinyl Chloride	2	7	10	1.3 U	1.7 U	1.3 U	1.5 U	1.4 U	1.4 U	1.3 U	1.5 U	1.5 U
Xylene (total)	410	1000	10	0.88 J	1.7 U	4.8	0.27 J	0.64 J	0.35 J	0.86 J	0.78 J	0.41 J

300652

Surface Soil Samples

Positive Analytical Results - Volatiles

Sample Location	Residential	Non-Residential	Impact to	SB20	SB23	SB23	SB26	SB31	SB33	SB35	SB36	SB36
Sample ID	Direct	Direct	Groundwater	SB20-2	SB23-3	SB23-4	SB26-2	SB31-2	SB33-2	SB35-1	SB36-3	SB36-4
Lab ID	Contact	Contact	Soil	9712030	9712034	9712035	9712026	9710634	9710856	9710844	9710852	9710853
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/8/97	7/8/97	7/8/97	7/7/97	6/17/97	6/19/97	6/18/97	6/19/97	6/19/97
Depth (feet)	Criteria	Criteria	Criteria	1-2	1-2	1-2	1-2	1-1.5	1.5-2	1-1.5	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.4 UJ	1.8 U	1.3 UJ	1.4 U	6.9	19	1.4 U	1.6 U	1.6 U
1,1-Dichloroethane	570	1000	10	1.4 UJ	1.8 U	1.3 UJ	1.4 U	98 JD	9.4	1.4 U	1.6 U	1.6 U
1,1-Dichloroethene	8	150	10	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.2 J	0.21 J	1.4 U	1.6 U	1.6 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.6 U	4.2	1.4 U	1.6 U	1.6 U
1,2-Dichloroethene (total)	79	1000	1	1.4 UJ	1.8 U	1.3 UJ	1.4 U	3.5	66	7.6	1.6 U	1.6 U
2-Butanone	1000	1000	50	1.4 UJ	1.8 U	7 UJ	1.4 U	8.9	1.9 U	1.4 U	1.6 U	1.6 U
4-Methyl-2-Pentanone	1000	1000	50	1.4 UJ	1.8 U	1.3 UJ	1.4 U	23	1.9 U	1.4 U	1.6 U	1.6 U
Acetone	1000	1000	100	0 R	3.4	3.2 DJ	1.2 J	4.9 J	2 J	1.4 U	9.8 J	7 J
Benzene	3	13	1	1.4 UJ	0.55 J	0.39 J	1.4 U	0.61 J	0.48 J	1.4 U	0.25 J	0.23 J
Carbon Tetrachloride	2	4	1	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.6 U	1.9 U	1.4 U	1.6 U	1.6 U
Chlorobenzene	37	680	1	1.4 UJ	1.8 U	1.3 UJ	1.4 U	5.4	19	0.22 J	1.6 U	1.6 U
Chloroform	19	28	1	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.6 U	1.7 J	1.4 U	1.6 U	1.6 U
Chloromethane	520	1000	10	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.6 U	1.9 U	1.4 U	1.6 U	3.4
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.4 UJ	1.9	2 UJ	1.4 U	30	26	2.5	1.6 U	1.6 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	3.3 JB	3.4 JB	1.6 JB	2.4 JB	220 DB	18 J	2 B	7 J	6.5 J
Styrene	23	97	100	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.6 U	1.9 U	1.4 U	1.6 U	1.6 U
Tetrachloroethene	4	6	1	1.4 UJ	0.46 J	0.37 J	0.56 J	310 D	1100 D	220 D	0.67 J	1.6 U
Toluene	1000	1000	500	1.4 UJ	0.4 J	0.45 J	0.35 J	1800 D	74 JDB	15	0.17 J	1.6 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.4 UJ	0.32 J	0.22 J	0.19 J	1800 D	180 JD	23	1.6 U	1.6 U
Vinyl Chloride	2	7	10	1.4 UJ	1.8 U	1.3 UJ	1.4 U	1.4 J	0.65 J	1.4 U	1.6 U	1.6 U
Xylene (total)	410	1000	10	1.4 UJ	0.89 J	0.98 J	0.28 J	150 JD	110 JD	12	0.21 J	1.6 U

300653

**Surface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB38	SB42	SB42	SB43	SB44	SB45	SB46	SB47	SB54
Sample ID	Direct	Direct	Groundwater	SB38-2	SB42-3	SB42-4	SB43-2	SB44-2	SB45-2	SB46-2	SB47-2	SB54-1
Lab ID	Contact	Contact	Soil	9710848	9710617	9710618	9710621	9710643	9710625	9710640	9710630	9713140
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	6/19/97	6/16/97	6/16/97	6/16/97	6/17/97	6/16/97	6/17/97	6/17/97	7/21/97
Depth (feet)	Criteria	Criteria	Criteria	1.5-2	1.5-2	1.5-2	1-1.5	1.5-2	1.5-2	1.5-2	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	0.48 J	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	0.38 J	1.6 U	1.4 U
1,1-Dichloroethane	570	1000	10	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	0.68 J	1.6 U	7.8
1,1-Dichloroethene	8	150	10	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
1,2-Dichloroethene (total)	79	1000	1	5.7	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	64 D	2.8	2.5
2-Butanone	1000	1000	50	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
4-Methyl-2-Pentanone	1000	1000	50	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
Acetone	1000	1000	100	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
Benzene	3	13	1	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	79
Carbon Tetrachloride	2	4	1	0.25 J	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
Chlorobenzene	37	680	1	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
Chloroform	19	28	1	2.4	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	0.27 J	0.19 J	1.4 U
Chloromethane	520	1000	10	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	4.2
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	5.4 J	1.2 B	1.3 B	1.3 J	1.8 B	1.4 J	3.2 B	26 DB	3.4 JB
Styrene	23	97	100	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
Tetrachloroethene	4	6	1	20	0.17 J	0.14 J	2.9	1.3 U	1.4 U	19	43 D	7.1
Toluene	1000	1000	500	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	19
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	26	1.4 U	1.4 U	0.34 J	1.3 U	1.4 U	16	9.8	1.4 U
Vinyl Chloride	2	7	10	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	1.4 U
Xylene (total)	410	1000	10	1.5 U	1.4 U	1.4 U	1.4 U	1.3 U	1.4 U	1.6 U	1.6 U	18

300654

Surface Soil Samples

Positive Analytical Results - Volatiles

Sample Location	Residential	Non-Residential	Impact to	SB62	SB63	SB64	SB64	SB65	SB66	SB67	SB68	SB69
Sample ID	Direct	Direct	Groundwater	SB62-2	SB63-3	SB64-2	SB64-3	SB65-2	SB66-2	SB67-2	SB68-2	SB69-2
Lab ID	Contact	Contact	Soil	15948	15950	15952	15953	15954	16046	15957	15959	15961
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/29/98	9/29/98	9/29/98
Depth (feet)	Criteria	Criteria	Criteria	1.5-2	1-1.5	1-1.5	1-1.5	1.5-2	1-1.5	1.5-2	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
1,1-Dichloroethane	570	1000	10	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
1,1-Dichloroethene	8	150	10	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
1,2-Dichloroethene (total)	79	1000	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
2-Butanone	1000	1000	50	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
4-Methyl-2-Pentanone	1000	1000	50	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Acetone	1000	1000	100	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Benzene	3	13	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Carbon Tetrachloride	2	4	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Chlorobenzene	37	680	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Chloroform	19	28	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Chloromethane	520	1000	10	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Styrene	23	97	100	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Tetrachloroethene	4	6	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Toluene	1000	1000	500	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Vinyl Chloride	2	7	10	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U
Xylene (total)	410	1000	10	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.3 U

300655



Surface Soil Samples

Positive Analytical Results - Volatiles

Sample Location	Residential	Non-Residential	Impact to	SB70	SB71	SB72	SB73	SB74	SB75	SB76	SB77	SB78
Sample ID	Direct	Direct	Groundwater	SB70-2	SB71-2	SB72-2	SB73-2	SB74-2	SB75-2	SB76-2	SB77-2	SB78-2
Lab ID	Contact	Contact	Soil	15963	15965	16047	15967	16048	15989	16050	16051	15991
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/29/98	9/30/98	9/30/98	9/30/98	9/30/98	9/29/98	10/1/98	10/1/98	9/29/98
Depth (feet)	Criteria	Criteria	Criteria	1.5-2	1-1.5	1-1.5	1.5-2	1-1.5	1.5-2	1-1.5	1-1.5	1-1.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
1,1-Dichloroethane	570	1000	10	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
1,1-Dichloroethene	8	150	10	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
1,2-Dichloroethene (total)	79	1000	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
2-Butanone	1000	1000	50	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
4-Methyl-2-Pentanone	1000	1000	50	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Acetone	1000	1000	100	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Benzene	3	13	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Carbon Tetrachloride	2	4	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Chlorobenzene	37	680	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Chloroform	19	28	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Chloromethane	520	1000	10	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Styrene	23	97	100	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Tetrachloroethene	4	6	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Toluene	1000	1000	500	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Vinyl Chloride	2	7	10	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U
Xylene (total)	410	1000	10	1.4 U	1.7 U	1.2 U	1.3 U	1.1 U	1.3 U	1.3 U	1.2 U	1.5 U

300656

Surface Soil Samples

Positive Analytical Results - Volatiles

Sample Location	Residential	Non-Residential	Impact to	SB79	SB80	SB81	SB82	SB83	SB84	SB85	SB86	SB87
Sample ID	Direct	Direct	Groundwater	SB79-2	SB80-2	SB81-2	SB82-2	SB83-2	SB84-2	SB85-2	SB86-2	SB87-2
Lab ID	Contact	Contact	Soil	16049	16055	16053	16052	16264	16265	16266	16056	16057
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/30/98	10/1/98	10/1/98	10/1/98	10/5/98	10/5/98	10/5/98	10/1/98	10/1/98
Depth (feet)	Criteria	Criteria	Criteria	1.5-2	1-1.5	1.3-1.5	1-1.5	1.5-2	1.5-2	1-1.5	1-1.5	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
1,1-Dichloroethane	570	1000	10	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
1,1-Dichloroethene	8	150	10	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
1,2-Dichloroethene (total)	79	1000	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
2-Butanone	1000	1000	50	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
4-Methyl-2-Pentanone	1000	1000	50	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Acetone	1000	1000	100	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Benzene	3	13	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Carbon Tetrachloride	2	4	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Chlorobenzene	37	680	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Chloroform	19	28	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Chloromethane	520	1000	10	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Styrene	23	97	100	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Tetrachloroethene	4	6	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Toluene	1000	1000	500	1.1 U	1.3 U	0.31 J	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Vinyl Chloride	2	7	10	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Xylene (total)	410	1000	10	1.1 U	1.3 U	0.26 J	1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	0.14 J

300657

**Surface Soil Samples**

**Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB88	SB89	SB90	SB91	SB92	SB93	SB94	SB95	SB96
Sample ID	Direct	Direct	Groundwater	SB88-2	SB89-2	SB90-2	SB91-2	SB92-2	SB93-2	SB94-2	SB95-2	SB96-2
Lab ID	Contact	Contact	Soil	16178	16179	16180	16498A	16499A	16500A	16501A	16502A	16181
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/2/98	10/2/98	10/2/98	10/6/98	10/6/98	10/6/98	10/6/98	10/6/98	10/2/98
Depth (feet)	Criteria	Criteria	Criteria	1-1.5	1.5-2	1-1.5	1-1.5	1.5-2	1-1.5	1.5-2	1-1.5	1-1.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
1,1-Dichloroethane	570	1000	10	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
1,1-Dichloroethene	8	150	10	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
1,2-Dichloroethene (total)	79	1000	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.9	1.4 U
2-Butanone	1000	1000	50	1.3 U	1.3 U	1.3 U	7.2	6.7	8.5	7.3	7.2	1.4 U
4-Methyl-2-Pentanone	1000	1000	50	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Acetone	1000	1000	100	1.3 U	1.3 U	1.3 U	1.5	1.5	1.8	1.4	1.5	1.4 U
Benzene	3	13	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Carbon Tetrachloride	2	4	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Chlorobenzene	37	680	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Chloroform	19	28	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Chloromethane	520	1000	10	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Styrene	23	97	100	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Tetrachloroethene	4	6	1	1.3 U	1.3 U	0.407 J	1.3 U	1.2 U	1.5 U	0.18 J	1.3	1.4 U
Toluene	1000	1000	500	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	5.9	1.4 U
Vinyl Chloride	2	7	10	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U
Xylene (total)	410	1000	10	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	1.5 U	1.4 U	1.2 U	1.4 U

300658

**Surface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB97	SB98	SB99	SB105	SB106	SB107	SB108	SB109	SB110
Sample ID	Direct	Direct	Groundwater	SB97-2	Sb98-2	SB99-2	SB105-2	SB106-2	SB107-2	SB108-2	SB109-2	SB110-2
Lab ID	Contact	Contact	Soil	16182	16183	16184	16267	16268	16185	16269	16270	16622A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/2/98	10/2/98	10/2/98	10/5/98	10/5/98	10/2/98	10/5/98	10/5/98	10/8/98
Depth (feet)	Criteria	Criteria	Criteria	1.5-2	1-1.5	1-1.5	1.5-2	1.5-2	1-1.5	1.5-2	1.5-2	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
1,1-Dichloroethane	570	1000	10	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
1,1-Dichloroethene	8	150	10	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	6	24	1	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
1,2-Dichloroethene (total)	79	1000	1	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
2-Butanone	1000	1000	50	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
4-Methyl-2-Pentanone	1000	1000	50	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Acetone	1000	1000	100	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.6
Benzene	3	13	1	1.1 U	1.2 U	1.2 U	5.1 J	0.22 J	1.5 U	1.4 U	1.3 U	1.5 U
Carbon Tetrachloride	2	4	1	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Chlorobenzene	37	680	1	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Chloroform	19	28	1	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Chloromethane	520	1000	10	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Isopropylbenzene				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Styrene	23	97	100	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Tetrachloroethene	4	6	1	1.1 U	0.356 J	0.466 J	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	3.2
Toluene	1000	1000	500	1.1 U	0.353 J	0.254 J	1.4 U	0.6 J	1.5 U	1.4 U	1.3 U	0.24 J
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	1.1 U	1.499	0.974 J	0.16 J	1.2 U	1.5 U	1.4 U	1.3 U	0.54 J
Vinyl Chloride	2	7	10	1.1 U	1.2 U	1.2 U	1.4 U	1.2 U	1.5 U	1.4 U	1.3 U	1.5 U
Xylene (total)	410	1000	10	1.1 U	0.331 J	1.2 U	1.4 U	0.28 J	1.5 U	1.4 U	1.3 U	1.5 U

300659

**Surface Soil Samples  
Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB112	SB113	SB114	SB115	SB116	SB118	SB119	SB120	SB121
Sample ID	Direct	Direct	Groundwater	SB112-2	SB113-2	SB114-2	SB115-2	SB116-2	SB118A2	SB119-1	SB120-1	SB121-1
Lab ID	Contact	Contact	Soil	16626A	16503A	16504A	16505A	16271	0213408A	0213411A	0213503A	0213505A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/8/98	10/6/98	10/7/98	10/6/98	10/5/98	2/16/00	2/16/00	2/15/00	2/15/00
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	1.5-2	1-1.5	1.5-2	1.5-2	1.5-2	1.5-2	1-1.5	1-1.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.5 U	0.7 J	0.26 J	1.4 U	1.3 U	1.8 U	3.7	0.96 J	3 U
1,1-Dichloroethane	570	1000	10	1.5 U	0.9 J	1.3 U	1.4 U	1.3 U	1.8 U	3.1	0.93 J	3 U
1,1-Dichloroethene	8	150	10	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA	1.8 U	1.9 U	4.1 U	3 U
1,2-Dichloroethane	6	24	1	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
1,2-Dichloroethene (total)	79	1000	1	1.5 U	1.4	0.69 J	64	1.3 U	NA	NA	NA	NA
2-Butanone	1000	1000	50	9.3	7.2	11	11	1.3 U	1.8 U	1.9 U	4.1 U	3 U
4-Methyl-2-Pentanone	1000	1000	50	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Acetone	1000	1000	100	2	1.7	2	2.2	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Benzene	3	13	1	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Carbon Tetrachloride	2	4	1	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Chlorobenzene	37	680	1	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Chloroform	19	28	1	1.5 U	0.22 J	1.3 U	1.4 U	1.3 U	1.8 U	2.2	4.1 U	3 U
Chloromethane	520	1000	10	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA	1.8 U	0.74 J	7.1	3 U
Ethylbenzene	1000	1000	100	1.5 U	1.3 U	1.1 J	0.49 J	1.3 U	1.8 U	0.28 J	13	3 U
Isopropylbenzene				NA	NA	NA	NA	NA	1.8 U	1.9 U	4.1 U	3 U
Methyl acetate				NA	NA	NA	NA	NA	0.79 J	0.81 J	4.1 U	3 U
Methylcyclohexane				NA	NA	NA	NA	NA	1.8 U	0.2 J	4.1 U	3 U
Methylene Chloride	49	210	1	0.93 J	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Styrene	23	97	100	1.5 U	1.3 U	1.3 U	1.4 U	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Tetrachloroethene	4	6	1	13	45	0.39 J	6.8	1.3 U	2.8	87	4.1 U	3 U
Toluene	1000	1000	500	0.34 J	0.17 J	1.8	11	1.3 U	1.8 U	20	38	0.38 J
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA	1.8 U	0.19 J	0.35 J	3 U
Trichloroethene	23	54	1	4.5	110 E	0.41 J	1.7	1.3 U	0.26 J	9.4	1.5 J	3 U
Vinyl Chloride	2	7	10	1.5 U	1.3 U	1.3 U	2.3	1.3 U	1.8 U	1.9 U	4.1 U	3 U
Xylene (total)	410	1000	10	1.5 U	1.3 U	1.3	3.3	1.3 U	0.35 J	1.9	74	3 U

300660

**Surface Soil Samples  
Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB12	SB122	SB123	SB124	SB127	SB129	SB130	SB131	SB132
Sample ID	Direct	Direct	Groundwater	SB12-2	SB122A2	SB123-1	SB124A2	SB127A2	SB129A2	SB130A2	SB131A2	SB132A2
Lab ID	Contact	Contact	Soil	9712255	0213508A	0213510A	0213513A	0213414A	0213516A	0213520a	0213603A	0213607A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/10/97	2/15/00	2/15/00	2/15/00	2/16/00	2/15/00	2/15/00	2/15/00	2/15/00
Depth (feet)	Criteria	Criteria	Criteria	1-2	1-1.5	1.5-2	1.5-2	1.5-2	1-1.5	1.5-2	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	3.5	1.2 U	2 U	2.5	1.9 U	0.9 J	1.3 J	2.3 U	2 U
1,1-Dichloroethane	570	1000	10	0.47 J	1.2 U	2 U	1.8 U	1.9 U	2.9	1.8 U	2.3 U	2 U
1,1-Dichloroethene	8	150	10	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
1,2-Dichlorobenzene	5100	10000	50	NA	1.2 U	2 U	1.8 U	1.9 U	2.2 U	0.16 J	2.3 U	2 U
1,2-Dichloroethane	6	24	1	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
1,2-Dichloroethene (total)	79	1000	1	0.42 J	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1000	1000	50	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
4-Methyl-2-Pentanone	1000	1000	50	1.4 U	1.2 U	0.4 J	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Acetone	1000	1000	100	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	1.2 J	2 U
Benzene	3	13	1	1.4 U	1.2 U	3.9	1.8 U	1.9 U	1.5 J	1.8 U	2.3 U	2 U
Carbon Tetrachloride	2	4	1	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Chlorobenzene	37	680	1	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Chloroform	19	28	1	1.4 U	1.2 U	2 U	0.18 J	1.9 U	14	0.15 J	1.1 J	2 U
Chloromethane	520	1000	10	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
cis-1,2-Dichloroethene	79	1000	1	NA	1.2 U	2 U	1.8 U	1.9 U	4	1.8 U	2.3 U	2 U
Ethylbenzene	1000	1000	100	1.4 U	1.2 U	0.62 J	1.8 U	0.18 J	0.21 J	0.23 J	2.3 U	2 U
Isopropylbenzene				NA	1.2 U	0.17 J	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Methyl acetate				NA	1.2 U	0.55 J	1.8 U	0.75 J	2.2 U	0.58 J	2.3 U	2 U
Methylcyclohexane				NA	1.2 U	0.18 J	0.23 J	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Methylene Chloride	49	210	1	0.8 JB	1.2 U	2 U	1.8 U	1.9 U	0.5 J	5.5	2.3 U	2 U
Styrene	23	97	100	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Tetrachloroethene	4	6	1	0.29 J	1.2 U	0.64 J	0.29 J	0.54 J	15	4.4	4.1	2 U
Toluene	1000	1000	500	1.4 U	0.15 J	2.1	1.8 U	1.9 U	1.1 J	0.58 J	2.3 U	2 U
trans-1,2-Dichloroethene	1000	1000	50	NA	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Trichloroethene	23	54	1	0.54 J	0.091 J	0.3 J	1.8 U	1.9 U	29	1.7 J	8.6	2 U
Vinyl Chloride	2	7	10	1.4 U	1.2 U	2 U	1.8 U	1.9 U	2.2 U	1.8 U	2.3 U	2 U
Xylene (total)	410	1000	10	0.36 J	0.1 J	4.1	1.8 U	1.9 U	0.95 J	1.1 J	2.3 U	2 U

300661

**Surface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB133	VOA1	VOA2
Sample ID	Direct	Direct	Groundwater	SB133A2	VOA1-1	VOA2-1
Lab ID	Contact	Contact	Soil	0213610A	16483	16485
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/15/00	10/7/98	10/7/98
Depth (feet)	Criteria	Criteria	Criteria	1.5-2	1.5-2	1.5-2
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.9 U	1.4 U	1.3 U
1,1-Dichloroethane	570	1000	10	1.9 U	0.52 J	0.42 J
1,1-Dichloroethene	8	150	10	1.9 U	1.4 U	1.3 U
1,2-Dichlorobenzene	5100	10000	50	1.9 U	NA	NA
1,2-Dichloroethane	6	24	1	1.9 U	1.4 U	1.3 U
1,2-Dichloroethene (total)	79	1000	1	NA	0.45 J	6.3
2-Butanone	1000	1000	50	1.9 U	11	11
4-Methyl-2-Pentanone	1000	1000	50	1.9 U	1.4 U	1.3 U
Acetone	1000	1000	100	1.9 U	2.3	2.8
Benzene	3	13	1	1.9 U	1.4 U	1.3 U
Carbon Tetrachloride	2	4	1	1.9 U	1.4 U	1.3 U
Chlorobenzene	37	680	1	1.9 U	1.4 U	1.3 U
Chloroform	19	28	1	1.9 U	1.4 U	1.3 U
Chloromethane	520	1000	10	1.9 U	1.4 U	1.3 U
cis-1,2-Dichloroethene	79	1000	1	1.9 U	NA	NA
Ethylbenzene	1000	1000	100	1.9 U	0.5 J	0.53 J
Isopropylbenzene				1.9 U	NA	NA
Methyl acetate				1.9 U	NA	NA
Methylcyclohexane				1.9 U	NA	NA
Methylene Chloride	49	210	1	1.9 U	1.4 U	1.3 U
Styrene	23	97	100	1.9 U	1.4 U	0.18 J
Tetrachloroethene	4	6	1	1.9 U	0.52 J	0.93 J
Toluene	1000	1000	500	1.9 U	2	17
trans-1,2-Dichloroethene	1000	1000	50	1.9 U	NA	NA
Trichloroethene	23	54	1	1.9 U	0.14 J	0.28 J
Vinyl-Chloride	2	7	10	1.9 U	1.4 U	1.3 U
Xylene (total)	410	1000	10	1.9 U	2.4	3.3

300662

**Table 7**  
**Surface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB01A	SB02A	SB03A	SB09A
Sample ID	Direct	Direct	Groundwater	SB01A-1	SB02A-1	SB03A-1	SB09A-1
Lab ID	Contact	Contact	Soil	16496RE	16458RE	16459	16460RE
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/6/98	10/6/98	10/6/98	10/6/98
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	0.5-1	0-1	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl				NA	NA	NA	NA
1,2,4-Trichlorobenzene	68	1200	100	1.9 U	0.11 J	0.41 U	3.9 U
1,2-Dichlorobenzene	5100	10000	50	1.9 U	0.39 U	1.2	3.9 U
1,4-Dichlorobenzene	570	10000	100	1.9 U	0.39 U	0.34 J	3.9 U
2,4-Dimethylphenol	1100	10000	10	1.9 U	0.39 U	0.55	3.9 U
2-Methylnaphthalene				0.22 J	0.081 J	0.45	3.9 U
2-Methylphenol	2800	10000		1.9 U	0.39 U	0.41 U	3.9 U
4-Methylphenol	2800	10000		1.9 U	0.39 U	0.2 J	3.9 U
4-Nitroaniline				4.5 U	0.94 U	1 U	9.5 U
Acenaphthene	3400	10000	100	0.38 J	0.071 J	0.15 J	3.9 U
Acenaphthylene				1.3 J	0.11 J	0.41 U	3.9 U
Acetophenone				NA	NA	NA	NA
Anthracene	10000	10000	100	2.1	0.26 J	0.25 J	0.76 J
Benzaldehyde				NA	NA	NA	NA
Benzo(a)Anthracene	0.9	4	500	5.6	1.5	0.61 J	1 J
Benzo(a)Pyrene	0.66	0.66	100	5.4	1.3 J	0.59 J	0.92 J
Benzo(b)Fluoranthene	0.9	4	50	5.5	1.5 J	0.69 J	1.4 J
Benzo(g,h,i)Perylene				1.1 J	0.47 J	0.3 J	3.9 U
Benzo(k)Fluoranthene	0.9	4	500	5.7	1.5 J	0.72 J	1.1 J
bis(2-Chloroethyl)Ether	0.66	3	10	1.9 U	0.39 U	0.41 U	3.9 U
bis(2-Ethylhexyl)Phthalate	49	210	100	1.9	0.59	13	18
Butylbenzylphthalate	1100	10000	100	1.9 U	0.39 U	0.41 U	0.41 J
Carbazole				0.59 J	0.1 J	0.11 J	3.9 U
Chrysene	9	40	500	6.1	1.7	0.81 J	1 J
Dibenz(a,h)Anthracene	0.66	0.66	100	0.6 J	0.23 J	0.41 U	3.9 U
Dibenzofuran				0.25 J	0.059 J	0.095 J	3.9 U
Diethylphthalate	10000	10000	50	1.9 U	0.39 U	0.41 U	3.9 U
Di-n-Butylphthalate	5700	10000	100	0.64 BJ	0.15 J	0.099 J	0.8 J
Di-n-Octylphthalate	1100	10000	100	1.9 U	0.39 U	0.45 J	3.9 U
Fluoranthene	2300	10000	100	12	1.7	0.84	2.1 J
Fluorene	2300	10000	100	0.47 J	0.1 J	0.23 J	3.9 U
Indeno(1,2,3-cd)Pyrene	0.9	4	500	1.3 J	0.5 J	0.27 J	0.41 J
Isophorone	1100	10000	50	1.9 U	0.39 U	0.41 U	3.9 U
Naphthalene	230	4200	100	0.64 J	0.51	3	0.55 J
N-Nitrosodiphenylamine (1)	140	600	100	1.9 U	0.39 U	0.41 U	3.9 U
Phenanthrene				5.8	1.2	1.2	0.94 J
Phenol	10000	10000	50	1.9 U	0.045 J	0.089 J	1.8 J
Pyrene	1700	10000	100	4.8	2.5	2 J	2.2 J

300663



**Table 7  
Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB15A	SB16A	SB19A	SB23A	SB42A	SB43A	SB46A
Sample ID	SB15A-1	SB16A-1	SB19A-1	SB23A-1	SB42A-1	SB43A-1	SB46A-1
Lab ID	16463RE	16464	16465	16466	16616	16618	16620
Date Sampled	10/7/98	10/7/98	10/7/98	10/7/98	10/8/98	10/8/98	10/8/98
Depth (feet)	0-0.5	0-0.5	0-0.5	0-0.5	0.5-1	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.36 U	0.35 U	0.066 J	0.41 U	0.37 U	0.36 U	0.38 U
1,2-Dichlorobenzene	0.36 U	0.35 U	0.37 U	0.41 U	0.37 U	0.36 U	0.38 U
1,4-Dichlorobenzene	0.36 U	0.35 U	0.37 U	0.41 U	0.37 U	0.36 U	0.38 U
2,4-Dimethylphenol	0.36 U	0.35 U	0.37 U	0.41 U	0.37 U	0.36 U	0.38 U
2-Methylnaphthalene	0.04 J	0.037 J	0.37 U	0.19 J	0.37 U	0.36 U	0.38 U
2-Methylphenol	0.36 U	0.35 U	0.37 U	0.053 J	0.37 U	0.36 U	0.38 U
4-Methylphenol	0.36 U	0.35 U	0.11 J	0.1 J	0.37 U	0.36 U	0.38 U
4-Nitroaniline	0.87 U	0.84 U	0.9 U	1 U	0.89 U	0.88 U	0.37 J
Acenaphthene	0.069 J	0.21 J	0.091 J	0.3 J	0.37 U	0.36 U	0.38 U
Acenaphthylene	0.36 U	0.35 U	0.37 U	0.087 J	0.088 J	0.36 U	0.27 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.21 J	0.33 J	0.18 J	1.6 J	0.064 J	0.36 U	0.21 J
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.8	1.2 J	0.55 J	2 J	0.2 J	0.1 J	0.85
Benzo(a)Pyrene	0.78 J	1.3 J	0.64 J	2.1 J	0.16 J	0.093 J	0.89
Benzo(b)Fluoranthene	0.85 J	1.5 J	0.71 J	2.4 J	0.17 J	0.094 J	0.65
Benzo(g,h,i)Perylene	0.24 J	0.55 J	0.47 J	1.2 J	0.17 J	0.072 J	1
Benzo(k)Fluoranthene	0.98 J	1.5 J	0.71 J	2.6 J	0.18 J	0.11 J	0.6
bis(2-Chloroethyl)Ether	0.093 J	0.35 U	0.37 U	0.41 U	0.37 U	0.36 U	0.38 U
bis(2-Ethylhexyl)Phthalate	0.46	0.8 J	2.1 J	18	0.15 J	0.1 J	2.1
Butylbenzylphthalate	0.11 J	0.17 J	3.6 J	0.41 U	0.37 U	0.36 U	0.078 BJ
Carbazole	0.067 J	0.12 J	0.37 U	0.41 J	0.37 U	0.36 U	0.075 J
Chrysene	0.72	1.2 J	0.75 J	2.1 J	0.25 J	0.14 J	0.97
Dibenz(a,h)Anthracene	0.15 J	0.28 J	0.25 J	0.53 J	0.055 J	0.36 U	0.3 J
Dibenzofuran	0.042 J	0.061 J	0.044 J	0.21 J	0.37 U	0.36 U	0.38 U
Diethylphthalate	0.36 U	0.35 U	0.086 J	0.045 J	0.37 U	0.36 U	0.38 U
Di-n-Butylphthalate	0.093 J	0.057 J	1.5	0.41 U	0.37 U	0.36 U	0.062 BJ
Di-n-Octylphthalate	0.072 J	0.036 J	0.37 U	0.32 J	0.37 U	0.36 U	0.38 U
Fluoranthene	1.2	1.5	0.59 J	2.2 J	0.36 J	0.17 J	1.3
Fluorene	0.081 J	0.12 J	0.063 J	0.43	0.37 U	0.36 U	0.038 J
Indeno(1,2,3-cd)Pyrene	0.26 J	0.62 J	0.49 J	1.2 J	0.16 J	0.065 J	0.76
Isophorone	0.36 U	0.35 U	0.37 U	0.52	0.37 U	0.36 U	0.38 U
Naphthalene	0.075 J	0.12 J	0.86	0.66	0.52	0.36 U	0.51
N-Nitrosodiphenylamine (1)	0.36 U	0.35 U	0.099 J	0.41 U	0.37 U	0.36 U	0.38 U
Phenanthrene	0.71	1	0.74 J	2.6 J	0.16 J	0.088 J	0.58
Phenol	0.36 U	0.037 J	0.15 J	0.11 J	0.37 U	0.36 U	0.38 U
Pyrene	1.6	2.9	2.3 J	4.3	0.31 J	0.17 J	1.1

300664

**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB62	SB63	SB63	SB64	SB65	SB66	SB67
Sample ID	SB62-1	SB63-1	SB63-2	SB64-1	SB65-1	SB66-1	SB67-1
Lab ID	15968	15970RE	15971RE	15973	15975	16059RE	15977
Date Sampled	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/29/98
Depth (feet)	0.5-1	0.5-1	0.5-1	0.5-1	0-1	0-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
1,2-Dichlorobenzene	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
1,4-Dichlorobenzene	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
2,4-Dimethylphenol	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.05 J
2-Methylnaphthalene	0.14 J	0.074 J	0.059 J	0.74	0.12 J	1.8 U	1.2
2-Methylphenol	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
4-Methylphenol	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.089 J
4-Nitroaniline	1 U	0.89 U	0.87 U	0.88 U	0.91 U	4.3 U	0.87 U
Acenaphthene	0.42 U	0.16 J	0.087 J	0.65	0.2 J	0.43 J	2
Acenaphthylene	0.42 U	0.16 J	0.13 J	0.3 J	0.12 J	0.31 J	0.95
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.059 J	0.47	0.25 J	1.8	0.5	0.96 J	5.5 D
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.24 J	1.4	1	3.9 D	1.6	3.4	7.9 D
Benzo(a)Pyrene	0.25 J	1.4	1.1	3.5 D	1.6	3	5.6 D
Benzo(b)Fluoranthene	0.29 J	1.8	1.3	3.6 D	1.9	4.2	5.3 D
Benzo(g,h,i)Perylene	0.11 J	0.39	0.34 J	1.1	0.51	0.59 J	0.93
Benzo(k)Fluoranthene	0.29 J	1.6	1.3	3.8 D	1.9	3.9	5.6 D
bis(2-Chloroethyl)Ether	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
bis(2-Ethylhexyl)Phthalate	0.42 U	0.37 U	0.042 J	0.1 J	0.055 J	1.8 U	0.36 U
Butylbenzylphthalate	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
Carbazole	0.42 U	0.23 J	0.13 J	0.78	0.22 J	0.62 J	2.4
Chrysene	0.31 J	1.5	1.1	4.2 D	1.8	3.5	7.2 D
Dibenz(a,h)Anthracene	0.42 U	0.15 J	0.13 J	0.59	0.2 J	1.8 U	0.66
Dibenzofuran	0.42 U	0.12 J	0.07 J	0.59	0.14 J	0.27 J	2.3
Diethylphthalate	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
Di-n-Butylphthalate	0.42 U	0.37 U	0.36 U	0.36 U	0.05 BJ	1.8 U	0.36 U
Di-n-Octylphthalate	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
Fluoranthene	0.46	2.2	1.5	8 D	2.4	4.6	15 D
Fluorene	0.42 U	0.21 J	0.11 J	0.66	0.2 J	0.41 J	2.6
Indeno(1,2,3-cd)Pyrene	0.14 J	0.51	0.39	1.4	0.63	0.8 J	1.3
Isophorone	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
Naphthalene	0.098 J	0.12 J	0.094 J	0.43	0.12 J	1.8 U	1.2
N-Nitrosodiphenylamine (1)	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
Phenanthrene	0.32 J	2	1.3	8.1 D	2.3	3.9	19 D
Phenol	0.42 U	0.37 U	0.36 U	0.36 U	0.38 U	1.8 U	0.36 U
Pyrene	0.48	3.7 E	2.8	7.6 D	3.6 D	7.7	12 D

300665

**Table 7**  
**Surface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB68	SB69	SB70	SB71	SB72	SB73	SB74
Sample ID	SB68-1	SB69-1	SB70-1	SB71-1	SB72-1	SB73-1	SB74-1
Lab ID	15979	15981	15983	15985RE	16060RE	15987	16061
Date Sampled	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/30/98	9/30/98
Depth (feet)	0-1	0.5-1	0-1	0-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
1,2-Dichlorobenzene	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
1,4-Dichlorobenzene	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
2,4-Dimethylphenol	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
2-Methylnaphthalene	0.073 J	0.23 J	0.98	0.36 U	0.34 U	0.053 J	1.7 U
2-Methylphenol	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
4-Methylphenol	0.36 U	0.038 J	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
4-Nitroaniline	0.86 U	0.9 U	1.8 U	0.86 U	0.83 U	0.9 U	4.1 U
Acenaphthene	0.47	0.42	1.9	0.36 U	0.34 U	0.081 J	0.71 J
Acenaphthylene	0.49	0.51	0.55 J	0.052 J	0.34 U	0.052 J	1.7 U
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	1.9	2	5.2	0.05 J	0.05 J	0.23 J	2.4
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	6.8 D	4.8 D	14 D	0.22 J	0.21 J	2.4	12
Benzo(a)Pyrene	5.8 D	4 D	12 D	0.26 J	0.2 J	2.5	8.8
Benzo(b)Fluoranthene	5.3 D	3.8 D	12 D	0.38	0.24 J	3 D	11
Benzo(g,h,i)Perylene	1.4	0.74	3.5	0.11 J	0.34 U	0.81	1.8
Benzo(k)Fluoranthene	5.1 D	3.9 D	9.9 D	0.3 J	0.23 J	2.8	11
bis(2-Chloroethyl)Ether	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
bis(2-Ethylhexyl)Phthalate	0.36 U	0.046 J	0.091 J	0.046 J	0.34 U	0.35 J	1.7 U
Butylbenzylphthalate	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.045 BJ	1.7 U
Carbazole	0.41	0.49	1.7	0.36 U	0.34 U	0.12 J	0.67 J
Chrysene	7.4 D	4.8 D	15 D	0.29 J	0.23 J	3.1 D	10
Dibenz(a,h)Anthracene	0.69	0.5	1.6	0.36 U	0.34 U	0.37 U	1.2 J
Dibenzofuran	0.23 J	0.32 J	1.1	0.36 U	0.34 U	0.043 J	0.25 J
Diethylphthalate	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
Di-n-Butylphthalate	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
Di-n-Octylphthalate	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
Fluoranthene	14 D	9.4 D	28 D	0.35 J	0.28 J	2.4	13
Fluorene	0.58	0.52	2.1	0.36 U	0.34 U	0.055 J	0.63 J
Indeno(1,2,3-cd)Pyrene	1.6	1.1	4	0.1 J	0.094 J	0.77	2.2
Isophorone	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
Naphthalene	0.085 J	0.15 J	0.97	0.36 U	0.34 U	0.044 J	1.7 U
N-Nitrosodiphenylamine (1)	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
Phenanthrene	9.8 D	6.9 D	25 D	0.19 J	0.23 J	1	7.7
Phenol	0.36 U	0.37 U	0.75 U	0.36 U	0.34 U	0.37 U	1.7 U
Pyrene	13 D	8.7 D	25 D	0.55	0.72	4.4 D	21 D

300666

**Table 7**  
**Surface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB75	SB76	SB77	SB78	SB79	SB80	SB81
Sample ID	SB75-1	SB76-1	SB77-1	SB78-1	SB79-1	SB80-1	SB81-1
Lab ID	15995	16063	16064	15997	16062RE	16067	16066
Date Sampled	9/29/98	10/1/98	10/1/98	9/29/98	9/30/98	10/1/98	10/1/98
Depth (feet)	0.5-1	0-1	0-1	0-1	0-1	0.5-1	0.8-1.3
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
1,2-Dichlorobenzene	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
1,4-Dichlorobenzene	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
2,4-Dimethylphenol	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
2-Methylnaphthalene	0.083 J	1.8 U	0.68 U	0.35 U	0.36 U	0.046 J	0.34 U
2-Methylphenol	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
4-Methylphenol	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
4-Nitroaniline	0.84 U	4.4 U	1.7 U	0.84 U	0.86 U	0.89 U	0.83 U
Acenaphthene	0.3 J	0.26 J	0.68 U	0.35 U	0.36 U	0.12 J	0.34 U
Acenaphthylene	0.14 J	0.35 J	0.68 U	0.35 U	0.36 U	0.078 J	0.34 U
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.7	0.74 J	0.68 U	0.35 U	0.36 U	0.38	0.34 U
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	2.2	4.7	0.17 J	0.15 J	0.077 J	1.2	0.14 J
Benzo(a)Pyrene	2.7	3.7	0.68 U	0.16 J	0.083 J	1.3	0.13 J
Benzo(b)Fluoranthene	2.6	2.9	0.68 U	0.14 J	0.11 J	1.8	0.15 J
Benzo(g,h,i)Perylene	0.76	0.55 J	0.51 J	0.13 J	0.36 U	0.46	0.071 J
Benzo(k)Fluoranthene	2.2	3.7	0.68 U	0.19 J	0.11 J	1.4	0.14 J
bis(2-Chloroethyl)Ether	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
bis(2-Ethylhexyl)Phthalate	2.7	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Butylbenzylphthalate	0.14 J	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Carbazole	0.28 J	0.37 J	0.68 U	0.35 U	0.36 U	0.1 J	0.34 U
Chrysene	2.4	3.9	0.24 J	0.18 J	0.11 J	1.2	0.15 J
Dibenz(a,h)Anthracene	0.38	1.8 U	0.68 U	0.35 U	0.36 U	0.2 J	0.041 J
Dibenzofuran	0.18 J	0.27 J	0.68 U	0.35 U	0.36 U	0.076 J	0.34 U
Diethylphthalate	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Di-n-Butylphthalate	0.055 BJ	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Di-n-Octylphthalate	0.063 J	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Fluoranthene	3.7 D	4.5	0.14 J	0.18 J	0.15 J	1.4	0.25 J
Fluorene	0.25 J	0.37 J	0.68 U	0.35 U	0.36 U	0.11 J	0.34 U
Indeno(1,2,3-cd)Pyrene	0.87	0.7 J	0.68 U	0.1 J	0.36 U	0.5	0.077 J
Isophorone	0.046 J	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Naphthalene	0.084 J	0.23 J	0.68 U	0.35 U	0.36 U	0.06 J	0.34 U
N-Nitrosodiphenylamine (1)	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Phenanthrene	3.1 D	3.3	0.18 J	0.16 J	0.077 J	1.7	0.11 J
Phenol	0.35 U	1.8 U	0.68 U	0.35 U	0.36 U	0.37 U	0.34 U
Pyrene	5 D	7.8	0.64 J	0.54	0.19 J	4.1 D	0.23 J

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**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB82	SB83	SB84	SB85	SB86	SB87	SB88
Sample ID	SB82-1	SB83-1	SB84-1	SB85-1	SB86-1	SB87-1	SB88-1
Lab ID	16065	16256	16257	16258	16068RE	16069	16170
Date Sampled	10/1/98	10/5/98	10/5/98	10/5/98	10/1/98	10/1/98	10/2/98
Depth (feet)	0.5-1	0.5-1.5	0.5-1.5	0-1	0-1	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
1,2-Dichlorobenzene	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
1,4-Dichlorobenzene	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
2,4-Dimethylphenol	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
2-Methylnaphthalene	0.043 J	0.37 U	0.34 U	0.064 J	0.099 J	0.55	3.8 U
2-Methylphenol	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
4-Methylphenol	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
4-Nitroaniline	0.87 U	0.89 U	0.83 U	0.86 U	0.83 U	0.87 U	9.3 U
Acenaphthene	0.36 U	0.37 U	0.34 U	0.22 J	0.34 U	0.15 J	1.1 J
Acenaphthylene	0.038 J	0.37 U	0.34 U	0.093 J	0.34 U	0.047 J	1 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.084 J	0.37 U	0.34 U	0.46	0.34 U	0.45	7.3
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.69	0.089 J	0.045 J	1.5 J	0.14 J	1.6	61
Benzo(a)Pyrene	0.85	0.07 J	0.035 J	1.3 J	0.34 U	1.2	75 J
Benzo(b)Fluoranthene	0.87	0.1 J	0.34 U	1.4 J	0.24 J	1.5	82 J
Benzo(g,h,i)Perylene	0.36	0.37 U	0.34 U	0.41 J	0.34 U	0.27 J	34 J
Benzo(k)Fluoranthene	0.79	0.065 J	0.34 U	1.6 J	0.34 U	1.4	69 J
bis(2-Chloroethyl)Ether	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
bis(2-Ethylhexyl)Phthalate	0.079 J	0.37 U	0.34 U	0.22 J	0.34 U	0.36 U	NA
Butylbenzylphthalate	0.052 BJ	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
Carbazole	0.044 J	0.37 U	0.34 U	0.27 J	0.34 U	0.18 J	3.1 J
Chrysene	0.66	0.17 J	0.046 J	1.6 J	0.41	1.4	63
Dibenz(a,h)Anthracene	0.22 J	0.37 U	0.34 U	0.2 J	0.34 U	0.14 J	13 J
Dibenzofuran	0.037 J	0.37 U	0.34 U	0.13 J	0.34 U	0.079 J	1.1 J
Diethylphthalate	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
Di-n-Butylphthalate	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
Di-n-Octylphthalate	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	
Fluoranthene	0.69	0.13 J	0.078 J	2.1	0.084 J	1.8	86
Fluorene	0.36 U	0.37 U	0.34 U	0.23 J	0.34 U	0.17 J	1.2 J
Indeno(1,2,3-cd)Pyrene	0.44	0.37 U	0.34 U	0.44 J	0.34 U	0.34 J	33 J
Isophorone	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
Naphthalene	0.06 J	0.37 U	0.34 U	NA	0.063 J	0.49	0.76 J
N-Nitrosodiphenylamine (1)	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
Phenanthrene	0.39	0.14 J	0.062 J	2.1	0.4	1.6	29
Phenol	0.36 U	0.37 U	0.34 U	0.36 U	0.34 U	0.36 U	3.8 U
Pyrene	0.66	0.13 J	0.069 J	3.4 J	0.35	2.6 D	1000

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**Table 7**  
**Surface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB89	SB90	SB91	SB92	SB93	SB94	SB95
Sample ID	SB89-1	SB90-1	SB91-1	SB92-1	SB93-1	SB94-1	SB95-1
Lab ID	16171	16172RE	16498	16499	16500	16501RE	16502RE
Date Sampled	10/2/98	10/2/98	10/6/98	10/6/98	10/6/98	10/6/98	10/6/98
Depth (feet)	0.5-1	0.5-1	0-0.5	0-1	0-1	0.5-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
1,2-Dichlorobenzene	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
1,4-Dichlorobenzene	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
2,4-Dimethylphenol	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
2-Methylnaphthalene	1.9 U	0.076 J	0.73 U	0.35 U	0.4 U	0.36 U	0.48 J
2-Methylphenol	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
4-Methylphenol	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
4-Nitroaniline	4.5 U	0.89 U	1.8 U	0.85 U	0.97 U	0.87 U	4.2 U
Acenaphthene	1.9 U	0.06 J	0.73 U	0.35 U	0.067 J	0.36 U	0.51 J
Acenaphthylene	1.2 J	0.098 J	0.73 U	0.081 J	0.4 U	0.36 U	0.51 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.98 J	0.18 J	0.11 J	0.1 J	0.12 J	0.36 U	1.9
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	6.1	1.2	0.21 J	0.28 J	0.59	0.36 U	3.2
Benzo(a)Pyrene	6.3	1.1 J	0.23 J	0.27 J	0.69	0.36 U	2.4
Benzo(b)Fluoranthene	5	1.3 J	0.33 J	0.18 J	0.52	0.36 U	2.9
Benzo(g,h,i)Perylene	1.9	0.39	0.1 J	0.32 J	0.71	0.12 J	0.34 J
Benzo(k)Fluoranthene	7	1.3 J	0.3 J	0.23 J	0.53	0.36 U	2.9
bis(2-Chloroethyl)Ether	1.9 U	0.37 U	0.73 U	0.35 U	0.11 J	0.36 U	1.7 U
bis(2-Ethylhexyl)Phthalate	1.9 U	0.046 J	2.1	0.045 J	0.06 J	0.36 U	1.7 U
Butylbenzylphthalate	1.9 U	0.37 U	1.7 B	0.35 U	0.4 U	0.36 U	1.7 U
Carbazole	1.9 U	0.091 J	0.73 U	0.048 J	0.087 J	0.36 U	0.6 J
Chrysene	5.9	1.4	0.31 J	0.29 J	0.63	0.36 U	3.1
Dibenz(a,h)Anthracene	0.93 J	0.2 J	0.73 U	0.12 J	0.27 J	0.36 U	1.7 U
Dibenzofuran	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	0.48 J
Diethylphthalate	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
Di-n-Butylphthalate	1.9 U	0.19 J	0.46 BJ	0.35 U	0.4 U	0.36 U	1.7 U
Di-n-Octylphthalate	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
Fluoranthene	7.1	1.4	0.56 J	0.46	0.98	0.36 U	12
Fluorene	1.9 U	0.047 J	0.73 U	0.35 U	0.4 U	0.36 U	0.61 J
Indeno(1,2,3-cd)Pyrene	2.3	0.4	0.093 J	0.28 J	0.71	0.36 U	0.4 J
Isophorone	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
Naphthalene	1.9 U	0.063 J	0.73 U	0.35 U	0.4 U	0.36 U	0.23 J
N-Nitrosodiphenylamine (1)	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
Phenanthrene	2.8	1	0.19 J	0.3 J	0.5	0.36 U	7.1
Phenol	1.9 U	0.37 U	0.73 U	0.35 U	0.4 U	0.36 U	1.7 U
Pyrene	8.9	2.7	0.25 J	0.4	0.77	0.36 U	4.3

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**Table 7**  
**Surface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB96	SB97	SB98	SB99	SB105	SB106	SB107
Sample ID	SB96-1	SB97-1	SB98-1	SB99-1	SB105-1	SB106-1	SB107-1
Lab ID	16173	16174RE	16175RE	16176	16259RE	16260RE	16177
Date Sampled	10/2/98	10/2/98	10/2/98	10/2/98	10/5/98	10/5/98	10/2/98
Depth (feet)	0.5-1	0-1	0-1	0-1	0.5-1.5	0.5-1.5	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
1,2-Dichlorobenzene	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
1,4-Dichlorobenzene	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
2,4-Dimethylphenol	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
2-Methylnaphthalene	0.18 J	1.7 U	0.042 J	0.2 J	0.042 J	0.07 J	0.076 J
2-Methylphenol	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
4-Methylphenol	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
4-Nitroaniline	0.87 U	4.2 U	0.86 U	1.7 U	0.96 U	0.93 U	0.97 U
Acenaphthene	0.067 J	1.7 U	0.35 U	0.08 J	0.067 J	0.04 J	0.058 J
Acenaphthylene	0.08 J	0.45 J	0.043 J	0.11 J	0.068 J	0.078 J	0.24 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.18 J	0.31 J	0.041 J	0.24 J	0.18 J	0.13 J	0.38 J
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.86 J	3.3	0.34 J	0.69 J	0.85	0.84	1.7
Benzo(a)Pyrene	0.8 J	3.2 J	0.38 J	0.75 J	0.76 J	0.87	1.5 J
Benzo(b)Fluoranthene	1.1 J	2.7 J	0.58 J	0.74 J	0.99 J	1.3	1.7 J
Benzo(g,h,i)Perylene	0.25 J	1.2 J	0.23 J	0.54 J	0.23 J	0.42	0.43 J
Benzo(k)Fluoranthene	0.88 J	3.1 J	0.57 J	0.69 J	0.86 J	0.91	1.6 J
bis(2-Chloroethyl)Ether	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
bis(2-Ethylhexyl)Phthalate	0.56 J	0.25 J	0.4	2.2 J	0.4 U	0.17 J	0.62
Butylbenzylphthalate	0.36 U	1.7 U	0.38 J	1 BJ	0.14 J	0.62 BJ	0.46 JB
Carbazole	0.048 J	1.7 U	0.35 U	0.079 J	0.09 J	0.058 J	0.087 J
Chrysene	0.94 J	3.4	0.46	0.78 J	1.1	0.91	1.8
Dibenz(a,h)Anthracene	0.12 J	0.57 J	0.094 J	0.18 J	0.11 J	0.22 J	0.29 J
Dibenzofuran	0.096 J	1.7 U	0.35 U	0.69 U	0.058 J	0.39 U	0.079 J
Diethylphthalate	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
Di-n-Butylphthalate	0.056 J	1.7 U	0.11 J	0.21 J	0.062 J	0.079 J	0.16 J
Di-n-Octylphthalate	0.36 U	1.7 U	0.35 U	0.59 J	0.4 U	0.39 U	0.43 J
Fluoranthene	1	3.1	0.38	0.74	1.3	0.93	2.2
Fluorene	0.074 J	1.7 U	0.35 U	0.1 J	0.085 J	0.39 U	0.14 J
Indeno(1,2,3-cd)Pyrene	0.29 J	1.2 J	0.22 J	0.41 J	0.27 J	0.44	0.5 J
Isophorone	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
Naphthalene	0.24 J	1.7 U	0.059 J	0.31 J	0.091 J	0.058 J	0.14 J
N-Nitrosodiphenylamine (1)	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
Phenanthrene	0.82	0.84 J	0.25 J	0.91	1.1	0.59	1.8
Phenol	0.36 U	1.7 U	0.35 U	0.69 U	0.4 U	0.39 U	0.4 U
Pyrene	2.3 J	6.2	0.96	2.3 J	1.8	1.9	3.8 J

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**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB108	SB109	SB110	SB112	SB113	SB114	SB115
Sample ID	SB108-1	SB109-1	SB110-1	SB112-1	SB113-1	SB114-1	SB115-1
Lab ID	16261RE	16262RE	16622RE	16626	16503	16504	16505
Date Sampled	10/5/98	10/5/98	10/8/98	10/8/98	10/6/98	10/7/98	10/6/98
Depth (feet)	0-1	0-1	0-0.5	0-0.5	0.5-1.5	0-0.5	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
1,2-Dichlorobenzene	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.053 J	0.35 U
1,4-Dichlorobenzene	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
2,4-Dimethylphenol	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
2-Methylnaphthalene	2 U	0.43 U	0.4 U	0.21 J	0.046 J	0.36 U	0.068 J
2-Methylphenol	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
4-Methylphenol	2 U	0.43 U	0.4 U	0.18 J	0.36 U	0.36 U	0.35 U
4-Nitroaniline	4.8 U	1 U	0.97 U	2 U	0.88 U	0.24 J	0.84 U
Acenaphthene	0.29 J	0.43 U	0.4 U	0.57 J	0.11 J	0.36 U	0.2 J
Acenaphthylene	0.37 J	0.43 U	0.3 J	4.9	0.24 J	0.1 J	0.3 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.87 J	0.085 J	0.19 J	4.8	0.38	0.27 J	0.59
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	5.4	0.32 J	0.67	14 D	1.2	0.78	1.5
Benzo(a)Pyrene	4.9	0.26 J	0.6	9.9 D	0.96	0.83	1.9
Benzo(b)Fluoranthene	6.5	0.3 J	0.47	10 D	0.75	1.1	2.2
Benzo(g,h,i)Perylene	1.4 J	0.091 J	0.67	4.3	0.93	0.22 J	0.53
Benzo(k)Fluoranthene	5.3	0.3 J	0.44	6.3	0.77	1.1	1.8
bis(2-Chloroethyl)Ether	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
bis(2-Ethylhexyl)Phthalate	1.3 J	0.1 J	0.31 J	0.87	0.12 J	8.1 D	2.1
Butylbenzylphthalate	0.49 BJ	0.43 U	0.4 U	0.83 U	0.36 U	0.6 B	0.36 B
Carbazole	0.31 J	0.43 U	0.15 J	0.93	0.18 J	0.099 J	0.27 J
Chrysene	5.4	0.32 J	0.81	15 D	1.4	0.98	1.6
Dibenz(a,h)Anthracene	0.94 J	0.43 U	0.22 J	2.1	0.45	0.36 U	0.3 J
Dibenzofuran	0.23 J	0.43 U	0.4 U	0.65 J	0.049 J	0.36 U	0.1 J
Diethylphthalate	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
Di-n-Butylphthalate	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.3 BJ	0.056 BJ
Di-n-Octylphthalate	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.12 J	1.7
Fluoranthene	6.6	0.46	1.4	26 D	2.2	2.7	3 D
Fluorene	0.27 J	0.43 U	0.4 U	1.2	0.092 J	0.36 U	0.17 J
Indeno(1,2,3-cd)Pyrene	1.6 J	0.099 J	0.58	4.7	1.1	0.27 J	0.75
Isophorone	2 U	0.43 U	0.4 U	0.83 U	0.11 J	0.36 U	0.35 U
Naphthalene	2 U	0.43 U	0.14 J	0.17 J	0.041 J	0.052 J	0.07 J
N-Nitrosodiphenylamine (1)	2 U	0.43 U	0.4 U	0.83 U	0.36 U	0.36 U	0.35 U
Phenanthrene	4.2	0.41 J	0.74	16 D	1.4	0.46	1.7
Phenol	2 U	0.43 U	0.4 U	0.83 U	0.36 U	2.2	0.35 U
Pyrene	11	0.78	1.1	21 D	1.9	1.4	1.8

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**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB116	SB118	SB11A	SB122	SB124	SB127	SB129
Sample ID	SB116-1	SB118B1	SB11A-1	SB122A1	SB124A1	SB127B1	SB129A1
Lab ID	16263RE	0323307A	16461	0213507A	0213512A	0323310A	0213515A
Date Sampled	10/5/98	3/23/00	10/6/98	2/15/00	2/15/00	3/23/00	2/15/00
Depth (feet)	0-1	0.5-1	0-0.5	0.5-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	0.26 J	NA	5.5 U	0.048 J	1.1 U	3.9 U
1,2,4-Trichlorobenzene	1.9 U	NA	1 U	NA	NA	NA	NA
1,2-Dichlorobenzene	1.9 U	NA	1 U	NA	NA	NA	NA
1,4-Dichlorobenzene	1.9 U	NA	1 U	NA	NA	NA	NA
2,4-Dimethylphenol	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
2-Methylnaphthalene	1.9 U	0.69 J	0.25 J	5.5 U	0.07 J	0.31 J	0.99 J
2-Methylphenol	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
4-Methylphenol	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
4-Nitroaniline	4.5 U	5.1 U	2.5 U	14 U	0.9 J	2.8 U	9.8 U
Acenaphthene	0.28 J	3.7	1.5	1.5 J	0.13 J	0.33 J	3.2 J
Acenaphthylene	0.19 J	0.27 J	0.12 J	5.5 U	0.11 J	0.17 J	3.9 U
Acetophenone	NA	0.51 J	NA	5.5 U	0.39 U	1.1 U	3.9 U
Anthracene	0.83 J	5.9	2.7	2.6 J	0.42	0.82 J	7.3
Benzaldehyde	NA	2 U	NA	5.5 U	0.39 U	1.1 U	3.9 U
Benzo(a)Anthracene	2.8	20 D	10	7.2	1	2.6	15
Benzo(a)Pyrene	2.4	16	9.3	6.8	0.82	2.2	14
Benzo(b)Fluoranthene	3.2	19 D	9.7	6.2	0.67	2.7	12
Benzo(g,h,i)Perylene	0.69 J	6.1	2.5 J	6.1	0.48	0.78 J	17
Benzo(k)Fluoranthene	2.5	14	9.5	5.9	0.73	2.7	9.8
bis(2-Chloroethyl)Ether	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
bis(2-Ethylhexyl)Phthalate	1.9 U	0.76 J	1.1 J	5.5 U	0.55	4.7	3.7 J
Butylbenzylphthalate	0.25 BJ	1.1 J	0.55 BJ	5.5 U	0.39 U	1.1 U	3.9 U
Carbazole	0.31 J	2.4	1.1	0.9 J	0.17 J	0.45 J	3.1 J
Chrysene	2.9	21 D	8 J	7.8	1	2.8	15
Dibenz(a,h)Anthracene	0.42 J	2 U	1.3 J	2.1 J	0.22 J	0.45 J	4.5
Dibenzofuran	1.9 U	1.7 J	0.64 J	5.5 U	0.087 J	0.25 J	1.7 J
Diethylphthalate	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
Di-n-Butylphthalate	1.9 U	0.43 J	1 U	5.5 U	0.13 J	1.1 U	1.4 J
Di-n-Octylphthalate	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
Fluoranthene	4.3	35 D	16	16	2.2	3.3	34 D
Fluorene	0.34 J	2.7	1.2	1 J	0.13 J	0.35 J	3.4 J
Indeno(1,2,3-cd)Pyrene	0.78 J	7.6	3 J	5.4 J	0.52	0.95 J	13
Isophorone	1.9 U	2 U	1 U	5.5 U	0.39 U	1.1 U	3.9 U
Naphthalene	1.9 U	1.1 J	0.45 J	5.5 U	1.6	0.59 J	1.3 J
N-Nitrosodiphenylamine (1)	1.9 U	2 U	1 U	NA	NA	1.1 U	NA
Phenanthrene	3.5	17 E	7.6	9.2	1.5	3.2	26
Phenol	1.9 U	0.32 J	1 U	5.5 U	0.39 U	1.1 U	3.9 U
Pyrene	6	37 E	15	13	1.2	7.3	29

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**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB130	SB131	SB132	SB133	SB134	SB135	SB136
Sample ID	SB130A1	SB131A1	SB132A1	SB133A1	SB134-1	SB135-1	SB136-1
Lab ID	0213519A	0213602A	0213606A	0213609A	0211212A	0211214A	0211210A
Date Sampled	2/16/00	2/15/00	2/15/00	2/15/00	2/14/00	2/14/00	2/14/00
Depth (feet)	0-1	0-1	1-1.5	0.5-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	0.044 J	0.047 J	0.35 U	0.39 U	0.064 J	0.36 U	0.059 J
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
2-Methylnaphthalene	0.34 U	0.086 J	0.35 U	0.067 J	0.25 J	0.36 U	0.12 J
2-Methylphenol	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
4-Methylphenol	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.19 J
4-Nitroaniline	0.86 U	1 U	0.87 U	0.97 U	1.1 U	0.91 U	1.1 U
Acenaphthene	0.062 J	0.41 U	0.35 U	0.25 J	0.23 J	0.36 U	0.18 J
Acenaphthylene	0.34 U	0.12 J	0.35 U	0.063 J	0.42	0.36 U	0.31 J
Acetophenone	0.045 J	0.069 BJ	0.35 U	0.39 U	0.22 J	0.36 U	0.37 J
Anthracene	0.12 J	0.16 J	0.072 J	0.38 J	0.83	0.36 U	0.51
Benzaldehyde	0.15 J	0.41 U	0.049 J	0.39 U	0.42 U	0.36 U	0.42 U
Benzo(a)Anthracene	0.42	0.53	0.24 J	0.83	1.7	0.25 J	1.3
Benzo(a)Pyrene	0.4	0.16 J	0.088 J	0.77	1.5	0.2 J	1.4
Benzo(b)Fluoranthene	0.31 J	0.45	0.17 J	0.68	1.8	0.27 J	2.9
Benzo(g,h,i)Perylene	0.2 J	0.41 U	0.35 U	0.76	0.32 J	0.15 J	0.54
Benzo(k)Fluoranthene	0.42 NJ	0.38 J	0.17 J	0.63	1.4	0.11 J	0.42 U
bis(2-Chloroethyl)Ether	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
bis(2-Ethylhexyl)Phthalate	0.69	0.41 U	0.038 J	0.39 U	0.7 B	39 BD	2.1 B
Butylbenzylphthalate	0.12 J	0.41 U	0.12 J	0.042 J	0.42 U	0.36 U	0.42 U
Carbazole	0.044 J	0.058 J	0.35 U	0.22 J	0.45	0.36 U	0.29 J
Chrysene	0.48	0.72	0.3 J	0.88	1.9	0.25 J	1.6
Dibenz(a,h)Anthracene	0.082 J	0.16 J	0.088 J	0.22 J	0.2 J	0.36 U	0.23 J
Dibenzofuran	0.34 U	0.1 J	0.35 U	0.16 J	0.27 J	0.36 U	0.09 J
Diethylphthalate	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
Di-n-Butylphthalate	0.079 J	0.41 U	0.35 U	0.39 U	0.12 J	0.36 U	1.3
Di-n-Octylphthalate	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.58	0.42 U
Fluoranthene	0.88	0.97	0.47	1.8	3.3	0.13 J	2
Fluorene	0.34 U	0.41 U	0.35 U	0.19 J	0.37 J	0.36 U	0.15 J
Indeno(1,2,3-cd)Pyrene	0.22 J	0.17 J	0.13 J	0.62	0.43	0.36 U	0.61
Isophorone	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
Naphthalene	0.14 J	0.37 J	0.35 U	0.19 J	1.1	0.21 J	0.41 J
N-Nitrosodiphenylamine (1)	NA	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
Phenanthrene	0.47	0.69	0.33 J	1.7	2.7	0.36 U	1.6
Phenol	0.34 U	0.41 U	0.35 U	0.39 U	0.42 U	0.36 U	0.42 U
Pyrene	0.53	0.34 J	0.31 J	1.5	1.7	0.79	2 D

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**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB137	SB138	SB139	SB13A	SB140	SB141	SB142
Sample ID	SB137-1	SB138-1	SB139-1	SB13A-1	SB140-1	SB141-1	SB142-1
Lab ID	0211216A	0213612A	0213614A	16462	0323303A	0323305A	0211218A
Date Sampled	2/14/00	2/15/00	2/15/00	10/7/98	3/23/00	3/23/00	2/14/00
Depth (feet)	0-1	5-1	0.5-1	0-0.5	0.5-1	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	0.04 J	0.34 U	0.38 U	NA	0.4 U	0.73 U	0.068 J
1,2,4-Trichlorobenzene	NA	NA	NA	0.37 U	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	0.37 U	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	0.37 U	NA	NA	NA
2,4-Dimethylphenol	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
2-Methylnaphthalene	0.1 J	0.081 J	0.11 J	0.37 U	0.4 U	0.73 U	0.17 J
2-Methylphenol	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
4-Methylphenol	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.048 J
4-Nitroaniline	0.11 J	0.85 U	0.96 U	0.9 U	1 U	1.8 U	0.92 U
Acenaphthene	0.19 J	0.28 J	0.2 J	0.37 U	0.4 U	0.13 J	0.35 J
Acenaphthylene	0.42	0.27 J	1	0.37 U	0.4 U	0.09 J	1.1
Acetophenone	0.21 J	0.34 U	0.38 U	NA	0.4 U	0.73 U	0.37 U
Anthracene	0.85	0.67	0.96	0.37 U	0.4 U	0.34 J	1.4
Benzaldehyde	0.39 U	0.34 U	0.38 U	NA	0.4 U	0.73 U	0.064 J
Benzo(a)Anthracene	1.5	2.2	2.4	0.075 J	0.055 J	1.4	5.4 D
Benzo(a)Pyrene	1.6	2	2.3	0.073 J	0.045 J	1.3	4.7 D
Benzo(b)Fluoranthene	1.4	2	2.6	0.091 J	0.067 J	1.4	3.6 D
Benzo(g,h,i)Perylene	0.9	0.75	0.98	0.038 J	0.4 U	0.41 J	0.68
Benzo(k)Fluoranthene	1.1	1.6	1.9	0.079 J	0.043 J	1.3	2.3
bis(2-Chloroethyl)Ether	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
bis(2-Ethylhexyl)Phthalate	14 BD	0.13 J	0.38 U	0.068 J	0.4 U	0.73 U	0.19 JB
Butylbenzylphthalate	0.053 J	0.065 J	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
Carbazole	0.23 J	0.45	0.36 J	0.37 U	0.4 U	0.19 J	0.68
Chrysene	1.7	2.3	2.6	0.083 J	0.14 J	1.6	5.8 D
Dibenz(a,h)Anthracene	0.36 J	0.34	0.44	0.37 U	0.4 U	0.22 J	0.45
Dibenzofuran	0.13 J	0.15 J	0.14 J	0.37 U	0.4 U	0.095 J	0.31 J
Diethylphthalate	0.062 J	0.34 U	0.43	0.37 U	0.4 U	0.73 U	0.37 U
Di-n-Butylphthalate	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
Di-n-Octylphthalate	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
Fluoranthene	3.9 D	5.4 D	5.6 D	0.15 J	0.1 J	2.2	11 D
Fluorene	0.25 J	0.22 J	0.19 J	0.37 U	0.4 U	0.16 J	0.5
Indeno(1,2,3-cd)Pyrene	0.89	0.84	1.1	0.04 J	0.4 U	0.49 J	1
Isophorone	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
Naphthalene	0.42	0.22 J	0.16 J	0.37 U	0.4 U	0.11 J	0.26 J
N-Nitrosodiphenylamine (1)	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
Phenanthrene	2.5	3.7 D	3.1	0.066 J	0.083 J	2.1	6.6 D
Phenol	0.39 U	0.34 U	0.38 U	0.37 U	0.4 U	0.73 U	0.37 U
Pyrene	2.2	2.5	2.6	0.13 J	0.094 J	3.9	9.3 D

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**Table 7**  
**Surface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB143	TP13A
Sample ID	SB143-1	TP13A-1
Lab ID	0323301A	16467
Date Sampled	3/23/00	10/7/98
Depth (feet)	0-1	0-0.5
Units	mg/kg	mg/kg
1,1-Biphenyl	0.37 U	NA
1,2,4-Trichlorobenzene	NA	0.34 U
1,2-Dichlorobenzene	NA	0.34 U
1,4-Dichlorobenzene	NA	0.34 U
2,4-Dimethylphenol	0.37 U	0.34 U
2-Methylnaphthalene	0.37 U	0.34 U
2-Methylphenol	0.37 U	0.34 U
4-Methylphenol	0.37 U	0.34 U
4-Nitroaniline	0.92 U	0.83 U
Acenaphthene	0.37 U	0.34 U
Acenaphthylene	0.37 U	0.34 U
Acetophenone	0.37 U	NA
Anthracene	0.37 U	0.063 J
Benzaldehyde	0.06 J	NA
Benzo(a)Anthracene	0.18 J	0.21 J
Benzo(a)Pyrene	0.2 J	0.21 J
Benzo(b)Fluoranthene	0.26 J	0.22 J
Benzo(g,h,i)Perylene	0.092 J	0.1 J
Benzo(k)Fluoranthene	0.21 J	0.26 J
bis(2-Chloroethyl)Ether	0.37 U	0.34 U
bis(2-Ethylhexyl)Phthalate	0.21 J	0.087 J
Butylbenzylphthalate	0.14 J	0.34 U
Carbazole	0.37 U	0.044 J
Chrysene	0.2 J	0.22 J
Dibenz(a,h)Anthracene	0.37 U	0.046 J
Dibenzofuran	0.37 U	0.34 U
Diethylphthalate	0.37 U	0.34 U
Di-n-Butylphthalate	0.052 J	0.051 J
Di-n-Octylphthalate	0.37 U	0.34 U
Fluoranthene	0.26 J	0.38
Fluorene	0.37 U	0.34 U
Indeno(1,2,3-cd)Pyrene	0.11 J	0.11 J
Isophorone	0.37 U	0.34 U
Naphthalene	0.084 J	0.05 J
N-Nitrosodiphenylamine (1)	0.37 U	0.34 U
Phenanthrene	0.13 J	0.3 J
Phenol	0.37 U	0.34 U
Pyrene	0.38	0.33 J

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**Surface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB01	SB02	SB03	SB04	SB05	SB06	SB07	SB08	SB09	SB10	SB14
Sample ID	Direct	Direct	SB01-1	SB02-1	SB03-1	SB04-1	SB05-1	SB06-1	SB07-1	SB08-1	SB09-1	SB10-1	SB14-1
Lab ID	Contact	Contact	9712238	9712933	9712251	9712936	9712248	9712634	9712243	9712939	9712626	9712638	9712642
Date Sampled	Soil Cleanup	Soil Cleanup	7/10/97	7/16/97	7/10/97	7/16/97	7/10/97	7/15/97	7/10/97	7/16/97	7/14/97	7/15/97	7/15/97
Depth (feet)	Criteria	Criteria	0-0.5	0.5-1	0-0.5	0-0.5	0.5-1	0-0.5	0-0.5	0.5-1	0-0.5	0-0.5	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			9810	8440	5730	10200	5920	8450	9780	14.5 U	6190	8140	5030
Antimony	14	340	5.1 U	5.4 U	5.7 U	5.4 J	6.4 J	5.2 UJ	5.1 U	5.1 U	9.9 BN	5 UJ	5.1 UJ
Arsenic	20	20	140	26.9 J	58.1	23.2 J	254	55.2	24.1	290 J	37.6	35.6	37.4
Barium	700	47000	864 J	234	1780 J	1440	473 J	630 J	2360 J	0.66 J	1420 N*	2060 J	3140 J
Beryllium	1	1	0.83 J	0.7 J	0.61 J	1.3	1.2	0.69 J	1.2	0.04 U	0.33 B	0.61 J	0.3 J
Cadmium	1	100	3.5 J	0.94 U	3.9 J	4	2.6 J	5	3 J	0.89 U	1.7	2.7	2.9
Calcium			28700	28600 J	46600	92100 J	25900	28000 J	42100	112 J	40600 *	13800 J	6670 J
Chromium	500	500	57.4	23	51.4	66.2	65.5	130 J	43.6	2.5 J	33.9 N	63.6 J	73.5 J
Cobalt			10.4	5.2 J	5.3 J	9.1 J	4.7 J	7.2 J	3.7 J	1.3 U	2 B	2.5 J	1.5 J
Copper	600	600	70.7 J	20.7 J	30.6 J	55.1 J	44.3 J	106 J	46 J	0.69 J	24.7 N*	30.7 J	92.8 J
Cyanide	1100	21000	0.16 JB	0.2 JB	0.84 JB	NA	0.38 JB	0.3 B	0.35 JB	0.44 JB	0.62	0.33 B	0.25 B
Iron			26900	14700	12000	19600	13600	41000 J	19900	9.5 U	21300 *	16300 J	40000 J
Lead	400	600	347 S	64.8 S	360 S	398	210 S	610	222	561	107	528	275
Magnesium			9830	4850	5890	52300	11200	10300	19600	18.7 J	3330	6080	2870
Manganese			498 J	319	188 J	653	421 J	524 J	579 J	0.34 J	176 N	309 J	665 J
Mercury	14	270	0.42 J	0.09 J	1.8 J	1.4	0.21 J	1.2 J	1 J	1.4	1.5 *	0.77 J	0.23 J
Nickel	250	2400	22.3	11.6 J	13.6	20.4 J	14	28.8	11	2.6 U	10.1	11.2	17.9
Potassium			3740	1580	1330	1360	1320	1580	1560	120 U	1090	959 J	795 J
Selenium	63	3100	1.8	0.3 U	1.1	2.1 S	0.29 U	0.28 UJ	1.8	0.28 J	0.29 U	0.28 U	0.29 U
Silver	110	4100	0.92 J	0.63 U	1 J	1.7 J	0.83 J	1.8 J	2 J	0.6 U	1.1 B	1.1 J	1.9 J
Sodium			913	394 J	274 J	707 J	467 J	0 R	415 J	73 J	271 B	0 R	0 R
Thallium	2	2	0.43 U	0.43 U	0.42 U	0.41 U	0.41 U	0.48 U	0.4 U	0.4 U	0.51 U	0.48 U	0.5 U
Vanadium	370	7100	41.9	19.7 J	41	21.6 J	14.6	26.9 J	17.5	0.41 U	19.3	17.9 J	17.7 J
Zinc	1500	1500	227 J	86.4 J	833 J	221 J	201 J	389 J	220 J	5.8 J	208 N	147 J	361 J

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## Surface Soil Samples

## Positive Analytical Results - Metals

Sample Location	Residential	Non-Residential	SB15	SB16	SB17	SB18	SB18	SB19	SB20	SB23	SB23	SB26	SB29
Sample ID	Direct	Direct	SB15-1	SB16-1	SB17-1	SB18-1	SB18-2	SB19-1	SB20-1	SB23-1	SB23-2	SB26-1	SB29-1
Lab ID	Contact	Contact	9712629	9712646	9712943	9712620	9712621	9712947	9712029	9712032	9712033	9712025	9712233
Date Sampled	Soil Cleanup	Soil Cleanup	7/14/97	7/15/97	7/17/97	7/14/97	7/14/97	7/17/97	7/8/97	7/8/97	7/8/97	7/7/97	7/9/97
Depth (feet)	Criteria	Criteria	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			9590	9270	6970	8630	7740	4710	14900	6690	6020	5200	6190
Antimony	14	340	5.2 UJ	4.9 UJ	6.2 J	5.1 UJ	5.1 BN	11.8 J	6.4 UJ	9.2 J	17.4 J	7.4 J	8.5 J
Arsenic	20	20	135	37.4 J	515 J	84.4	67.8	116 J	52.6 J	282 J	295 J	22.5 J	95.3 S
Barium	700	47000	3060 J	602 J	14600	1420 J	836 N*	8300	25300	13300	15300	165	1610 J
Beryllium	1	1	0.83 J	0.42 J	0.56 J	0.47 J	0.4 B	0.57 J	1.2 J	0.72 J	0.52 J	0.52 J	0.31 J
Cadmium	1	100	3.2	1.7	19.7	2.2	3.4	11.9	7.3 J	7.7 J	6.3 J	3.2 J	5.8 J
Calcium			27100 J	25100 J	16900 J	13300 J	7910 *	6630 J	0 R	0 R	0 R	0 R	6430
Chromium	500	500	134 J	155 J	403	64.3 J	57.4 N	239	54.3 J	469 J	326 J	28 J	23.5 J
Cobalt			4.5 J	7.2 J	1.4 J	1.2 U	5.6 B	11.2 J	5.3 J	21.1	15.7	6.7 J	5.1 J
Copper	600	600	250 J	62.6 J	71.7 J	56.8 J	181 N*	362	83.1	128	159	40.3	120 J
Cyanide	1100	21000	0.21 B	0.37 J	0.24 JB	0 R	0.44 B	0.22 JB	0.67 JB	0.63 JB	0.65 JB	0.21 JB	3.3 J
Iron			46400 J	19100 J	20500	41700 J	24400 *	109000	31400	56000	53300	17200	19800
Lead	400	600	311	155	326	187	251	675	153	471	700	249	660
Magnesium			10500	14500	6570	1930	1550	1860	1780 J	3430 J	2940 J	19100 J	2510
Manganese			441 J	195 J	182	287 J	598 N	527	438	928	446	246	220 J
Mercury	14	270	0.26 J	0.97 J	0.46 J	0.32 J	0.42 *	0.72	0.68 J	0.66 J	0.53 J	0.98 J	0.95 J
Nickel	250	2400	22.7	34.6	15.8 J	21.2	16.5	82.3 J	19.4	35.9	29.6	13.6	16.8
Potassium			1500	1840	1150 J	1100	1030	809 J	1440	881 J	997 J	795 J	1310
Selenium	63	3100	0.28 UJ	0.28 U	2.9	0.34 J	0.29 U	2.9	0.37 J	4.1 J	1.7 J	0.29 J	2.4
Silver	110	4100	10.6	1.3 J	1.2 J	1.3 J	2.3	0.85 J	0.75 J	2.5 J	3.5 J	0.58 J	1 J
Sodium			0 R	0 R	377 J	0 R	305 B	347 J	0 R	0 R	0 R	0 R	507 J
Thallium	2	2	0.48 U	0.48 U	0.48 U	0.51 U	0.49 U	0.49 U	0.54 U	0.47 UW	0.49 U	0.41 U	0.48 U
Vanadium	370	7100	27.9 J	17.8 J	25.9 J	23.8 J	22.7	20 J	39.6	32.9	34.4	18.1	30.8
Zinc	1500	1500	480 J	339 J	572 J	326 J	549 N	588 J	1320	1110	728	444	951 *

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**Surface Soil Samples  
Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB31	SB32	SB33	SB35	SB36	SB36	SB38	SB41	SB42	SB42	SB43
Sample ID	Direct	Direct	SB31-1	SB32-1	SB33-1	SB35-1	SB36-1	SB36-2	SB38-1	SB41-1	SB42-1	SB42-2	SB43-1
Lab ID	Contact	Contact	9710633	9710636	9710855	9710844	9710850	9710851	9710847	9710841	9710615	9710616	9710620
Date Sampled	Soil Cleanup	Soil Cleanup	6/17/97	6/17/97	6/19/97	6/18/97	6/19/97	6/19/97	6/19/97	6/18/97	6/16/97	6/16/97	6/16/97
Depth (feet)	Criteria	Criteria	1-1.5	1-1.5	0.5-1	1-1.5	0.5-1	0.5-1	0.5-1	1.5-2	0.5-1	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			3070	5240	11900 J	7130 J	2620 J	3040 J	5200 J	3840 J	3200	4620	4500
Antimony	14	340	5.8 UJ	5.2 UJ	5.9 UJ	5.3 UJ	5.3 UJ	5.2 UJ	5.9 UJ	6.1 UJ	5.4 UJ	5.2 UJ	4.9 UJ
Arsenic	20	20	7.7	9.9	18.1	4.4	53.2	51.6	24	85.8	53.3	66.6	137
Barium	700	47000	448	783	1790	20.8 J	425	589	11400	251	25.5 J	30.4 J	14.3 J
Beryllium	1	1	0.36 J	0.34 J	2	0.12 J	0.33 J	0.34 J	0.51 J	0.35 J	0.26 J	0.44 J	0.2 J
Cadmium	1	100	1 U	0.89 U	5.2 J	0.92 U	0.91 U	0.92 J	1 U	1.1 U	0.93 U	0.9 U	0.85 U
Calcium			999 J	3390 J	5630	8980	1680	2250	17900	15500	20200 J	7020 J	4580 J
Chromium	500	500	20.1 J	31	60.1	17.2 J	38.3	41	57.6	15.4 J	13.5 J	18.8 J	15.6 J
Cobalt			3.8 J	2.8 J	17.1	2.2 J	4.4 J	6.2 J	2.5 J	4.1 J	1.9 J	1.3 U	1.2 U
Copper	600	600	28.8	32	124 J	8 JB	60.7 J	60.8 J	32.4 J	63.5 J	5.5	7.3	4.8 JB
Cyanide	1100	21000	0.4 B	0.29 B	0.26 B	0.26 B	0.29 B	0.81 JB	0.22 B	0.34 B	0.24 B	0.24 B	0.19 B
Iron			11700 J	10200 J	44500 J	10100 J	13400 J	13300 J	13500 J	26800 J	10100 J	16700 J	10400 J
Lead	400	600	50.7	215	998	21.8 J	148	126	134	97.9	9.3 J	8.6 J	7.9 J
Magnesium			311 J	896 J	1130 J	555 J	440 J	471 J	1700	3470	1770	2440	1340
Manganese			12.3 J	62.3 J	244 J	34.1 J	45.5 J	42.3 J	88.1 J	142 J	43.4 J	29 J	22.2 J
Mercury	14	270	3.3 J	0.71 J	2 J	0.1 J	16 J	14 J	0.21 J	0.11 J	0.06 B	0.04 B	0 R
Nickel	250	2400	11.6	7.4 J	31	3.2 J	10.5	11.7	11	9.9	2.7 U	3.7 J	2.7 B
Potassium			811 J	409 J	1180 J	186 J	503 J	410 J	971 J	1160 J	482 J	650 J	720 B
Selenium	63	3100	1.4	0.31 U	0.37 J	0.3 U	2.2	2	0.38 J	0.55 J	0.32 U	0.31 U	0.3 U
Silver	110	4100	0.88 J	0.6 U	2.5	0.62 U	0.61 U	0.6 U	0.69 U	0.71 U	0.63 U	0.6 U	0.57 U
Sodium			0 R	0 R	8500	454 JB	2160	2250	541 JB	1230	0 R	0 R	0 R
Thallium	2	2	0.44 U	0.44 U	0.49 U	0.43 UJ	0.43 U	0.42 U	0.47 U	0.5 U	0.45 U	0.45 U	0.42 U
Vanadium	370	7100	11.3 J	17 J	19.7	19.9	16.1	15.1	13.7	15.2	22 J	32.5 J	24.6 J
Zinc	1500	1500	99.6	193	1670 J	30.5 J	86.1 J	85.4 J	187 J	58.6 J	43.6	16.8	12.2

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## Surface Soil Samples

## Positive Analytical Results - Metals

Sample Location	Residential	Non-Residential	SB44	SB45	SB46	SB47	SB48	SB62	SB63	SB63	SB64	SB65	SB66
Sample ID	Direct	Direct	SB44-1	SB45-1	SB46-1	SB47-1	SB48-1	SB62-1	SB63-1	SB63-2	SB64-1	SB65-1	SB66-1
Lab ID	Contact	Contact	9710642	9710624	9710639	9710629	9713210	15968	15970RE	15971	15973	15975	16059
Date Sampled	Soil Cleanup	Soil Cleanup	6/17/97	6/16/97	6/17/97	6/17/97	7/22/97	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98
Depth (feet)	Criteria	Criteria	0.5-1.5	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			3940	3870	11000	3650	2530 J	4790	5890	5490	5920	4310	5710 *
Antimony	14	340	5.1 UJ	5.3 UJ	5.8 UJ	5.5 UJ	106 J	1.8 BN	1.6 BN	2.3 BN	2.5 BN	10.5 BN	2.7 B
Arsenic	20	20	25.9	100	9.9	54	29.4	10.8	7.8	7.4	22.4	35.3	10.7 *
Barium	700	47000	14.2 J	26 J	115	55.4	733 J	578	436	646	1370	610	6640 N*
Beryllium	1	1	0.4 J	0.33 J	0.46 J	0.22 J	0.47 J	0.32 B	0.31 B	0.31 B	0.63 B	0.4 B	0.38 B
Cadmium	1	100	0.89 U	0.92 U	1 U	0.94 U	2 J	0.05 U	0.37 B	1 B	0.04 U	0.32 B	0.04 U
Calcium			3030 J	9620 J	66400 J	20300 J	3020 J	1560 E	3380 E	3810 E	28200 E	47800 E	4530
Chromium	500	500	17.2 J	19.3 J	31.3	12.7 J	45.3	19.6	17.3	14.4	20.9	24.3	33
Cobalt			1.3 U	2.6 J	7.5 J	3.1 J	3.8 J	4.2 B	4.1 B	4.8 B	4.8 B	5.5 B	1.2 B
Copper	600	600	7.5	12.9	67.8	24.6	0 R	78.2 E	35.8 E	234 E	77.6 E	130 E	40.4 *
Cyanide	1100	21000	0.19 B	0.29 B	0.26 B	0.21 B	5.6 J	0.62 U*	0.56 U*	0.52 U*	0.53 U*	0.54 U*	0.55 U
Iron			23700 J	10600 J	10800 J	5540 J	18400 J	12500	13100	13000	18800	26100	15200
Lead	400	600	4.4 J	47.9 J	56.2	74.4 J	52.3	210	188	289	309	2790	224 N*
Magnesium			804 J	1800	5710	2610	382 J	1250 BE	1290 E	1200 E	5990 E	3980 E	2380
Manganese			23.3 J	37.5 J	133 J	47.9 J	81.9 J	81.9	92.2	101	328	224	269 *
Mercury	14	270	0 R	0.09 B	0.11 B	0.15 B	1.2 J	0.26	0.23	0.31	0.2	0.3	0.36
Nickel	250	2400	3 J	6.4 J	31.6	12.2	11.4	8.1 BE	10 E	8.7 BE	10.7 E	11.7 E	13.3 E
Potassium			678 J	915 J	3570	936 J	283 J	587 BE	626 BE	600 BE	902 BE	772 BE	592 BE
Selenium	63	3100	0.3 U	1.5	1.3	1.5	0.45 J	0.76 U	0.83 B	1.8	3.3	5.2	0.64 U
Silver	110	4100	0.6 U	0.62 U	2.3	0.64 U	1 J	0.51 B	0.5 B	0.49 B	0.45 B	1.2 B	0.99 U
Sodium			317 BE	0 R	0 R	0 R	258 J	251 B	204 B	255 B	422 B	981 B	197 B
Thallium	2	2	0.43 U	0.43 U	0.46 U	0.44 U	0.45 U	0.94 U	0.82 U	0.81 U	0.8 U	0.85 U	0.79 U
Vanadium	370	7100	36.7 J	27.2 J	26.5 J	13.3 J	16.9 J	23.5	13.6	13.8	19.5	26.7	34
Zinc	1500	1500	13.2	22.8	69.6	45.7	370 J	163 *	174 *	237 *	450 *	605 *	366

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Surface Soil Samples

Positive Analytical Results - Metals

Sample Location	Residential	Non-Residential	SB67	SB68	SB69	SB70	SB71	SB72	SB73	SB74	SB75	SB76	SB77
Sample ID	Direct	Direct	SB67-1	SB68-1	SB69-1	SB70-1	SB71-1	SB72-1	SB73-1	SB74-1	SB75-1	SB76-1	SB77-1
Lab ID	Contact	Contact	15977	15979	15981	15983	15985	16060	15987	16061	15995	16063	16064
Date Sampled	Soil Cleanup	Soil Cleanup	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/30/98	9/30/98	9/29/98	10/1/98	10/1/98
Depth (feet)	Criteria	Criteria	0.5-1	0-1	0.5-1	0-1	0-1	0-1	0-1	0-1	0.5-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			4620	9210	6100	5030	3870	5120 *	6280	3930 *	4920	6230 *	4550 *
Antimony	14	340	1.2 BN	1.7 BN	27.5 N	3 BN	1.2 BN	1.1 B	3.4 BN	2.3 B	2.9 BN	4.5 B	1.9 B
Arsenic	20	20	9.3	5.6	15.7	22.3	8.5	6.3 *	8.6	7.1 *	12.9	39.5 *	6.7 *
Barium	700	47000	138	201	713	3710	619	191 N*	526	146 N*	338 *	1550 N*	129 N*
Beryllium	1	1	0.29 B	0.79 B	0.26 B	0.42 B	0.35 B	0.41 B	0.36 B	0.2 B	0.32 B	0.55 B	0.19 B
Cadmium	1	100	0.04 U	0.04 U	0.91 B	1.5	0.04 U	0.04 U	0.04 B	0.03 U	1.2	0.03 U	0.03 U
Calcium			718 BE	11500 E	3680 E	7790 E	5510 E	12700	23100 E	39800	8370	13800	13000
Chromium	500	500	12.3	13.1	16.9	25.6	16.2	14.9	34.2	17	41.3	15.2	18.8
Cobalt			3.4 B	5.1 B	7.4 B	2.9 B	3.1 B	2.1 B	4.8 B	3.9 B	5.7 B	8.7	6 B
Copper	600	600	32.4 E	14.5 E	850 E	66.2 E	23.5 E	19.1 *	51.7 E	50.2 *	127	144 *	61.6 *
Cyanide	1100	21000	0.54 U*	0.51 U*	0.52 U*	0.52 U*	0.51 U*	0.5 U	0.53 U*	0.48 U	0.55 *	3.9	0.5 U
Iron			9570	27300	27600	20700	11300	9910	18900	11900	17500	39600	15000
Lead	400	600	150	53.3	1320	1000	65.9	132 N*	196	178 N*	603 *	306 N*	87.9 N*
Magnesium			930 BE	901 BE	1950 E	1420 E	2200 E	5180	2940 E	3190	2410	1890	6200
Manganese			68.8	201	211	270	75.1	179 *	145	179 *	202 N*	649 *	164 *
Mercury	14	270	0.26	0.11 U	0.4	0.31	0.11 U	0.52	0.11 U	0.19	0.11 U	0.54	0.11 U
Nickel	250	2400	6.5 BE	7.1 BE	161 E	10.1 E	8.8 E	4.9 BE	14.5 E	10.3 E	13	6.1 BE	14.4 E
Potassium			574 BE	611 BE	793 BE	619 BE	886 BE	597 BE	868 BE	608 BE	620 B	934 E	668 BE
Selenium	63	3100	0.65 U	1.1 B	1.8	2	0.65 U	1.5	2.5	3.2	0.96 B	0.52 U	0.52 U
Silver	110	4100	17.3	0.39 U	0.73 B	0.56 B	0.39 U	0.87 U	0.63 B	0.75 U	0.66 B	0.8 U	0.8 U
Sodium			202 B	269 B	259 B	218 B	245 B	210 B	514 B	570 B	243 B	104 B	327 B
Thallium	2	2	0.8 U	0.8 U	0.81 U	0.84 U	0.8 U	0.7 U	0.81 U	0.61 U	0.72 U	0.64 U	0.65 U
Vanadium	370	7100	15	20.1	24.7	14.8	21.9	17.1	39.4	20	17.1	29.9	32.5
Zinc	1500	1500	48.6 *	71.5 *	389 *	541 *	88.2 *	101	1010 *	163	456	272	79.4

300680

**Surface Soil Samples  
Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB78	SB79	SB80	SB81	SB82	SB83	SB84	SB85	SB86	SB87	SB88	SB89
Sample ID	Direct	Direct	SB78-1	SB79-1	SB80-1	SB81-1	SB82-1	SB83-1	SB84-1	SB85-1	SB86-1	SB87-1	SB88-1	SB89-1
Lab ID	Contact	Contact	15997	16062	16067	16066	16065	16256	16257	16258	16068	16069	16170	16171
Date Sampled	Soil Cleanup	Soil Cleanup	9/29/98	9/30/98	10/1/98	10/1/98	10/1/98	10/5/98	10/5/98	10/5/98	10/1/98	10/1/98	10/2/98	10/2/98
Depth (feet)	Criteria	Criteria	0-1	0-1	0.5-1	0.8-1.3	0.5-1	0.5-1.5	0.5-1.5	0-1	0-1	0.5-1	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			5300	3230 *	2690 *	3090 *	2790 *	3290 J	2840 J	3470 J	694 *	4890 *	5320 J	5500 J
Antimony	14	340	0.55 UN	0.88 B	3 B	0.73 B	0.46 U	2.2 J	1.1 J	2.2 J	1.3 B	0.62 B	6.6 J	3.5 J
Arsenic	20	20	5.1	6.2 *	10.7 *	3.6 *	4.5 *	17.3 J	23.6 J	8.4 JB	9.6 *	6.3 *	15.7 J	15.1 J
Barium	700	47000	111 *	34.9 N*	1390 N*	324 N*	44.5 N*	82.6 J	24.4 J	76.5 J	277 N*	272 N*	6150 J	9720 J
Beryllium	1	1	0.58 B	0.24 B	0.22 B	0.16 B	0.18 B	0.4 J	0.21 J	0.33 J	0.25 B	0.46 B	0.61 J	0.5 J
Cadmium	1	100	0.04 U	0.03 U	0.8 B	0.03 U	0.04 U	0.04 UJ	0.03 UJ	0.03 UJ	0.03 U	0.03 U	13 J	7.3 J
Calcium			6500	4500	3250	2100	7980	7790 J	2200 J	94000 J	474 B	2260	8400 J	13600 J
Chromium	500	500	11	8.5	15	8.9	6.7	11.5 J	9.7 J	12.2 J	5.5	10.8	52.3 J	14 J
Cobalt			6.8 B	2.1 B	3.1 B	2 B	2.1 B	4.8 J	1.6 J	3.2 J	1.7 B	6.5 B	3.4 J	4.8 J
Copper	600	600	15	9.1 *	560 *	14.4 *	13.4 *	17.9 J	8.5 J	30.3 J	24.5 *	21 *	98.1 J	61.4 J
Cyanide	1100	21000	1.8 *	0.54 U	0.53 U	0.52 U	0.5 U	0 R	0 R	0 R	1.8	0.51 U	0 R	0 R
Iron			9760	13800	9970	7820	6550	15500 J	5330 J	13500 J	7320	9370	30300 J	19000 J
Lead	400	600	99.5 *	36.3 N*	437 N*	77.6 N*	19.9 N*	34.3 J	22.2 J	161 J	64.7 N*	279 N*	1190 J	857 J
Magnesium			1550	1270	1160	687 B	575 B	742 J	538 J	40400 J	263 B	1090	1090 J	1640 J
Manganese			209 N*	69.7 *	110 *	53.7 *	28.4 *	349 J	52.5 J	366 J	19.9 *	73.5 *	264 J	473 J
Mercury	14	270	0.11 U	0.53	0.72	0.28	0.11	2.5	0.1 U	0.22	0.36	0.73	1.1	1.4
Nickel	250	2400	9.6	3.6 BE	6.1 BE	3.5 BE	4.3 BE	6.1 J	4.3 J	6.6 J	5.6 BE	7.5 E	14.9 J	13.2 J
Potassium			645 B	509 BE	447 BE	521 BE	388 BE	334 J	470 J	554 J	256 BE	524 BE	553 J	542 J
Selenium	63	3100	0.63 U	0.51 U	0.86 B	0.55 B	0.82 B	2.7 J	0.59 UJ	1.3 J	0.95	0.47 U	0.51 UJ	0.62 UJ
Silver	110	4100	0.38 U	0.78 U	0.83 U	0.77 U	0.82 U	0.99 J	0.25 UJ	1.3 UJ	0.78 U	0.72 U	0.67 J	0.85 J
Sodium			245 B	132 B	225 B	177 B	249 B	205 UJ	180 J	185 UJ	149 B	124 B	132 UJ	161 UJ
Thallium	2	2	0.78 U	0.63 U	0.67 U	0.62 U	0.66 U	0.8 J	0.51 UJ	0.61 UJ	0.63 U	0.58 U	0.44 UJ	0.53 UJ
Vanadium	370	7100	12.5	11.2	8.6 B	10.1	10.1	9 J	7.1 J	14.4 J	8.8	11.1	23 J	15.6 J
Zinc	1500	1500	140	34.4	428	71	19.8	45.5 J	19.6 J	115 J	63.8	55.7	2540 J	1570 J

300681

**Surface Soil Samples  
Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB90	SB91	SB92	SB93	SB94	SB95	SB96	SB97	SB98	SB99
Sample ID	Direct	Direct	SB90-1	SB91-1	SB92-1	SB93-1	SB94-1	SB95-1	SB96-1	SB97-1	SB98-1	SB99-1
Lab ID	Contact	Contact	16172	16498	16499	16500	16501	16502	16173	16174	16175	16176
Date Sampled	Soil Cleanup	Soil Cleanup	10/2/98	10/6/98	10/6/98	10/6/98	10/6/98	10/6/98	10/2/98	10/2/98	10/2/98	10/2/98
Depth (feet)	Criteria	Criteria	0.5-1	0-0.5	0-1	0-1	0.5-1	0-1	0.5-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			4110 J	5550	6700	6940	3930	4610	7630 J	5610 J	5080 J	7150 J
Antimony	14	340	12 J	4.4 B*	4.3 B*	9.8 *	11.3 *	6.4 B*	8.7 J	3.6 J	16.3 J	12.5 J
Arsenic	20	20	21.9 J	13 *	16.3 *	19.6 *	15.2 *	20.4 *	53.1 J	46.2 J	28.3 J	104 J
Barium	700	47000	0.31 J	886 E*	5180 E*	10000 E*	8080 E*	8800 E*	10700 J	4430 J	2500 J	4700 J
Beryllium	1	1	0.29 J	1.2	0.38 B	0.53 B	0.42 B	0.46 B	0.54 J	0.6 J	0.46 J	0.43 J
Cadmium	1	100	11.4 J	0.73	0.03 U	6.8	0.05 B	2.8	3.2 J	0.47 J	6.5 J	3.8 J
Calcium			17700 J	20600	23300	25900	6570	14900	16900 J	36800 J	15800 J	22300 J
Chromium	500	500	19.2 J	19.5	13.9	29.1	24.9	24.5	83.6 J	38.4 J	50.2 J	115 J
Cobalt			5.1 J	5.3 B	2.5 B	0.05 U	0.06 U	0.06 U	0.05 UJ	1.8 J	8.1 J	6.5 J
Copper	600	600	281 J	55.6	99.5	66	60.2	77.1	334 J	149 J	696 J	442 J
Cyanide	1100	21000	0 R	0.55 U	0.53 U	0.57 U	0.54 U	0.61	0 R	0 R	0 R	0 R
Iron			44900 J	19300	29500	25500	22500	16400	32300 J	18800 J	62300 J	34500 J
Lead	400	600	908 J	114 *	399 *	217 *	455 *	483 *	723 J	290 J	1000 J	812 J
Magnesium			1350 J	1970	2450	1980	1340	2790	3990 J	6040 J	3930 J	8700 J
Manganese			275 J	617 N	207 N	752 N	196 N	146 N	319 J	311 J	530 J	402 J
Mercury	14	270	0.8	1.3	0.32	1.2	3.1	0.47	0.71	0.71	1.3	2
Nickel	250	2400	20.8 J	22.2	10.7	18	12.6	14.7	35.2 J	23.3 J	76.6 J	60.3 J
Potassium			470 J	929	1050	357 B	587 B	695 B	1060 J	1060 J	718 J	997 J
Selenium	63	3100	0.49 UJ	3.5	5.4	3.3	1.9	1.7	0.59 UJ	1.5 J	0.58 UJ	0.47 J
Silver	110	4100	0.8 J	0.26 U	0.45 B	0.65 B	0.56 B	0.69 B	2 J	0.63 J	1.5	1.9 J
Sodium			127 UJ	406 B	213 B	145 B	207 B	210 B	153 UJ	161 UJ	656 J	186 J
Thallium	2	2	0.42 UJ	0.45 U	0.5 U	0.47 U	0.53 U	0.54 U	0.51 UJ	0.53 UJ	0.5 UJ	0.4 UJ
Vanadium	370	7100	16.2 J	18.6 E	24.9 E	16.8 E	17 E	20.1 E	26.6 J	26.5 J	22.9 J	42.8 J
Zinc	1500	1500	1600 J	242 E*	502 E*	3360 E*	454 E*	789 E*	910 J	398 J	1620 J	1050 J

300682

Surface Soil Samples

Positive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB01	SB02	SB03	SB04	SB05	SB06	SB07
Sample ID	Direct	Direct	Groundwater	SB01-1	SB02-1	SB03-1	SB04-1	SB05-1	SB06-1	SB07-1
Lab ID	Contact	Contact	Soil	9712238	9712933	9712251	9712936	9712248	9712634	9712243
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/10/97	7/16/97	7/10/97	7/16/97	7/10/97	7/15/97	7/10/97
Depth (feet)	Criteria	Criteria	Criteria	0-0.5	0.5-1	0-0.5	0-0.5	0.5-1	0-0.5	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.044 PJ	0.015 PJ	0.041 JPD	0.013 PJ	0.048 PJ	0.0035 U	0.016 PJ
4,4'-DDE	2	9	50	0.012 PJ	0.094 PDJ	0.091 JPD	0.15 PDJ	0.034 PJ	0.94 D	0.04 PJ
4,4'-DDT	2	9	500	0.021	0.0018 JP	0.011 PJ	0.0034 U	0.0036 U	0.0035 U	0.0057 PJ
Aldrin	0.04	0.17	50	0.0018 U	0.0029 PJ	0.72 D	45 PJ	28 D	0.072 PD	0.0017 U
alpha-BHC				0.0018 U	0.0019 U	0.0037 PJ	0.001 JP	0.027 JPD	0.0017 U	0.0017 U
alpha-Chlordane				0.22 PDJ	0.012 PJ	1.2 PDJ	0.03 PDJ	1.1 PDJ	0.64 JPD	0.036 D
Aroclor-1016				0.035 U	0.039 U	5 PDJ	0.034 U	44 D	0.035 U	0.034 U
Aroclor-1248				0.035 U	0.039 U	0.037 U	0.034 U	0.036 U	0.035 U	0.034 U
Aroclor-1254				0.035 U	0.039 U	0.037 U	1.7 D	0.036 U	11 D	0.034 U
Aroclor-1260				1.6 PDJ	0.039 U	1.9 JD	0.83 D	2.6 PD	0.035 U	2.2 D
beta-BHC				0.0018 U	0.0019 U	0.0019 U	0.0017 U	0.0018 U	0.0017 U	0.0017 U
delta-BHC				0.0018 U	0 R	0.0019 U	0 R	0.0018 U	0.0017 U	0.0017 U
Dieldrin	0.042	0.18	50	0.0035 U	0.0039 U	0.18 JPD	0.0034 U	0.05 PJ	0.0035 U	0.0034 U
Endosulfan II				0.2 D	0.0039 U	0.19 JPD	0.0034 U	0.1 JPD	0.0035 U	0.21 D
Endosulfan sulfate				0.0035 U	0.0039 U	0.0037 U	0.0034 U	0.0036 U	0.0035 U	0.0034 U
Endrin	17	310	50	0 R	0.0094 PJ	0 R	0.0034 U	0 R	0.0035 UJ	0 R
Endrin aldehyde				0.0035 U	0.0039 U	0.0037 U	0.0034 U	0.0036 U	0.0035 U	0.0034 U
Endrin ketone				0.0035 U	0.0039 U	0.0037 U	0.0034 U	0.023 PJ	0.022 P	0.0034 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.0019 U	0.0019 U	0.00014 JP	0.029	0.0017 U	0.0017 U
gamma-Chlordane				0.24 D	0.015 PJ	1.3 D	0.05 PDJ	1.3 PDJ	0.72 JD	0.055 D
Heptachlor	0.15	0.65	50	0.0018 U	0.0019 U	0.0019 U	0.0017 U	0.0018 U	0.053 D	0.0017 U
Heptachlor epoxide				0.0018 U	0.0019 U	0.24 PDJ	0.0017 U	0.81 PDJ	0.0017 U	0.0017 U
Methoxychlor	280	5200	50	0.018 U	0.019 U	0.019 U	0.17	0.048 PJ	0.017 U	0.017 U
Total PCB	0.49	2	0	1.6	0.039 U	6.9	2.53 D	46.6	11	2.2

300683

Surface Soil Samples

Positive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB08	SB09	SB10	SB11	SB12	SB13	SB14	SB15
Sample ID	Direct	Direct	Groundwater	SB08-1	SB09-1	SB10-1	SB11-1	SB12-1	SB13-1	SB14-1	SB15-1
Lab ID	Contact	Contact	Soil	9712939	9712626	9712638	9711024	9712254	9712931	9712642	9712629
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/16/97	7/14/97	7/15/97	6/24/97	7/10/97	7/16/97	7/15/97	7/14/97
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.48 JD	0.018 P	0.17 PD	0.0092 J	0.0075 PJ	0.0093	0.0031 JP	0.01 P
4,4'-DDE	2	9	50	6.9 D	0.2 PD	0.13 PD	0.03	0.021 PJ	0.0062 PJ	0.0085 P	0.026 P
4,4'-DDT	2	9	500	0.0036 U	0.0036 U	0.0034 U	0.0006 J	0.0036 U	0.021 P	0.0036 U	0.0021 JP
Aldrin	0.04	0.17	50	4.4 D	0.0018 U	0.0017 U	0.0018 JP	0.0018 U	0.0043 J	0.0018 U	0.016 P
alpha-BHC				0.0018 U	0.0018 U	0.0029 P	0.00022 JP	0.0018 U	0.0018 U	0.0018 U	0.0018 U
alpha-Chlordane				1.3 PDJ	0.066 PD	0.043 PD	0.0044 J	0.017 PJ	0.0022 PJ	0.066 PD	0.039 PD
Aroclor-1016				65 PDJ	0.036 U	0.034 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U
Aroclor-1248				0.036 U	0.036 U	0.034 U	0.036 U	0.036 U	0.036 U	0.036 U	0.035 U
Aroclor-1254				0.036 U	8.2 D	0.034 U	0.036 U	0.036 U	0.036 U	1.3 D	0.86 D
Aroclor-1260				0.036 U	0.036 U	38 PD	0.094 P	0.33 PJ	0.036 U	0.39 P	0.36
beta-BHC				0.0018 U	0.0018 U	0.0017 U	0.0018 U	0.0028 PJ	0.0018 U	0.0018 U	0.0018 U
delta-BHC				0 R	0.0018 U	0.0017 U	0.0002 JP	0.0018 U	0 R	0.0018 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0036 U	0.0036 U	0.0034 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0035 U
Endosulfan II				0.37 JPD	0.0036 U	2.2 PD	0.0036 U	0.031 PJ	0.0036 U	0.0036 U	0.0035 U
Endosulfan sulfate				0.0036 U	0.0036 U	0.0034 U	0.0036 U	0.0025 JP	0.0036 PJ	0.0036 U	0.0035 U
Endrin	17	310	50	0.0036 U	0.0036 UJ	0.0034 UJ	0.0031 JP	0 R	0.0012 JP	0.0036 UJ	0.0035 UJ
Endrin aldehyde				0.0036 U	0.0036 U	0.0034 U	0.0036 U	0.0036 U	0.0036 U	0.0036 U	0.0035 U
Endrin ketone				0.0036 U	0.0036 U	0.082 PD	0.0036 U	0.00073 JP	0.0036 U	0.0036 U	0.0035 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.0018 U	0.0017 U	0.0018 U	0.0016 JP	0.0018 U	0.0018 U	0.0018 U
gamma-Chlordane				1.6 PDJ	0.091 PD	0.2 PD	0.0038 J	0.028	0.002 PJ	0.074 PD	0.041 D
Heptachlor	0.15	0.65	50	0.0018 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Heptachlor epoxide				2.3 PDJ	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Methoxychlor	280	5200	50	0.018 U	0.018 U	0.017 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Total PCB	0.49	2	0	65 PD	8.2	38	0.094	0.33	0.036 U	1.69	1.22

300684

Surface Soil Samples

Positive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB16	SB17	SB18	SB18	SB19	SB20	SB23	SB23
Sample ID	Direct	Direct	Groundwater	SB16-1	SB17-1	SB18-1	SB18-2	SB19-1	SB20-1	SB23-1	SB23-2
Lab ID	Contact	Contact	Soil	9712646	9712943	9712620	9712621	9712947	9712029	9712032	9712033
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/15/97	7/17/97	7/14/97	7/14/97	7/17/97	7/8/97	7/8/97	7/8/97
Depth (feet)	Criteria	Criteria	Criteria	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.18 PD	0.022 PJ	0.0064 P	0.0088 J	0.0042 U	0.0019 JP	0.8 D	1.5 D
4,4'-DDE	2	9	50	0.12 PD	0.5 PDJ	0.037 P	0.012 P	1.8 D	0.0034 JP	0.15 PDJ	0.25 PDJ
4,4'-DDT	2	9	500	0.0034 U	0.004 U	0.008 P	0.0084 J	0.0042 U	0.0038 J	0.059	0.16 PDJ
Aldrin	0.04	0.17	50	0.079 PD	0.13 PDJ	0.035 D	0.016	0.54 PDJ	0.0022 U	0.031 JPD	0.079 PDJ
alpha-BHC				0.0017 U	0.002 U	0.0018 U	0.0018 U	0.031 PJ	0.0022 U	0.002 U	0.002 U
alpha-Chlordane				1.5 PD	0.66 PDJ	0.015 J	0.0086 P	0.31 PDJ	0.12 PDJ	0.12 PDJ	0.21 PDJ
Aroclor-1016				0.034 U	0.04 U	0.036 U	0.035 U	17 D	0.044 U	0.04 U	0.041 U
Aroclor-1248				0.034 U	0.04 U	0.036 U	0.035 U	0.042 U	0.044 U	0.04 U	0.041 U
Aroclor-1254				0.034 U	2.4 PDJ	0.036 U	0.035 U	0.042 U	0.044 U	0.04 U	0.041 U
Aroclor-1260				14 JD	1.1 PDJ	0.15 P	0.16 P	0.042 U	0.27 PJ	5.9 D	11 D
beta-BHC				0.0017 U	0.002 U	0.0018 U	0.0018 U	0.0021 U	0.0022 U	0.002 U	0.0057 P
delta-BHC				0.0017 U	0 R	0.0018 U	0.0018 U	0 R	0.0022 U	0.002 U	0.002 U
Dieldrin	0.042	0.18	50	4 D	0.43 D	0.0036 U	0.0035 U	0.15 JPD	0.0044 U	0.004 U	0.0041 U
Endosulfan II				0.78 EPD	0.004 U	0.015 P	0.016 P	0.16 JPD	0.026 PJ	0.61 D	1.1 D
Endosulfan sulfate				0.0034 U	0.004 U	0.0036 U	0.0035 U	0.0042 U	0.0044 U	0.004 U	0.0041 U
Endrin	17	310	50	0.0034 UJ	0.004 U	0.0036 UJ	0.0035 UJ	0.0042 U	0 R	0 R	0 R
Endrin aldehyde				0.0034 U	0.004 U	0.0036 U	0.0035 U	0.0042 U	0.0044 U	0.004 U	0.0041 U
Endrin ketone				0.042 P	0.004 U	0.0036 U	0.0035 U	0.0042 U	0.0044 U	0.011 PJ	0.016 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0017 U	0.002 U	0.0018 U	0.0018 U	0.0021 U	0.0022 U	0.002 U	0.002 U
gamma-Chlordane				1.4 D	0.75 D	0.014 P	0.012 P	0.4 PDJ	0.093 D	0.19 PDJ	0.34 PDJ
Heptachlor	0.15	0.65	50	0.032 PD	0.0028 PJ	0.0018 U	0.0018 U	0.0021 U	0.0022 U	0.002 U	0.002 U
Heptachlor epoxide				0.0017 U	0.002 U	0.0018 U	0.0018 U	0.0021 U	0.0022 U	0.002 U	0.002 U
Methoxychlor	280	5200	50	0.017 U	0.02 U	0.018 U	0.018 U	0.021 U	0.022 U	0.02 U	0.02 U
Total PCB	0.49	2	0	14	3.5 JPD	0.15	0.16	17 D	0.27	5.9 D	11 D

300685

Surface Soil Samples

Positive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB26	SB29	SB31	SB32	SB33	SB35	SB36	SB36
Sample ID	Direct	Direct	Groundwater	SB26-1	SB29-1	SB31-1	SB32-1	SB33-1	SB35-1	SB36-1	SB36-2
Lab ID	Contact	Contact	Soil	9712025	9712233	9710633	9710636	9710855	9710844	9710850	9710851
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/7/97	7/9/97	6/17/97	6/17/97	6/19/97	6/18/97	6/19/97	6/19/97
Depth (feet)	Criteria	Criteria	Criteria	0-0.5	0-0.5	1-1.5	1-1.5	0.5-1	1-1.5	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0036 U	0.0041 U	0.0008 JP	0.0036 U	0.0042 U	0.0036 U	0.0037 U	0.0037 U
4,4'-DDE	2	9	50	0.0036 U	0.0041 U	0.0041 P	0.01 P	0.053 P	0.17 PD	0.0037 U	0.0037 U
4,4'-DDT	2	9	500	0.0036 U	0.0022 J	0.0039 U	0.0036 U	0.0042 U	0.0036 U	0.0037 U	0.0037 U
Aldrin	0.04	0.17	50	0.0018 U	0.0021 U	0.002 U	0.013 P	0.08 JP	0.0018 U	0.0018 U	0.0019 U
alpha-BHC				0.00027 JP	0.0021 U	0.002 U	0.0018 U	0.0059	0.0024 P	0.0004 J	0.00028 JP
alpha-Chlordane				0.0026	0.0021 U	0.0013 JP	0.0047 P	0.24 JP	0.2 PD	0.0018 U	0.0019 U
Aroclor-1016				0.036 U	0.041 U	0.039 U	0.036 U	0.042 U	0.036 U	0.037 U	0.037 U
Aroclor-1248				0.036 U	0.041 U	0.039 U	0.036 U	0.042 U	0.036 U	0.037 U	0.037 U
Aroclor-1254				0.036 U	0.041 U	0 R	0.036 U	0.042 U	4 J	0.037 U	0.037 U
Aroclor-1260				0.036 U	0.041 U	0.039 U	0.036 U	0.042 U	0.036 U	0.037 U	0.037 U
beta-BHC				0.0018 U	0.0021 U	0.002 U	0.0018 U	0.0021 U	0.0018 U	0.0018 U	0.0019 U
delta-BHC				0.0018 U	0.0021 U	0.002 U	0.0018 U	0.0021 U	0.0018 U	0.0018 U	0.0019 U
Dieldrin	0.042	0.18	50	0.0036 U	0.0041 U	0.0039 U	0.0032 JP	0.0042 U	0.0036 U	0.0037 U	0.0037 U
Endosulfan II				0.0036 U	0.0041 U	0.0039 U	0.0036 U	0.0042 U	0.0036 U	0.0037 U	0.0037 U
Endosulfan sulfate				0.0036 U	0.0041 U	0.0039 U	0.0036 U	0.0042 U	0.0036 U	0.0037 U	0.0037 U
Endrin	17	310	50	0 R	0 R	0.0039 U	0.0036 U	0.0042 U	0.017 P	0.0037 U	0.0037 U
Endrin aldehyde				0.0036 U	0.0041 U	0.0039 U	0.0036 U	0.0042 U	0.0036 U	0.0037 U	0.0037 U
Endrin ketone				0.0036 U	0.0041 U	0.0039 U	0.0016 JP	0.0042 U	0.0038 P	0.0037 U	0.0037 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.0021 U	0.002 U	0.0018 U	0.0021 U	0.0018 U	0.0018 U	0.0019 U
gamma-Chlordane				0.0007 JP	0.0021 U	0.0013 JP	0.0082	0.54 J	0.27 J	0.0018 U	0.0019 U
Heptachlor	0.15	0.65	50	0.0018 U	0.0021 U	0.002 U	0.0018 U	0.0014 JP	0.00062 JP	0.0018 U	0.0019 U
Heptachlor epoxide				0.0018 U	0.0021 U	0.0072 P	0.0018 U	0.061 JP	0.0018 U	0.011 P	0.011 P
Methoxychlor	280	5200	50	0.018 U	0.021 U	0.013 J	0.068 P	0.021 U	0.044 P	0.018 U	0.019 U
Total PCB	0.49	2	0	0.036 U	0.041 U	0 U	0.036 U	0.042 U	4	0.037 U	0.037 U

300686

Surface Soil Samples

Positive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB38	SB41	SB42	SB42	SB43	SB44	SB45	SB46
Sample ID	Direct	Direct	Groundwater	SB38-1	SB41-1	SB42-1	SB42-2	SB43-1	SB44-1	SB45-1	SB46-1
Lab ID	Contact	Contact	Soil	9710847	9710841	9710615	9710616	9710620	9710642	9710624	9710639
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	6/19/97	6/18/97	6/16/97	6/16/97	6/16/97	6/17/97	6/16/97	6/17/97
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	1.5-2	0.5-1	0.5-1	0.5-1	0.5-1.5	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.004 U	0.00088 JP	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
4,4'-DDE	2	9	50	0.0063 P	0.0039 JP	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
4,4'-DDT	2	9	500	0.004 U	0.006	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
Aldrin	0.04	0.17	50	0.0026 P	0.0034	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
alpha-BHC				0.00018 JP	0.0021 U	0.0019 U	0.00057 JP	0.0018 U	0.0019 U	0.0019 U	0.00056 J
alpha-Chlordane				0.0012 JP	0.004 P	0.0019 U	0.0018 U	0.0018 U	0.0012 JP	0.0012 JP	0.0012 JP
Aroclor-1016				0.04 U	0.042 U	0.037 U	0.037 U	0.035 U	0.037 U	0.038 U	0.042 U
Aroclor-1248				0.04 U	0.042 U	0.037 U	0.037 U	0.035 U	0.037 U	0.038 U	0.042 U
Aroclor-1254				0.58	0.22	0.037 U	0.037 U	0.035 U	0.037 U	0.038 U	0.042 U
Aroclor-1260				0.04 U	0.042 U	0.037 U	0.037 U	0.035 U	0.037 U	0.038 U	0.042 U
beta-BHC				0.002 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
delta-BHC				0.00045 JP	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
Dieldrin	0.042	0.18	50	0.0007 JP	0.004 J	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
Endosulfan II				0.004 U	0.0042 U	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0038 JP
Endosulfan sulfate				0.004 U	0.0042 U	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
Endrin	17	310	50	0.0051 P	0.0042 U	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
Endrin aldehyde				0.004 U	0.0042 U	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
Endrin ketone				0.004 U	0.00024 JP	0.0037 U	0.0037 U	0.0035 U	0.0037 U	0.0038 U	0.0042 U
gamma-BHC (Lindane)	0.52	2.2	50	0.00019 JP	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
gamma-Chlordane				0.002 P	0.0061 P	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
Heptachlor	0.15	0.65	50	0.002 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
Heptachlor epoxide				0.002 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0021 U
Methoxychlor	280	5200	50	0.02 U	0.021 U	0.019 U	0.018 U	0.018 U	0.019 U	0.019 U	0.021 U
Total PCB	0.49	2	0	0.58	0.22	0.037 U	0.037 U	0.035 U	0.037 U	0.038 U	0.042 U

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Surface Soil Samples

Positive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB47	SB48	SB62	SB63	SB63	SB64	SB65
Sample ID	Direct	Direct	Groundwater	SB47-1	SB48-1	SB62-1	SB63-1	SB63-2	SB64-1	SB65-1
Lab ID	Contact	Contact	Soil	9710629	9713210	15968	15970RE	15971	15973	15975
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	6/17/97	7/22/97	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0.5-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0039 U	0.0081 U	0.0048	0.0037 U	0.0051	0.012 P	0.0038 U
4,4'-DDE	2	9	50	0.0039 U	0.0081 U	0.016 P	0.0037 U	0.0036 U	0.014 P	0.0099 P
4,4'-DDT	2	9	500	0.0039 U	0.0081 U	0.0081	0.0037 U	0.0036 U	0.0063 P	0.0043 P
Aldrin	0.04	0.17	50	0.002 U	0.011 P	0.0035 P	0.0056 P	0.0062 P	0.022 P	0.017 P
alpha-BHC				0.00077 J	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
alpha-Chlordane				0.0019 JP	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Aroclor-1016				0.039 U	0.081 U	0.041 U	0.037 U	0.036 U	0.036 U	0.038 U
Aroclor-1248				0.039 U	0.081 U	0.041 U	0.037 U	0.036 U	0.036 U	0.038 U
Aroclor-1254				0.039 U	0.081 U	0.041 U	0.037 U	0.036 U	0.036 U	0.038 U
Aroclor-1260				0.039 U	0.081 U	0.041 U	0.037 U	0.036 U	0.036 U	0.038 U
beta-BHC				0.002 U	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
delta-BHC				0.002 U	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Dieldrin	0.042	0.18	50	0.0039 U	0.0081 U	0.0041 U	0.0037 U	0.0036 U	0.0036 U	0.0038 U
Endosulfan II				0.0046 P	0.0081 U	0.0041 U	0.0037 U	0.0036 U	0.0036 U	0.0038 U
Endosulfan sulfate				0.0039 U	0.0081 U	0.0041 U	0.0037 U	0.0036 U	0.0036 U	0.0038 U
Endrin	17	310	50	0.0039 U	0.0011 JP	0.0041 U	0.0037 U	0.0036 U	0.0036 U	0.0038 U
Endrin aldehyde				0.0039 U	0.0081 U	0.0041 U	0.0037 U	0.0036 U	0.0088	0.0055 P
Endrin ketone				0.0039 U	0.0018 JP	0.0083 P	0.01 P	0.017 P	0.045	0.032
gamma-BHC (Lindane)	0.52	2.2	50	0.002 U	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
gamma-Chlordane				0.002 U	0.002 JP	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Heptachlor	0.15	0.65	50	0.002 U	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Heptachlor epoxide				0.002 U	0.004 U	0.0021 U	0.0019 U	0.0019 U	0.052 P	0.062 P
Methoxychlor	280	5200	50	0.02 U	0.04 U	0.031 P	0.037 P	0.05 P	0.098	0.1
Total PCB	0.49	2	0	0.039 U	0.081 U	0 U	0 U	0 U	0 U	0 U

300688

## Surface Soil Samples

## Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB66	SB67	SB68	SB69	SB70	SB71	SB72	SB73	SB74
Sample ID	Direct	Direct	Groundwater	SB66-1	SB67-1	SB68-1	SB69-1	SB70-1	SB71-1	SB72-1	SB73-1	SB74-1
Lab ID	Contact	Contact	Soil	16059	15977	15979	15981	15983	15985	16060	15987	16061
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/30/98	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/30/98	9/30/98
Depth (feet)	Criteria	Criteria	Criteria	0-1	0.5-1	0-1	0.5-1	0-1	0-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0078 P	0.0052	0.0035 U	0.0037 U	0.0096 P	0.018 U	0.0049	0.031 P	0.0034 U
4,4'-DDE	2	9	50	0.023 P	0.012 P	0.0035 U	0.0062 P	0.011 P	0.018 U	0.0068 P	0.019 U	0.0051 P
4,4'-DDT	2	9	500	0.031 P	0.0036 U	0.0035 U	0.0037 U	0.0037 U	0.018 U	0.0035 U	0.019 U	0.01 P
Aldrin	0.04	0.17	50	0.0033 P	0.0048 P	0.0024 P	0.016 P	0.028 P	0.0092 U	0.0018 P	0.0097 U	0.0028 P
alpha-BHC				0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0018 U	0.0097 U	0.0017 U
alpha-Chlordane				0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0018 U	0.0097 U	0.0017 U
Aroclor-1016				0.037 U	0.036 U	0.035 U	0.037 U	0.037 U	0.18 U	0.035 U	0.19 U	0.034 U
Aroclor-1248				0.037 U	0.036 U	0.035 U	0.037 U	0.037 U	0.18 U	0.035 U	0.19 U	0.034 U
Aroclor-1254				0.037 U	0.036 U	0.035 U	0.037 U	0.037 U	0.18 U	0.035 U	0.19 U	0.034 U
Aroclor-1260				0.037 U	0.036 U	0.035 U	0.037 U	0.037 U	0.18 U	0.035 U	0.19 U	0.034 U
beta-BHC				0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0018 U	0.0097 U	0.0017 U
delta-BHC				0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0018 U	0.0097 U	0.0017 U
Dieldrin	0.042	0.18	50	0.0037 U	0.0036 U	0.0035 U	0.0037 U	0.0037 U	0.018 U	0.0035 U	0.019 U	0.0034 U
Endosulfan II				0.0037 U	0.0036 U	0.0035 U	0.0037 U	0.0037 U	0.018 U	0.0035 U	0.019 U	0.0034 U
Endosulfan sulfate				0.0037 U	0.0036 U	0.0035 U	0.0037 U	0.0037 U	0.018 U	0.0035 U	0.019 U	0.0034 U
Endrin	17	310	50	0.0037 U	0.0036 U	0.0035 U	0.0037 U	0.0039 P	0.018 U	0.0035 U	0.019 U	0.0034 U
Endrin aldehyde				0.0022 JP	0.0036 U	0.0035 U	0.0037 U	0.0037 U	0.018 U	0.0035 U	0.019 U	0.0034 U
Endrin ketone				0.013	0.0082 P	0.0046 P	0.018 P	0.035 P	0.018 U	0.0035 U	0.023 P	0.0034 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0018 U	0.0097 U	0.0017 U
gamma-Chlordane				0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0029	0.0097 U	0.0031
Heptachlor	0.15	0.65	50	0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.0092 U	0.0018 U	0.0097 U	0.0017 U
Heptachlor epoxide				0.013 P	0.0019 U	0.0078 P	0.033 P	0.0019 U	0.0092 U	0.0051 P	0.028 P	0.0017 U
Methoxychlor	280	5200	50	0.042	0.031 P	0.018 JP	0.065 P	0.14 P	0.092 U	0.018 U	0.1 P	0.039 P
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300689

## Surface Soil Samples

## Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB75	SB76	SB77	SB78	SB79	SB80	SB81	SB82	SB83
Sample ID	Direct	Direct	Groundwater	SB75-1	SB76-1	SB77-1	SB78-1	SB79-1	SB80-1	SB81-1	SB82-1	SB83-1
Lab ID	Contact	Contact	Soil	15995	16063	16064	15997	16062	16067	16066	16065	16256
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/29/98	10/1/98	10/1/98	9/29/98	9/30/98	10/1/98	10/1/98	10/1/98	10/5/98
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	0-1	0-1	0-1	0-1	0.5-1	0.8-1.3	0.5-1	0.5-1.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.018 U	0.017 P	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 U
4,4'-DDE	2	9	50	0.019 P	0.12 P	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.013 J
4,4'-DDT	2	9	500	0.026	0.14 P	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 U
Aldrin	0.04	0.17	50	0.012 P	0.032 P	0.0018 U	0.0018 U	0.0018 U	0.0071 P	0.0018 U	0.0037 P	0.0024 J
alpha-BHC				0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.0019 UJ
alpha-Chlordane				0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.018 J
Aroclor-1016				0.18 U	0.073 U	0.035 U	0.034 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U
Aroclor-1248				0.18 U	0.073 U	0.035 U	0.034 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U
Aroclor-1254				0.18 U	0.073 U	0.035 U	0.034 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U
Aroclor-1260				0.18 U	0.073 U	0.035 U	0.034 U	0.036 U	0.037 U	0.034 U	0.036 U	0.037 U
beta-BHC				0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U
delta-BHC				0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U
Dieldrin	0.042	0.18	50	0.018 U	0.0073 U	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 U
Endosulfan II				0.018 U	0.0073 U	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 U
Endosulfan sulfate				0.018 U	0.0073 U	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 U
Endrin	17	310	50	0.018 U	0.01 P	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 UJ
Endrin aldehyde				0.018 U	0.0073 U	0.0035 U	0.0034 U	0.0036 U	0.0037 U	0.0034 U	0.0036 U	0.0037 U
Endrin ketone				0.018 U	0.065 P	0.0035 U	0.0034 U	0.0036 U	0.012 P	0.0034 U	0.012 P	0.0079 J
gamma-BHC (Lindane)	0.52	2.2	50	0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.0019 UJ
gamma-Chlordane				0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0038	0.017 J
Heptachlor	0.15	0.65	50	0.0092 U	0.0038 U	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U
Heptachlor epoxide				0.043 P	0.094 P	0.0018 U	0.0018 U	0.0018 U	0.013 P	0.0018 U	0.0018 U	0.0019 U
Methoxychlor	280	5200	50	0.092 U	0.29	0.018 U	0.018 U	0.018 U	0.061 P	0.018 U	0.037	0.031 J
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300690

Surface Soil Samples

Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB84	SB85	SB86	SB87	SB88	SB89	SB90	SB91
Sample ID	Direct	Direct	Groundwater	SB84-1	SB85-1	SB86-1	SB87-1	SB88-1	SB89-1	SB90-1	SB91-1
Lab ID	Contact	Contact	Soil	16257	16258	16068	16069	16170	16171	16172	16498
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/5/98	10/5/98	10/1/98	10/1/98	10/2/98	10/2/98	10/2/98	10/6/98
Depth (feet)	Criteria	Criteria	Criteria	0.5-1.5	0-1	0-1	0.5-1	0.5-1	0.5-1	0.5-1	0-0.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0034 U	0.0039 J	0.0034 U	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.014 P
4,4'-DDE	2	9	50	0.0034 U	0.0082 J	0.0033 J	0.0036 U	0.022 P	0.0037 U	0.0036 U	0.0036 U
4,4'-DDT	2	9	500	0.0034 U	0.019 J	0.0034 U	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.0097 P
Aldrin	0.04	0.17	50	0.0017 U	0.008 J	0.0087	0.0018 U	0.036 P	0.0085 P	0.0058 P	0.0095
alpha-BHC				0.0017 UJ	0.0018 UJ	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U
alpha-Chlordane				0.0017 U	0.019 J	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0038 P
Aroclor-1016				0.034 U	0.036 U	0.034 U	0.036 U	0.037 U	0.037 U	0.036 U	0.036 U
Aroclor-1248				0.034 U	0.036 U	0.034 U	0.036 U	0.037 U	0.037 U	0.036 U	0.036 U
Aroclor-1254				0.034 U	0.036 U	0.034 U	0.036 U	0.037 U	0.037 U	0.036 U	0.036 U
Aroclor-1260				0.034 U	0.036 U	0.034 U	0.036 U	0.037 U	0.037 U	0.036 U	0.036 U
beta-BHC				0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U
delta-BHC				0.0017 U	0.0018 U	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0034 U	0.0045 J	0.0034 U	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.052 P
Endosulfan II				0.0034 U	0.0036 U	0.0034 U	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U
Endosulfan sulfate				0.0034 U	0.0036 U	0.0034 U	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U
Endrin	17	310	50	0.0034 UJ	0.0036 UJ	0.0034 U	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U
Endrin aldehyde				0.0034 U	0.0036 U	0.0034 P	0.0036 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U
Endrin ketone				0.0034 U	0.0036 U	0.025	0.017 P	0.14	0.047 P	0.023	0.006 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0017 UJ	0.0018 UJ	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U
gamma-Chlordane				0.0017 U	0.027	0.0017 U	0.0025 P	0.0019 U	0.0019 U	0.0019 U	0.0071
Heptachlor	0.15	0.65	50	0.0017 U	0.008	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0019 P
Heptachlor epoxide				0.0017 U	0.013 J	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0019 U	0.0018 P
Methoxychlor	280	5200	50	0.017 U	0.051 J	0.076 P	0.074 P	0.3 P	0.12 P	0.064 P	0.018 U
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300691

Surface Soil Samples

Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB92	SB93	SB94	SB95	SB96	SB97	SB98	SB99
Sample ID	Direct	Direct	Groundwater	SB92-1	SB93-1	SB94-1	SB95-1	SB96-1	SB97-1	SB98-1	SB99-1
Lab ID	Contact	Contact	Soil	16499	16500	16501	16502	16173	16174	16175	16176
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/6/98	10/6/98	10/6/98	10/6/98	10/2/98	10/2/98	10/2/98	10/2/98
Depth (feet)	Criteria	Criteria	Criteria	0-1	0-1	0.5-1	0-1	0.5-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0034 U	0.004 U	0.0037 U	0.0035 U	0.0041 P	0.0035 U	0.0073	0.023 P
4,4'-DDE	2	9	50	0.0034 U	0.0061 P	0.11 P	0.0041 P	0.0036 U	0.0035 U	0.046	0.04
4,4'-DDT	2	9	500	0.0034 U	0.0056 P	0.0037 U	0.0066 P	0.0062 P	0.011 P	0.027 P	0.015 P
Aldrin	0.04	0.17	50	0.0018 U	0.0021 U	0.0046 P	0.004 P	0.019 P	0.007	0.0099 P	0.026 P
alpha-BHC				0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
alpha-Chlordane				0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.1 P
Aroclor-1016				0.034 U	0.04 U	0.037 U	0.035 U	0.036 U	0.035 U	0.035 U	0.034 U
Aroclor-1248				0.034 U	0.04 U	0.037 U	0.035 U	0.34 P	0.18 P	0.35 P	1.1 P
Aroclor-1254				0.034 U	0.05	0.037 U	0.035 U	0.48	0.34	0.83	1.1 P
Aroclor-1260				0.034 U	0.04 U	0.037 U	0.035 U	0.036 U	0.035 U	0.035 U	0.034 U
beta-BHC				0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
delta-BHC				0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0034 U	0.004 U	0.0037 U	0.0035 U	0.0074 P	0.0073 P	0.0035 U	0.018 P
Endosulfan II				0.0034 U	0.004 U	0.0037 U	0.0035 U	0.0036 U	0.0035 U	0.0035 U	0.0034 U
Endosulfan sulfate				0.0034 U	0.004 U	0.0037 U	0.0035 U	0.0036 U	0.0035 U	0.0035 U	0.0034 U
Endrin	17	310	50	0.0034 U	0.004 U	0.0037 U	0.0035 U	0.0036 U	0.0035 U	0.0054 P	0.0034 U
Endrin aldehyde				0.0034 U	0.004 U	0.0037 U	0.0035 U	0.0036 U	0.0035 U	0.0035 U	0.0034 U
Endrin ketone				0.0034 U	0.004 U	0.016 P	0.011 P	0.025	0.0035 U	0.0035 U	0.0034 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
gamma-Chlordane				0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.12 P
Heptachlor	0.15	0.65	50	0.0018 U	0.0021 U	0.0019 U	0.0018 U	0.0079 P	0.0042 P	0.0065 P	0.0018 U
Heptachlor epoxide				0.0038 P	0.003 P	0.013 P	0.0068 P	0.0018 U	0.0098 P	0.013 P	0.0018 U
Methoxychlor	280	5200	50	0.018 U	0.021 U	0.019 U	0.034	0.084	0.032	0.047 P	0.047 P
Total PCB	0.49	2	50	0 U	0.05	0 U	0 U	0.82	0.52	1.18	2.2

300692

Surface Soil Samples

Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB105	SB106	SB107	SB108	SB109	SB110	SB112	SB113
Sample ID	Direct	Direct	Groundwater	SB105-1	SB106-1	SB107-1	SB108-1	SB109-1	SB110-1	SB112-1	SB113-1
Lab ID	Contact	Contact	Soil	16259	16260	16177	16261	16262	16622	16626	16503
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/5/98	10/5/98	10/2/98	10/5/98	10/5/98	10/8/98	10/8/98	10/6/98
Depth (feet)	Criteria	Criteria	Criteria	0.5-1.5	0.5-1.5	0.5-1	0-1	0-1	0-0.5	0-0.5	0.5-1.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0039 U	0.0038 U	0.004 U	0.014	0.0043 U	0.0043 U	0.0042 U	0.0038
4,4'-DDE	2	9	50	0.0061 J	0.039 J	0.004 U	0.025	0.0043 U	0.0043 U	0.019 P	0.013 P
4,4'-DDT	2	9	500	0.0064 J	0.039 J	0.004 U	0.032 J	0.0043 U	0.0043 U	0.0042 U	0.0036 U
Aldrin	0.04	0.17	50	0.0067 J	0.0053 J	0.0021 U	0.013 J	0.0022 U	0.0022 U	0.032 P	0.0056 P
alpha-BHC				0.002 UJ	0.002 UJ	0.0021 U	0.002 UJ	0.0022 U	0.0022 U	0.0021 U	0.0019 U
alpha-Chlordane				0.0055 J	0.0049 J	0.0021 U	0.0063 J	0.0022 U	0.0022 U	0.0021 U	0.01 P
Aroclor-1016				0.039 U	0.038 U	0.04 U	0.039 U	0.043 U	0.043 U	0.042 U	0.036 U
Aroclor-1248				0.039 U	0.038 U	0.04 U	0.039 U	0.043 U	0.043 U	0.042 U	0.036 U
Aroclor-1254				0.039 U	0.65	0.04 U	0.039 U	0.043 U	0.043 U	0.042 U	0.036 U
Aroclor-1260				0.039 U	1.2	0.04 U	0.039 U	0.043 U	0.043 U	0.042 U	0.036 U
beta-BHC				0.002 U	0.002 U	0.0021 U	0.002 U	0.0022 U	0.0022 U	0.0021 U	0.0019 U
delta-BHC				0.002 U	0.002 U	0.0021 U	0.002 U	0.0022 U	0.0022 U	0.0021 U	0.0019 U
Dieldrin	0.042	0.18	50	0.0039 U	0.01 J	0.004 U	0.0082 J	0.0043 U	0.0043 U	0.0081	0.013 P
Endosulfan II				0.0039 U	0.0038 U	0.004 U	0.0039 U	0.0043 U	0.0043 U	0.0042 U	0.0036 U
Endosulfan sulfate				0.0039 U	0.0038 U	0.004 U	0.0039 U	0.0043 U	0.0043 U	0.0042 U	0.0036 U
Endrin	17	310	50	0.0039 UJ	0.0039 J	0.004 U	0.0039 UJ	0.0043 U	0.0043 U	0.0085 P	0.0036 U
Endrin aldehyde				0.0039 U	0.0038 U	0.004 U	0.0039 U	0.0043 U	0.0043 U	0.0042 U	0.005
Endrin ketone				0.022	0.0038 U	0.004 U	0.035	0.0053	0.015	0.15 P	0.015 P
gamma-BHC (Lindane)	0.52	2.2	50	0.002 UJ	0.002 UJ	0.0021 U	0.002 UJ	0.0022 U	0.0022 U	0.0021 U	0.0019 U
gamma-Chlordane				0.0056 J	0.012 J	0.0021 U	0.011	0.0022 U	0.0022 U	0.0021 U	0.019 P
Heptachlor	0.15	0.65	50	0.002 U	0.0048 J	0.0021 U	0.0042 J	0.0022 U	0.0022 U	0.0021 U	0.0019 U
Heptachlor epoxide				0.002 U	0.01 J	0.0021 U	0.028 J	0.0025 P	0.0022 U	0.12 P	0.013 P
Methoxychlor	280	5200	50	0.097	0.067 J	0.021 U	0.14	0.022 P	0.03 P	0.47 P	0.056 P
Total PCB	0.49	2	50	0 U	1.25	0 U	0 U	0 U	0 U	0 U	0 U

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Surface Soil Samples

Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB114	SB115	SB116	SB118	SB122	SB124	SB127	SB129	SB130
Sample ID	Direct	Direct	Groundwater	SB114-1	SB115-1	SB116-1	SB118A1	SB122A1	SB124A1	SB127A1	SB129A1	SB130A1
Lab ID	Contact	Contact	Soil	16504	16505	16263	0213407A	0213507A	0213512A	0213413A	0213515A	0213519A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/7/98	10/6/98	10/5/98	2/16/00	2/15/00	2/15/00	2/16/00	2/15/00	2/16/00
Depth (feet)	Criteria	Criteria	Criteria	0-0.5	0-0.5	0-1	0.5-1	0.5-1	0-1	0-1	0-1	0-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.018 P	0.016	0.0073 J	NA	NA	NA	NA	NA	NA
4,4'-DDE	2	9	50	0.053 P	0.043 P	0.033 J	NA	NA	NA	NA	NA	NA
4,4'-DDT	2	9	500	0.0048 P	0.016 P	0.14 J	NA	NA	NA	NA	NA	NA
Aldrin	0.04	0.17	50	0.017 P	0.016 P	0.0086 J	0.03 P	0.029 U	0.0042 P	0.094	0.014 P	0.0065 P
alpha-BHC				0.0018 U	0.0018 U	0.0017 UJ	0.01 U	0.029 U	0.002 U	0.01 U	0.002 U	0.0018 U
alpha-Chlordane				0.022 P	0.0068 P	0.0034 J	0.053 P	0.032 P	0.002 U	0.01 U	0.15	0.0018 U
Aroclor-1016				0.036 U	0.035 U	0.033 U	0.2 U	0.56 U	0.039 U	0.2 U	0.039 U	0.035 U
Aroclor-1248				0.036 U	0.035 U	0.033 U	0.2 U	0.56 U	0.039 U	0.2 U	0.039 U	0.035 U
Aroclor-1254				0.036 U	0.035 U	0.033 U	1.8	0.56 U	0.14 P	11	1 P	0.035 U
Aroclor-1260				0.036 U	0.035 U	0.033 U	0.2 U	0.56 U	0.16	4.8 P	1.7	0.035 U
beta-BHC				0.0018 U	0.0018 U	0.0017 U	0.01 U	0.029 U	0.002 U	0.01 U	0.002 U	0.0018 U
delta-BHC				0.0018 U	0.0018 U	0.0017 U	0.01 U	0.029 U	0.002 U	0.01 U	0.002 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0036 U	0.031 P	0.0037 J	0.02 U	0.077	0.0034 JP	0.02 U	0.0039 U	0.0035 U
Endosulfan II				0.0036 U	0.0035 U	0.0033 U	0.02 U	0.056 U	0.0039 U	0.02 U	0.0039 U	0.0083 P
Endosulfan sulfate				0.0036 U	0.0035 U	0.0033 U	0.02 U	0.056 U	0.0039 U	0.02 U	0.0039 U	0.026
Endrin	17	310	50	0.011 P	0.0035 U	0.0033 UJ	0.037	0.056 U	0.0039 U	0.15	0.0039 U	0.0095 P
Endrin aldehyde				0.0036 U	0.0035 U	0.0033 U	0.078 P	0.056 U	0.0039 U	0.02 U	0.0039 U	0.008
Endrin ketone				0.0036 U	0.043 P	0.022 J	0.035	0.056 U	0.0039 U	0.1	0.0039 U	0.0035 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.002 P	0.0017 UJ	0.01 U	0.029 U	0.002 U	0.01 U	0.002 U	0.0018 U
gamma-Chlordane				0.033 P	0.0084 P	0.0038 J	0.087	0.037	0.0093	0.28 P	0.2	0.0076
Heptachlor	0.15	0.65	50	0.0033 P	0.0018 U	0.0034 J	0.018	0.029 U	0.02	0.01 U	0.0095 P	0.0017 JP
Heptachlor epoxide				0.0074 P	0.011 P	0.026 J	0.01 U	0.029 U	0.002 U	0.01 U	0.002 U	0.0018 U
Methoxychlor	280	5200	50	0.06 P	0.089 P	0.075	0.17 P	0.29 U	0.02 U	0.43 P	0.02 U	0.018 U
Total PCB	0.49	2	50	0 U	0 U	0 U	1.8	0 U	0.3	15.8	2.7	0 U

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Surface Soil Samples

Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB131	SB132	SB133	SB144	SB145	SB146	SB147	SB147	SB148
Sample ID	Direct	Direct	Groundwater	SB131A1	SB132A1	SB133A1	SB144-1	SB145-1	SB146-1	SB147-1	SB147-3	SB148-1
Lab ID	Contact	Contact	Soil	0213602A	0213606A	0213609A	0211101A	0211103A	0211105A	0211107A	0211109A	0211110A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/15/00	2/15/00	2/15/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00
Depth (feet)	Criteria	Criteria	Criteria	0-1	1-1.5	0.5-1	0-1	0-1	0-1	0-1	0-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	2	9	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2	9	500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	0.04	0.17	50	0.0062 P	0.0032 P	0.002 U	2.7	0.061	0.12 P	0.022 P	0.01 P	0.019
alpha-BHC				0.0021 U	0.002 U	0.002 U	0.082 U	0.0082 U	0.018 U	0.0085 U	0.0087 U	0.0018 U
alpha-Chlordane				0.058	0.002 U	0.002 U	0.082 U	0.17 P	0.5 P	0.074 P	0.087 P	0.037 P
Aroclor-1016				0.041 U	0.038 U	0.039 U	1.6 U	0.16 U	0.35 U	0.17 U	0.17 U	0.035 U
Aroclor-1248				0.041 U	0.038 U	0.039 U	1.6 U	0.16 U	0.35 U	0.17 U	0.17 U	0.035 U
Aroclor-1254				0.44 P	0.038 U	0.039 U	1.6 U	2.8 P	4.7 P	0.72 P	0.17 U	0.77
Aroclor-1260				0.041 U	0.038 U	0.039 U	1.6 U	3.4	5.4	0.84	0.17 U	0.64 P
beta-BHC				0.0021 U	0.002 U	0.002 U	0.082 U	0.0082 U	0.018 U	0.0085 U	0.0087 U	0.0018 U
delta-BHC				0.0021 U	0.002 U	0.002 U	0.082 U	0.0082 U	0.018 U	0.0085 U	0.0087 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0041 U	0.0038 U	0.0039 U	0.37	0.1 P	0.035 U	0.016 JP	0.017 P	0.014 P
Endosulfan II				0.0041 U	0.0038 U	0.0039 U	0.16 U	0.016 U	0.035 U	0.017 U	0.017 U	0.0035 U
Endosulfan sulfate				0.0041 U	0.0038 U	0.0039 U	0.16 U	0.016 U	0.035 U	0.017 U	0.017 U	0.0035 U
Endrin	17	310	50	0.0063 P	0.0038 U	0.0039 U	0.16 U	0.042 P	0.075 P	0.022 P	0.017 U	0.0035 U
Endrin aldehyde				0.0041 U	0.0038 U	0.0039 U	0.16 U	0.016 U	0.035 U	0.017 U	0.017 U	0.0035 U
Endrin ketone				0.0095	0.0038 U	0.0039 U	0.16 U	0.06 P	0.035 U	0.056 P	0.017 U	0.0079 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0021 U	0.002 U	0.002 U	0.082 U	0.0082 U	0.018 U	0.0085 U	0.0087 U	0.0018 U
gamma-Chlordane				0.08 P	0.002 U	0.002 U	0.1	0.26	0.64 P	0.13	0.16	0.06
Heptachlor	0.15	0.65	50	0.0097 P	0.002 U	0.002 U	0.082 U	0.0082 U	0.085 P	0.0085 U	0.0087 U	0.0018 U
Heptachlor epoxide				0.0021 U	0.002 U	0.002 U	0.1	0.0082 U	0.018 U	0.1 P	0.079 P	0.0018 U
Methoxychlor	280	5200	50	0.02 JP	0.02 U	0.02 U	0.82 U	0.61	0.72 P	0.3 P	0.11 P	0.11 P
Total PCB	0.49	2	50	0.44	0 U	0 U	0 U	6.2	10.1	15.6	0 U	1.41

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Surface Soil Samples

Positive Analytical Results - Pesticides and PCBs

Sample Location	Residential	Non-Residential	Impact to	SB149	SB150	SB151	SB152	SB153	SB154	SB155	SB156	SB157
Sample ID	Direct	Direct	Groundwater	SB149-1	SB150-1	SB151-1	SB152-1	SB153-1	SB154-1	SB155-1	SB156-1	SB157-1
Lab ID	Contact	Contact	Soil	0211112A	0211114A	0211116A	0211118A	0211120A	0211202A	0211204A	0211206A	0211208A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00
Depth (feet)	Criteria	Criteria	Criteria	0.5-1	0.5-1	0-1	0-1	0.5-1	0-1	0.5-1	0.5-1	0.5-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	2	9	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2	9	500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	0.04	0.17	50	0.094 U	0.026 P	0.021 P	0.0077 P	0.018 P	0.047 P	0.0026 P	0.0017 U	0.22
alpha-BHC				0.094 U	0.0092 U	0.0096 U	0.0018 U	0.0018 U	0.0018 U	0.0016 U	0.0017 U	0.0089 U
alpha-Chlordane				0.094 U	0.087 P	0.058 P	0.0028 P	0.035 P	0.0018 U	0.0016 U	0.0017 U	0.0089 U
Aroclor-1016				1.8 U	0.18 U	0.19 U	0.034 U	0.034 U	0.034 U	0.031 U	0.033 U	0.17 U
Aroclor-1248				1.8 U	0.18 U	0.19 U	0.034 U	0.034 U	0.034 U	0.031 U	0.033 U	0.17 U
Aroclor-1254				13	2.6	0.87	0.034 U	0.77 P	1.9 P	0.33 P	0.55	7.1
Aroclor-1260				10	2.3	0.79 P	0.034 U	1.1	2.1 P	0.31 P	0.51	6.1
beta-BHC				0.094 U	0.0092 U	0.0096 U	0.0018 U	0.0018 U	0.0053 P	0.0016 U	0.0017 U	0.0089 U
delta-BHC				0.094 U	0.0092 U	0.0096 U	0.0018 U	0.0018 U	0.0018 U	0.0016 U	0.0017 U	0.0089 U
Dieldrin	0.042	0.18	50	0.18 U	0.074 P	0.027 P	0.0034 U	0.0034 U	0.0034 U	0.036	0.0033 U	0.017 U
Endosulfan II				0.18 U	0.018 U	0.019 U	0.0034 U	0.0034 U	0.0034 U	0.0031 U	0.0033 U	0.017 U
Endosulfan sulfate				0.18 U	0.018 U	0.019 U	0.0034 U	0.016 P	0.0034 U	0.0031 U	0.0033 U	0.017 U
Endrin	17	310	50	0.2 P	0.025 P	0.019 U	0.0034 U	0.0077 P	0.055 P	0.0056 P	0.0047 P	0.086 P
Endrin aldehyde				0.18 U	0.018 U	0.019 U	0.0047 P	0.0034 U	0.0034 U	0.0031 U	0.0033 U	0.017 U
Endrin ketone				0.18 U	0.018 U	0.019 U	0.0065 P	0.0034 U	0.057 P	0.0046 P	0.0033 U	0.017 U
gamma-BHC (Lindane)	0.52	2.2	50	0.094 U	0.0092 U	0.0096 U	0.0018 U	0.0018 U	0.0018 U	0.0016 U	0.0017 U	0.0089 U
gamma-Chlordane				0.25 P	0.14	0.036	0.0041	0.048	0.12 P	0.0073 P	0.0092	0.12
Heptachlor	0.15	0.65	50	0.094 U	0.015 P	0.0096 U	0.0018 U	0.0078 P	0.027 P	0.0016 U	0.0017 U	0.0089 U
Heptachlor epoxide				0.21 P	0.0092 U	0.06 P	0.012 P	0.014 P	0.0018 U	0.011 P	0.0017 U	0.14 P
Methoxychlor	280	5200	50	0.41 JP	0.092 U	0.13 P	0.049 P	0.12	0.33 P	0.016 P	0.017 U	0.34 P
Total PCB	0.49	2	50	23	4.9	1.66	0 U	1.87	4	0.64	1.06	13.2

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**Table 10**  
**Soil Samples**  
**Positive Analytical Results - Dioxin/Furan**

Sample Location	SB02	SB04	SB06	SB06	SB08	SB10	SB13	SB14	SB16	SB36
Sample ID	SB02-1	SB04-1	SB06-1	SB06-2	SB08-1	SB10-1	SB13-1	SB14-1	SB16-1	SB36-1
Lab ID	008	H7G170164-009	001	002	010	003	007	004	H7G170164-005	007
Date Sampled	7/16/97	7/16/97	7/15/97	7/15/97	7/16/97	7/15/97	7/16/97	7/15/97	7/15/97	6/19/97
Depth (feet)	0.5 -1	0 - 0.5	0 - 0.5	0 - 0.5	0.5 - 1	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0.5 - 1
Units	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g
2,3,7,8-TCDD	0 U	3.3 Q	6.3	5.6	14 Q	1.2 Q	0 U	0.8 J,B	170 Q,C	0 U
<b>Total TCDD</b>	9.7 Q	11 Q	19 Q	20 Q	63 Q	17 Q	25	18 Q	180 Q,C	0 U
1,2,3,7,8-PeCDD	0.99 J,Q	5.3 Q	4.6 J,Q	4.9	24 Q	3.9 J,Q	2.7 J,Q	1.7 J,Q	10 J,Q	0 U
<b>Total PeCDD</b>	24 Q,J	32 Q	38 Q	36 Q	160 Q	47 Q	56 Q	25 Q	93 Q,J,S	13 J,Q
1,2,3,4,7,8-HxCDD	1.7 J	4.5 J,Q	4.7 J	4.5 J	26 Q	3.2 J	2.3 J,Q	2.1 J,Q	29 J	0 U
1,2,3,6,7,8-HxCDD	6.8	30	35	33	330	20	7.4	11	85	0 U
1,2,3,7,8,9-HxCDD	5.4 J	22	19 C	14	130	18	8.3	9.2	93	0 U
<b>Total HxCDD</b>	95 Q	210 Q	190 Q	170 Q	2300 Q	170 Q	110 Q	100 Q	690	23 J,Q
1,2,3,4,6,7,8-HpCDD	200	940 Q	510	470	4500	300	130	190	3300	23 J,Q
<b>Total HpCDD</b>	400	1800 Q	870	830	5700	580	260	410	6400	45 J,Q
OCDD	1700 B	10000 Q,B,E	5600 E,B	5400 E,B	51000 B,E	5000 E,B	4800 B	2600 B	41000 B	380 B
2,3,7,8-TCDF	3.5 Q,C	9.6 Q,C	24	25 C,Q	94 Q,C	26 C	8.2 Q,C	15 Q,C	13 C,Q	0 U
<b>Total TCDF</b>	23 Q	58 Q	140 Q	140	470 Q	120 Q,S	48 Q	89 Q	50 Q	18 Q,J
1,2,3,7,8-PeCDF	0.77 J	2 J	7.7	7.2	15 Q	5 J	3.5 J	4.1 J	0.61 J,Q	0 U
2,3,4,7,8-PeCDF	1.9 J	5 J	12	13 Q	38	19 Q	4.3 J	9.8	2 J	0 U
<b>Total PeCDF</b>	43 Q,B	78 Q,B	180 Q,B	170 Q,B	500 B,Q	150 Q,B	56 Q,B	120 Q,B	23 Q,B,S	21 J,Q
1,2,3,4,7,8-HxCDF	3.6 J,C	11	29	28	70	45	9.4 Q,C	21	28 J	0 U
1,2,3,6,7,8-HxCDF	2.5 Q,B	6.1 Q,B	17 Q,B	15 B	40 B,Q	14 Q,B	4.5 J,Q,B	12 Q,B	12 J,B	0 U
2,3,4,6,7,8-HxCDF	2.1 J	4.4 J	8.9	9.3	29	9.9	2.4 J	6.3	7.8 J	0 U
1,2,3,7,8,9-HxCDF	0 U	0 U	1.1 J	1.3 J	3 J,Q	0.61 J	0 U	0.99 J	0 U	0 U
<b>Total HxCDF</b>	51 Q,B	130 Q,B	250 Q,S,B	250 Q,S,B	940 B,Q	210 Q,S,B	50 Q,B	160 B,Q	300 Q,B	12 J,Q
1,2,3,4,6,7,8-HpCDF	17	77 Q	120	110	580	79	31	51	270	18 Q,J
1,2,3,4,7,8,9-HpCDF	2 J	8.2 Q	12	12	39 Q	18	2 J,Q	6.8	18 J	0 U
<b>Total HpCDF</b>	48	230 Q	310 Q	290 Q	1500 Q	210 Q	56 Q	120	750	18 Q,J
OCDF	38	210 Q	260 Q	220 Q	630	220	49	75	1000	27 J
<b>Total Toxic Equivalent</b>	7.972	37.772	41.135	39.46	175.77	35.761	14.404	19.667	280.691	0.817

300697

**Table 10**  
**Soil Samples**  
**Positive Analytical Results - Dioxin/Furan**

Sample Location	SB36	SB38	SB39	SB41	SB44	SB46
Sample ID	SB36-2	SB38-1	SB39-1	SB41-1	SB44-1	SB46-1
Lab ID	008	006	005	003	002	001
Date Sampled	6/19/97	6/19/97	6/19/97	6/18/97	6/17/97	6/17/97
Depth (feet)	0.5 - 1	0.5 - 1	3-Feb	1.5 - 2	0.5 - 1.5	0.5 - 1
Units	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g
2,3,7,8-TCDD	0 U	0 U	0 U	0 U	0 U	0 U
<b>Total TCDD</b>	0 U	5.2 J	9.9 Q	0 U	1.8	5.3
1,2,3,7,8-PeCDD	0 U	0 U	0.81 J,Q	0 U	0 U	0 U
<b>Total PeCDD</b>	9.4 J,Q	44 J,Q	12 Q	0 U	1.8 Q,J	2.7 J,Q
1,2,3,4,7,8-HxCDD	0 U	0 U	0.49 J	0 U	0.15 J,Q	0 U
1,2,3,6,7,8-HxCDD	3.9 J,Q	0 U	1.2 J	0 U	0.4 J	0 U
1,2,3,7,8,9-HxCDD	0 U	0 U	1.1 J,Q	0 U	1.3 J,Q	0 U
<b>Total HxCDD</b>	26 Q	35 J,Q	15 Q	4.2 J,Q	14 Q,J	5 J,Q
1,2,3,4,6,7,8-HpCDD	28	150	4.4 J	15 J	16	1.3 J
<b>Total HpCDD</b>	56	290	8.8 J	29 J	36	2.9 J
OCDD	360 B	3000 B	46 B	180 B	2100 B	22 B
2,3,7,8-TCDF	5.4 Q,C	6.9 C,Q	2.8 Q,C	6.4 C,Q	0 U	1 C,J
<b>Total TCDF</b>	43 Q	41 Q,J	18 Q	19 Q,J	0 U	2.1 Q,J
1,2,3,7,8-PeCDF	0 U	0 U	2 J,Q	0 U	0 U	0 U
2,3,4,7,8-PeCDF	0 U	0 U	1.5 J,Q	0 U	0 U	0.44 J,Q
<b>Total PeCDF</b>	25 Q	39 J,Q	15 Q	21 J,Q	0.24 Q,J	3.6 J,Q
1,2,3,4,7,8-HxCDF	0 U	16 J	2.7 J	3.2 J	0 U	0.64 J
1,2,3,6,7,8-HxCDF	0 U	3.1 J,Q	1.4 J	1.2 J	0 U	0.26 J,Q
2,3,4,6,7,8-HxCDF	0 U	17 J,Q	1.1 J	4.4 J,Q	0 U	0.37 J
1,2,3,7,8,9-HxCDF	0 U	0 U	0 U	0 U	0 U	0 U
<b>Total HxCDF</b>	18 Q,J	83 J,Q	8.8 Q,J	23 J,Q	0 U	2.1 J,Q
1,2,3,4,6,7,8-HpCDF	15 J,Q	52	3.9 J	4.3 J	0 U	1 J
1,2,3,4,7,8,9-HpCDF	0 U	0 U	0 U	0 U	0 U	0 U
<b>Total HpCDF</b>	15 J,Q	85	5 J	8.1 J	0 U	1.4 J,Q
OCDF	24 J	110	1.7 J	6 J	0.4 J	0.32 J
<b>Total Toxic Equivalent</b>	1.744	9.43	2.465	1.899	2.445	0.492

300698

**Table 11  
Subsurface Soil Samples**

**Positive Analytical Results - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB01A	SB02	SB03	SB04	SB05
Sample ID	Direct	Direct	Groundwater	SB01A-2	SB02-3	SB03-3	SB04-3	SB05-3
Lab ID	Contact	Contact	Soil	16497	9712935	9712253	9712938	9712250
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/6/98	7/16/97	7/10/97	7/16/97	7/10/97
Depth (feet)	Criteria	Criteria	Criteria	5-6	6.5-7.5	5-6	3-4	5-6
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	1.2 U	1.4 U	2 U	1.9 U	1.7 U
1,1-Dichloroethane	570	1000	10	1.2 U	1.4 U	2 U	1.9 U	1.7 U
1,1-Dichloroethene	8	150	10	1.2 U	1.4 U	2 U	1.9 U	1.7 U
1,2-Dichloroethane	6	24	1	1.2 U	1.4 U	2 U	1.9 U	1.7 U
1,2,4-Trichlorobenzene	68	1200	100	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	79	1000	1	0.7 J	1.4 U	2 U	1.9 U	3.8 JD
1,2-Dichloropropane	10	43		1.2 U	1.4 U	2 U	1.9 U	1.7 U
1,3-Dichlorobenzene	5100	10000	100	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	570	10000	100	NA	NA	NA	NA	NA
2-Butanone	1000	1000	50	1.2 U	1.4 U	2 U	1.9 U	1.7 U
2-Hexanone				1.2 U	1.4 U	2 U	1.9 U	1.7 U
4-Methyl-2-Pentanone	1000	1000	50	1.2 U	1.4 U	2 U	1.9 U	1.7 U
Acetone	1000	1000	100	1.2 U	1.4 U	2 U	1.9 U	14 D
Benzene	3	13	1	1.2 U	1.4 U	2 U	1.9 U	8.6 D
Bromodichloromethane	11	46	1	1.2 U	1.4 U	2 U	1.9 U	1.7 U
Carbon Disulfide				1.2 U	1.4 U	2 U	1.9 U	1.7 U
Carbon Tetrachloride	2	4	1	1.2 U	1.4 U	2 U	1.9 U	1.7 U
Chlorobenzene	37	680	1	1.2 U	1.4 U	2 U	1.9 U	1.7 U
Chloroform	19	28	1	1.2 U	1.4 U	2 U	1.9 U	1.7 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA
Cyclohexane				NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	1.2 U	1.4 U	2 U	1.9 U	14 D
Isopropylbenzene				NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	0.4 J	1.2 JB	1.6 JB	1.4 JB	3.7 JDB
Styrene	23	97	100	1.2 U	1.4 U	2 U	1.9 U	1.7 U
Tetrachloroethene	4	6	1	1.1 J	20	2 U	1.9 U	1.7 U
Toluene	1000	1000	500	0.21 j	1.4 U	2 U	1.9 U	29 D
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	0.65 J	0.59 J	2 U	1.9 U	1.7 U
Vinyl Chloride	2	7	10	1.2 U	1.4 U	2 U	1.9 U	1.7 U
Xylene (total)	410	1000	10	0.21 J	1.4 U	2 U	1.9 U	59 D
Total TICS				7.2	1.1	16.2	6.96	435
Total Volatiles				10.47	21.69	16.2	6.96	563.4

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	SB06	SB08	SB09	SB10	SB12	SB13	SB14	SB15
Sample ID	SB06-4	SB08-3	SB09-3	SB10-3	SB12-3	SB13-3	SB14-3	SB15-4
Lab ID	9712636	9712941	9712628	9712640	9712256	9712650	9712644	9712632
Date Sampled	7/15/97	7/16/97	7/14/97	7/15/97	7/10/97	7/15/97	7/15/97	7/14/97
Depth (feet)	5-6	3-4	3-5	4-6	5-6	5-6	6-8	6-6.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.6 U	1.5 U	1.6 U	1.6 U	0.72 J	1.8 U	1.4 UJ	2 J
1,1-Dichloroethane	1.6 U	1.5 U	1.6 U	1.6 U	0.9 J	1.8 U	1.4 UJ	2.4 U
1,1-Dichloroethene	1.6 U	1.5 U	1.6 U	1.6 U	1.3 UJ	1.8 U	1.4 UJ	2.4 U
1,2-Dichloroethane	1.6 U	1.5 U	1.6 U	1.6 U	1.3 UJ	1.8 U	1.4 UJ	2.4 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.6 U	0.26 J	1.6 U	1.6 U	1.3 UJ	0.28 J	1.4 UJ	2.8
1,2-Dichloropropane	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	2.4 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.6 U	1.5 U	7.4	160 D	1.3 UJ	1.8 U	1.4 UJ	2.4 U
2-Hexanone	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	2.4 U
4-Methyl-2-Pentanone	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	2.4 U
Acetone	1.6 U	1.5 U	1.6 U	1.6 U	1.3 UJ	1.8 U	1.4 UJ	2.4 U
Benzene	1.6 U	1.5 U	1.6 U	1.6 U	1.2 J	1.8 U	1.4 UJ	2.4 U
Bromodichloromethane	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	2.4 U
Carbon Disulfide	1.6 U	1.5 U	1.6 U	1.6 U	1.3 UJ	1.8 U	3.5 J	2.4 U
Carbon Tetrachloride	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	2.4 U
Chlorobenzene	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	2.4 U
Chloroform	1.6 U	1.5 U	1.6 U	1.6 U	1.8	1.8 U	1.4 UJ	2.4 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.6 U	1.5 U	2.1	1.6 U	1.8	1.8 U	1.4 UJ	0.27 J
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	0 R	2 B	2.6 B	0.79 B	0.77 JB	1.8 B	1.4 B	2.4 B
Styrene	1.6 U	1.5 U	1.6 U	1.6 U	1.3 U	1.8 U	1.4 UJ	0.32 J
Tetrachloroethene	1.6 U	1.5 U	1.6 U	0.48 J	1.3 U	1.9	1.4 UJ	0.29 J
Toluene	0.35 J	1.5 U	5.1	1.6 J	5.1	1.8 U	1.4 UJ	1.8 J
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.6 U	1.5 U	0.2 J	1.6 U	0.5 J	1.8 U	1.4 UJ	8.9
Vinyl Chloride	1.6 U	1.5 U	1.6 U	1.6 U	1.3 UJ	1.8 U	0 R	2.4 U
Xylene (total)	0.21 J	1.5 U	11	1.6 U	17	0.48 J	1.4 UJ	2.6
Total TICS	1.1	11.05	46.99	46.99	40.1	38.5	5	5.3
Total Volatiles	1.66	11.31	72.79	72.79	69.12	41.16	8.5	24.28

**Table 11  
Subsurface Soil Samples**

**Positive Analytical Results - Volatiles**

Sample Location	SB16	SB17	SB18	SB19	SB20	SB23	SB26	SB30
Sample ID	SB16-3	SB17-3	SB18-6	SB19-3	SB20-3	SB23-5	SB26-3	SB30-2
Lab ID	9712648	9712945	9712625	9712949	9712031	9712036	9712027	9712039
Date Sampled	7/15/97	7/17/97	7/14/97	7/17/97	7/8/97	7/8/97	7/7/97	7/8/97
Depth (feet)	6-7	5-6	7-7.5	5-6	5-6	3-4	7-8	2.5-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.9 U	4.3 U	17	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
1,1-Dichloroethane	1.9 U	4.3 U	3.8	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
1,1-Dichloroethene	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
1,2-Dichloroethane	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	2.1	4.3 U	1.6 J	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
1,2-Dichloropropane	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	24	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
2-Hexanone	90 D	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
4-Methyl-2-Pentanone	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Acetone	29 D	4.3 U	1.6 U	1.7 U	3.5	3.2 U	0 R	1.3 UJ
Benzene	0.26 J	4.3 U	1.6 U	0.91 J	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Bromodichloromethane	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Carbon Disulfide	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Carbon Tetrachloride	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Chlorobenzene	1.9 U	4.3 U	0.2 J	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Chloroform	1.9 U	4.3 U	1.1 J	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	55 E	0.52 J	1.2 J	1.4 J	1.8 U	3.1 J	1.6 UJ	1.3 UJ
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	16 B	49 B	13 B	2.4 JB	3.4 JB	3.7 JB	3.4 JB	2.6 JB
Styrene	39 E	4.3 U	0.33 J	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Tetrachloroethene	1.8 J	4.3 U	57 D	1.7 U	1.8 U	0.63 J	1.6 UJ	1.3 UJ
Toluene	52 E	4.3 U	6.5	1.1 J	1.8 U	7	1.6 UJ	1.3 UJ
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	0.57 J	4.3 U	6.2	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Vinyl Chloride	1.9 U	4.3 U	1.6 U	1.7 U	1.8 U	3.2 U	1.6 UJ	1.3 UJ
Xylene (total)	93	1.4 J	5.2	4.1	1.8 U	12	1.6 UJ	1.3 UJ
Total TICS	723.4	90.4	36.01	20.3	2.4	45.2	8.8	40.58
Total Volatiles	1110.13	92.32	136.1	27.81	5.9	67.93	8.8	40.58

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	SB30	SB31	SB32	SB32	SB33	SB36	SB38	SB39
Sample ID	SB30-3	SB31-3	SB32-2	SB32-3	SB33-4	SB36-6	SB38-3	SB39-1
Lab ID	9712040	9710635	9710637	9710638	9710857	9710854	9710849	9710846
Date Sampled	7/8/97	6/17/97	6/17/97	6/17/97	6/19/97	6/19/97	6/19/97	6/19/97
Depth (feet)	7-8	4-5	2.5-3	3.5-4	5.5-6	5.5-6	5-6	2-3
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	2.1 U	1.9 U	5.3	3.7	4	1.7 U	1.7 U	1.7 U
1,1-Dichloroethane	2.1 U	0.95 J	7	4.2	12	1.7 U	1.7 U	1.7 U
1,1-Dichloroethene	2.1 U	1.9 U	0.62 J	0.29 J	0.91 J	1.7 U	1.7 U	1.7 U
1,2-Dichloroethane	2.1 U	1.9 U	360 D	88 JD	33	1.7 U	1.7 U	1.7 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	2.1 U	1.9 U	77 JD	47 JD	900 D	1.7 U	8.4	3.6
1,2-Dichloropropane	2.1 U	1.9 U	2	1.9	1.9 U	1.7 U	1.7 U	1.7 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2.1 U	11	1.5 U	1.4 U	9.8	2.9	1.7 U	1.7 U
2-Hexanone	2.1 U	1.9 U	1.5 U	1.4 U	1.9 U	1.7 U	1.7 U	1.7 U
4-Methyl-2-Pentanone	2.1 U	14	1.5 U	1.4 U	1.9 U	1.7 U	1.7 U	1.7 U
Acetone	3.2	8.5	1.5 U	1.4 U	6.6 J	11 J	1.7 U	1.7 U
Benzene	2.1 U	1.9 U	0.24 J	0.15 J	1.3 J	1.7 U	1.7 U	1.7 U
Bromodichloromethane	2.1 U	1.9 U	1.5 U	1.4 U	1.9 U	1.7 U	1.7 U	1.7 U
Carbon Disulfide	2.1 U	1.9 U	1.5 U	1.4 U	1.9 U	1.7 U	1.7 U	1.7 U
Carbon Tetrachloride	2.1 U	1.9 U	0.58 J	0.85 J	1.9 U	1.7 U	1.7 U	1.7 U
Chlorobenzene	2.1 U	1.9 U	1.2 J	0.52 J	18	1.7 U	0.56 J	1.7 U
Chloroform	2.1 U	1.9 U	15	8.4	4.1	1.7 U	0.49 J	0.94 J
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	2.1 U	1.9 U	0.29 J	0.48 J	32	1.7 U	0.29 J	1.7 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	3.4 JB	2.9 B	280 B	180 B	33 J	3.7 B	6.1 J	2.2 B
Styrene	2.1 U	1.9 U	1.5 U	1.4 U	1.9 U	1.7 U	1.7 U	1.7 U
Tetrachloroethene	2.1 U	1.9 U	1500 D	730 D	630 D	0.7 J	5.7	100 D
Toluene	2.1 U	0.25 J	9.4	3.9	51 JDB	0.36 B	0.64 J	0.57 J
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	2.1 U	1.9 U	290 D	100 JD	390 D	0.27 J	6.2	30
Vinyl Chloride	2.1 U	1.9 U	3.2	2.9	9.4	1.7 U	1.7 U	1.7 U
Xylene (total)	2.1 U	1.9 U	6.5	2.2	120 JD	0.61 J	1 J	1.7 U
Total TICS	13.2	75.08	220.3	253.6	368.9	42.4	97.41	65.74
Total Volatiles	16.4	109.8	2499	1248	2573	57.88	126.8	200.9

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	SB40	SB40	SB41	SB41	SB42	SB43	SB44	SB45
Sample ID	SB40-2	SB40-3	SB41-3	SB41-4	SB42-5	SB43-4	SB44-3	SB45-4
Lab ID	9710613	9710614	9710842	9710843	9710619	9710623	9710644	9710627
Date Sampled	6/16/97	6/16/97	6/18/97	6/18/97	6/16/97	6/16/97	6/17/97	6/16/97
Depth (feet)	2.5-3	9.5-10	2-2.5	4.5-5	3.5-4	6.5-7	5.5-6	8-8.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
1,1-Dichloroethane	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
1,1-Dichloroethene	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
1,2-Dichloroethane	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	2.1	2.5 U
1,2-Dichloropropane	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
2-Hexanone	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
4-Methyl-2-Pentanone	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Acetone	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Benzene	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Bromodichloromethane	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Carbon Disulfide	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Carbon Tetrachloride	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Chlorobenzene	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Chloroform	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	0.94 B	1.3 J	3.3 B	2.7 B	1.2 J	1.6 J	2.1 B	2.6 J
Styrene	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Tetrachloroethene	1.4 U	1.4 U	3.9	1.3 J	1.4 U	1.6 U	7	2.5 U
Toluene	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	0.33 J	0.8 J	2.5 U
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.4 U	1.4 U	1.8 U	0.3 J	1.4 U	1.6 U	2.8	2.5 U
Vinyl Chloride	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	1.6 U	1.7 U	2.5 U
Xylene (total)	1.4 U	1.4 U	1.8 U	1.6 U	1.4 U	4	0.23 J	0.52 J
Total TICS	11.6	9.15	33.11	8.36	4.6	1.1	6.3	17.3
Total Volatiles	11.6	10.45	37.01	9.96	5.8	7.03	19.23	20.42



**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	SB46	SB47	SB48	SB49	SB49	SB50	SB51	SB52
Sample ID	SB46-3	SB47-3	SB48-4	SB49-1	SB49-2	SB50-1	SB51-1	SB52-1
Lab ID	9710641	9710631	9713212	9710859	9710860	9713146	9713145	9713144
Date Sampled	6/17/97	6/17/97	7/22/97	6/19/97	6/19/97	7/21/97	7/21/97	7/21/97
Depth (feet)	7-7.5	6.5-7	7-7.5	2-3	5-5.5	5.5-6	5.5-6	5-5.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	2 U	2.8 U	1.5 U	3.5	5.2	1.5 UJ	1.6 UJ	1.6 UJ
1,1-Dichloroethane	2 U	2.8 U	1.5 U	1.1 J	1.3 J	1.5 UJ	7.9 JD	16 UJ
1,1-Dichloroethene	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
1,2-Dichloroethane	2 U	2.8 U	1.5 U	2.4	0.57 J	1.5 UJ	1.6 UJ	1.6 UJ
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	0.61 J	2.8 U	5.8	110 D	100 D	25 DJ	56 DJ	83 DJ
1,2-Dichloropropane	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	2 U	2.8 U	1.5 U	1.6 U	2.2	1.5 UJ	1.6 UJ	1.6 UJ
2-Hexanone	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
4-Methyl-2-Pentanone	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
Acetone	2 U	2.8 U	1.5 U	4.5 J	5.8 J	1.5 UJ	10 UJ	16 UJ
Benzene	2 U	2.8 U	1 J	1.6 U	1.6 U	11 JD	74 DJ	78 DJ
Bromodichloromethane	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
Carbon Disulfide	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
Carbon Tetrachloride	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
Chlorobenzene	2 U	2.8 U	1.5 U	0.58 J	1.2 J	1.5 UJ	1.6 UJ	1.6 UJ
Chloroform	2 U	2.8 U	1.5 U	1.5 J	0.86 J	1.5 UJ	1.6 UJ	1.6 UJ
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	2 J	2.8 U	0.4 J	1.5 J	1.9	200 DJ	320 DJ	160 DJ
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	3.8 B	5.1 B	0.76 B	6.1 J	7.2 J	16 JDB	17 JDB	17 JDB
Styrene	2 U	2.8 U	1.5 U	1.6 U	1.6 U	1.5 UJ	1.6 UJ	1.6 UJ
Tetrachloroethene	0.23 J	0.38 J	1.5 J	250 D	170 D	1.5 UJ	1.6 UJ	16 UJ
Toluene	3.3	2.8 U	2	6.9	7.1	220 DJ	700 EDJ	550 ED
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	2 U	2.8 U	0.18 J	110 D	69 D	1.5 UJ	1.6 UJ	1.6 UJ
Vinyl Chloride	2 U	2.8 U	1.5 U	1.6 U	1.1 J	15 UJ	15 JD	19 DJ
Xylene (total)	5.5	2.8 U	1.4 J	7.2	10	1100 EDJ	2000 EDJ	1100 ED
Total TICS	31.71	39.5	12.6	71.62	46.56	0	130.1	211.1
Total Volatiles	43.35	39.88	24.88	576.9	430	1556	3303	2201

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	SB53	SB54	SB55	SB56	SB57	SB57	SB58	SB59	SB61
Sample ID	SB53-1	SB54-2	SB55-1	SB56-2	SB57-1	SB57-2	SB58-1	SB59-1	SB61-1
Lab ID	9713142	9713141	9713138	9713205	9713207	9713208	9713209	9713213	9713214
Date Sampled	7/21/97	7/21/97	7/21/97	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Depth (feet)	3.5-4	7.5-8	3.5-4	6.5-7	6.5-7	6.5-7	5.5-6	5.5-6	3.5-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
1,1-Dichloroethane	1.9 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
1,1-Dichloroethene	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
1,2-Dichloroethane	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	7.1 JD	1.5 U	2 U	2 U	0.78 J	1.3 J	0.42 J	18 UJ	280
1,2-Dichloropropane	0.093 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
2-Hexanone	1.5 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
4-Methyl-2-Pentanone	1.5 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Acetone	0.0089 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Benzene	10 JD	1.6	32 D	2	2.3	5	4.8	5 J	27
Bromodichloromethane	1.5 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Carbon Disulfide	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Carbon Tetrachloride	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Chlorobenzene	0.97 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Chloroform	1.6 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	15 JD	1.7	17 JD	9	0.82 J	3	23	25 J	18 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	15 JDB	1.5 JB	20 JDB	2.5 B	4.2 JB	2 B	2.2 B	18 B	18 B
Styrene	1.5 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Tetrachloroethene	3 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	64
Toluene	68 DJ	0.48 J	57 D	1.6 J	1.1 J	2.9	6.1	7 J	78
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.6 UJ	1.5 U	2 U	2 U	1.6 U	0.34 J	1.6 U	18 UJ	7.9 J
Vinyl Chloride	1 UJ	1.5 U	2 U	2 U	1.6 U	1.6 U	1.6 U	18 UJ	18 U
Xylene (total)	110 DJ	4.2	67 D	10	3.8	9	64	75 J	3.8 J
Total TICS	246.9	33.2	160.6	2396	39	41.7	545	1111	377
Total Volatiles	457	41.18	333.6	2418.6	47.8	63.24	643.32	1223	831.7

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB62	SB63	SB64	SB65	SB66
Sample ID	Direct	Direct	Groundwater	SB62-3	SB63-4	SB64-4	SB65-3	SB66-3
Lab ID	Contact	Contact	Soil	15949RE	15951	15956	15955	16034
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98
Depth (feet)	Criteria	Criteria	Criteria	5-5.5	3.5-4	6-6.5	6-7	6.5-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	210	1000	50	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
1,1-Dichloroethane	570	1000	10	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
1,1-Dichloroethene	8	150	10	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
1,2-Dichloroethane	6	24	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
1,2,4-Trichlorobenzene	68	1200	100	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	5100	10000	50	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	79	1000	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
1,2-Dichloropropane	10	43		4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
1,3-Dichlorobenzene	5100	10000	100	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	570	10000	100	NA	NA	NA	NA	NA
2-Butanone	1000	1000	50	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
2-Hexanone				4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
4-Methyl-2-Pentanone	1000	1000	50	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Acetone	1000	1000	100	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Benzene	3	13	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Bromodichloromethane	11	46	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Carbon Disulfide				4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Carbon Tetrachloride	2	4	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Chlorobenzene	37	680	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Chloroform	19	28	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
cis-1,2-Dichloroethene	79	1000	1	NA	NA	NA	NA	NA
Cyclohexane				NA	NA	NA	NA	NA
Ethylbenzene	1000	1000	100	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Isopropylbenzene				NA	NA	NA	NA	NA
Methyl acetate				NA	NA	NA	NA	NA
Methylcyclohexane				NA	NA	NA	NA	NA
Methylene Chloride	49	210	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Styrene	23	97	100	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Tetrachloroethene	4	6	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Toluene	1000	1000	500	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
trans-1,2-Dichloroethene	1000	1000	50	NA	NA	NA	NA	NA
Trichloroethene	23	54	1	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Vinyl Chloride	2	7	10	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Xylene (total)	410	1000	10	4.1 U	1.4 U	1.5 U	1.4 U	1.3 U
Total TICS				0	0	0	0	0
Total Volatiles				0	0	0	0	0

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB67	SB68	SB69	SB70	SB71	SB72	SB73	SB74
Sample ID	SB67-3	SB68-3	SB69-3	SB70-3	SB71-3	SB72-3	SB73-3	SB74-3
Lab ID	15958	15960	15962	15964	15966	16035	15988	16036
Date Sampled	9/29/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/30/98	9/30/98
Depth (feet)	5.5-6	6.5-7	6-7	6.5-7.5	4-5	9-10	7-8	6-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
1,1-Dichloroethane	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
1,1-Dichloroethene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
1,2-Dichloroethane	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
1,2-Dichloropropane	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
2-Hexanone	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
4-Methyl-2-Pentanone	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Acetone	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Benzene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Bromodichloromethane	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Carbon Disulfide	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Carbon Tetrachloride	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Chlorobenzene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Chloroform	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Styrene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Tetrachloroethene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Toluene	1.4 U	0.25 J	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Vinyl Chloride	1.4 U	1.6 U	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Xylene (total)	1.4 U	0.28 J	1.5 U	1.5 U	1.6 U	1.1 U	1.3 U	1.3 U
Total TICS	9.8	11	4.8	8.8	0	0	9.3	0
Total Volatiles	9.8	11.53	4.8	8.8	0	0	9.3	0

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB75	SB76	SB77	SB78	SB79	SB79	SB80	SB81
Sample ID	SB75-3	SB76-3	SB77-3	SB78-3	SB79-3	SB79-4	SB80-3	SB81-3
Lab ID	15990	16039	16040	15992	16037	16038	16043	16042
Date Sampled	9/29/98	10/1/98	10/1/98	9/29/98	9/30/98	9/30/98	10/1/98	10/1/98
Depth (feet)	6.5-7	4-5	6-7	6.5-7.5	6.5-7.5	6.5-7.5	4.5-5.5	5-6
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
1,1-Dichloroethane	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
1,1-Dichloroethene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
1,2-Dichloroethane	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
1,2-Dichloropropane	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
2-Hexanone	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
4-Methyl-2-Pentanone	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Acetone	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Benzene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Bromodichloromethane	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Carbon Disulfide	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Carbon Tetrachloride	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Chlorobenzene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Chloroform	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Styrene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Tetrachloroethene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Toluene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	0.22 J
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Vinyl Chloride	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	1.3 U
Xylene (total)	1.8 U	1.5 U	1.2 U	1.6 U	1.2 U	1.2 U	1.4 U	0.2 J
Total TICS	29	0	0	11	0	0	0	0
Total Volatiles	29	0	0	11	0	0	0	0.42

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB82	SB83	SB84	SB85	SB86	SB87	SB88	SB89
Sample ID	SB82-3	SB83-3	SB84-3	SB85-3	SB86-3	SB87-3	SB88-3	SB89-3
Lab ID	16041	16272	16273	16274	16044	16045	16186	16187
Date Sampled	10/1/98	10/5/98	10/5/98	10/5/98	10/1/98	10/1/98	10/2/98	10/2/98
Depth (feet)	4-5	4-5	4.5-5.5	6.5-7.5	6.5-7.5	4-5	6-7	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
1,1-Dichloroethane	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
1,1-Dichloroethene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
1,2-Dichloroethane	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
1,2-Dichloropropane	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
2-Hexanone	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
4-Methyl-2-Pentanone	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Acetone	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Benzene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Bromodichloromethane	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Carbon Disulfide	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Carbon Tetrachloride	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Chlorobenzene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Chloroform	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Styrene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Tetrachloroethene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Toluene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Vinyl Chloride	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Xylene (total)	1.3 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.7 U	1.5 U
Total TICS	0	7.9	6.5	7.1	0	0	11	9.8
Total Volatiles	0	7.9	6.5	7.1	0	0	11	9.8

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB90	SB91	SB92	SB93	SB94	SB95	SB96	SB96
Sample ID	SB90-3	SB91-3	SB92-3	SB93-3	SB94-3	SB95-3	SB96-3	SB96-4
Lab ID	16188	16487	16488	16489	16490	16491	16189	16190
Date Sampled	10/2/98	10/6/98	10/6/98	10/6/98	10/6/98	10/6/98	10/2/98	10/2/98
Depth (feet)	7-7.5	5-6	6-7	4-5	4.5-5.5	4.5-5.5	4-5	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
1,1-Dichloroethane	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
1,1-Dichloroethene	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
1,2-Dichloroethane	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	5	1.5 U	1.4 U
1,2-Dichloropropane	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.4 U	11	9.8	11	10	17	1.5 U	1.4 U
2-Hexanone	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
4-Methyl-2-Pentanone	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Acetone	1.4 U	2.2	2.2	2.2	2.1	3.6	1.5 U	1.4 U
Benzene	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Bromodichloromethane	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Carbon Disulfide	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Carbon Tetrachloride	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Chlorobenzene	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Chloroform	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	0.39 J	1.5 U	1.4 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Styrene	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Tetrachloroethene	1.4 U	1.5 U	0.18 J	1.5 U	0.6 J	28	1.5 U	1.4 U
Toluene	1.4 U	0.25 J	1.4 U	1.5 U	0.18 J	2 J	0.26 J	0.173 J
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	10	1.5 U	1.4 U
Vinyl Chloride	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	2.6 U	1.5 U	1.4 U
Xylene (total)	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	4.3	0.5 J	0.342 J
Total TICS	9.7	8.1	6.9	7.5	6.8	12	16.9	16.3
Total Volatiles	9.7	21.55	19.08	20.7	19.68	82.29	17.66	16.82

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB97	SB98	SB99	SB105	SB106	SB107	SB108	SB109
Sample ID	SB97-3	SB98-3	SB99-3	SB105-3	SB106-3	SB107-3	SB108-3	SB109-3
Lab ID	16191	16192	16193	16275	16276	16194	16277	16278
Date Sampled	10/2/98	10/2/98	10/2/98	10/5/98	10/5/98	10/2/98	10/5/98	10/5/98
Depth (feet)	4-5	4-5	7-7.5	4-5	4-5	5-6	5-6	4.5-5.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
1,1-Dichloroethane	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
1,1-Dichloroethene	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
1,2-Dichloroethane	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
1,2-Dichloropropane	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
2-Hexanone	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
4-Methyl-2-Pentanone	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Acetone	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Benzene	1.2 U	1.3 U	1.4 U	2.19	0.54 J	1.6 U	1.2 U	1.3 U
Bromodichloromethane	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Carbon Disulfide	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Carbon Tetrachloride	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Chlorobenzene	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Chloroform	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.2 U	1.3 U	1.4 U	0.58 J	0.31 J	1.6 U	1.2 U	1.3 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Styrene	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Tetrachloroethene	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Toluene	1.2 U	1.3 U	1.4 U	4.79	0.46 J	1.6 U	1.2 U	1.3 U
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Vinyl Chloride	1.2 U	1.3 U	1.4 U	1.3 U	1.1 U	1.6 U	1.2 U	1.3 U
Xylene (total)	1.2 U	1.3 U	1.4 U	6.35	1.56	1.6 U	1.2 U	1.3 U
Total TICS	8.8	9	10	0	29.8	11	8.6	9.4
Total Volatiles	8.8	9	10	13.91	32.67	11	8.6	9.4



**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB110	SB111	SB112	SB113	SB114	SB114	SB115	SB116
Sample ID	SB110-3	SB111-4	SB112-3	SB113-3	SB114-3	SB114-4	SB115-3	SB116-3
Lab ID	16623	16625	16627	16492	16493	16494RE	16495	16279
Date Sampled	10/8/98	10/8/98	10/8/98	10/6/98	10/7/98	10/7/98	10/6/98	10/5/98
Depth (feet)	3-4	4-5	2-3	3-4	4-5	4-5	6.7-7	4.4-5.1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.6 U	1.4 U	0.54 J	1.1 J	2.1 U	1.8 U	1.5 U	1.1 U
1,1-Dichloroethane	1.6 U	1.4 U	1.1 U	5.6	2.1 U	1.8 U	1.5 U	1.1 U
1,1-Dichloroethene	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
1,2-Dichloroethane	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	1.6 U	1.4 U	0.35 J	22	6.5	6.6	0.36 J	1.1 U
1,2-Dichloropropane	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	10	9	7.2	9.7	12	9.9	8.2	1.1 U
2-Hexanone	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
4-Methyl-2-Pentanone	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Acetone	2.1	2	1.6	2.1	2.6	1.9	1.8	1.1 U
Benzene	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Bromodichloromethane	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Carbon Disulfide	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Carbon Tetrachloride	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Chlorobenzene	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Chloroform	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1.6 U	1.4 U	1.1 U	0.46 J	2.8	8.3	1.5 U	1.1 U
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	0.19 J	1.4 U	2.2	1.4 U	0.36 J	1.4 J	1.5 U	1.1 U
Styrene	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Tetrachloroethene	1.4 J	1.6	29	21	2.2	1 J	0.18 J	1.1 U
Toluene	0.18 J	0.65 J	0.54 J	1.5	0.97 J	1.9	0.27 J	1.1 U
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	0.37 J	0.41 J	11	1.8	1.1 J	0.32 J	1.5 U	1.1 U
Vinyl Chloride	1.6 U	1.4 U	1.1 U	1.4 U	2.1 U	1.8 U	1.5 U	1.1 U
Xylene (total)	1.6 U	0.35 J	0.17 J	3	3.1	8.9	1.5 U	1.1 U
Total TICS	9.31	64.44	6.2	48.7	87.1	34.4	0	8.1
Total Volatiles	23.55	78.45	58.8	117	118.7	74.62	10.81	8.1

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB118	SB118	SB119	SB120	SB121	SB122	SB123	SB124
Sample ID	SB118A3	SB118A4	SB119-2	SB120-2	SB121-2	SB122A3	SB123-2	SB124A3
Lab ID	0213409A	0213410A	0213412A	0213504A	0213506A	0213509A	0213511A	0213514A
Date Sampled	2/16/00	2/16/00	2/16/00	2/15/00	2/15/00	2/15/00	2/15/00	2/15/00
Depth (feet)	7-8	7-8	4.5-5.5	5.5-6	7-7.5	6.5-7	6.5-7	6.5-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	0.18 J	2.2 U	1.9 J	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,1-Dichloroethane	0.17 J	2.2 U	2.8	2 U	1.7 U	1.2 U	4.8 U	0.96 J
1,1-Dichloroethene	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,2-Dichloroethane	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,2,4-Trichlorobenzene	2 U	2.2 U	1.6 J	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,2-Dichlorobenzene	2 U	2.2 U	1.3 J	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,3-Dichlorobenzene	2 U	2.2 U	0.26 J	2 U	1.7 U	1.2 U	4.8 U	3.2 U
1,4-Dichlorobenzene	2 U	2.2 U	0.33 J	2 U	1.7 U	1.2 U	4.8 U	3.2 U
2-Butanone	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
2-Hexanone	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
4-Methyl-2-Pentanone	2 U	2.2 U	1.9 U	0.57 J	1.7 U	1.2 U	4.8 U	0.45 J
Acetone	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	2.3 J
Benzene	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Bromodichloromethane	2 U	2.2 U	0.61 J	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Carbon Disulfide	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Carbon Tetrachloride	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Chlorobenzene	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Chloroform	2 U	2.2 U	3.6	2 U	1.7 U	1.2 U	4.8 U	3.2 U
cis-1,2-Dichloroethene	2 U	2.2 U	32	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Cyclohexane	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Ethylbenzene	2 U	2.2 U	2.3	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Isopropylbenzene	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Methyl acetate	0.85 J	1 J	0.98 J	2.9	1.7 U	0.16 J	4.8 U	0.86 J
Methylcyclohexane	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Methylene Chloride	2 U	2.2 U	7	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Styrene	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Tetrachloroethene	7.1	5.2	76 D	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Toluene	2 U	2.2 U	7	0.79 J	0.19 J	1.2 U	4.8 U	3.2 U
trans-1,2-Dichloroethene	2 U	2.2 U	3	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Trichloroethene	1.2 J	0.85 J	89 D	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Vinyl Chloride	2 U	2.2 U	1.9 U	2 U	1.7 U	1.2 U	4.8 U	3.2 U
Xylene (total)	0.76 J	0.53 J	7.8		1.7 U	1.2 U	4.8 U	0.61 J
Total TICS	2.3	1.8	16.6	0	4.6	1.42	0	4.5
Total Volatiles	12.56	9.38	254.1	5.66	4.79	1.58	0	9.68

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB125	SB125	SB126	SB126	SB127	SB128	SB128	SB129
Sample ID	SB125-1	SB125-2	SB126A2	SB126A3	SB127A3	SB128-1	SB128-2	SB129A3
Lab ID	0213501A	0213502A	0213419A	0213420A	0213415A	0213416A	0213417A	0213517A
Date Sampled	2/16/00	2/16/00	2/16/00	2/16/00	2/16/00	2/16/00	2/16/00	2/15/00
Depth (feet)	5.5-6	7.5-8	5.5-6	7.5-8	7.5-8	5.5-6.5	7.5-8.5	7-7.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	1.6 J	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	0.69 J
1,1-Dichloroethane	1.3 J	3.3 U	0.33 J	1.5 U	2.6 U	1.2 J	2.2 U	2 J
1,1-Dichloroethene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
1,2-Dichloroethane	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
1,2,4-Trichlorobenzene	5.9 U	3.3 U	0.21 J	1.5 U	2.6 U	2.1 U	2.2 U	12
1,2-Dichlorobenzene	5.9 U	3.3 U	0.29 J	0.2 J	2.6 U	5.7	0.77 J	14
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
1,3-Dichlorobenzene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	0.29 J
1,4-Dichlorobenzene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	0.62 J	2.2 U	0.97 J
2-Butanone	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
2-Hexanone	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
4-Methyl-2-Pentanone	5.9 U	3.3 U	0.39 J	1.5 U	2.6 U	0.65 J	2.2 U	3.9
Acetone	5.9 U	1.6 J	1.7 J	1.5 U	2.6 U	0.32 J	2.2 U	2.3 U
Benzene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	10
Bromodichloromethane	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
Carbon Disulfide	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	0.29 J
Carbon Tetrachloride	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	2.3 U
Chlorobenzene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	0.22 J
Chloroform	5.9 U	3.3 U	0.33 J	1.5 U	2.6 U	2.1 U	2.2 U	4.9
cis-1,2-Dichloroethene	5.9 U	3.3 U	0.38 J	1.5 U	2.6 U	0.91 J	0.25 J	46 D
Cyclohexane	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	1.1 J
Ethylbenzene	0.53 J	3.3 U	0.83 J	0.31 J	2.6 U	25 D	22	17
Isopropylbenzene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.9	1.7 J	1.3 J
Methyl acetate	0.82 J	3.3 U	0.99 J	1.5 U	1 J	1.1 J	1.3 J	0.99 J
Methylcyclohexane	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	16
Methylene Chloride	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	4.7
Styrene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.9	2.2 U	2.3 U
Tetrachloroethene	25	3.3 U	4	1.5 U	2.6 U	2.1 U	2.2 U	7.3
Toluene	22	0.77 J	19	5.2	2.6 U	20	1.1 J	25
trans-1,2-Dichloroethene	5.9 U	3.3 U	2 U	1.5 U	2.6 U	2.1 U	2.2 U	0.91 J
Trichloroethene	8	3.3 U	1.1 J	1.5 U	2.6 U	2.1 U	2.2 U	16
Vinyl Chloride	5.9 U	3.3 U	2 U	1.5 U	2.6 U	0.2 J	2.2 U	2.3 U
Xylene (total)	1.7 J	3.3 U	3.3	2.3	0.28 J	49	28	110
Total TICS	39.4	0	70.2	124.2	1.7	168.4	162.8	815.2
Total Volatiles	100.35	2.37	103.1	132.2	2.98	279.6	217.9	110.8

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	SB129	SB130	SB131	SB132	SB133	SE01	SE01	SE03
Sample ID	SB129A4	SB130A3	SB131A3	SB132A3	SB133A3	SE01-1	SE01-2	SE03-1
Lab ID	0213518A	0213601A	0213604a	0213608A	0213611a	9714169	9714170	9714469
Date Sampled	2/15/00	2/15/00	2/15/00	2/15/00	2/15/00	8/5/97	8/5/97	8/12/97
Depth (feet)	7-7.5	6-6.5	6-6.5	7-8	6-6.5	2-3	2-3	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	0.5 J	3.2 U	2.3 U	1.9 U	1.7 U	1.5 J	1.1 J	1.7 U
1,1-Dichloroethane	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	3.8	3	1.7 U
1,1-Dichloroethene	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
1,2-Dichloroethane	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.3 J	0.98 J	1.7 U
1,2,4-Trichlorobenzene	11	1.5 J	0.36 J	1.9 U	1.7 U	NA	NA	NA
1,2-Dichlorobenzene	10	0.4 J	0.23 J	1.9 U	1.7 U	NA	NA	NA
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	43	29	1.7 U
1,2-Dichloropropane	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	20	18	1.7 U
1,3-Dichlorobenzene	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
1,4-Dichlorobenzene	0.79 J	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
2-Butanone	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
2-Hexanone	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
4-Methyl-2-Pentanone	2.9	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
Acetone	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	3.3 J	2.2 J	1.7 U
Benzene	8.7	3.2 U	2.3 U	1.9 U	1.7 U	0.28 J	0.23 J	1.7 U
Bromodichloromethane	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
Carbon Disulfide	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
Carbon Tetrachloride	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
Chlorobenzene	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	0.27 J	0.22 J	1.7 U
Chloroform	5.3	3.2 U	2.3 U	1.9 U	1.7 U	1.3 J	0.95 J	0.46 J
cis-1,2-Dichloroethene	53 D	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
Cyclohexane	0.68 J	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
Ethylbenzene	12	3.2 U	0.85 J	1.9 U	1.7 U	3.8	3.2	0.28 J
Isopropylbenzene	0.83 J	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
Methyl acetate	1.2 J	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
Methylcyclohexane	9.1	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
Methylene Chloride	5.9	3.2 U	2.3 U	1.9 U	1.7 U	2.8 B	1.6 B	2.3 JB
Styrene	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	1.6 U	1.5 U	1.7 U
Tetrachloroethene	6.2	3.2 U	2.3 U	1.9 U	1.7 U	29	22	1.1 J
Toluene	19	3.2 U	0.67 J	1.9 U	1.7 U	8.4	6.8	1.5 J
trans-1,2-Dichloroethene	1.3 J	3.2 U	2.3 U	1.9 U	1.7 U	NA	NA	NA
Trichloroethene	20	3.2 U	2.3 U	1.9 U	1.7 U	17	13	0.93 J
Vinyl Chloride	2.4 U	3.2 U	2.3 U	1.9 U	1.7 U	5.4	0 R	1.7 U
Xylene (total)	73	0.69 J	4.3	1.9 U	1.7 U	17	15	1.6 J
Total TICS	621	18.7	12.4	1.5	0	211.5	235	159.8
Total Volatiles	862.4	21.29	18.81	1.5	0	366.9	350.7	165.7

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	TP01	TP06	TP09	TP10	TP13	TP14	TP17	TP18
Sample ID	TP01-1	TP06-1	TP09-1	TP10-1	TP13-1	TP14-1	TP17-1	TP18-1
Lab ID	9714168	9714172	9714315	9714316	9714317	9714319	9714464	9714465
Date Sampled	8/4/97	8/6/97	8/7/97	8/7/97	8/8/97	8/8/97	8/11/97	8/11/97
Depth (feet)	3-4	3-4	3-4	4-5	3-4	3-4	4-5	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	0.63 J	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	16 UJ
1,1-Dichloroethane	3.6	1.7 U	1.6 U	1.9 U	74	0.82 J	1.7 U	16 UJ
1,1-Dichloroethene	1.4 U	1.7 U	1.6 U	1.9 U	4.5	1.6 U	1.7 U	1.6 UJ
1,2-Dichloroethane	1.4 U	1.7 U	1.6 U	1.9 U	5.7	1.6 U	1.7 U	1.6 UJ
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	120 D	2	4.2	8.7	0.89 J	1.6 U	1.7 U	19 DJ
1,2-Dichloropropane	120 D	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	1.4 U	1.7 U	1.6 U	12	6.1	1.6 U	1.7 U	70 D
2-Hexanone	1.4 U	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
4-Methyl-2-Pentanone	1.4 U	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
Acetone	2.6 J	3.7 J	1.6 U	1.9 U	1.9 J	1.6 U	1.7 U	47 DJ
Benzene	0.6 J	1.7 U	0.2 J	1.9 U	2.2 U	0.29 J	1.7 U	16 UJ
Bromodichloromethane	1.4 U	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
Carbon Disulfide	1.4 U	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
Carbon Tetrachloride	1.4 U	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
Chlorobenzene	1.4 U	1.7 U	0.31 J	1.9 U	0.26 J	1.6 U	1.7 U	1.6 UJ
Chloroform	1.4 J	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	0.49 J	2.5 DJ
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	12	3.9	5.9	0.6 J	0.75 J	1.6 U	1.7 U	16 UJ
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	12 JB	2 B	1.4 B	1.8 B	2.2 B	1.6 B	1.6 JB	20 JDB
Styrene	1.4 U	1.7 U	1.6 U	1.9 U	2.2 U	1.6 U	1.7 U	1.6 UJ
Tetrachloroethene	100 D	2.9	2	1.9 U	230 D	0.85 J	1.7 U	1.6 UJ
Toluene	150 D	1.8	16	0.77 J	5.2	0.21 J	1.7 U	2.7 JD
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	10	2	1.3 J	1.1 J	85 D	0.39 J	1.7 U	16 UJ
Vinyl Chloride	0 R	0 R	0 R	0 R	0 R	0 R	1.7 U	16 UJ
Xylene (total)	46	15	22	1.1 J	12	0.35 J	0.23 J	1.7 JD
Total TICS	206.8	283	303.7	297.3	269.6	125.3	446.6	224.9
Total Volatiles	773.63	341.3	355.6	321.5	695.9	129.6	447.3	367.8

**Table 11**  
**Subsurface Soil Samples**  
**Positive Analytical Results -Volatiles**

Sample Location	TP20	TP21	TP24	VOA1	VOA2
Sample ID	TP20-1	TP21-2	TP24-1	VOA1-2	VOA2-2
Lab ID	9714466	9714468	9714725	16484	16486
Date Sampled	8/12/97	8/12/97	8/13/97	10/7/98	10/7/98
Depth (feet)	3.5-4.5	4-5	3-4	4-4.5	6.5-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1,1-Trichloroethane	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
1,1-Dichloroethane	1 J	1.8 U	1.6 U	1.5 U	1.8 U
1,1-Dichloroethene	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
1,2-Dichloroethane	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	2.1 U	17 JD	0.37 J	0.62 J	1.8 U
1,2-Dichloropropane	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA
2-Butanone	2.1 U	1.8 U	1.6 U	1.5 U	12
2-Hexanone	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
4-Methyl-2-Pentanone	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Acetone	2.1 U	1.8 U	1.6 U	1.5 U	2.8
Benzene	2.1 U	1.8 U	0.49 J	1.5 U	0.46 J
Bromodichloromethane	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Carbon Disulfide	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Carbon Tetrachloride	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Chlorobenzene	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Chloroform	0.72 J	2.9 JD	0.23 J	1.5 U	1.8 U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA
Ethylbenzene	2.1 U	8.4 JD	0.66 J	3.5	0.69 J
Isopropylbenzene	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA
Methylene Chloride	2.7 JB	34 JDB	1.9 JB	1.2 J	1.8 U
Styrene	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Tetrachloroethene	0.78 J	1.8 U	1.6 U	1.5 U	1.8 U
Toluene	5.7	200 D	3	4.7	1.2 J
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA
Trichloroethene	0.22 J	26 D	1.6 U	1.5 U	1.8 U
Vinyl Chloride	2.1 U	1.8 U	1.6 U	1.5 U	1.8 U
Xylene (total)	2.1 U	61 D	3.3	15	2.6
Total TICS	240.6	279.6	9.49	0	0
Total Volatiles	249	594.9	17.54	25.02	19.75

**Table 12**  
**Subsurface Soil Samples**

**Positive Analytical Results - Semi - Volatiles**

Sample Location	Residential	Non-Residential	Impact to	SB01A	SB02A	SB03A	SB09A
Sample ID	Direct	Direct	Groundwater	SB01A-2	SB02A-2	SB03A-2	SB09A-2
Lab ID	Contact	Contact	Soil	16497RE	16468	16469RE	16470
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/6/98	10/6/98	10/6/98	10/6/98
Depth (feet)	Criteria	Criteria	Criteria	5-6	6.5-7.5	5-6	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl				NA	NA	NA	NA
1,2,4-Trichlorobenzene	68	1200	100	1.9 U	2.7	0.21 J	1.2 J
1,2-Dichlorobenzene	5100	10000	50	1.9 U	1.2 U	1 U	2.1 U
1,4-Dichlorobenzene	570	10000	100	1.9 U	1.2 U	1 U	2.1 U
2,4-Dimethylphenol	1100	10000	10	1.9 U	1.2 U	1 U	0.63 J
2-Chlorophenol	280	5200	10	1.9 U	1.2 U	1 U	2.1 U
2-Methylnaphthalene				0.34 J	0.29 J	0.14 J	0.79 J
2-Methylphenol	2800	10000		1.9 U	1.2 U	1 U	1 J
4-Methylphenol	2800	10000		1.9 U	1.2 U	1 U	1.9 J
4-Nitroaniline				0.28 J	3 U	2.5 U	5 U
Acenaphthene	3400	10000	100	0.9 J	0.56 J	1 J	0.31 J
Acenaphthylene				1.1 J	0.13 J	1 U	0.25 J
Acetophenone				NA	NA	NA	NA
Anthracene	10000	10000	100	2.5	2	1.3	0.77 J
Benzaldehyde				NA	NA	NA	NA
Benzo(a)Anthracene	0.9	4	500	5.7	6.7	4.1	3.1
Benzo(a)Pyrene	0.66	0.66	100	4.9	6.5 J	3.7 J	2.5 J
Benzo(b)Fluoranthene	0.9	4	50	5.1	7.6 J	4.7 J	2.6 J
Benzo(g,h,i)Perylene				0.78 J	2.7 J	1.1 J	0.38 J
Benzo(k)Fluoranthene	0.9	4	500	4.5	4.3 J	3.8 J	2.9 J
bis(2-Ethylhexyl)Phthalate	49	210	100	1.1 J	1.6	0.44 J	8.9
Butylbenzylphthalate	1100	10000	100	0.23 BJ	1.2 U	1 U	0.79 J
Caprolactam				NA	NA	NA	NA
Carbazole				0.94 J	0.62 J	0.82 J	0.53 J
Chrysene	9	40	500	6.6	5.8	3.8	3.3
Dibenz(a,h)Anthracene	0.66	0.66	100	0.49 J	1.4 J	0.75 J	0.59 J
Dibenzofuran				0.47 J	0.28 J	0.34 J	0.29 J
Diethylphthalate	10000	10000	50	1.9 U	1.2 U	1 U	0.46 J
Di-n-Butylphthalate	5700	10000	100	1.9 U	8.4 BJ	0.17 J	35 J
Di-n-Octylphthalate	1100	10000	100	1.9 U	1.2 U	1 U	3
Fluoranthene	2300	10000	100	12	9	5.2	5.4
Fluorene	2300	10000	100	0.95 J	0.59 J	0.67 J	0.6 J
Indeno(1,2,3-cd)Pyrene	0.9	4	500	1.1 J	3 J	1.3 J	0.93 J
Isophorone	1100	10000	50	1.9 U	1.2 U	1 U	1.2 J
Naphthalene	230	4200	100	0.52 J	0.71 J	0.36 J	6.2
N-Nitrosodiphenylamine (1)	140	600	100	1.9 U	1.2 U	1 U	2.1 U
Phenanthrene				9.6	5.2	4.4	4
Phenol	10000	10000	50	1.9 U	1.2 U	1 U	0.63 J
Pyrene	1700	10000	100	5.5	10	7.9	5.2
Total TICS				30.25	25.83	14.88	140.8
Total Semi-Volatiles				95.62	97.51	61.08	236.2

300718

**Table 12**  
**Subsurface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB11A	SB13A	SB15A	SB16A	SB19A	SB23A	SB42A	SB43A
Sample ID	SB11A-2	SB13A-2	SB15A-2	SB16A-2	SB19A-2	SB23A-2	SB42A-2	SB43A-2
Lab ID	16471RE	16472	16473	16474	16475	16476	16617	16619
Date Sampled	10/6/98	10/7/98	10/7/98	10/7/98	10/7/98	10/7/98	10/8/98	10/8/98
Depth (feet)	3-3.5	5-6	5-6	6-7	5-6	5-6	3.5-4.5	3.5-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA		NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
1,2-Dichlorobenzene	0.099 J	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
1,4-Dichlorobenzene	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
2,4-Dimethylphenol	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
2-Chlorophenol	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
2-Methylnaphthalene	0.63 J	0.39 J	0.4 U	0.14 J	0.42 U	44 J	0.37 U	0.45 U
2-Methylphenol	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
4-Methylphenol	0.15 J	1.9 U	0.4 U	0.087 J	0.07 J	10 U	0.37 U	0.45 U
4-Nitroaniline	1.7 U	4.5 U	0.97 U	1.2 U	1 U	24 U	0.9 U	1.1 U
Acenaphthene	1.1	1.3 J	0.4 U	0.16 J	0.42 U	1.8 J	0.37 U	0.45 U
Acenaphthylene	0.34 J	0.66 J	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	2.3	2.9	0.4 U	0.4 J	0.059 J	10 U	0.37 U	0.45 U
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	6.9	9.6	0.061 J	0.82	0.21 J	10 U	0.11 J	0.45 U
Benzo(a)Pyrene	5.1 J	8.2	0.054 J	0.61	0.18 J	10 U	0.097 J	0.45 U
Benzo(b)Fluoranthene	6.1	11	0.077 J	0.78	0.26 J	10 U	0.093 J	0.45 U
Benzo(g,h,i)Perylene	1.3 J	1.3 J	0.4 U	0.48 U	0.093 J	10 U	0.37 U	0.45 U
Benzo(k)Fluoranthene	0.71 U	6.7	0.051 J	0.68	0.23 J	10 U	0.1 J	0.45 U
bis(2-Ethylhexyl)Phthalate	9.3	1.9 U	0.4 U	0.48 U	0.37 J	10 U	0.37 U	0.45 U
Butylbenzylphthalate	0.3 J	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.071 BJ
Caprolactam	NA		NA	NA	NA	NA	NA	NA
Carbazole	1.6	2.4	0.4 U	0.15 J	0.42 U	10 U	0.37 U	0.45 U
Chrysene	5.5 J	9.1	0.11 J	0.83	0.25 J	10 U	0.13 J	0.45 U
Dibenz(a,h)Anthracene	1.2 J	1.9 U	0.4 U	0.14 J	0.073 J	10 U	0.37 U	0.45 U
Dibenzofuran	0.88	0.93 J	0.4 U	0.12 J	0.42 U	2.6 J	0.37 U	0.45 U
Diethylphthalate	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
Di-n-Butylphthalate	0.27 J	1.9 U	0.4 U	0.48 U	0.051 J	10 U	0.37 U	0.45 U
Di-n-Octylphthalate	0.45 J	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
Fluoranthene	15	14	0.076 J	1.5	0.4 J	1.8 J	0.21 J	0.45 U
Fluorene	1.3	1.5 J	0.4 U	0.19 J	0.42 U	1.5 J	0.37 U	0.45 U
Indeno(1,2,3-cd)Pyrene	2.1 J	2.9	0.4 U	0.25 J	0.15 J	10 U	0.067 J	0.45 U
Isophorone	0.71 U	1.9 U	0.4 U	0.48 U	0.42 U	10 U	0.37 U	0.45 U
Naphthalene	1.8	0.94 J	0.065 J	3.1	0.34 J	1900	0.37 U	0.45 U
N-Nitrosodiphenylamine (1)	0.71 U	1.9 U	0.4 U	0.46 J	0.42 U	47	0.37 U	0.45 U
Phenanthrene	11	11	0.075 J	1.4	0.26 J	4.1 J	0.11 J	0.45 U
Phenol	0.71 U	1.9 U	0.4 U	0.48 U	0.11 J	1.6 J	0.37 U	0.45 U
Pyrene	13	14	0.08 J	1.3	0.36 J	2.4 J	0.23 J	0.45 U
Total TICS	143	36.47	3.934	18.78	10.3	1594	2.742	5.9
Total Semi-Volatiles	230.7	135.3	4.583	31.9	13.77	3601	3.889	5.9

300719



**Table 12**  
**Subsurface Soil Samples**

**Positive Analytical Results - Semi -Volatiles**

Sample Location	SB46A	SB62	SB63	SB64	SB65	SB66	SB67	SB68
Sample ID	SB46A-2	SB62-3	SB63-4	SB64-4	SB65-3	SB66-3	SB67-3	SB68-3
Lab ID	16621	15969RE	15972RE	15974	15976RE	16034RE	15978	15980
Date Sampled	10/8/98	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/29/98	9/29/98
Depth (feet)	3-4	5-5.5	3.5-4	6-6.5	6-7	6.5-7	5.5-6	6.5-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
1,2-Dichlorobenzene	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
1,4-Dichlorobenzene	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
2,4-Dimethylphenol	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
2-Chlorophenol	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
2-Methylnaphthalene	0.43 U	17 U	0.073 J	0.4 U	0.23 J	2 U	1.2	0.16 J
2-Methylphenol	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
4-Methylphenol	0.43 U	17 U	0.37 U	0.085 J	0.41 U	2 U	0.78 U	0.44 U
4-Nitroaniline	1 U	41 U	0.89 U	0.96 U	1 U	4.8 U	1.9 U	1.1 U
Acenaphthene	0.43 U	17 U	0.11 J	0.4 U	0.54	0.4 J	2	0.28 J
Acenaphthylene	0.43 U	17 U	0.086 J	0.4 U	0.047 J	2 U	0.57 J	0.28 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.43 U	17 U	0.3 J	0.4 U	0.95	0.75 J	6.3	0.71
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.43 U	17 U	0.86	0.12 J	1.2	1.9 J	13 D	2
Benzo(a)Pyrene	0.43 U	17 U	0.82	0.12 J	0.97	1.4 J	11 D	1.9
Benzo(b)Fluoranthene	0.43 U	17 U	0.95	0.12 J	0.96	1.1 J	12 D	2.3
Benzo(g,h,i)Perylene	0.046 J	17 U	0.26 J	0.056 J	0.22 J	2 U	3.2	0.5
Benzo(k)Fluoranthene	0.43 U	17 U	0.97	0.14 J	1.2	1.3 J	8.8 D	2.1
bis(2-Ethylhexyl)Phthalate	1.5	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Butylbenzylphthalate	0.071 BJ	17 U	0.37 U	0.4 U	0.41 U	0.21 J	0.78 U	0.44 U
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	0.43 U	17 U	0.18 J	0.4 U	0.49	0.38 J	3	0.42 J
Chrysene	0.045 J	17 U	0.99	0.16 J	1.3	2.3	14 D	2.3
Dibenz(a,h)Anthracene	0.43 U	17 U	0.14 J	0.4 U	0.13 J	2 U	1.6	0.26 J
Dibenzofuran	0.43 U	17 U	0.097 J	0.4 U	0.44	0.35 J	1.8	0.29 J
Diethylphthalate	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Di-n-Butylphthalate	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Di-n-Octylphthalate	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Fluoranthene	0.43 U	17 U	1.8	0.2 J	2.3	2.5	28 D	4.4 D
Fluorene	0.43 U	17 U	0.15 J	0.4 U	0.6	0.47 J	2.9	0.39 J
Indeno(1,2,3-cd)Pyrene	0.047 J	17 U	0.34 J	0.064 J	0.31 J	2 U	3.7	0.66
Isophorone	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Naphthalene	0.06 J	17 U	0.088 J	0.4 U	0.36 J	0.22 J	2	0.33 J
N-Nitrosodiphenylamine (1)	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Phenanthrene	0.43 U	17 U	1.5	0.13 J	3.3	4.4	26 D	4.3 D
Phenol	0.43 U	17 U	0.37 U	0.4 U	0.41 U	2 U	0.78 U	0.44 U
Pyrene	0.045 J	1.9 J	1.9	0.22 J	2.8	6.8	23 D	4.2 D
Total TICS	9.203	841	13.5	11.5	12.61	41.43	28.98	7.2
Total Semi-Volatiles	10.95	842.9	25.11	12.91	30.96	65.91	193.1	34.98

300720

**Table 12**  
**Subsurface Soil Samples**

**Positive Analytical Results - Semi -Volatiles**

Sample Location	SB69	SB70	SB71	SB72	SB73	SB74	SB75	SB76
Sample ID	SB69-3	SB70-3	SB71-3	SB72-3	SB73-3	SB74-3	SB75-3	SB76-3
Lab ID	15982	15984	15986RE	16035	15994	16036	15996	16039RE
Date Sampled	9/29/98	9/29/98	9/30/98	9/30/98	9/30/98	9/30/98	9/29/98	10/1/98
Depth (feet)	6-7	6.5-7.5	4-5	9-10	7-8	6-7	6.5-7	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
1,2-Dichlorobenzene	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
1,4-Dichlorobenzene	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
2,4-Dimethylphenol	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	0.68 J	0.43 U
2-Chlorophenol	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
2-Methylnaphthalene	0.65	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	5.4	0.43 U
2-Methylphenol	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	0.46 J	0.43 U
4-Methylphenol	0.041 J	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	1.5 J	0.43 U
4-Nitroaniline	0.95 U	0.9 U	0.87 U	0.83 U	0.9 U	0.91 U	5.9 U	1 U
Acenaphthene	1.6	0.04 J	0.079 J	0.34 U	0.37 U	0.38 U	5.8	0.079 J
Acenaphthylene	0.46	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	7.4	0.057 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	3.7 DJ	0.084 J	0.14 J	0.34 U	0.047 J	0.11 J	14	0.2 J
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	8.1 D	0.43	0.36	0.34 U	0.14 J	0.31 J	25 D	0.67
Benzo(a)Pyrene	6.4 D	0.41	0.32 J	0.34 U	0.14 J	0.27 J	24 DJ	0.64
Benzo(b)Fluoranthene	6.2 D	0.32 J	0.38	0.34 U	0.16 J	0.25 J	24 DJ	0.7
Benzo(g,h,i)Perylene	1.3	0.14 J	0.097 J	0.34 U	0.062 J	0.1 J	8.4	0.38 J
Benzo(k)Fluoranthene	5.3 D	0.39	0.35 J	0.34 U	0.16 J	0.32 J	26 D	0.74
bis(2-Ethylhexyl)Phthalate	0.2 J	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.067 J
Butylbenzylphthalate	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	1.1	0.04 J	0.059 J	0.34 U	0.37 U	0.043 J	12	0.095 J
Chrysene	9.1 D	0.5	0.41	0.34 U	0.18 J	0.34 J	30 D	0.77
Dibenz(a,h)Anthracene	0.77	0.076 J	0.36 U	0.34 U	0.37 U	0.048 J	3.2	0.43 U
Dibenzofuran	0.83	0.37 U	0.038 J	0.34 U	0.37 U	0.38 U	11	0.055 J
Diethylphthalate	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
Di-n-Butylphthalate	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
Di-n-Octylphthalate	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.43 U
Fluoranthene	16 D	0.55	0.7	0.34 U	0.34 J	0.58	58 D	0.92
Fluorene	1.6	0.038 J	0.064 J	0.34 U	0.058 J	0.38 U	13	0.072 J
Indeno(1,2,3-cd)Pyrene	1.8	0.16 J	0.11 J	0.34 U	0.077 J	0.13 J	9.8	0.42 J
Isophorone	0.39 U	0.37 U	0.36 U	0.	0.37 U	0.38 U	2.4 U	0.43 U
Naphthalene	0.83	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	15	0.14 J
N-Nitrosodiphenylamine (1)	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	2.4 U	0.053 J
Phenanthrene	18 D	0.42	0.65	0.34 U	0.26 J	0.43	110 D	1
Phenol	0.39 U	0.37 U	0.36 U	0.34 U	0.37 U	0.38 U	0.98 J	0.43 U
Pyrene	17 D	0.63	0.76	0.34 U	0.31 J	0.49	120 D	2.2
Total TICS	30.1	6.169	4.765	1.59	4.131	5.221	110.2	12.69
Total Semi-Volatiles	131.1	10.4	9.282	1.59	6.065	8.642	635.8	21.94

**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi -Volatiles**

Sample Location	SB77	SB78	SB79	SB79	SB80	SB81	SB82	SB83
Sample ID	SB77-3	SB78-3	SB79-3	SB79-4	SB80-3	SB81-3	SB82-3	SB83-3
Lab ID	16040	15998	16037	16038	16043RE	16042	16041	16272
Date Sampled	10/1/98	9/29/98	9/30/98	9/30/98	10/1/98	10/1/98	10/1/98	10/5/98
Depth (feet)	6-7	6.5-7.5	6.5-7.5	6.5-7.5	4.5-5.5	5-6	4-5	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
1,2-Dichlorobenzene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
1,4-Dichlorobenzene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
2,4-Dimethylphenol	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
2-Chlorophenol	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
2-Methylnaphthalene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.051 J	0.37 U	0.37 U
2-Methylphenol	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
4-Methylphenol	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
4-Nitroaniline	0.88 U	0.92 U	0.86 U	0.87 U	0.97 U	0.9 U	0.9 U	0.9 U
Acenaphthene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Acenaphthylene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.046 J	0.38 U	0.068 J	0.039 J	0.056 J	0.37 U	0.37 U	0.37 U
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.15 J	0.086 J	0.15 J	0.12 J	0.21 J	0.21 J	0.37 U	0.044 J
Benzo(a)Pyrene	0.15 J	0.09 J	0.14 J	0.12 J	0.21 J	0.27 J	0.37 U	0.37 U
Benzo(b)Fluoranthene	0.16 J	0.086 J	0.14 J	0.12 J	0.22 J	0.3 J	0.37 U	0.37 U
Benzo(g,h,i)Perylene	0.074 J	0.38 U	0.056 J	0.059 J	0.099 J	0.16 J	0.37 U	0.37 U
Benzo(k)Fluoranthene	0.15 J	0.098 J	0.14 J	0.14 J	0.25 J	0.28 J	0.37 U	0.039 J
bis(2-Ethylhexyl)Phthalate	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Butylbenzylphthalate	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Chrysene	0.17 J	0.1 J	0.17 J	0.14 J	0.24 J	0.23 J	0.37 U	0.044 J
Dibenz(a,h)Anthracene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.07 J	0.37 U	0.37 U
Dibenzofuran	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Diethylphthalate	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Di-n-Butylphthalate	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Di-n-Octylphthalate	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Fluoranthene	0.32 J	0.15 J	0.3 J	0.22 J	0.39 J	0.25 J	0.041 J	0.079 J
Fluorene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Indeno(1,2,3-cd)Pyrene	0.087 J	0.039 J	0.076 J	0.072 J	0.12 J	0.19 J	0.37 U	0.37 U
Isophorone	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Naphthalene	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.079 J	0.37 U	0.37 U
N-Nitrosodiphenylamine (1)	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Phenanthrene	0.17 J	0.095 J	0.24 J	0.15 J	0.37 J	0.046 J	0.37 U	0.07 J
Phenol	0.36 U	0.38 U	0.36 U	0.36 U	0.4 U	0.37 U	0.37 U	0.37 U
Pyrene	0.29 J	0.17 J	0.25 J	0.19 J	0.63	0.25 J	0.37 U	0.063 J
Total TICS	4.108	2.148	3.39	2.682	5.43	3.375	4.755	3.082
Total Semi-Volatiles	5.875	3.062	5.12	4.052	8.225	5.761	4.796	3.421

**Table 12**  
**Subsurface Soil Samples**

**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB84	SB85	SB86	SB87	SB88	SB89	SB90	SB91
Sample ID	SB84-3	SB85-3	SB86-3	SB87-3	SB88-3	SB89-3	SB90-3	SB91-3
Lab ID	16273	16274	16044	16045	16186	16187RE	16188RE	16487
Date Sampled	10/5/98	10/5/98	10/1/98	10/1/98	10/2/98	10/2/98	10/2/98	10/6/98
Depth (feet)	4.5-5.5	6.5-7.5	6.5-7.5	4-5	6-7	4-5	7-7.5	5-6
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
1,2-Dichlorobenzene	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
1,4-Dichlorobenzene	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
2,4-Dimethylphenol	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
2-Chlorophenol	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
2-Methylnaphthalene	0.36 U	0.36 U	0.2 J	0.37 U	0.52 U	0.11 J	0.43 U	0.047 J
2-Methylphenol	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
4-Methylphenol	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
4-Nitroaniline	0.87 U	0.87 U	1.1 U	0.9 U	1.2 U	1 U	1 U	0.97 U
Acenaphthene	0.36 U	0.36 U	0.45	0.37 U	0.52 U	0.43 U	0.43 U	0.12 J
Acenaphthylene	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 J
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.36 U	0.36 U	0.36 J	0.072 J	0.11 J	0.43 U	0.43 U	0.49
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.36 U	0.36 U	0.55	0.22 J	0.3 J	0.11 J	0.16 J	1.3
Benzo(a)Pyrene	0.36 U	0.36 U	0.48	0.2 J	0.3 J	0.071 J	0.16 J	0.84
Benzo(b)Fluoranthene	0.36 U	0.36 U	0.48	0.24 J	0.24 J	0.14 J	0.19 J	0.9
Benzo(g,h,i)Perylene	0.36 U	0.36 U	0.17 J	0.071 J	0.12 J	0.43 U	0.066 J	0.14 J
Benzo(k)Fluoranthene	0.36 U	0.36 U	0.43 J	0.24 J	0.3 J	0.044 J	0.15 J	0.81
bis(2-Ethylhexyl)Phthalate	0.36 U	0.36 U	0.45 U	0.1 J	0.52 U	0.43 U	0.43 U	0.4 U
Butylbenzylphthalate	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	0.36 U	0.36 U	0.45 U	0.042 J	0.52 U	0.43 U	0.43 U	0.24 J
Chrysene	0.36 U	0.36 U	0.59	0.28 J	0.28 J	0.29 J	0.17 J	1.5
Dibenz(a,h)Anthracene	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.31 J
Dibenzofuran	0.36 U	0.36 U	0.42 J	0.37 U	0.52 U	0.43 U	0.43 U	0.076 J
Diethylphthalate	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Di-n-Butylphthalate	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Di-n-Octylphthalate	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Fluoranthene	0.36 U	0.069 J	1.1	0.43	0.41 J	0.13 J	0.27 J	2.7
Fluorene	0.36 U	0.36 U	0.78	0.37 U	0.077 J	0.43 U	0.43 U	0.12 J
Indeno(1,2,3-cd)Pyrene	0.36 U	0.36 U	0.21 J	0.095 J	0.13 J	0.43 U	0.073 J	0.7
Isophorone	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Naphthalene	0.36 U	0.36 U	0.11 J	0.37 U	0.52 U	0.43 U	0.43 U	0.091 J
N-Nitrosodiphenylamine (1)	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Phenanthrene	0.36 U	0.056 J	1.5	0.36 J	0.48 J	0.39 J	0.19 J	1.7
Phenol	0.36 U	0.36 U	0.45 U	0.37 U	0.52 U	0.43 U	0.43 U	0.4 U
Pyrene	0.36 U	0.054 J	0.96	0.41	0.38 J	0.15 J	0.27 J	2
Total TICS	1.511	3.897	29.17	9.798	4.18	6.8	6.712	9.947
Total Semi-Volatiles	1.511	4.076	37.96	12.56	7.307	8.235	8.411	24.43

**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi -Volatiles**

Sample Location	SB92	SB93	SB94	SB95	SB96	SB96	SB97	SB98
Sample ID	SB92-3	SB93-3	SB94-3	SB95-3	SB96-3	SB96-4	SB97-3	SB98-3
Lab ID	16488	16489	16490	16491	16189RE	16190RE	16191	16192
Date Sampled	10/6/98	10/6/98	10/6/98	10/6/98	10/2/98	10/2/98	10/2/98	10/2/98
Depth (feet)	6-7	4-5	4.5-5.5	4.5-5.5	4-5	4-5	4-5	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.045 J	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
1,2-Dichlorobenzene	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
1,4-Dichlorobenzene	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
2,4-Dimethylphenol	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
2-Chlorophenol	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
2-Methylnaphthalene	0.41 U	0.42 U	0.43 U	0.51 U	0.11 J	0.049 J	0.39 U	0.37 U
2-Methylphenol	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
4-Methylphenol	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
4-Nitroaniline	1 U	1 U	1.1 U	1.2 U	0.96 U	0.99 U	0.95 U	0.89 U
Acenaphthene	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Acenaphthylene	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.064 J	0.059 J	0.43 U	0.51 U	0.17 J	0.41 U	0.053 J	0.37 U
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.16 J	0.24 J	0.43 U	0.51 U	0.096 J	0.12 J	0.19 J	0.13 J
Benzo(a)Pyrene	0.11 J	0.21 J	0.43 U	0.51 U	0.13 J	0.096 J	0.17 J	0.11 J
Benzo(b)Fluoranthene	0.097 J	0.22 J	0.43 U	0.51 U	0.26 J	0.42 J	0.22 J	0.11 J
Benzo(g,h,i)Perylene	0.066 J	0.069 J	0.43 U	0.51 U	0.4 U	0.056 J	0.066 J	0.055 J
Benzo(k)Fluoranthene	0.089 J	0.2 J	0.43 U	0.51 U	0.15 J	0.15 J	0.17 J	0.11 J
bis(2-Ethylhexyl)Phthalate	0.41 U	0.42 U	0.43 U	0.51 U	0.058 J	0.41 U	0.39 U	0.37 U
Butylbenzylphthalate	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Chrysene	0.18 J	0.31 J	0.43 U	0.51 U	0.28 J	0.22 J	0.22 J	0.13 J
Dibenz(a,h)Anthracene	0.41 U	0.1 J	0.43 U	0.51 U	0.4 U	0.41 U	0.043 J	0.37 U
Dibenzofuran	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Diethylphthalate	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Di-n-Butylphthalate	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Di-n-Octylphthalate	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Fluoranthene	0.34 J	0.5	0.43 U	0.51 U	0.14 J	0.15 J	0.33 J	0.22 J
Fluorene	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Indeno(1,2,3-cd)Pyrene	0.076 J	0.23 J	0.43 U	0.51 U	0.067 J	0.061 J	0.076 J	0.055 J
Isophorone	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Naphthalene	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
N-Nitrosodiphenylamine (1)	0.41 U	0.42 U	0.43 U	0.51 U	0.071 JN	0.41 U	0.39 U	0.37 U
Phenanthrene	0.3 J	0.28 J	0.43 U	0.51 U	0.17 J	0.12 J	0.32 J	0.14 J
Phenol	0.41 U	0.42 U	0.43 U	0.51 U	0.4 U	0.41 U	0.39 U	0.37 U
Pyrene	0.3 J	0.37 J	0.43 U	0.51 U	0.32 J	0.21 J	0.35 J	0.2 J
Total TICS	3.343	2.198	2.422	1.95	8.27	9.3	4.402	0
Total Semi-Volatiles	5.17	4.986	2.422	1.95	10.29	10.95	6.61	1.26

**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB99	SB105	SB106	SB107	SB108	SB109	SB110	SB111
Sample ID	SB99-3	SB105-3	SB106-3	SB107-3	SB108-3	SB109-3	SB110-3	SB111-4
Lab ID	16193	16275RE	16276	16194	16277	16278	16623	16625
Date Sampled	10/2/98	10/5/98	10/5/98	10/2/98	10/5/98	10/5/98	10/8/98	10/8/98
Depth (feet)	7-7.5	4-5	4-5	5-6	5-6	4.5-5.5	3-4	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
1,2-Dichlorobenzene	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
1,4-Dichlorobenzene	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.13 J
2,4-Dimethylphenol	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
2-Chlorophenol	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
2-Methylnaphthalene	0.43 U	0.28 J	0.21 J	0.52 J	0.38 U	0.39 U	0.42 U	0.4 U
2-Methylphenol	0.73	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
4-Methylphenol	0.47	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
4-Nitroaniline	1 U	0.97 U	4.7 U	5.5 U	0.92 U	0.94 U	1 U	0.96 U
Acenaphthene	0.43 U	0.4 U	0.64 J	1.8 J	0.38 U	0.39 U	0.42 U	0.4 U
Acenaphthylene	0.083 J	0.4 U	2 U	1.1 J	0.38 U	0.39 U	0.13 J	0.4 U
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	0.12 J	0.4 U	1.4 J	4.1	0.11 J	0.39 U	0.1 J	0.084 J
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)Anthracene	0.49	0.066 J	5.6	12	0.31 J	0.12 J	0.33 J	0.2 J
Benzo(a)Pyrene	0.84	0.4 U	5.1	10 J	0.32 J	0.11 J	0.29 J	0.14 J
Benzo(b)Fluoranthene	0.55	0.098 J	5	11 J	0.25 J	0.11 J	0.28 J	0.13 J
Benzo(g,h,i)Perylene	0.43	0.4 U	1.6 J	2.1 J	0.1 J	0.39 U	0.068 J	0.12 J
Benzo(k)Fluoranthene	0.47	0.4 U	5.5	12 J	0.33 J	0.13 J	0.28 J	0.12 J
bis(2-Ethylhexyl)Phthalate	0.57	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.1 J	1.5
Butylbenzylphthalate	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.11 BJ
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	0.43 U	0.4 U	0.38 J	1.2 J	0.039 J	0.39 U	0.076 J	0.4 U
Chrysene	0.57	0.17 J	5.4	11	0.29 J	0.12 J	0.41 J	0.29 J
Dibenz(a,h)Anthracene	0.14 J	0.4 U	1.1 J	1.3 J	0.075 J	0.39 U	0.09 J	0.058 J
Dibenzofuran	0.43 U	0.4 U	0.3 J	1.2 J	0.38 U	0.39 U	0.42 U	0.4 U
Diethylphthalate	0.065 J	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
Di-n-Butylphthalate	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.055 BJ
Di-n-Octylphthalate	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
Fluoranthene	0.48	0.4 U	8.3	17	0.47	0.23 J	0.57	0.36 J
Fluorene	0.43 U	0.4 U	0.63 J	2.5	0.045 J	0.39 U	0.42 U	0.4 U
Indeno(1,2,3-cd)Pyrene	0.28 J	0.4 U	1.9 J	2.4 J	0.12 J	0.048 J	0.26 J	0.13 J
Isophorone	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
Naphthalene	0.2 J	0.3 J	0.44 J	1.2 J	0.38 U	0.39 U	0.21 J	0.24 J
N-Nitrosodiphenylamine (1)	0.43 U	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
Phenanthrene	0.41 J	0.13 J	4.7	14	0.36 J	0.1 J	0.33 J	0.45
Phenol	0.16 J	0.4 U	2 U	2.3 U	0.38 U	0.39 U	0.42 U	0.4 U
Pyrene	0.88	0.072 J	8.3	22 J	0.43	0.2 J	0.49	0.35 J
Total TICS	0	0	30.9	61.93	5.3	5.164	5.631	12.04
Total Semi-Volatiles	7.938	1.116	87.4	190.4	8.549	6.332	9.645	16.34

**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi -Volatiles**

Sample Location	SB112	SB113	SB114	SB114	SB115	SB116	SB118	SB118
Sample ID	SB112-3	SB113-3	SB114-3	SB114-4	SB115-3	SB116-3	SB118B3	SB118B4
Lab ID	16627	16492	16493RE	16494RE	16495RE	16279	0323308A	0323309A
Date Sampled	10/8/98	10/6/98	10/7/98	10/7/98	10/6/98	10/5/98	3/23/00	3/23/00
Depth (feet)	2-3	3-4	4-5	4-5	6.7-7	4.4-5.1	7-8	7-8
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	NA	NA	NA	NA	NA	NA	2.2 U	2 U
1,2,4-Trichlorobenzene	1.6 U	0.41 U	0.23 J	0.6 U	0.43 U	0.36 U	NA	NA
1,2-Dichlorobenzene	1.6 U	0.41 U	1.1	0.26 J	0.43 U	0.36 U	NA	NA
1,4-Dichlorobenzene	1.6 U	0.41 U	0.19 J	0.6 U	0.43 U	0.36 U	NA	NA
2,4-Dimethylphenol	0.42 J	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
2-Chlorophenol	1.6 U	0.41 U	0.1 J	0.6 U	0.43 U	0.36 U	2.2 U	2 U
2-Methylnaphthalene	1.5 J	0.41 U	0.14 J	0.6 U	0.046 J	0.36 U	2.2 U	2 U
2-Methylphenol	0.23 J	0.14 J	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
4-Methylphenol	1.1 J	0.6	0.88	0.087 J	0.43 U	0.36 U	2.2 U	2 U
4-Nitroaniline	0.46 J	1 U	1.5 U	1.5 U	1 U	0.87 U	5.5 U	5.2 U
Acenaphthene	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Acenaphthylene	28 DJ	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	0.57 J	0.86 J
Acetophenone	NA	NA	NA	NA	NA	NA	0.34 J	0.43 J
Anthracene	26 DJ	0.069 J	0.073 J	0.6 U	0.43 U	0.36 U	0.81 J	2.1
Benzaldehyde	NA	NA	NA	NA	NA	NA	2.2 U	2 U
Benzo(a)Anthracene	97 D	0.22 J	0.18 J	0.6 U	0.089 J	0.36 U	6.9	24 D
Benzo(a)Pyrene	73 D	0.18 J	0.63 U	0.6 U	0.085 J	0.36 U	7	22 D
Benzo(b)Fluoranthene	65 D	0.18 J	0.17 J	0.6 U	0.066 J	0.36 U	6.9	21 D
Benzo(g,h,i)Perylene	9.7	0.12 J	0.63 U	0.6 U	0.12 J	0.36 U	1.9 J	7.5
Benzo(k)Fluoranthene	1.6 U	0.15 J	0.18 J	0.6 U	0.071 J	0.36 U	6.2	23 D
bis(2-Ethylhexyl)Phthalate	1.6 U	0.48	2.7	1.1	0.43 U	0.36 U	0.39 J	0.27 J
Butylbenzylphthalate	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Caprolactam	NA	NA	NA	NA	NA	NA	2.2 U	2 U
Carbazole	3.9	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Chrysene	100 D	0.34 J	0.29 J	0.6 U	0.12 J	0.36 U	7.2	25 D
Dibenz(a,h)Anthracene	7.8	0.077 J	0.63 U	0.6 U	0.43 U	0.36 U	1.1 J	2 U
Dibenzofuran	2.4	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Diethylphthalate	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Di-n-Butylphthalate	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Di-n-Octylphthalate	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Fluoranthene	170 D	0.44	0.34 J	0.6 U	0.15 J	0.05 J	5.9	12
Fluorene	4.8	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Indeno(1,2,3-cd)Pyrene	49 D	0.13 J	0.077 J	0.6 U	0.083 J	0.36 U	2.5	8.3
Isophorone	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Naphthalene	4	0.12 J	0.52 J	0.19 J	2.1	0.36 U	2.2 U	2 U
N-Nitrosodiphenylamine (1)	1.6 U	0.41 U	0.63 U	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Phenanthrene	73 D	0.35 J	0.23 J	0.6 U	0.13 J	0.043 J	1.9 J	3.8
Phenol	0.79 J	0.39 J	0.34 J	0.6 U	0.43 U	0.36 U	2.2 U	2 U
Pyrene	130 D	0.46	0.17 J	0.6 U	0.15 J	0.042 J	12	45 D
Total TICS	299.4	19.46	176.2	80.02	7.6	4.338	32.98	75.27
Total Semi-Volatiles	1147	23.91	184.1	81.66	10.81	4.473	94.59	270.5

**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB122	SB124	SB126	SB126	SB127	SB129	SB129	SB130
Sample ID	SB122A3	SB124A3	SB126B1	SB126B3	SB127B3	SB129A3	SB129A4	SB130A3
Lab ID	0213509B	0213514B	0323312A	0323313A	0323311A	0213517B	0213518B	0213601B
Date Sampled	2/15/00	2/15/00	3/23/00	3/23/00	3/23/00	2/15/00	2/15/00	2/15/00
Depth (feet)	6.5-7	6.5-7	5-5.5	7.5-8	7.5-8	7-7.5	7-7.5	6-6.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	0.46 U	0.13 J	0.43 U	4.9 U	0.25 J	24 E	11 JD	0.67 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	0.46 U	0.59 U	0.43 U	4.9 U	1.9 U	2.1	1	0.67 U
2-Chlorophenol	0.46 U	0.59 U	0.066 J	4.9 U	1.9 U	0.48 U	0.48 U	0.67 U
2-Methylnaphthalene	0.12 J	0.59 U	0.2 J	1.9 J	0.99 J	4.6 E	1.9	0.67 U
2-Methylphenol	0.46 U	0.19 J	0.26 J	4.9 U	1.9 U	4 E	2.7	0.67 U
4-Methylphenol	0.46 U	0.73	1.1	4.9 U	1.9 U	9.8 E	6 JD	0.67 U
4-Nitroaniline	1.2 U	1.5 U	1.1 U	12 U	4.8 U	1.2 U	1.2 U	1.7 U
Acenaphthene	0.46 U	0.59 U	0.43 U	4.9 U	2.6	0.48 U	0.48 U	0.67 U
Acenaphthylene	0.063 J	0.59 U	0.43 U	4.9 U	1.1 J	0.48 U	0.48 U	0.15 J
Acetophenone	0.062 J	0.066 J	0.43 U	4.9 U	1.9 U	2.2	0.48 U	0.67 U
Anthracene	0.052 J	0.066 J	0.43 U	2.2 J	6.1	0.48 U	0.48 U	0.13 J
Benzaldehyde	0.054 J	0.59 U	0.35 J	4.9 U	1.9 U	0.12 J	0.48 U	0.069 J
Benzo(a)Anthracene	0.21 J	0.13 J	0.076 J	6.2	19 D	0.64	0.48 U	0.76
Benzo(a)Pyrene	0.21 J	0.094 J	0.12 J	5.2	15	0.37 J	0.24 J	0.34 J
Benzo(b)Fluoranthene	0.18 J	0.093 J	0.16 J	4.8 J	15 D	0.4 J	0.24 J	0.58 J
Benzo(g,h,i)Perylene	0.22 J	0.069 J	0.16 J	1.6 J	4	0.2 J	0.12 J	0.67 U
Benzo(k)Fluoranthene	0.19 J	0.087 J	0.095 J	6	20 D	0.29 J	0.13 J	0.53 J
bis(2-Ethylhexyl)Phthalate	0.46 U	4	1.1	35	0.41 J	91 E	93 D	0.67 U
Butylbenzylphthalate	0.46 U	0.59 U	0.43 U	4.9 U	1.9 U	10 E	5.7 JD	0.67 U
Caprolactam	0.46 U	0.59 U	0.43 U	4.9 U	1.9 U	1.4	0.48 U	0.67 U
Carbazole	0.46 U	0.59 U	0.43 U	1.4 J	3.1	0.48 U	0.48 U	0.67 U
Chrysene	0.24 J	0.15 J	0.2 J	6.6	20 D	0.67	0.48 U	0.72
Dibenz(a,h)Anthracene	0.066 J	0.59 U	0.43 U	4.9 U	2	0.091 J	0.055 J	0.23 J
Dibenzofuran	0.46 U	0.59 U	0.43 U	4.9 U	2	0.48 U	0.48 U	0.67 U
Diethylphthalate	0.46 U	0.1 J	0.43 U	4.9 U	1.9 U	18 E	21 D	0.67 U
Di-n-Butylphthalate	0.46 U	0.59 U	0.43 U	2 J	1.9 U	0.69	0.6	0.67 U
Di-n-Octylphthalate	0.46 U	0.59 U	0.43 U	4.9 U	1.9 U	0.48 U	0.48 U	0.67 U
Fluoranthene	0.33 J	0.24 J	0.054 J	8.9	32 D	0.48 U	0.48 U	1.1
Fluorene	0.46 U	0.59 U	0.43 U	4.9 U	3	0.48 U	0.48 U	0.67 U
Indeno(1,2,3-cd)Pyrene	0.18 J	0.59 U	0.14 J	2 J	5	0.18 J	0.096 J	0.43 J
Isophorone	0.46 U	0.59 U	0.43 U	4.9 U	1.9 U	0.48 U	0.48 U	0.67 U
Naphthalene	11 D	0.078 J	4.3 D	3.1 J	2	22 E	31 D	1.2
N-Nitrosodiphenylamine (1)	NA	NA	0.16 J	4.9 U	1.9 U	NA	NA	0.41 J
Phenanthrene	0.23 J	0.29 J	0.12 J	11	30 D	0.83	2.3	0.22 J
Phenol	0.46 U	0.49 J	1.7	4.9 U	1.9 U	8.7 E	5.3 JD	0.67 U
Pyrene	0.29 J	0.23 J	0.4 J	17	46 D	0.48 U	0.48 U	0.51 J
Total TICS	10.75	21.81	67.67	996.9	1837	0	48.44	25.61
Total Semi-Volatiles	25.06	29.04	78.59	1112	2066	202.3	234	32.98



**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi -Volatiles**

Sample Location	SB131	SB132	SB133	SB134	SB135	SB136	SB137	SB138
Sample ID	SB131A3	SB132A3	SB133A3	SB134-2	SB135-2	SB136-2	SB137-2	SB138-2
Lab ID	0213604B	0213608B	0213611B	0211213A	0211215A	0211211A	0211217A	0213613A
Date Sampled	2/15/00	2/15/00	2/15/00	2/14/00	2/14/00	2/14/00	2/14/00	2/15/00
Depth (feet)	6-6.5	7-8	6-6.5	5-6	4.5-5.5	6-7	4.5-5.5	6-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	0.43 U	21 J	0.38 U	0.83 U	0.52 U	0.089 J	0.44 U	0.35 U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
2-Chlorophenol	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
2-Methylnaphthalene	0.43 U	81	0.38 U	0.11 J	0.11 J	0.85	1.1	0.35 U
2-Methylphenol	0.14 J	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
4-Methylphenol	0.089 J	45 U	0.38 U	0.83 U	0.52 U	0.11 J	0.33 J	0.35 U
4-Nitroaniline	1.1 U	110 U	0.94 U	2.1 U	1.3 U	1.7 U	1.1 U	0.87 U
Acenaphthene	0.43 U	120	0.38 U	0.13 J	0.29 J	0.11 J	0.077 J	0.35 U
Acenaphthylene	0.43 U	45 U	0.38 U	0.4 J	0.41 J	0.68 U	0.069 J	0.087 J
Acetophenone	0.2 BJ	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
Anthracene	0.43 U	15 J	0.38 U	0.45 J	0.74	0.14 J	0.16 J	0.09 J
Benzaldehyde	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.13 J	0.35 U
Benzo(a)Anthracene	0.43 U	16 J	0.38 U	1.5	1.7	0.68 U	0.33 J	0.32 J
Benzo(a)Pyrene	0.1 J	45 U	0.38 U	1.4	1.6	0.11 J	0.3 J	0.26 J
Benzo(b)Fluoranthene	0.048 J	45 U	0.38 U	1.2	1.3	0.11 J	0.23 J	0.24 J
Benzo(g,h,i)Perylene	0.43 U	45 U	0.38 U	1.6	0.8	0.68 U	0.31 J	0.15 J
Benzo(k)Fluoranthene	0.43 U	5.3 J	0.38 U	1	1.3	0.096 J	0.22 J	0.24 J
bis(2-Ethylhexyl)Phthalate	0.53	45 U	0.38 U	2.2 B	4.5 EB	0.47 JB	0.44 U	0.35 U
Butylbenzylphthalate	0.43 U	45 U	0.38 U	0.2 J	0.069 J	0.68 U	0.44 U	0.35 U
Caprolactam	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
Carbazole	0.43 U	12 J	0.38 U	0.26 J	0.15 J	0.68 U	0.092 J	0.064 J
Chrysene	0.061 J	15 J	0.38 U	1.8	1.8	0.17 J	0.39 J	0.37
Dibenz(a,h)Anthracene	0.43 U	45 U	0.38 U	0.62 J	0.32 J	0.68 U	0.13 J	0.057 J
Dibenzofuran	0.43 U	68	0.38 U	0.83 U	0.16 J	0.19 J	0.073 J	0.35 U
Diethylphthalate	0.43 U	45 U	0.38 U	0.83 U	0.14 J	0.68 U	0.44 U	0.35 U
Di-n-Butylphthalate	0.43 U	45 U	0.38 U	0.16 J	0.52 U	0.68 U	0.44 U	0.35 U
Di-n-Octylphthalate	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
Fluoranthene	0.072 J	120	0.38 U	2.8	3.4	0.39 J	0.77	0.75
Fluorene	0.43 U	68	0.38 U	0.11 J	0.35 J	0.12 J	0.13 J	0.35 U
Indeno(1,2,3-cd)Pyrene	0.061 J	45 U	0.38 U	1.5	0.79	0.68 U	0.31 J	0.15 J
Isophorone	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.68 U	0.44 U	0.35 U
Naphthalene	0.27 J	130 B	0.38 U	1.3	0.48 J	42 D	360 D	0.35 U
N-Nitrosodiphenylamine (1)	0.43 U	45 U	0.38 U	0.83 U	0.52 U	1.3	0.19 J	0.35 U
Phenanthrene	0.073 J	220	0.38 U	1.6	2.7	0.53 J	0.76	0.56
Phenol	0.43 U	45 U	0.38 U	0.83 U	0.52 U	0.31 J	0.056 J	0.35 U
Pyrene	0.2 J	84	0.38 U	2.4	2.6	0.23 J	0.65	0.59
Total TICS	6.26	133.7	8.167	39.94	25.84	39.84	163.4	2.04
Total Semi-Volatiles	7.904	979	8.167	60.48	47.05	86.7	530.6	5.968

**Table 12**  
**Subsurface Soil Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	SB139	SB140	SB141	SB142	SB143	TP13A
Sample ID	SB139-2	SB140-2	SB141-2	SB142-2	SB143-2	TP13A-2
Lab ID	0213615A	0323304A	0323306A	0211219A	0323302A	16477
Date Sampled	2/15/00	3/23/00	3/23/00	2/14/00	3/23/00	10/7/98
Depth (feet)	6-7	5-6	5.5-6	6-7	6-6.5	3-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1,1-Biphenyl	0.36 U	0.32 J	0.43 U	0.36 U	0.4 U	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	0.7 U
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	0.7 U
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	0.7 U
2,4-Dimethylphenol	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
2-Chlorophenol	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
2-Methylnaphthalene	0.081 J	0.47 J	0.43 U	0.36 U	0.4 U	0.076 J
2-Methylphenol	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
4-Methylphenol	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
4-Nitroaniline	0.91 U	5.1 U	1.1 U	0.89 U	1 U	1.7 U
Acenaphthene	0.048 J	2 J	0.43 U	0.36 U	0.4 U	0.7 U
Acenaphthylene	0.36 U	2.1	0.43 U	0.36 U	0.4 U	0.7 U
Acetophenone	0.36 U	2 U	0.43 U	0.36 U	0.4 U	NA
Anthracene	0.36 U	8.9	0.43 U	0.36 U	0.096 J	0.7 U
Benzaldehyde	0.36 U	2 U	0.43 U	0.36 U	0.4 U	NA
Benzo(a)Anthracene	0.063 J	30 D	0.3 J	0.043 J	0.21 J	0.096 J
Benzo(a)Pyrene	0.36 U	24 D	0.29 J	0.041 J	0.15 J	0.097 J
Benzo(b)Fluoranthene	0.046 J	30 D	0.29 J	0.042 J	0.18 J	0.098 J
Benzo(g,h,i)Perylene	0.36 U	7	0.099 J	0.36 U	0.049 J	0.7 U
Benzo(k)Fluoranthene	0.05 J	24 D	0.32 J	0.04 J	0.17 J	0.077 J
bis(2-Ethylhexyl)Phthalate	0.36 U	2 U	0.43 U	0.3 JB	0.4 U	0.7 U
Butylbenzylphthalate	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Caprolactam	0.36 U	2 U	0.43 U	0.36 U	0.4 U	NA
Carbazole	0.36 U	1.9 J	0.43 U	0.36 U	0.4 U	0.7 U
Chrysene	0.064 J	27 D	0.44	0.051 J	0.24 J	0.11 J
Dibenz(a,h)Anthracene	0.36 U	2 U	0.056 J	0.36 U	0.4 U	0.7 U
Dibenzofuran	0.36 U	2.4	0.43 U	0.36 U	0.4 U	0.7 U
Diethylphthalate	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Di-n-Butylphthalate	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Di-n-Octylphthalate	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Fluoranthene	0.11 J	40 D	0.43 J	0.079 J	0.51	0.7 U
Fluorene	0.36 U	3.5	0.43 U	0.36 U	0.051 J	0.7 U
Indeno(1,2,3-cd)Pyrene	0.36 U	8.8	0.12 J	0.36 U	0.069 J	0.7 U
Isophorone	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Naphthalene	0.33 J	0.98 J	0.43 U	0.36 U	0.06 J	1.9
N-Nitrosodiphenylamine (1)	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Phenanthrene	0.07 J	40 D	0.22 J	0.045 J	0.43	0.7 U
Phenol	0.36 U	2 U	0.43 U	0.36 U	0.4 U	0.7 U
Pyrene	0.081 J	63 D	0.65	0.066 J	0.4 J	0.096 J
Total TICS	0.582	6483	2.031	0.901	0.579	0
Total Semi-Volatiles	1.525	6800	5.246	1.308	3.194	2.55

## Subsurface Soil Samples

## Positive Analytical Results - Metals

Sample Location	Residential	Non-Residential	SB01	SB02	SB03	SB04	SB05	SB06	SB07	SB08	SB09	SB10	SB11
Sample ID	Direct	Direct	SB01-3	SB02-3	SB03-3	SB04-3	SB05-3	SB06-4	SB07-3	SB08-3	SB09-3	SB10-3	SB11-3
Lab ID	Contact	Contact	9712240	9712935	9712253	9712938	9712250	9712636	9712245	9712941	9712628	9712640	9711026
Date Sampled	Soil Cleanup	Soil Cleanup	7/10/97	7/16/97	7/10/97	7/16/97	7/10/97	7/15/97	7/10/97	7/16/97	7/14/97	7/15/97	6/24/97
Depth (feet)	Criteria	Criteria	5-6	6.5-7.5	5-6	3-4	5-6	5-6	5-6	3-4	3-5	4-6	3-3.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			6570	6050	12100	6940	4000	9090	5830	3800	4850	4570	5660
Antimony	14	340	7 J	5.5 U	23.1	6.7 U	31.2	7.7 J	5.4 U	5.6 J	8.1 J	57.4 J	5.7 UJ
Arsenic	20	20	408	50.1 J	1760	807 J	10900 J	182	779	699 J	1340	108	0 R
Barium	700	47000	1550 J	830	25900 J	308	416 J	5430 J	1510 J	602	2090 J	2140 J	1730
Beryllium	1	1	0.36 J	0.39 J	1.1 J	0.41 J	0.56 J	0.51 J	0.8 J	3.2	0.21 J	0.5 J	0.39 J
Cadmium	1	100	2.9 J	0.95 U	12 J	1.2 U	3.1 J	4.7	3.5 J	3.2	1 U	2.3	1.5
Calcium			37900	16800 J	25500	11400 J	52400	15700 J	19400	9900 J	39000 J	10900 J	0 R
Chromium	500	500	80.4	23.2	1340	35.4	252	2120 J	96.7	205	914 J	160 J	58.2 J
Cobalt			6.3 J	4.1 J	2 U	1.8 J	4.1 J	5.7 J	5.4 J	7.4 J	1.9 J	4.8 J	4.5 J
Copper	600	600	143 J	31.3 J	155 J	15.5 J	27.4 JB	131 J	52.8 J	61.3 J	39.9 J	269 J	67.2
Cyanide	1100	21000	1.4 J	0.73 JB	0.26 JB	0.19 JB	0.22 JB	0.39 J	0.2 JB	0.18 JB	0 R	0.27 J	0.5 JB
Iron			18400	13400	41100	15200	10200	25000 J	21400	16800	11800 J	23800 J	17900
Lead	400	600	512 S	6660	663 S	76.7	185	412	238	304	250	974	189
Magnesium			6330	2540	7090	7370	62000	2970	6680	9390	24300	2520	4740 J
Manganese			213 J	238	253 J	72.6	217 J	177 J	163 J	120	146 J	194 J	139 J
Mercury	14	270	0.52 J	0.22 J	2.8 J	0.27 J	0.76 J	14.2 J	1 J	0.49	0.56 J	0.68 J	0.62 J
Nickel	250	2400	17.8	10 J	40.1	6.1 J	10.7	36.6	15.3	18.9 J	8.1 J	17.3	13.7
Potassium			1580	1280	2330	3480	986 J	1400	1950	533 J	1080 J	572 J	1040 J
Selenium	63	3100	0.3 U	2	0.44 U	2.1	0.39 U	0.37 J	6.1	1.3	0.38 J	0.37 J	1.5
Silver	110	4100	0.8 J	0.64 U	2.4 J	0.78 U	1.2 J	1.8 J	1.5 J	1 J	1.2 J	1.1 J	0.67 UJ
Sodium			491 J	342 J	772 J	415 J	1060 J	0 R	312 J	655 J	0 R	0 R	0 R
Thallium	2	2	0.43 U	0.45 U	0.63 U	0.53 U	0.56 U	0.6 U	0.46 U	0.45 U	0.57 U	0.6 U	0.46 UJ
Vanadium	370	7100	21	16 J	44	28.7 J	10.2 J	41.6 J	27.1	15.6 J	16.9 J	19.1 J	22.6
Zinc	1500	1500	267 *	153 J	2710 J	68.3 J	290 J	871 J	395 J	264 J	193 J	507 J	207 J

300730

**Subsurface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB12	SB13	SB14	SB15	SB16	SB17	SB18	SB19	SB20	SB23	SB26
Sample ID	Direct	Direct	SB12-3	SB13-3	SB14-3	SB15-3	SB16-3	SB17-3	SB18-5	SB19-3	SB20-3	SB23-6	SB26-3
Lab ID	Contact	Contact	9712256	9712650	9712644	9712631	9712648	9712945	9712624	9712949	9712031	9712037	9712027
Date Sampled	Soil Cleanup	Soil Cleanup	7/10/97	7/15/97	7/15/97	7/14/97	7/15/97	7/17/97	7/14/97	7/17/97	7/8/97	7/8/97	7/7/97
Depth (feet)	Criteria	Criteria	5-6	5-6	6-8	4-6	6-7	5-6	6-7	5-6	5-6	5-6	7-8
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			2790	13600	4790	6190	4190	8290	5940	2590	6360	4910	6780
Antimony	14	340	8.8 J	6.3 UJ	6 UJ	5.9 J	15.9 J	26.7 J	6.3 UJ	6.2 U	6.6 J	74.5 J	5.6 J
Arsenic	20	20	62.7	25.9 J	75.2 J	77.4	0 NR	12300 J	165	24.7 J	1660 J	14000 J	11.5 J
Barium	700	47000	800	187 J	12500 J	1340 J	4610 J	1000	10200 J	15800	9650	351	82.6
Beryllium	1	1	0.51 J	0.69 J	0.42 J	0.44 J	0.37 J	0.54 J	0.51 J	0.28 J	0.8 J	0.46 J	0.43 J
Cadmium	1	100	3.6 J	1.2 J	1.9	1.1	1.3 U	2.8 U	2	1.1 U	3.2 J	2.4 U	2.4 J
Calcium			2320	12700 J	6250 J	47200 J	70800 J	82300 J	8020 J	2620 J	0 R	0 R	0 R
Chromium	500	500	57.5	64.8 J	154 J	190 J	805 J	3110	62.2 J	33.4	218 J	4550 J	26 J
Cobalt			5 J	3.7 J	1.5 U	5.2 J	5.8 J	7.1 J	1.5 U	1.5 U	4.6 J	4.1 J	4.6 J
Copper	600	600	113 J	52.6 J	104 J	280 J	61.8 J	370 J	43.5 J	15.4 J	60.1	70.7	20.8
Cyanide	1100	21000	0.17 JB	0.35 J	0.49 JB	0.2 B	0.84 JB	0.59 JB	0 R	0.19 JB	0.3 JB	0.47 JB	0.19 JB
Iron			22000	17400 J	22500 J	19200 J	11900 J	20700	36900 J	16500	17800	7560	17500
Lead	400	600	223	45.9	145	279	367	473	125	225	70.4	128	89.8
Magnesium			639 J	4930	2590	23700	45800	193000	1410	441 J	4010 J	185000 J	9960 J
Manganese			83.2 J	153 J	156 J	245 J	154 J	514	84 J	25.7	154	425	209
Mercury	14	270	1.9 J	0.52 J	0.36 J	0.13 J	0.41 J	0.93 J	0.64 J	0.11 J	1.8	0.65 J	0.27 J
Nickel	250	2400	16.8	16	11.2	15.9	12.4	9.3 J	13.8	9.6 J	17.3	7 U	11.6
Potassium			315 J	1730	709 J	1080	772 J	855 J	663 J	578 J	979 J	569 J	922 J
Selenium	63	3100	4.7	0.36 U	0.32 U	0.29 J	2.6	7.4	0.65 J	2.9	2.4 J	0.74 U	0.31 J
Silver	110	4100	1.3 J	1.1 J	1.4 J	1.5 J	1.1 J	1.9 U	1.1 J	0.72 U	1.3 J	1.6 J	0.65 J
Sodium			188 J	0 R	0 R	0 R	0 R	701 J	0 R	374 J	0 R	0 R	0 R
Thallium	2	2	0.44 U	0.62 U	0.55 U	0.49 U	0.67 U	1.3 U	0.6 U	0.53 U	0.56 U	1.1	0.45 U
Vanadium	370	7100	25	30 J	16.1 J	22.4 J	20.6 J	18.8 J	21.3 J	12.9 J	21.6	9.4 JB	18.1
Zinc	1500	1500	270 J	114 J	498 J	408 J	657 J	1200 J	276 J	474 J	691	1290	125

300731

**Subsurface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB29	SB30	SB30	SB31	SB32	SB33	SB36	SB38	SB39	SB40	SB40
Sample ID	Direct	Direct	SB29-3	SB30-1	SB30-3	SB31-3	SB32-3	SB33-4	SB36-6	SB38-3	SB39-1	SB40-1	SB40-3
Lab ID	Contact	Contact	9712235	9712038	9712040	9710635	9710638	9710857	9710854	9710849	9710846	9710612	9710614
Date Sampled	Soil Cleanup	Soil Cleanup	7/9/97	7/8/97	7/8/97	6/17/97	6/17/97	6/19/97	6/19/97	6/19/97	6/19/97	6/16/97	6/16/97
Depth (feet)	Criteria	Criteria	5-6	2-2.5	7-8	4-5	3.5-4	5.5-6	5.5-6	5-6	2-3	2-2.5	9.5-10
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			4160	4590	7910	2790	2710	4370 J	3260 J	3300 J	4140 J	4740	3270
Antimony	14	340	44.7	5 J	198 J	6 UJ	5.3 UJ	6.9 UJ	5.9 UJ	5.6 UJ	5.6 UJ	5.5 UJ	5.2 UJ
Arsenic	20	20	71.2	15.7 J	110 J	189	19.5	144	174	18.1	30.7	55.4 J	18.1
Barium	700	47000	950 J	71.1	4680	761	793	1260	923	2530	5480	21.8	25.4 J
Beryllium	1	1	0.29 J	0.26 J	0.32 J	0.93 J	0.53 J	0.75 J	0.83 J	0.37 J	0.57 J	0.26 J	0.31 J
Cadmium	1	100	5.4 J	0.9 J	10.5 J	1 U	0.92 U	1.2 U	1 U	1.7 J	0.96 U	0.96 U	0.9 U
Calcium			14200	0 R	0 R	20300 J	3430 J	2610	13100	9350	7600	2430	1130 J
Chromium	500	500	32.2	18.5 J	232 J	76.8	83.1	23.3 J	331	33.5	31.1	14.9 J	7 J
Cobalt			5.7 J	4.3 J	22.4	6.5 J	7 J	6.6 J	6.8 J	4.6 J	4.2 J	1.4 U	2.1 J
Copper	600	600	309 J	14 J	179	34.2	60.5	72.3 J	45.9 J	24 JB	19.4 JB	7.1	3.7 JB
Cyanide	1100	21000	0.49 JB	0.2 JB	0.39 JB	0.89 JB	0.32 B	0.26 B	0.24 B	0.68 B	0.26 B	0.21 B	0.2 B
Iron			37500	11000	147000 J	11300 J	12100 J	12300 J	11000 J	10700 J	9730 J	10700 J	3570 J
Lead	400	600	1470	62.9	358	63.3	113	187	121	1030	119	56.7 J	4 J
Magnesium			4500	1440 J	2470 J	494 J	759 J	490 J	984 J	849 J	1040 J	1420	774 B
Manganese			221 J	99.4	312	136 J	78 J	78.4 J	68.7 J	69.7 J	74.7 J	35.4 J	21.4 J
Mercury	14	270	0.81 J	0.26 J	0.55 J	0.14 B	1.7 J	0.52 J	0.38 J	0.23 J	0.14 J	0.15 B	0 R
Nickel	250	2400	33	8.1	46.6	18.2	15.8	14	18.3	11	11.2	4.6 B	5.2 J
Potassium			761 J	926 J	904 J	323 J	595 J	503 J	640 J	457 J	751 J	877 J	300 J
Selenium	63	3100	3.8 S	0.29 U	0.28 U	3.9	0.32 U	2.6	2.5 J	0.38 J	0.43 J	0.31 U	0.3 U
Silver	110	4100	0.78 J	0.58 J	0.85 J	0.7 U	0.62 U	0.81 U	1.2 J	0.66 U	0.65 U	0.65 U	0.61 U
Sodium			393 J	0 R	0 R	0 R	0 R	2720	3040	335 J	268 B	0 R	0 R
Thallium	2	2	0.49 U	0.42 U	0.41 U	0.52 U	0.46 U	0.55 U	0.46 U	0.47 U	0.48 U	0.44 U	0.42 U
Vanadium	370	7100	19.2	13.7	28.4	16.6 J	10.2 J	18.6	18.8	10.1 J	12.7	25.2 J	6.9 J
Zinc	1500	1500	1160 J	278	945	156	275	158 J	87.7 J	136 J	196 J	30.9	14.3

300732

**Subsurface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB41	SB42	SB43	SB44	SB45	SB46	SB47	SB48	SB49	SB49	SB51
Sample ID	Direct	Direct	SB41-4	SB42-5	SB43-3	SB44-3	SB45-3	SB46-3	SB47-4	SB48-4	SB49-1	SB49-2	SB51-1
Lab ID	Contact	Contact	9710843	9710619	9710622	9710644	9710626	9710641	9710632	9713212	9710859	9710860	9713145
Date Sampled	Soil Cleanup	Soil Cleanup	6/18/97	6/16/97	6/16/97	6/17/97	6/16/97	6/17/97	6/17/97	7/22/97	6/19/97	6/19/97	7/21/97
Depth (feet)	Criteria	Criteria	4.5-5	3.5-4	3.5-4	5.5-6	7.5-8	7-7.5	7.5-8	7-7.5	2-3	5-5.5	5.5-6
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			3620 J	3580	15900	2350	5400	3220	2280	3920 J	3280 J	4700 J	4660 J
Antimony	14	340	5.4 UJ	5.2 UJ	7.8 UJ	6.1 UJ	7.8 UJ	7.4 UJ	5.1 UJ	5.5 UN	12.7 B	5.9 UJ	5.8 J
Arsenic	20	20	4.8	126	79.5	9.6	26.8	21.8	5.2	32.3	16.7	18.4	183
Barium	700	47000	48.8	24.6 J	206	95.4	137	59.1 J	24.9 J	31.6 J	224	129	425 J
Beryllium	1	1	0.3 J	0.21 J	0.78 J	0.31 J	1.1 J	0.18 J	0.29 J	0.17 J	0.75 J	0.52 J	0.48 J
Cadmium	1	100	0.93 U	0.89 U	1.3 U	1.1 U	1.3 U	1.3 U	0.88 U	0.96 UJ	11.2 J	3.5 J	1.9 J
Calcium			1020 J	10300 J	80500 J	19900 J	9830 J	13500 J	1170 J	2170 J	12100	9530	21000 J
Chromium	500	500	8.2 J	10.1 J	47.3	32	80.9	40.6	6.4 J	24.5	101	66.3	68
Cobalt			2.5 J	1.7 J	8.4 J	4.1 J	6.3 J	6 J	2.6 J	3.1 J	6.6 J	8.2 J	7.6 J
Copper	600	600	6 B	5.4	122	34.2	96.2	59.7	5.1 JB	0 R	41.5 J	58.7 J	0 R
Cyanide	1100	21000	0.2 B	0.27 B	0.3 B	0.23 B	0.32 B	0.35 B	0.19 B	0.23 B	2.9	0.56 B	11.2 J
Iron			7000 J	7290 J	13400 J	11100 J	8960 J	7280 J	3040 J	8490 J	8920 J	10100 J	18200 J
Lead	400	600	41.7	7.8 J	70 J	6 J	37.3	71.2	14.4 J	20.4	192	126	152
Magnesium			878 J	2340	7890	9020	1370 J	1920	582 J	1020 J	1200	795 J	2900
Manganese			68.5 J	41.8 J	178 J	66.8 J	58.1 J	74 J	17.6 J	39.2 J	72 J	88.2 J	128 J
Mercury	14	270	0.09 J	0.09 B	0.08 B	0.05 B	0.1 B	0 R	0 R	0.06 J	0.68 J	0.44 J	0.17 J
Nickel	250	2400	4.7 J	2.6 U	43.5	9.4 J	16.6	16.7	4.9 J	5.8 J	10.6	14.2	14.2
Potassium			551 J	510 J	4070	352 J	375 J	722 J	267 J	1050 J	571 J	512 J	620 J
Selenium	63	3100	0.3 J	0.3 U	3.4	0.34 U	2.9	3.3	0.28 U	0.32 U	0.34 U	0.32 U	0.38 J
Silver	110	4100	0.63 U	0.6 U	2 J	0.71 U	0.91 U	0.86 U	0.6 U	0.65 UJ	0.68 U	0.68 U	0.67 J
Sodium			202 B	0 R	0 R	0 R	0 R	0 R	0 R	183 J	741 JB	472 JB	490 J
Thallium	2	2	0.43 U	0.42 U	0.65 U	0.48 U	0.6 U	0.61 U	0.4 U	0.46 U	0.49 U	0.45 U	0.48 U
Vanadium	370	7100	9.9 J	15.8 J	35.7 J	16.7 J	15.5 J	13.1 J	4.6 J	15.4 J	11.1 J	14.3	20.7 J
Zinc	1500	1500	25.6 J	61.1	158	36.9	76.8	126	15.9	29.9 J	321 J	167 J	318 J

300733

**Subsurface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB52	SB53	SB54	SB55	SB56	SB57	SB57	SB58	SB59	SB60	SB61
Sample ID	Direct	Direct	SB52-1	SB53-1	SB54-2	SB55-1	SB56-2	SB57-1	SB57-2	SB58-1	SB59-1	SB60-1	SB61-1
Lab ID	Contact	Contact	9713144	9713142	9713141	9713138	9713205	9713207	9713208	9713209	9713213	9713147	9713214
Date Sampled	Soil Cleanup	Soil Cleanup	7/21/97	7/21/97	7/21/97	7/21/97	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97	7/21/97	7/22/97
Depth (feet)	Criteria	Criteria	5-5.5	3.5-4	7.5-8	3.5-4	6.5-7	6.5-7	6.5-7	5.5-6	5.5-6	3.5-4	3.5-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			2970 J	2470 J	5090 J	6180 J	3840 J	3670 J	2850 J	2800 J	2980 J	4410 J	4970 J
Antimony	14	340	5.7 J	5.6 J	5.7 J	6 J	6.6 UJ	6 UJ	6 UJ	6.2 UJ	14 J	5.9 J	15.3 J
Arsenic	20	20	218	114	29.3	39.2	47	68.5	110	126	157	1120	168
Barium	700	47000	398 J	175 J	122 J	1610 J	195 J	117 J	106 J	78 J	216 J	1510 J	497 J
Beryllium	1	1	0.58 J	0.37 J	0.2 J	0.66 J	0.3 J	0.28 J	0.35 J	0.17 J	0.44 J	0.35 J	0.7 J
Cadmium	1	100	0.99 J	0.96 J	0.98 J	1 J	1.1 UJ	1 UJ	1 UJ	1.5 J	1.4 J	4.5 J	3.7 J
Calcium			21400 J	9390 J	2190 J	9510 J	4770 J	3460 J	2800 J	1810 J	11600 J	10100 J	8790 J
Chromium	500	500	51.5	26.9	13	44.4	105	71.3	66.4	77.2	235	42.7	156
Cobalt			9.3 J	4.6 J	3 J	5.5 J	5.6 J	5.5 J	5.7 J	5.5 J	6.4 J	4.6 J	7.1 J
Copper	600	600	0 R	0 R	0 R	0 R	0 R	0 R	0 R	0 R	0 R	0 R	0 R
Cyanide	1100	21000	0.21 JB	0.88 JB	0.36 JB	0.59 JB	0.27 B	0.18 B	0.24 B	0.28 B	0.24 B	0.27 JB	0.37 B
Iron			5360 J	5000 J	8150 J	13700 J	6850 J	7740 J	8220 J	9010 J	16800 J	20800 J	32800 J
Lead	400	600	82.9	179	24.8	381	64.8	62.3	72.2	30.6	266	421	835 J
Magnesium			1340	805 J	1090 J	709 J	802 J	522 J	436 J	411 J	1570	3820	1770
Manganese			97.1 J	51.3 J	61.2 J	91 J	58.1 J	50.8 J	56.8 J	45 J	76.4 J	150 J	254 J
Mercury	14	270	0.15 J	0.21 J	0.11 J	0.17 J	0.12 J	0.15 J	0.21 J	0.13 J	0.27 J	0.66 J	1 J
Nickel	250	2400	20.1	13.5	6.3 J	19.2	10 J	11.4	13	10.5	17.4	10.6	26.6
Potassium			281 J	320 J	845 J	331 J	424 J	338 J	302 J	438 J	644 J	1780	814 J
Selenium	63	3100	0.32 U	0.33 U	0.32 U	0.32 U	0.51 J	0.41 J	0.41 J	0.42 J	0.42 J	0.34 U	0.55 J
Silver	110	4100	0.67 J	0.65 J	0.66 J	0.7 J	0.77 UJ	0.7 UJ	0.7 UJ	0.72 U	0.96 J	0.68 J	0.78 UJ
Sodium			322 J	329 J	278 J	376 J	405 J	341 J	252 J	241 J	2230 J	823 J	1510 J
Thallium	2	2	0.46 U	0.47 U	0.46 U	0.46 U	0.54 UJ	0.48 UJ	0.48 U	0.49 UJ	0.5 U	0.48 U	0.55 U
Vanadium	370	7100	9.3 J	10.6 J	10.9 J	16.5 J	11.6 J	13.2 J	12 J	13.1 J	21.8 J	30.1 J	17.3 J
Zinc	1500	1500	258 J	47.3 J	31.7 J	131 J	82.1 J	145 J	154 J	147 J	149 J	1520 J	755 J

300734

## Subsurface Soil Samples

## Positive Analytical Results - Metals

Sample Location	Residential	Non-Residential	SB105	SB106	SB107	SB108	SB109	SB110	SB111	SB113	SB114	SB114	SB115
Sample ID	Direct	Direct	SB105-3	SB106-3	SB107-3	SB108-3	SB109-3	SB110-3	SB111-4	SB113-3	SB114-3	SB114-4	SB115-3
Lab ID	Contact	Contact	16275	16276	16194	16277	16278	16623	16625	16492	16493	16494RE	16495
Date Sampled	Soil Cleanup	Soil Cleanup	10/5/98	10/5/98	10/2/98	10/5/98	10/5/98	10/8/98	10/8/98	10/6/98	10/7/98	10/7/98	10/6/98
Depth (feet)	Criteria	Criteria	4-5	4-5	5-6	5-6	4.5-5.5	3-4	4-5	3-4	4-5	4-5	6.7-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			1200 J	4770 J	5710 J	4460 J	4010 J	4890	3450	5510	5610	5360	6300
Antimony	14	340	0.58 J	6.4 J	3 J	0.41 UJ	0.64 J	14	4.9 B	26.3 *	31.3 *	32.4 *	13.2 *
Arsenic	20	20	9.7 J	18 J	38.8 J	3 J	5.2 J	376 N	50.9 N	23.1 *	46.1 *	38.6 *	2760 *
Barium	700	47000	1250 J	5040 J	6650 J	128 J	6600 J	274 *	1750 *	1410 E*	440 E*	330 E*	14400 E*
Beryllium	1	1	0.21 J	0.46 J	0.5 J	0.38 J	0.3 J	1.3	0.49 B	1.3	0.57 B	0.38 B	0.51 B
Cadmium	1	100	0.03 UJ	6.8 J	4.3 J	3.9 J	0.26 J	0.03 U	0.03 U	0.03 U	0.06 U	0.04 U	0.03 U
Calcium			1510 J	4420 J	4290 J	2450 J	8260 J	20800	2080	2210	12600	12800	27100
Chromium	500	500	4.9 J	9.1 J	23.5 J	8.7 J	12.5 J	45.7 *	81.5 *	30.4	556	538	108
Cobalt			1.5 J	1.7 J	0.06 UJ	2.7 J	0.06 UJ	12.4	10	9.5	27.3	25.7	0.06 U
Copper	600	600	12.1 J	84.1 J	92.5 J	6.9 J	7.3 J	90.6	53.7	236	137	124	23.2
Cyanide	1100	21000	0 R	0 R	0 R	0 R	0 R	0.6 U*	0.74 *	0.63 U	0.88 U	0.74 U	0.6 U
Iron			12100 J	16700 J	17700 J	7360 J	9330 J	18700 *	26500 *	13100	19400	19800	16800
Lead	400	600	148 J	8960 J	2340 J	52.4 J	69.6 J	170 N*	488 N*	371 *	2080 *	1900 *	130 *
Magnesium			86.4 J	1200 J	688 J	938 J	1660 J	5330	435 B	407 B	1840	2220	10900
Manganese			34.3 J	204 J	109 J	38.6 J	149 J	310 N*	48.3 N*	35.3 N	186 N	193 N	223 N
Mercury	14	270	0.12 U	0.41 J	0.78	0.84	0.19	1.9 N	0.18 N	0.26	0.7	0.58	1.4
Nickel	250	2400	4.8 J	15.8 J	11.3 J	6.1 J	4.5 J	19.1	29.2	17.3	19.3	15.5	7.9
Potassium			127 UJ	377 J	587 J	485 J	1170 J	621 B	615 B	1670	1100 B	1020	1450
Selenium	63	3100	1.3 J	2.8 J	0.62 UJ	0.81 J	0.66 J	2.7	3.4	1.9	4.7	3.6	2
Silver	110	4100	0.31 UJ	0.37 J	0.55 J	2.7 J	0.25 J	0.3 UN	0.27 UN	0.31 U	0.59 U	0.38 U	0.6 B
Sodium			314 J	194 J	475 J	177 UJ	155 UJ	460 B	591 B	4000	1140 B	979	533 B
Thallium	2	2	0.63 UJ	0.54 UJ	0.54 UJ	0.58 UJ	0.51 UJ	0.52 U	0.47 U	0.55 U	1 U	0.66 U	0.55 U
Vanadium	370	7100	5.9 J	13.2 J	18.3 J	10.7 J	15.7 J	26 E	18.8 E	16.8 E	28.7 E	31.3 E	18.9 E
Zinc	1500	1500	152 J	3800 J	2200 J	563 J	628 J	357 N	257 N	91 E*	496 E*	436 E*	507 E*

300735



**Subsurface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB116	SB118	SB122	SB124	SB126	SB126	SB127	SB127	SB129
Sample ID	Direct	Direct	SB116-3	SB118-3	SB122-3	SB124-3	SB126-1	SB126-3	SB127-1	SB127-3	SB129-3
Lab ID	Contact	Contact	16279	991204712C	991210407B	991210428B	991210411B	991210413B	991210408B	991210410B	991210422B
Date Sampled	Soil Cleanup	Soil Cleanup	10/5/98	12/1/99	12/7/99	12/8/99	12/7/99	12/7/99	12/7/99	12/7/99	12/8/99
Depth (feet)	Criteria	Criteria	4.4-5.1	8-8.5	6.5-7	6.5-7	5-5.5	7.5-8	5-6	8.5-9	7-7.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			1380 J	4880 *	1680	7010	5970	6220	5440	3300	10300
Antimony	14	340	2.3 J	10.8	12.2 B	4.4 B	80.5	9.3 B	20.8	0.82 B	7.4 B
Arsenic	20	20	4.4 JB	99.9	2960	439	392	520	1130	7.6	303
Barium	700	47000	1290 J	1270 E	440 *	4820 *	12600 *	10100 *	12900 *	42.1 *	3650 *
Beryllium	1	1	0.04 J	0.21 B	0.12 U	0.39 B	0.09 U	0.48 B	0.48 B	0.27 B	1.2
Cadmium	1	100	4.4 J	2.4	0.61 B*N	1.9 *N	19.7 *N	8.3 *N	35.2 *N	0.081 *N	5.3 *N
Calcium			616 J	38100	292000 *	16500 *	41300 *	13700 *	124000 *	201 B*	13700 *
Chromium	500	500	6.3 J	69.9	38.3 *	10.6 *	3960 *	136 *	507 *	7.7 *	199 *
Cobalt			1.7 J	2.3 B	1.5 B	0.17 U	0.12 U	0.12 U	0.27 B	2.4 B	1.2 B
Copper	600	600	9.3 J	105	30.5	9.4	64.7	17.8	37.9	3.2 B	32.8
Cyanide	1100	21000	0 R	0.25 B	3.8 N	0.06 UN	0.08 UN	0.08 UN	0.15 BN	0.13 BN	0.06 UN
Iron			20900 J	54600 *	3030	38600	26200	24900	17100	3370	35800
Lead	400	600	142 J	233 *	23.5	674	689	330	448	4.3	264
Magnesium			166 J	4940	63500	5160	6310	6080	22400	727 B	4280
Manganese			86.7 J	262 *	166 *N	264 *N	267 *N	125 *N	365 *N	28.3 *N	301 *N
Mercury	14	270		0.51	0.88	0.09 U	25.6	0.1 U	4.9	0.088 U	0.088 U
Nickel	250	2400	2.6 J	14.5	3 B	2 B	17	9.1	11.2	5.6 B	9.9
Potassium			222 J	447 B	128 B	386 B	578 B	335 B	559 B	366 B	1500
Selenium	63	3100	4.4 J	0.75 U	1.2 UN	1.3 UN	0.92 UN	0.87 UN	1.1 N	0.92 UN	0.65 UN
Silver	110	4100	0.21 UJ	0.22 B	0.23 U	0.24 U	0.41 B	0.16 U	0.26 B	0.17 U	0.12 U
Sodium			128 UJ	111 B	174 B	127 B	827 B	857 B	352 B	181 B	279 B
Thallium	2	2	0.42 UJ	3	1.2 U	1.3 U	0.92 U	0.87 U	0.99 U	0.92 U	0.65 U
Vanadium	370	7100	14.1 J	16.6	5.1 B	8.8 B	0.14 U	8.4 B	12.2	6.8 B	10
Zinc	1500	1500	597 J	458	79.2 *	1400 *	6730 *	3850 *	2220 *	22.1 *	3150 *

300736

**Subsurface Soil Samples**  
**Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	SB129	SB130	SB131	SB132	SB132	SB133	SE01	SE01	SE03
Sample ID	Direct	Direct	SB129-4	SB130-3	SB131-3	SB132-3	SB132-4	SB133-3	SE01-1	SE01-2	SE03-1
Lab ID	Contact	Contact	991210423B	991210419B	991210416B	991204713C	991204714C	991204715C	9714169	9714170	9714469
Date Sampled	Soil Cleanup	Soil Cleanup	12/8/99	12/7/99	12/7/99	12/1/99	12/1/99	12/1/99	8/5/97	8/5/97	8/12/97
Depth (feet)	Criteria	Criteria	7-7.5	6-6.5	6-6.5	7.5-8.5	7.5-8.5	6-6.5	2-3	2-3	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			5950	2220	6170	7760 *	5490 *	3100 *	6500 J	6070 J	9520 J
Antimony	14	340	5.7 B	61.8	5.8 B	1.6 B	1.5 B	1 B	5.5 U	5.8 U	9.2 J
Arsenic	20	20	351	5070	106	110	79.7	9	19.4 J	23 J	108
Barium	700	47000	5230 *	197 *	4250 *	255 E	315 E	36.9 E	3440 J	3770 J	7710 J
Beryllium	1	1	0.65	0.11 U	0.33 B	0.8 B	0.45 B	0.26 B	0.37 J	0.37 J	0.59 JB
Cadmium	1	100	5.6 *N	0.58 B*N	2.7 *N	0.16 U	0.086 U	0.077 U	1.8 J	2.1 J	28.6
Calcium			56400 *	145000 *	7300 *	4970	4610	1080	5470	4810	9500
Chromium	500	500	153 *	769 *	48.9 *	22	21.8	7.1	95	92.1	159
Cobalt			0.085 U	2.5 B	0.091 U	9.2 B	5 B	1.8 B	4.5 J	3.4 J	10.8 J
Copper	600	600	32.7	634	45.9	10.7	10	1.4 B	190 J	102 J	324
Cyanide	1100	21000	0.06 UN	0.31 BN	0.06 UN	0.12 U	0.08 U	0.11 B	0.3 B	0.41 B	0.18 J
Iron			21400	9820	44500	10200 *	10100 *	10100 *	20100	17500	63300 J
Lead	400	600	165	178	354	34.3 *	41.1 *	10.8 *	645	866	375
Magnesium			15700	51600	2550	2490	2400	574	1250	1200	2980
Manganese			187 *N	212 *N	181 *N	94.8 *	84.9 *	20.7 *	158	135	405
Mercury	14	270	0.082 U	0.75	0.077 U	0.15 U	0.1 U	0.083 U	1.1 J	1.1 J	0.5 J
Nickel	250	2400	7.8	3.6 B	6.8	12.5 B	8.2	3 B	19.8	29.1	295
Potassium			1030	148 B	310 B	410 B	587 B	141 B	1120	1180	1590
Selenium	63	3100	0.64 UN	1.1 UN	0.99 N	1.8 U	0.98 U	0.88 U	1.9	2	1.8 J
Silver	110	4100	0.12 U	0.53 B	0.13 U	0.34 U	0.19 U	0.17 U	0.64 UJ	0.67 UJ	1.9 J
Sodium			149 B	201 B	142 B	155 U	89.1 U	77.2 U	223 J	261 J	469 JB
Thallium	2	2	0.64 U	1.1 U	1.3 B	1.8 U	0.98 U	0.88 U	0.45 U	0.44 U	0.46 U
Vanadium	370	7100	7.9	1.2 B	7.4	23.7	16.7	7.7 B	32.4 J	34.7 J	31.2 J
Zinc	1500	1500	3960 *	393 *	1550 *	40.8	44.1	9.5	399 J	416 J	776 J

300737

**Subsurface Soil Samples  
Positive Analytical Results - Metals**

Sample Location	Residential	Non-Residential	TP01	TP05	TP06	TP09	TP10	TP13	TP14	TP17	TP18	TP20
Sample ID	Direct	Direct	TP01-1	TP05-1	TP06-1	TP09-1	TP10-1	TP13-1	TP14-1	TP17-1	TP18-1	TP20-1
Lab ID	Contact	Contact	9714168	9714171	9714172	9714315	9714316	9714317	9714319	9714464	9714465	9714466
Date Sampled	Soil Cleanup	Soil Cleanup	8/4/97	8/5/97	8/6/97	8/7/97	8/7/97	8/8/97	8/8/97	8/11/97	8/11/97	8/12/97
Depth (feet)	Criteria	Criteria	3-4	3-4	3-4	3-4	4-5	3-4	3-4	4-5	4-5	3.5-4.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			3380 J	5830 J	6540 J	5050 J	8810 J	8710 J	3710 J	7050 J	1730 J	3150 J
Antimony	14	340	5.4 U	5.7 J	5.4 U	23.8	15.5 J	55.4	5.7 U	6.2 U	5.8 U	7.3 U
Arsenic	20	20	31.8 J	3.5 J	838 J	71.2 J	173 J	3300 J	26.6 J	259	971	35
Barium	700	47000	11300 J	435 J	2880 J	3380 J	3490 J	5950 J	10700 J	1130 J	1640 J	8560 J
Beryllium	1	1	0.25 J	0.08 J	0.56 J	0.61 J	0.61 J	0.68 J	0.73 J	0.73 JB	1.1 JB	0.64 JB
Cadmium	1	100	3.2 J	47.4	2.9 J	8 J	5.2 J	1.3 UJ	0.98 UJ	2.5	0.99 U	4.4
Calcium			2220	3030	18100	10400	8600	45100	2750	17200	14900	13600
Chromium	500	500	33.6	158	82.9	212 J	449	16000	32.1	463	54.5	11
Cobalt			1.7 J	3.7 J	6.6 J	13.3	7.9 J	12.3 J	2.7 J	6.2 J	6.3 J	8.3 J
Copper	600	600	94.2 J	38 J	55.2 J	212 E	155 J	126 J	49.1 J	27.8	43.5	28 JB
Cyanide	1100	21000	0.37 B	0.64 JB	1.1 JB	0.99 JB	0.32 B	0.32 B	0.21 B	11.4	0.62	0.88
Iron			31500	23100	15300	30200	36600	17000	23400	24700 J	19300 J	32100 J
Lead	400	600	385	1050	493	985	530	654	105	125	39.8	125
Magnesium			666 J	648 J	6230	2060	2850	11400	512 J	4580	1490	675 J
Manganese			132	153	169	223	236	492	40	243	59.4	95.8
Mercury	14	270	0.5 J	2.3 J	1.1 J	1.6 J	3.9 J	1.4 J	0.05 J	1.2 J	0.95 J	0.08 J
Nickel	250	2400	12.9	14.8	13.9	20.4	39.7	28.5	18.5	18.2	12.7	20
Potassium			694 J	288 J	2040	775 J	2070	1790	550 J	1740	261 J	450 J
Selenium	63	3100	2.9	1.8	2	2	2.8	3	2.2	2.3 J	4	5.1
Silver	110	4100	0.62 UJ	0.59 UJ	0.66 J	0.81 J	0.96 J	0.91 UJ	0.66 UJ	0.74 J	0.95 J	0.99 J
Sodium			161 J	162 J	498 J	231 J	492 J	413 J	271 J	673 JB	291 JB	292 JB
Thallium	2	2	0.44 U	0.41 U	0.43 U	0.44 U	0.58 U	0.62 UW	0.44 UW	0.48 U	0.47 U	0.59 U
Vanadium	370	7100	22.8 J	15.4 J	22.1 J	28.3 J	84.3 J	12.7 J	21.6 J	21.7 J	10.1 J	16.2 J
Zinc	1500	1500	338 J	341 J	357 J	759 J	1000 J	1020 J	291 UJ	535 J	156 J	529 J

300738

## Subsurface Soil Samples

## Positive Analytical Results - Metals

Sample Location	Residential	Non-Residential	TP21	TP24
Sample ID	Direct	Direct	TP21-2	TP24-1
Lab ID	Contact	Contact	9714468	9714725
Date Sampled	Soil Cleanup	Soil Cleanup	8/12/97	8/13/97
Depth (feet)	Criteria	Criteria	4-5	3-4
Units	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			7010 J	4720
Antimony	14	340	16.6	7.7 J
Arsenic	20	20	1180	656
Barium	700	47000	12200 J	3870 J
Beryllium	1	1	0.71 JB	0.75 J
Cadmium	1	100	10.6	6.8 J
Calcium			31000	35100
Chromium	500	500	213	32.5 J
Cobalt			5.8 J	7.6 J
Copper	600	600	98.6	0 R
Cyanide	1100	21000	0.2 J	0.14 J
Iron			25000 J	20600 J
Lead	400	600	355	194
Magnesium			5450	7660 J
Manganese			269	91.8
Mercury	14	270	0.82 J	0.18 J
Nickel	250	2400	29.5	20
Potassium			860 J	611 J
Selenium	63	3100	2.5 J	2.2
Silver	110	4100	1.4 J	0.75 J
Sodium			3420 J	358 J
Thallium	2	2	0.52 U	0.51 U
Vanadium	370	7100	17.5 J	15.6 J
Zinc	1500	1500	2920 J	2520

**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides/PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB01	SB02	SB03	SB04	SB05	SB06	SB07	SB08
Sample ID	Direct	Direct	Groundwater	SB01-3	SB02-3	SB03-3	SB04-3	SB05-3	SB06-4	SB07-3	SB08-3
Lab ID	Contact	Contact	Soil	9712240	9712935	9712253	9712938	9712250	9712636	9712245	9712941
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/10/97	7/16/97	7/10/97	7/16/97	7/10/97	7/15/97	7/10/97	7/16/97
Depth (feet)	Criteria	Criteria	Criteria	5-6	6.5-7.5	5-6	3-4	5-6	5-6	5-6	3-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.068 PDJ	0.0039 U	0.13 PDJ	0.0047 U	0.017 PJ	0.054 P	1.4 D	0.017 PJ
4,4'-DDE	2	9	50	0.016 PJ	0.0048 PJ	0.06 PJ	0.023 PJ	0.021 PJ	0.06 P	0.13 PDJ	0.01 PJ
4,4'-DDT	2	9	500	0.029	0.0039 U	0.006 PJ	0.0012 JP	0.0047 U	0.012 J	0.0038 U	0.012 PJ
Aldrin	0.04	0.17	50	0.0019 U	0.0032 PJ	0.087 PDJ	0.013 PJ	// D	0.027 P	0.23 D	0.0063 PJ
alpha-BHC				0.0019 U	0.0019 U	0.0067 PJ	0.00065 JP	0.012 PJ	0.00067 JP	0.0027	0.00027 JP
alpha-Chlordane				0.36 PDJ	0.0019 U	0.27 PDJ	0.017 PJ	0.38 PDJ	0.22 PD	0.22 D	0.084 PDJ
Aroclor-1016				0.038 U	0.039 U	3.9 D	0.047 U	16 D	0.043 U	0.038 U	0.039 U
Aroclor-1221				0.076 U	0.077 U	0.11 U	0.094 U	0.093 U	0.086 U	0.076 U	0.078 U
Aroclor-1232				0.038 U	0.039 U	0.054 U	0.047 U	0.047 U	0.043 U	0.038 U	0.039 U
Aroclor-1242				0.038 U	0.039 U	0.054 U	0.047 U	0.047 U	0.043 U	0.038 U	0.039 U
Aroclor-1248				0.038 U	0.039 U	0.054 U	0.047 U	0.047 U	0.043 U	0.038 U	0.039 U
Aroclor-1254				0.038 U	0.039 U	0.054 U	0.18 PJ	0.0047 U	3.6 D	0.038 U	1.3 PDJ
Aroclor-1260				2 PDJ	0.039 U	0.78	0.095 PJ	0.55 PJ	1.4 PD	1.5 PDJ	0.45 PJ
beta-BHC				0.0019 U	0.0019 U	0.0027 U	0.0023 U	0.0023 U	0.0022 U	0.0019 U	0.0019 U
delta-BHC				0.0019 U	0 R	0.0027 U	0 R	0.0023 U	0.0022 U	0.0019 U	0 R
Dieldrin	0.042	0.18	50	0.0038 U	0.0039 U	0.014 PJ	0.0039 JP	0.032	0.034 P	0.0038 U	0.0022 JP
Endosulfan I				0.0019 U	0.0019 U	0.0027 U	0.0023 U	0.0023 U	0.0022 U	0.0019 U	0.0019 U
Endosulfan II				0.25 D	0.0039 U	0.077	0.0047 U	0.049 PJ	0.0043 U	0.1 PDJ	0.0039 U
Endosulfan sulfate				0.0038 U	0.0039 U	0.0054 U	0.0047 U	0.0047 U	0.0043 U	0.0038 U	0.0039 U
Endrin	17	310	50	0 R	0.0023 JP	0 R	0.0047 U	0 R	0.0043 UJ	0 R	0.0039 U
Endrin aldehyde				0.0038 U	0.0039 U	0.0054 U	0.0047 U	0.0047 U	0.0043 U	0.0038 U	0.0039 U
Endrin ketone				0.0038 U	0.0039 U	0.0054 U	0.0047 U	0.0074 PJ	0.0043 U	0.0038 U	0.0039 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0019 U	0.0019 U	0.0027 U	0.00056 JP	0.01 PJ	0.0022 U	0.0019 U	0.0019 U
gamma-Chlordane				0.33 D	0.0019 U	0.29 PDJ	0.022	0.42 PDJ	0.21 D	0.3 D	0.11 D
Heptachlor	0.15	0.65	50	0.0019 U	0.0019 U	0.0027 U	0.0023 U	0.0023 U	0.0022 U	0.0019 U	0.024
Heptachlor epoxide				0.0019 U	0.0019 U	0.2 PDJ	0.0023 U	0.58 D	0.0022 U	0.0019 U	0.011 PJ
Methoxychlor	280	5200	50	0.019 U	0.019 U	0.027 U	0.023 U	0.023 U	0.022 U	0.019 U	0.019 U
Total PCB	0.49	2	50	2	0.039 U	4.68	0.275 P	16.55	5	1.5	1.75 PD

300740

**Subsurface Soil Samples**  
**Postive Analytical Results - Pesticides/PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB09	SB10	SB11	SB12	SB13	SB14	SB15	SB16
Sample ID	Direct	Direct	Groundwater	SB09-3	SB10-3	SB11-3	SB12-3	SB13-3	SB14-3	SB15-3	SB16-3
Lab ID	Contact	Contact	Soil	9712628	9712640	9711026	9712256	9712650	9712644	9712631	9712648
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/14/97	7/15/97	6/24/97	7/10/97	7/15/97	7/15/97	7/14/97	7/15/97
Depth (feet)	Criteria	Criteria	Criteria	3-5	4-6	3-3.5	5-6	5-6	6-8	4-6	6-7
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0038 U	0.021 P	0.0042 P	0.033 PJ	0.0044 U	0.0025 JP	0.011 P	0.015 P
4,4'-DDE	2	9	50	0.06 P	0.014 P	0.004 U	0.039 PJ	0.0044 U	0.003 JP	0.012 P	0.005 U
4,4'-DDT	2	9	500	0.0038 U	0.0002 JP	0.004 U	0.044 PJ	0.0023 JP	0.0025 JP	0.0038 P	0.0045 JP
Aldrin	0.04	0.17	50	0.0019 U	0.0081	0.0094 P	0.0019 U	0.0031 P	0.0031 P	0.0071 P	0.17 D
alpha-BHC				0.0019 U	0.0003 JP	0.0003 JP	0.0044 PJ	0.0022 U	0.0029	0.0018 U	0.0051
alpha-Chlordane				0.026 P	0.019 P	0.073 PD	0.077 JPD	0.0022 U	0.018 P	0.013 P	0.54 PD
Aroclor-1016				0.038 U	0.041 U	0.04 U	0.039 U	0.044 U	0.039 U	0.036 U	0.05 U
Aroclor-1221				0.076 U	0.082 U	0.081 U	0.078 U	0.088 U	0.079 U	0.072 U	0.1 U
Aroclor-1232				0.038 U	0.041 U	0.04 U	0.039 U	0.044 U	0.039 U	0.036 U	0.05 U
Aroclor-1242				0.038 U	0.041 U	0.04 U	0.039 U	0.044 U	0.039 U	0.036 U	0.05 U
Aroclor-1248				0.038 U	0.041 U	0.04 U	0.039 U	0.044 U	0.039 U	0.036 U	0.05 U
Aroclor-1254				5 D	1 PD	0.04 U	0.039 U	0.044 U	0.48	0.54	0.05 U
Aroclor-1260				0.038 U	0.56	0.17 P	14 D	0.044 U	0.22 P	0.28	12 D
beta-BHC				0.0019 U	0.0021 U	0.002 U	0.0019 U	0.0022 U	0.002 U	0.0018 U	0.0025 U
delta-BHC				0.0019 U	0.0021 U	0.002 U	0.0019 U	0.0022 U	0.002 U	0.0018 U	0.0025 U
Dieldrin	0.042	0.18	50	0.0038 U	0.0041 U	0.004 U	0.0039 U	0.0009 JP	0.0043	0.0036 U	0.49 PD
Endosulfan I				0.0019 U	0.0021 U	0.002 U	0.0019 U	0.0022 U	0.002 U	0.0018 U	0.0025 U
Endosulfan II				0.0038 U	0.0041 U	0.015 P	0.61 PDJ	0.0044 U	0.0039 U	0.0036 U	0.5 PD
Endosulfan sulfate				0.0038 U	0.0041 U	0.004 U	0.044 PJ	0.0044 U	0.0039 U	0.0036 U	0.005 U
Endrin	17	310	50	0.0038 UJ	0.0041 UJ	0.0022 JP	0 R	0.0044 UJ	0.0039 UJ	0.0036 UJ	0.005 UJ
Endrin aldehyde				0.0038 U	0.0041 U	0.004 U	0.0039 U	0.0044 U	0.0039 U	0.0036 U	0.005 U
Endrin ketone				0.0038 U	0.0041 U	0.004 U	0.0039 U	0.0044 U	0.0039 U	0.0036 U	0.04 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.0022 U	0.002 U	0.0018 U	0.0025 U
gamma-Chlordane				0.058 PD	0.036 D	0.073 D	0.13 PDJ	0.0022 U	0.02 P	0.022	0.58 D
Heptachlor	0.15	0.65	50	0.0019 U	0.0021 U	0.002 U	0.0019 U	0.0022 U	0.002 U	0.0018 U	0.0025 U
Heptachlor epoxide				0.0019 U	0.0021 U	0.002 U	0.0019 U	0.0022 U	0.002 U	0.0018 U	0.0025 U
Methoxychlor	280	5200	50	0.019 U	0.021 U	0.02 U	0.019 U	0.022 U	0.02 U	0.018 U	0.025 U
Total PCB	0.49	2	50	5	1.56	0.17	14	0 U	0.7	0.82	12

300741

## Subsurface Soil Samples

## Postive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB17	SB18	SB19	SB20	SB23	SB26	SB29	SB30
Sample ID	Direct	Direct	Groundwater	SB17-3	SB18-5	SB19-3	SB20-3	SB23-6	SB26-3	SB29-3	SB30-1
Lab ID	Contact	Contact	Soil	9712945	9712624	9712949	9712031	9712037	9712027	9712235	9712038
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/17/97	7/14/97	7/17/97	7/8/97	7/8/97	7/7/97	7/9/97	7/8/97
Depth (feet)	Criteria	Criteria	Criteria	5-6	6-7	5-6	5-6	5-6	7-8	5-6	2-2.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0041 U	0.0043 U	0.0044 U	0.0047 U	0.0096 U	0.0039 U	0.0042 U	0.0034 U
4,4'-DDE	2	9	50	0.0019 JP	0.093 PD	0.37 PDJ	0.0017 JP	0.0096 U	0.0039 U	0.0042 U	0.0034 U
4,4'-DDT	2	9	500	0.0041 U	0.0043 U	0.0044 U	0.0012 JP	0.0096 U	0.0039 U	0.0005 J	0.00019 JP
Aldrin	0.04	0.17	50	0.0021 PJ	0.19 PD	0.0022 U	0.0023 U	0.03 PJ	0.002 U	0.0021 U	0.00061 JP
alpha-BHC				0.002 U	0.0022 U	0.0022 U	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.00035 JP
alpha-Chlordane				0.002 U	0.098 PD	0.021 PJ	0.012 PJ	0.0048 U	0.002 U	0.0021 U	0.0017 U
Aroclor-1016				0.041 U	0.043 U	0.044 U	0.047 U	0.096 U	0.039 U	0.042 U	0.034 U
Aroclor-1221				0.082 U	0.086 U	0.089 U	0.093 U	0.19 U	0.079 U	0.084 U	0.069 U
Aroclor-1232				0.041 U	0.043 U	0.044 U	0.047 U	0.096 U	0.039 U	0.042 U	0.034 U
Aroclor-1242				0.041 U	0.043 U	0.044 U	0.047 U	0.096 U	0.039 U	0.042 U	0.034 U
Aroclor-1248				0.041 U	0.043 U	0.044 U	0.047 U	0.096 U	0.039 U	0.042 U	0.034 U
Aroclor-1254				0.041 U	6 D	1.3 D	0.047 U	0.096 U	0.039 U	0.042 U	0.034 U
Aroclor-1260				0.041 U	0.043 U	0.044 U	0.11 PJ	0.096 U	0.039 U	0.042 U	0.034 U
beta-BHC				0.002 U	0.0022 U	0.0022 U	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.0017 U
delta-BHC				0 R	0.0022 U	0 R	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.0017 U
Dieldrin	0.042	0.18	50	0.0041 U	0.0043 U	0.0044 U	0.0047 U	0.0096 U	0.0039 U	0.0042 U	0.0034 U
Endosulfan I				0.002 U	0.0022 U	0.0022 U	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.0017 U
Endosulfan II				0.0041 U	0.0043 U	0.0044 U	0.016 PJ	0.0096 U	0.0039 U	0.0042 U	0.0034 U
Endosulfan sulfate				0.0041 U	0.0043 U	0.0044 U	0.0047 U	0.0096 U	0.0039 U	0.0042 U	0.0034 U
Endrin	17	310	50	0.0041 U	0.0043 UJ	0.0044 U	0 R	0 R	0 R	0 R	0 R
Endrin aldehyde				0.001 JP	0.0043 U	0.0044 U	0.0047 U	0.0096 U	0.0039 U	0.0042 U	0.0034 U
Endrin ketone				0.0041 U	0.0043 U	0.0044 U	0.0047 U	0.0096 U	0.0039 U	0.0042 U	0.0034 U
gamma-BHC (Lindane)	0.52	2.2	50	0.002 U	0.0022 U	0.0022 U	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.0017 U
gamma-Chlordane				0.002 U	0.18 PD	0.018	0.017	0.0048 U	0.002 U	0.0021 U	0.0017 U
Heptachlor	0.15	0.65	50	0.002 U	0.0022 U	0.0022 U	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.0017 U
Heptachlor epoxide				0.002 U	0.0022 U	0.0022 U	0.0023 U	0.0048 U	0.002 U	0.0021 U	0.0017 U
Methoxychlor	280	5200	50	0.02 U	0.022 U	0.022 U	0.023 U	0.048 U	0.02 U	0.021 U	0.017 U
Total PCB	0.49	2	50	0.041 U	6	1.3 D	0.11	0.096 U	0.039 U	0.042 U	0.034 U

300742

Subsurface Soil Samples

Postive Analytical Results - Pesticides/PCBs

Sample Location	Residential	Non-Residential	Impact to	SB30	SB31	SB32	SB33	SB36	SB38	SB39	SB40
Sample ID	Direct	Direct	Groundwater	SB30-3	SB31-3	SB32-3	SB33-4	SB36-6	SB38-3	SB39-1	SB40-1
Lab ID	Contact	Contact	Soil	9712040	9710635	9710638	9710857	9710854	9710849	9710846	9710612
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/8/97	6/17/97	6/17/97	6/19/97	6/19/97	6/19/97	6/19/97	6/16/97
Depth (feet)	Criteria	Criteria	Criteria	7-8	4-5	3.5-4	5.5-6	5.5-6	5-6	2-3	2-2.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.005 U	0.0042 U	0.0038 U	0.0046 U	0.0041 U	0.004 U	0.004 U	0.0038 U
4,4'-DDE	2	9	50	0.005 U	0.0042 U	0.0015 JP	0.095 PD	0.0041 U	0.004 JP	0.004 U	0.0038 U
4,4'-DDT	2	9	500	0.005 U	0.0042 U	0.0038 U	0.0046 U	0.0041 U	0.004 U	0.004 U	0.0038 U
Aldrin	0.04	0.17	50	0.00027 JP	0.0021 U	0.0083	0.29 PD	0.002 U	0.0033 P	0.002 U	0.0019 U
alpha-BHC				0.0025 U	0.0005 JP	0.0019 U	0.0049 P	0.002 U	0.002 U	0.002 U	0.00056 JP
alpha-Chlordane				0.0025 U	0.0047	0.063 JP	4.2 EPD	0.0059 P	0.029 P	0.002 U	0.0019 U
Aroclor-1016				0.05 U	0.042 U	0.038 U	0.046 U	0.041 U	0.04 U	0.04 U	0.038 U
Aroclor-1221				0.1 U	0.085 U	0.077 U	0.092 U	0.082 U	0.081 U	0.08 U	0.076 U
Aroclor-1232				0.05 U	0.042 U	0.038 U	0.046 U	0.041 U	0.04 U	0.04 U	0.038 U
Aroclor-1242				0.05 U	0.042 U	0.038 U	0.046 U	0.041 U	0.04 U	0.04 U	0.038 U
Aroclor-1248				0.05 U	0.042 U	0.038 U	0.046 U	0.041 U	0.04 U	0.04 U	0.038 U
Aroclor-1254				0.05 U	0 R	0.038 U	0.046 U	0.041 U	0.63	0.057 P	0.038 U
Aroclor-1260				0.05 U	0.042 U	0.038 U	0.046 U	0.054	0.04 U	0.04 U	0.038 U
beta-BHC				0.0025 U	0.0021 U	0.0019 U	0.0023 U	0.002 U	0.002 U	0.002 U	0.0019 U
delta-BHC				0.0025 U	0.0021 U	0.0019 U	0.0023 U	0.001 JP	0.00024 JP	0.002 U	0.0019 U
Dieldrin	0.042	0.18	50	0.005 U	0.0042 U	0.0038 U	0.0046 U	0.0041 U	0.004 U	0.004 U	0.0038 U
Endosulfan I				0.0025 U	0.0021 U	0.0019 U	0.0023 U	0.002 U	0.002 U	0.002 U	0.0019 U
Endosulfan II				0.005 U	0.0042 U	0.0046 P	0.064 P	0.0041 U	0.004 U	0.004 U	0.0038 U
Endosulfan sulfate				0.005 U	0.0042 U	0.0038 U	0.0046 U	0.0041 U	0.004 U	0.004 U	0.0038 U
Endrin	17	310	50	0 R	0.0042 U	0.0038 U	0.0046 U	0.0041 U	0.0033 JP	0.004 U	0.0038 U
Endrin aldehyde				0.005 U	0.0042 U	0.0038 U	0.0046 U	0.0041 U	0.004 U	0.004 U	0.0038 U
Endrin ketone				0.005 U	0.0042 U	0.0038 U	0.0028 JP	0.0041 U	0.004 U	0.004 U	0.0038 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0025 U	0.0021 U	0.0019 U	0.0023 U	0.002 U	0.002 U	0.002 U	0.0019 U
gamma-Chlordane				0.0025 U	0.0032 P	0.054 J	4.3 ED	0.0048 P	0.032	0.002 U	0.0019 U
Heptachlor	0.15	0.65	50	0.0025 U	0.0021 U	0.0019 U	0.014 P	0.002 U	0.002 U	0.002 U	0.0019 U
Heptachlor epoxide				0.0025 U	0.0021 U	0.0019 U	0.51 PD	0.022 P	0.002 U	0.002 U	0.0019 U
Methoxychlor	280	5200	50	0.025 U	0.02 U	0.0038 JP	0.023 U	0.02 U	0.004 JP	0.02 U	0.019 U
Total PCB	0.49	2	50	0.05 U	0 U	0.038 U	0.046 U	0.054	0.63	0.057	0.038 U

300743



**Subsurface Soil Samples**  
**Postive Analytical Results - Pesticides/PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB40	SB41	SB42	SB43	SB44	SB45	SB46	SB47
Sample ID	Direct	Direct	Groundwater	SB40-3	SB41-4	SB42-5	SB43-3	SB44-3	SB45-3	SB46-3	SB47-4
Lab ID	Contact	Contact	Soil	9710614	9710843	9710619	9710622	9710644	9710626	9710641	9710632
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	6/16/97	6/18/97	6/16/97	6/16/97	6/17/97	6/16/97	6/17/97	6/17/97
Depth (feet)	Criteria	Criteria	Criteria	9.5-10	4.5-5	3.5-4	3.5-4	5.5-6	7.5-8	7-7.5	7.5-8
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0036 U	0.00049 JP	0.0005 J	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
4,4'-DDE	2	9	50	0.0036 U	0.0039 U	0.00041 JP	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
4,4'-DDT	2	9	500	0.0036 U	0.0039 U	0.0011 J	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
Aldrin	0.04	0.17	50	0.0018 U	0.0019 U	0.00047 JP	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
alpha-BHC				0.00094 J	0.0019 U	0.0018 U	0.0027 U	0.0021 U	0.0027 U	0.0026 P	0.00064 J
alpha-Chlordane				0.0013 J	0.0019 U	0.00044 JP	0.0027 U	0.0098 P	0.09 JP	0.29 JP	0.0012 JP
Aroclor-1016				0.036 U	0.039 U	0.037 U	0.054 U	0.041 U	0.053 U	0.051 U	0.036 U
Aroclor-1221				0.073 U	0.077 U	0.073 U	0.11 U	0.082 U	0.11 U	0.1 U	0.073 U
Aroclor-1232				0.036 U	0.039 U	0.037 U	0.054 U	0.041 U	0.053 U	0.051 U	0.036 U
Aroclor-1242				0.036 U	0.039 U	0.037 U	0.054 U	0.041 U	0.053 U	0.051 U	0.036 U
Aroclor-1248				0.036 U	0.039 U	0.037 U	0.054 U	0.041 U	0.053 U	0.051 U	0.036 U
Aroclor-1254				0.036 U	0.047 P	0.037 U	0.054 U	0 R	0 R	0 R	0.036 U
Aroclor-1260				0.036 U	0.039 U	0.037 U	0.054 U	0.041 U	0.053 U	0.051 U	0.036 U
beta-BHC				0.0018 U	0.0019 U	0.0018 U	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
delta-BHC				0.0018 U	0.0019 U	0.0018 U	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0036 U	0.0039 U	0.00014 J	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
Endosulfan I				0.0018 U	0.0019 U	0.0018 U	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
Endosulfan II				0.0036 U	0.0039 U	0.0037 U	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
Endosulfan sulfate				0.0036 U	0.0039 U	0.0037 U	0.0054 U	0.0041 U	0.0053 U	0.012 P	0.0036 U
Endrin	17	310	50	0.0036 U	0.0039 U	0.0037 U	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
Endrin aldehyde				0.0036 U	0.0039 U	0.0037 U	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
Endrin ketone				0.0036 U	0.0039 U	0.0037 U	0.0054 U	0.0041 U	0.0053 U	0.0051 U	0.0036 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.0019 U	0.0018 U	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
gamma-Chlordane				0.0018 U	0.0019 U	0.00056 JP	0.0027 U	0.012 P	0.15 JP	0.43 P	0.0018 U
Heptachlor	0.15	0.65	50	0.0018 U	0.0019 U	0.00016 J	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
Heptachlor epoxide				0.0018 U	0.0019 U	0.0018 U	0.0027 U	0.0021 U	0.0027 U	0.0025 U	0.0018 U
Methoxychlor	280	5200	50	0.018 U	0.019 U	0.018 U	0.027 U	0.0029 JP	0.027 U	0.025 U	0.018 U
Total PCB	0.49	2	50	0.036 U	0.047	0.037 U	0.054 U	0 U	0 U	0	0.036 U

300744

**Subsurface Soil Samples**  
**Postive Analytical Results - Pesticides/PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB48	SB49	SB49	SB51	SB52	SB53	SB54	SB55
Sample ID	Direct	Direct	Groundwater	SB48-4	SB49-1	SB49-2	SB51-1	SB52-1	SB53-1	SB54-2	SB55-1
Lab ID	Contact	Contact	Soil	9713212	9710859	9710860	9713145	9713144	9713142	9713141	9713138
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/22/97	6/19/97	6/19/97	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Depth (feet)	Criteria	Criteria	Criteria	7-7.5	2-3	5-5.5	5.5-6	5-5.5	3.5-4	7.5-8	3.5-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.008 U	0.0041 U	0.004 U	0.0079 U	0.0075 U	0.0018 JP	0.0075 U	0.008 U
4,4'-DDE	2	9	50	0.008 U	0.019 P	0.036 P	0.0059 JP	0.0083 PJ	0.0096 PJ	0.0075 U	0.008 U
4,4'-DDT	2	9	500	0.008 U	0.0041 U	0.004 U	0.0079 U	0.0075 U	0.0077 U	0.0075 U	0.008 U
Aldrin	0.04	0.17	50	0.004 U	0.002 U	0.002 U	0.004 U	0.024 PJ	0.0059 PJ	0.0038 U	0.004 U
alpha-BHC				0.0016 JP	0.002 U	0.0053 P	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
alpha-Chlordane				0.0054	0.087 J	0.33 JP	0.13 PDJ	0.055	0.019	0.0038 U	0.004 U
Aroclor-1016				0.08 U	1.5 JP	0.04 U	0.079 U	0.075 U	0.077 U	0.075 U	0.08 U
Aroclor-1221				0.16 U	0.082 U	0.08 U	0.16 U	0.15 U	0.15 U	0.15 U	0.16 U
Aroclor-1232				0.08 U	0.041 U	0.04 U	0.079 U	0.075 U	0.077 U	0.075 U	0.08 U
Aroclor-1242				0.08 U	0.041 U	0.04 U	0.079 U	0.075 U	0.077 U	0.075 U	0.08 U
Aroclor-1248				0.08 U	0.041 U	0.04 U	0.079 U	0.075 U	0.077 U	0.075 U	0.08 U
Aroclor-1254				0.08 U	0.041 U	0.04 U	0.25 PJ	0.38	0.49	0.075 U	0.08 U
Aroclor-1260				0.08 U	0.041 U	0.21	0.21	0.11 PJ	0.24 PJ	0.075 U	0.08 U
beta-BHC				0.004 U	0.002 U	0.002 U	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
delta-BHC				0.004 U	0.002 U	0.002 U	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
Dieldrin	0.042	0.18	50	0.008 U	0.59 J	0.92 J	0.0078 JP	0.0075 U	0.0032 J	0.0075 U	0.008 U
Endosulfan I				0.004 U	0.002 U	0.002 U	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
Endosulfan II				0.008 U	0.0041 U	0.004 U	0.0079 U	0.0075 U	0.0077 U	0.0075 U	0.008 U
Endosulfan sulfate				0.008 U	0.0041 U	0.004 U	0.0079 U	0.0075 U	0.0077 U	0.0075 U	0.008 U
Endrin	17	310	50	0.008 U	0.0041 U	0.004 U	0.0079 U	0.0075 U	0.0077 U	0.0075 U	0.008 U
Endrin aldehyde				0.008 U	0.0041 U	0.004 U	0.0079 U	0.0075 U	0.0077 U	0.0075 U	0.008 U
Endrin ketone				0.008 U	0.012 P	0.01	0.0079 U	0.0075 U	0.0077 U	0.0075 U	0.008 U
gamma-BHC (Lindane)	0.52	2.2	50	0.004 U	0.00052 JP	0.002 U	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
gamma-Chlordane				0.0029 J	0.11 J	0.31 J	0.16 D	0.053 PJ	0.024 PJ	0.0038 U	0.004 U
Heptachlor	0.15	0.65	50	0.004 U	0.002 U	0.002 U	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
Heptachlor epoxide				0.004 U	0.002 U	0.002 U	0.004 U	0.0038 U	0.0039 U	0.0038 U	0.004 U
Methoxychlor	280	5200	50	0.04 U	0.02 U	0.02 U	0.0033 JP	0.038 U	0.022 JP	0.038 U	0.04 U
Total PCB	0.49	2	50	0.08 U	1.5	0.21	0.46	0.49	0.73	0.075 U	0.08 U

300745

**Subsurface Soil Samples  
Postive Analytical Results - Pesticides/PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB56	SB57	SB57	SB58	SB59	SB60	SB61
Sample ID	Direct	Direct	Groundwater	SB56-2	SB57-1	SB57-2	SB58-1	SB59-1	SB60-1	SB61-1
Lab ID	Contact	Contact	Soil	9713205	9713207	9713208	9713209	9713213	9713147	9713214
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97	7/21/97	7/22/97
Depth (feet)	Criteria	Criteria	Criteria	6.5-7	6.5-7	6.5-7	5.5-6	5.5-6	3.5-4	3.5-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0054 J	0.0093 UJ
4,4'-DDE	2	9	50	0.0073 JP	0.00075 JP	0.00078 JP	0.0083 U	0.011 P	0.0081 U	0.03 P
4,4'-DDT	2	9	500	0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0081 U	0.0093 UJ
Aldrin	0.04	0.17	50	0.0027 J	0.004 U	0.0039 U	0.0058 P	0.0044 UJ	0.029	0.0047 UJ
alpha-BHC				0.0047 U	0.004 U	0.0039 U	0.0041 U	0.0044 UJ	0.0041 U	0.093 UJ
alpha-Chlordane				0.00066 JP	0.006 P	0.0064 P	0.023	0.015 P	0.0041 U	0.034 JP
Aroclor-1016				0.095 U	0.08 U	0.079 U	0.083 U	0.089 UJ	0.081 U	0.093 UJ
Aroclor-1221				0.19 U	0.16 U	0.16 U	0.16 U	0.18 UJ	0.16 U	0.19 UJ
Aroclor-1232				0.095 U	0.08 U	0.079 U	0.083 U	0.089 UJ	0.081 U	0.093 UJ
Aroclor-1242				0.095 U	0.08 U	0.079 U	0.083 U	0.089 UJ	0.081 U	0.093 UJ
Aroclor-1248				0.095 U	0.08 U	0.079 U	0.083 U	0.089 UJ	0.081 U	0.093 UJ
Aroclor-1254				0.095 U	0.08 U	0.079 U	0.083 U	0.089 UJ	0.081 U	1.6 UJ
Aroclor-1260				0.095 U	0.08 U	0.079 U	0.083 U	0.089 UJ	0.081 U	1.6 UJ
beta-BHC				0.0047 U	0.004 U	0.0039 U	0.0041 U	0.0044 UJ	0.0041 U	0.0047 UJ
delta-BHC				0.0047 U	0.004 U	0.0039 U	0.0041 U	0.0044 UJ	0.0041 U	0.0047 UJ
Dieldrin	0.042	0.18	50	0.0095 U	0.008 U	0.0079 U	0.0083 U	0.015 P	0.0081 U	0.0093 UJ
Endosulfan I				0.0047 U	0.004 U	0.0039 U	0.0041 U	0.0044 UJ	0.0041 U	0.0047 UJ
Endosulfan II				0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0081 U	0.0093 UJ
Endosulfan sulfate				0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0081 U	0.0093 UJ
Endrin	17	310	50	0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0011 JP	0.0093 UJ
Endrin aldehyde				0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0081 U	1.6 UJ
Endrin ketone				0.0095 U	0.008 U	0.0079 U	0.0083 U	0.0089 UJ	0.0081 U	0.013 J
gamma-BHC (Lindane)	0.52	2.2	50	0.0047 U	0.004 U	0.0039 U	0.0041 U	0.0044 UJ	0.0041 U	0.0047 UJ
gamma-Chlordane				0.00069 J	0.004 U	0.0039 U	0.021	0.028 P	0.0041 U	0.07 J
Heptachlor	0.15	0.65	50	0.0047 U	0.004 U	0.0039 U	0.0041 U	0.0044 UJ	0.0041 U	0.0047 UJ
Heptachlor epoxide				0.0047 U	0.004 U	0.0039 U	0.00029 JP	0.0044 UJ	0.0041 U	0.0047 UJ
Methoxychlor	280	5200	50	0.047 U	0.04 U	0.0014 JP	0.0008 JP	0.016 J	0.041 U	0.017 JP
Total PCB	0.49	2	50	0.095 U	0.08 U	0.079 U	0.083 U	0.089 U	0.081 U	0.093 U

300746

**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB62	SB63	SB64	SB65	SB66	SB67	SB68	SB69	SB70
Sample ID	Direct	Direct	Groundwater	SB62-3	SB63-4	SB64-4	SB65-3	SB66-3	SB67-3	SB68-3	SB69-3	SB70-3
Lab ID	Contact	Contact	Soil	15969RE	15972	15974	15976	16034	15978	15980	15982	15984
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/29/98	9/29/98	9/29/98	9/30/98	9/30/98	9/29/98	9/29/98	9/29/98	9/29/98
Depth (feet)	Criteria	Criteria	Criteria	5-5.5	3.5-4	6-6.5	6-7	6.5-7	5.5-6	6.5-7	6-7	6.5-7.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.011 U	0.0037 U	0.004 U	0.0041 U	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
4,4'-DDE	2	9	50	0.011 U	0.0037 U	0.004 U	0.0079 P	0.0041 U	0.039 U	0.0044 U	0.01 P	0.0037 U
4,4'-DDT	2	9	500	0.011 U	0.0037 U	0.004 U	0.0041 U	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
Aldrin	0.04	0.17	50	0.0059 U	0.0035 P	0.002 U	0.019 P	0.0044 P	0.02 U	0.0045 P	0.042 P	0.0084 P
alpha-BHC				0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
alpha-Chlordane				0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
Aroclor-1016				0.11 U	0.037 U	0.04 U	0.041 U	0.041 U	0.39 U	0.044 U	0.04 U	0.037 U
Aroclor-1248				0.11 U	0.037 U	0.04 U	0.041 U	0.041 U	0.39 U	0.044 U	0.04 U	0.037 U
Aroclor-1254				0.11 U	0.037 U	0.04 U	0.041 U	0.041 U	0.39 U	0.044 U	0.04 U	0.037 U
Aroclor-1260				0.11 U	0.037 U	0.04 U	0.041 U	0.041 U	0.39 U	0.044 U	0.04 U	0.037 U
beta-BHC				0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
delta-BHC				0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
Dieldrin	0.042	0.18	50	0.011 U	0.0037 U	0.004 U	0.0041 U	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
Endosulfan II				0.011 U	0.0037 U	0.004 U	0.0041 U	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
Endosulfan sulfate				0.011 U	0.0037 U	0.004 U	0.0041 U	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
Endrin	17	310	50	0.011 U	0.0037 U	0.004 U	0.0078 P	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
Endrin aldehyde				0.011 U	0.0037 U	0.004 U	0.0041 U	0.0041 U	0.039 U	0.0044 U	0.004 U	0.0037 U
Endrin ketone				0.011 U	0.0042 P	0.004 U	0.032	0.0051 P	0.039 U	0.0083 P	0.034 P	0.0064 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
gamma-Chlordane				0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
Heptachlor	0.15	0.65	50	0.0059 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.02 U	0.0023 U	0.002 U	0.0019 U
Heptachlor epoxide				0.0059 U	0.0019 U	0.002 U	0.04 P	0.0027 P	0.067 P	0.017 P	0.083 P	0.0019 U
Methoxychlor	280	5200	50	0.059 U	0.019 U	0.02 U	0.068 P	0.021 U	0.2 U	0.029 P	0.15 P	0.028 P
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300747

**Subsurface Soil Samples  
Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB71	SB72	SB73	SB74	SB75	SB76	SB77	SB78	SB79
Sample ID	Direct	Direct	Groundwater	SB71-3	SB72-3	SB73-3	SB74-3	SB75-3	SB76-3	SB77-3	SB78-3	SB79-3
Lab ID	Contact	Contact	Soil	15986	16035	15994	16036	15996	16039	16040	15998	16037
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/30/98	9/30/98	9/30/98	9/30/98	9/29/98	10/1/98	10/1/98	9/29/98	9/30/98
Depth (feet)	Criteria	Criteria	Criteria	4-5	9-10	7-8	6-7	6.5-7	4-5	6-7	6.5-7.5	6.5-7.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
4,4'-DDE	2	9	50	0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
4,4'-DDT	2	9	500	0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
Aldrin	0.04	0.17	50	0.0038 P	0.0018 U	0.0019 U	0.0019 U	0.029 P	0.0095 P	0.0019 U	0.011 P	0.0018 U
alpha-BHC				0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
alpha-Chlordane				0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
Aroclor-1016				0.036 U	0.035 U	0.037 U	0.038 U	0.24 U	0.043 U	0.036 U	0.19 U	0.035 U
Aroclor-1248				0.036 U	0.035 U	0.037 U	0.038 U	0.24 U	0.043 U	0.036 U	0.19 U	0.035 U
Aroclor-1254				0.036 U	0.035 U	0.037 U	0.038 U	0.24 U	0.043 U	0.036 U	0.19 U	0.035 U
Aroclor-1260				0.036 U	0.035 U	0.037 U	0.038 U	0.24 U	0.043 U	0.036 U	0.19 U	0.035 U
beta-BHC				0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
delta-BHC				0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
Dieldrin	0.042	0.18	50	0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
Endosulfan II				0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
Endosulfan sulfate				0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
Endrin	17	310	50	0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0056 P	0.0036 U	0.019 U	0.0035 U
Endrin aldehyde				0.0036 U	0.0035 U	0.0037 U	0.0038 U	0.024 U	0.0043 U	0.0036 U	0.019 U	0.0035 U
Endrin ketone				0.0046 P	0.0035 U	0.0037 U	0.0038 U	0.036 P	0.02	0.0036 U	0.019 U	0.0035 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
gamma-Chlordane				0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
Heptachlor	0.15	0.65	50	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.013 U	0.0022 U	0.0019 U	0.01 U	0.0018 U
Heptachlor epoxide				0.024	0.0018 U	0.0019 U	0.0019 U	0.1 P	0.0022 U	0.012 P	0.034 P	0.0018 U
Methoxychlor	280	5200	50	0.023 P	0.018 U	0.019 U	0.019 U	0.14 P	0.053	0.019 U	0.1 U	0.018 U
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300748

**Subsurface Soil Samples  
Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB79	SB80	SB81	SB82	SB83	SB84	SB85	SB86	SB87
Sample ID	Direct	Direct	Groundwater	SB79-4	SB80-3	SB81-3	SB82-3	SB83-3	SB84-3	SB85-3	SB86-3	SB87-3
Lab ID	Contact	Contact	Soil	16038	16043	16042	16041	16272	16273	16274	16044	16045
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	9/30/98	10/1/98	10/1/98	10/1/98	10/5/98	10/5/98	10/5/98	10/1/98	10/1/98
Depth (feet)	Criteria	Criteria	Criteria	6.5-7.5	4.5-5.5	5-6	4-5	4-5	4.5-5.5	6.5-7.5	6.5-7.5	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
4,4'-DDE	2	9	50	0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
4,4'-DDT	2	9	500	0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
Aldrin	0.04	0.17	50	0.0018 U	0.0021 U	0.0031 P	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0028 P	0.0019 U
alpha-BHC				0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 UJ	0.0019 UJ	0.0018 UJ	0.0023 U	0.0019 U
alpha-Chlordane				0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0023 U	0.0019 U
Aroclor-1016				0.036 U	0.04 U	0.037 U	0.037 U	0.037 U	0.036 U	0.036 U	0.044 U	0.037 U
Aroclor-1248				0.036 U	0.04 U	0.037 U	0.037 U	0.037 U	0.036 U	0.036 U	0.044 U	0.037 U
Aroclor-1254				0.036 U	0.04 U	0.037 U	0.037 U	0.037 U	0.036 U	0.036 U	0.044 U	0.037 U
Aroclor-1260				0.036 U	0.04 U	0.037 U	0.037 U	0.037 U	0.036 U	0.036 U	0.044 U	0.037 U
beta-BHC				0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0023 U	0.0019 U
delta-BHC				0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0023 U	0.0019 U
Dieldrin	0.042	0.18	50	0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
Endosulfan II				0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
Endosulfan sulfate				0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
Endrin	17	310	50	0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 UJ	0.0036 UJ	0.0036 UJ	0.0044 U	0.0037 U
Endrin aldehyde				0.0036 U	0.004 U	0.0037 U	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0037 U
Endrin ketone				0.0036 U	0.004 U	0.0047 P	0.0037 U	0.0037 U	0.0036 U	0.0036 U	0.0044 U	0.0044 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 UJ	0.0019 UJ	0.0018 UJ	0.0023 U	0.0019 U
gamma-Chlordane				0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0023 U	0.0019 U
Heptachlor	0.15	0.65	50	0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0023 U	0.0019 U
Heptachlor epoxide				0.0018 U	0.0021 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0018 U	0.0052 P	0.0021 P
Methoxychlor	280	5200	50	0.018 U	0.021 U	0.023 P	0.019 U	0.019 U	0.019 U	0.018 U	0.023 U	0.02 P
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300749

**Subsurface Soil Samples  
Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB88	SB89	SB90	SB91	SB92	SB93	SB94	SB95	SB96
Sample ID	Direct	Direct	Groundwater	SB88-3	SB89-3	SB90-3	SB91-3	SB92-3	SB93-3	SB94-3	SB95-3	SB96-3
Lab ID	Contact	Contact	Soil	16186	16187	16188	16487	16488	16489	16490	16491	16189
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/2/98	10/2/98	10/2/98	10/6/98	10/6/98	10/6/98	10/6/98	10/6/98	10/2/98
Depth (feet)	Criteria	Criteria	Criteria	6-7	4-5	7-7.5	5-6	6-7	4-5	4.5-5.5	4.5-5.5	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0049 U	0.0042 U	0.004 U	0.004 U	0.0041 U	0.0042 U	0.0043 U	0.005 U	0.004 U
4,4'-DDE	2	9	50	0.0049 U	0.0042 U	0.004 U	0.0065 P	0.0051 P	0.0042 U	0.0043 U	0.005 U	0.004 U
4,4'-DDT	2	9	500	0.0049 U	0.015 P	0.004 U	0.004 U	0.0044 P	0.0042 U	0.0043 U	0.005 U	0.004 U
Aldrin	0.04	0.17	50	0.0025 U	0.024	0.0021 U	0.014 P	0.0041 P	0.0022 U	0.0022 U	0.0026 U	0.0046 P
alpha-BHC				0.0025 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0022 U	0.0026 U	0.0021 U
alpha-Chlordane				0.0025 U	0.0022 U	0.0021 U	0.011 P	0.01 P	0.0022 U	0.0022 U	0.01	0.0021 U
Aroclor-1016				0.049 U	0.042 U	0.04 U	0.04 U	0.041 U	0.042 U	0.043 U	0.05 U	0.04 U
Aroclor-1248				0.049 U	0.43 P	0.04 U	0.04 U	0.041 U	0.042 U	0.043 U	0.05 U	0.04 U
Aroclor-1254				0.049 U	0.74	0.04 U	0.04 U	0.44 P	0.042 U	0.043 U	0.05 U	0.04 U
Aroclor-1260				0.049 U	0.042 U	0.04 U	0.04 U	0.041 U	0.042 U	0.043 U	0.05 U	0.04 U
beta-BHC				0.0025 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0022 U	0.0026 U	0.0021 U
delta-BHC				0.0025 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0022 U	0.0026 U	0.0021 U
Dieldrin	0.042	0.18	50	0.0049 U	0.0042 U	0.004 U	0.058 P	0.022 P	0.0042 U	0.0043 U	0.005 U	0.004 U
Endosulfan II				0.0049 U	0.0042 U	0.004 U	0.004 U	0.0041 U	0.0042 U	0.0043 U	0.005 U	0.004 U
Endosulfan sulfate				0.0049 U	0.0042 U	0.004 U	0.004 U	0.0041 U	0.0042 U	0.0043 U	0.005 U	0.004 U
Endrin	17	310	50	0.0049 U	0.0055 P	0.004 U	0.004 U	0.0041 U	0.0042 U	0.0043 U	0.005 U	0.004 U
Endrin aldehyde				0.0049 U	0.0042 U	0.004 U	0.004 U	0.0041 U	0.0042 U	0.0043 U	0.005 U	0.004 U
Endrin ketone				0.0049 U	0.029	0.004 U	0.024 P	0.0041 U	0.0067 P	0.0043 U	0.005 U	0.015 P
gamma-BHC (Lindane)	0.52	2.2	50	0.0025 U	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0022 U	0.0026 U	0.0021 U
gamma-Chlordane				0.0025 U	0.014 P	0.0021 U	0.0068 P	0.02	0.0022 U	0.0022 U	0.013	0.0021 U
Heptachlor	0.15	0.65	50	0.0025 U	0.0078 P	0.0021 U	0.0021 U	0.0021 U	0.0022 U	0.0022 U	0.0026 U	0.0021 U
Heptachlor epoxide				0.0025 U	0.0022 U	0.0021 U	0.023 P	0.0072 P	0.0058 P	0.0022 U	0.0026 U	0.0021 U
Methoxychlor	280	5200	50	0.025 U	0.11	0.021 U	0.067	0.031 P	0.028 P	0.022 U	0.026 U	0.056 P
Total PCB	0.49	2	50	0 U	1.17	0 U	0 U	0.44	0 U	0 U	0 U	0 U

300750

**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB96	SB97	SB98	SB99	SB105	SB106	SB107	SB108	SB109
Sample ID	Direct	Direct	Groundwater	SB96-4	SB97-3	SB98-3	SB99-3	SB105-3	SB106-3	SB107-3	SB108-3	SB109-3
Lab ID	Contact	Contact	Soil	16190	16191	16192	16193	16275	16276	16194	16277	16278
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/2/98	10/2/98	10/2/98	10/2/98	10/5/98	10/5/98	10/2/98	10/5/98	10/5/98
Depth (feet)	Criteria	Criteria	Criteria	4-5	4-5	4-5	7-7.5	4-5	4-5	5-6	5-6	4.5-5.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4.4'-DDD	3	12	50	0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.0044 U	0.0037 U	0.0037 U
4.4'-DDE	2	9	50	0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.013 P	0.0037 U	0.0037 U
4.4'-DDT	2	9	500	0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.0044 U	0.0037 U	0.0037 U
Aldrin	0.04	0.17	50	0.0055	0.0046	0.0018 U	0.0018 U	0.0021	0.0032 J	0.018 P	0.0019 U	0.0025 J
alpha-BHC				0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 UJ	0.002 UJ	0.0023 U	0.0019 UJ	0.0019 UJ
alpha-Chlordane				0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.002 U	0.0023 U	0.0019 U	0.0019 U
Aroclor-1016				0.041 U	0.036 U	0.035 U	0.035 U	0.038 U	0.038 U	0.044 U	0.037 U	0.037 U
Aroclor-1248				0.041 U	0.036 U	0.026 JP	0.035 U	0.038 U	0.038 U	0.044 U	0.037 U	0.037 U
Aroclor-1254				0.041 U	0.036 U	0.054 P	0.035 U	0.038 U	0.038 U	0.044 U	0.037 U	0.037 U
Aroclor-1260				0.041 U	0.036 U	0.035 U	0.035 U	0.038 U	0.038 U	0.044 U	0.037 U	0.037 U
beta-BHC				0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.002 U	0.0023 U	0.0019 U	0.0019 U
delta-BHC				0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.002 U	0.0023 U	0.0019 U	0.0019 U
Dieldrin	0.042	0.18	50	0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.0044 U	0.0037 U	0.0037 U
Endosulfan II				0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.0044 U	0.0037 U	0.0037 U
Endosulfan sulfate				0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.0044 U	0.0037 U	0.0037 U
Endrin	17	310	50	0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 UJ	0.0039 J	0.0044 U	0.0037 UJ	0.0037 UJ
Endrin aldehyde				0.0041 U	0.0036 U	0.0035 U	0.0035 U	0.0038 U	0.0038 U	0.0044 U	0.0037 U	0.0037 U
Endrin ketone				0.014 P	0.013	0.0035 U	0.0047 P	0.0068 J	0.016 J	0.036 P	0.0037 U	0.012 J
gamma-BHC (Lindane)	0.52	2.2	50	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 UJ	0.002 UJ	0.0023 U	0.0019 UJ	0.0019 UJ
gamma-Chlordane				0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.002 U	0.0023 U	0.0019 U	0.0019 U
Heptachlor	0.15	0.65	50	0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.002 U	0.0023 U	0.0019 U	0.0019 U
Heptachlor epoxide				0.0021 U	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.027 J	0.0023 U	0.0019 J	0.016
Methoxychlor	280	5200	50	0.062 P	0.051 P	0.018 U	0.018 U	0.032 J	0.056 J	0.11 P	0.019 J	0.026
Total PCB	0.49	2	50	0 U	0 U	0.08	0 U	0 U	0 U	0 U	0 U	0 U

300751



**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB110	SB111	SB112	SB113	SB114	SB114	SB115	SB116	SB118
Sample ID	Direct	Direct	Groundwater	SB110-3	SB111-4	SB112-3	SB113-3	SB114-3	SB114-4	SB115-3	SB116-3	SB118A3
Lab ID	Contact	Contact	Soil	16623	16625	16627	16492	16493	16494RE	16495	16279	0213409B
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	10/8/98	10/8/98	10/8/98	10/6/98	10/7/98	10/7/98	10/6/98	10/5/98	2/16/00
Depth (feet)	Criteria	Criteria	Criteria	3-4	4-5	2-3	3-4	4-5	4-5	6.7-7	4.4-5.1	7-8
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0042 U	0.004 U	0.0033 U	0.0041 U	1.3 U	0.26 U	0.013 P	0.0035 U	NA
4,4'-DDE	2	9	50	0.0042 U	0.004 U	0.038 P	0.009 P	1.9 P	0.45 P	0.0043 U	0.0035 U	NA
4,4'-DDT	2	9	500	0.0042 U	0.004 U	0.0033 U	0.0041 U	1.3 U	0.26 U	0.0043 U	0.0035 U	NA
Aldrin	0.04	0.17	50	0.0022 U	0.002 U	0.041 P	0.0094 P	0.67 U	0.13 U	0.0068	0.0018 U	0.0038 P
alpha-BHC				0.0022 U	0.002 U	0.0017 U	0.0021 U	0.67 U	0.13 U	0.0022 U	0.0018 U	0.0017 U
alpha-Chlordane				0.0022 U	0.007 P	0.0017 U	0.0021 U	19 P	4.5 P	0.0022 U	0.0018 U	0.0017 U
Aroclor-1016				0.042 U	0.04 U	0.033 U	0.041 U	13 U	2.6 U	0.043 U	0.035 U	0.032 U
Aroclor-1248				0.042 U	0.04 U	0.033 U	0.041 U	13 U	2.6 U	0.043 U	0.035 U	0.032 U
Aroclor-1254				0.042 U	0.04 U	0.033 U	0.041 U	13 U	2.6 U	0.043 U	0.035 U	0.032 U
Aroclor-1260				0.042 U	0.04 U	0.033 U	0.041 U	13 U	2.6 U	0.043 U	0.035 U	0.032 U
beta-BHC				0.0022 U	0.002 U	0.0017 U	0.0021 U	0.67 U	0.13 U	0.0022 U	0.0018 U	0.0017 U
delta-BHC				0.0022 U	0.002 U	0.0017 U	0.0021 U	0.67 U	0.13 U	0.0022 U	0.0018 U	0.0017 U
Dieldrin	0.042	0.18	50	0.0042 U	0.0055 P	0.02	0.0047 P	1.3 U	0.26 U	0.0043 U	0.0035 U	0.0032 U
Endosulfan II				0.0042 U	0.004 U	0.0033 U	0.0041 U	1.3 U	0.26 U	0.0043 U	0.0035 U	0.0032 U
Endosulfan sulfate				0.0042 U	0.004 U	0.0033 U	0.0041 U	1.3 U	0.26 U	0.0043 U	0.0035 U	0.0032 U
Endrin	17	310	50	0.0042 U	0.004 U	0.024 P	0.0041 U	1.3 U	0.26 U	0.0043 U	0.0035 U	0.0032 U
Endrin aldehyde				0.0042 U	0.004 U	0.012 P	0.0041 U	1.3 U	0.26 U	0.0043 U	0.0035 U	0.0032 U
Endrin ketone				0.01 P	0.017 P	0.32 P	0.0075 P	1.3 U	0.26 U	0.0043 U	0.0035 U	0.0079
gamma-BHC (Lindane)	0.52	2.2	50	0.0022 U	0.002 U	0.0017 U	0.0021 U	0.67 U	0.13 U	0.0022 U	0.0018 U	0.0017 U
gamma-Chlordane				0.0022 U	0.0084	0.0017 U	0.016	19 P	4.5 P	0.0031 P	0.0018 U	0.0017 U
Heptachlor	0.15	0.65	50	0.0022 U	0.002 U	0.0017 U	0.0021 U	4.5	/	0.0022 U	0.0018 U	0.0017 U
Heptachlor epoxide				0.0059 P	0.0035 P	0.13 P	0.0043 P	0.67 U	0.13 U	0.0022 U	0.0018 U	0.0043 P
Methoxychlor	280	5200	50	0.034	0.049 P	0.48 P	0.04	6.7 U	1.3 U	0.022 U	0.018 U	0.017 U
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300752

**Subsurface Soil Samples  
Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB118	SB122	SB124	SB126	SB126	SB127	SB129	SB129
Sample ID	Direct	Direct	Groundwater	SB118A4	SB122A3	SB124A3	SB126A1	SB126A3	SB127A3	SB129A3	SB129A4
Lab ID	Contact	Contact	Soil	0213410B	0213509B	0213514B	0213418A	0213420B	0213415B	0213517B	0213518B
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/16/00	2/15/00	2/15/00	2/16/00	2/16/00	2/16/00	2/15/00	2/15/00
Depth (feet)	Criteria	Criteria	Criteria	7-8	6.5-7	6.5-7	5-5.5	7.5-8	7.5-8	7-7.5	7-7.5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	2	9	50	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2	9	500	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	0.04	0.17	50	0.0032	0.003 P	0.011	0.029 U	0.0051 P	0.0057 P	0.24 U	0.24 U
alpha-BHC				0.0017 U	0.0023 U	0.0031 U	0.029 U	0.0017 U	0.0017 U	0.24 U	0.24 U
alpha-Chlordane				0.0017 U	0.0023 U	0.0079 P	0.029 U	0.0017 U	0.0017 U	0.24 U	0.24 U
Aroclor-1016				0.032 U	0.045 U	0.059 U	0.56 U	0.033 U	0.033 U	4.7 U	4.7 U
Aroclor-1248				0.032 U	0.045 U	0.059 U	0.56 U	0.033 U	0.033 U	4.7 U	4.7 U
Aroclor-1254				0.032 U	0.045 U	0.059 U	0.56 U	0.033 U	0.033 U	4.7 U	4.7 U
Aroclor-1260				0.032 U	0.045 U	0.059 U	0.56 U	0.033 U	0.033 U	4.7 U	4.7 U
beta-BHC				0.0017 U	0.0023 U	0.0031 U	0.024 JP	0.0017 U	0.0017 U	0.24 U	0.24 U
delta-BHC				0.0017 U	0.0023 U	0.0031 U	0.029 U	0.0017 U	0.0017 U	0.24 U	0.24 U
Dieldrin	0.042	0.18	50	0.0032 U	0.0045 U	0.015	0.056 U	0.0033 U	0.0033 U	0.47 U	0.47 U
Endosulfan II				0.0032 U	0.0045 U	0.0059 U	0.056 U	0.0033 U	0.0033 U	0.47 U	0.47 U
Endosulfan sulfate				0.0032 U	0.0045 U	0.0059 U	0.056 U	0.0033 U	0.0033 U	0.47 U	0.47 U
Endrin	17	310	50	0.0032 U	0.0045 U	0.0059 U	0.056 U	0.0027 JP	0.0033 U	0.47 U	0.47 U
Endrin aldehyde				0.0032 U	0.0045 U	0.0059 U	0.056 U	0.0033 U	0.0033 U	0.47 U	0.47 U
Endrin ketone				0.004 P	0.0045 U	0.0059 U	0.4 P	0.0033 U	0.0048	0.47 U	0.47 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0017 U	0.0023 U	0.0031 U	0.034	0.0017 U	0.0017 U	0.24 U	0.24 U
gamma-Chlordane				0.0017 U	0.0023 U	0.025	0.1 P	0.0017 U	0.0017 U	0.68 P	0.38 P
Heptachlor	0.15	0.65	50	0.0017 U	0.0023 U	0.0031 U	0.029 U	0.0017 U	0.0017 U	0.24 U	0.24 U
Heptachlor epoxide				0.0017 U	0.0023 U	0.0031 U	0.029 U	0.0017 U	0.0068 P	0.24 U	0.24 U
Methoxychlor	280	5200	50	0.017 U	0.023 U	0.031 U	0.29 U	0.017 U	0.017 U	2.4 U	2.4 U
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300753

**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB130	SB131	SB132	SB133	SB144	SB145	SB146	SB147
Sample ID	Direct	Direct	Groundwater	SB130A3	SB131A3	SB132A3	SB133A3	SB144-2	SB145-2	SB146-2	SB147-2
Lab ID	Contact	Contact	Soil	0213601B	0213604B	0213608B	0213611B	0211102A	0211104A	0211106A	0211108A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/15/00	2/15/00	2/15/00	2/15/00	2/14/00	2/14/00	2/14/00	2/14/00
Depth (feet)	Criteria	Criteria	Criteria	6-6.5	6-6.5	7-8	6-6.5	7.5-8	5-6	4-5	5.5-6
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	2	9	50	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2	9	500	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	0.04	0.17	50	0.0056 P	0.026 P	0.0025 P	0.002 U	0.0033 P	0.0043 P	0.0094 P	0.007 P
alpha-BHC				0.0034 U	0.012 U	0.002 U	0.002 U	0.0022 U	0.0023 U	0.0019 U	0.0019 U
alpha-Chlordane				0.0034 U	0.43	0.002 U	0.002 U	0.0022 U	0.0023 U	0.03 P	0.0059 P
Aroclor-1016				0.066 U	0.23 U	0.039 U	0.038 U	0.042 U	0.045 U	0.037 U	0.036 U
Aroclor-1248				0.066 U	0.23 U	0.039 U	0.038 U	0.042 U	0.045 U	0.037 U	0.036 U
Aroclor-1254				0.066 U	0.23 U	0.039 U	0.038 U	0.042 U	0.045 U	0.37 P	0.036 U
Aroclor-1260				0.066 U	0.23 U	0.039 U	0.038 U	0.042 U	0.045 U	0.39	0.036 U
beta-BHC				0.0034 U	0.0095 J	0.002 U	0.002 U	0.0022 U	0.0023 U	0.0019 U	0.0019 U
delta-BHC				0.0034 U	0.012 U	0.002 U	0.002 U	0.0022 U	0.0023 U	0.0019 U	0.0019 U
Dieldrin	0.042	0.18	50	0.0066 U	0.023 U	0.0039 U	0.0038 U	0.0042 U	0.0045 U	0.0037 U	0.0036 U
Endosulfan II				0.0066 U	0.023 U	0.0039 U	0.0038 U	0.0042 U	0.0045 U	0.0037 U	0.0036 U
Endosulfan sulfate				0.0066 U	0.023 U	0.0039 U	0.0038 U	0.0042 U	0.0045 U	0.0037 U	0.0036 U
Endrin	17	310	50	0.0066 U	0.023 U	0.0039 U	0.0038 U	0.0043	0.0045 U	0.0036 JP	0.0036 U
Endrin aldehyde				0.0066 U	0.023 U	0.0039 U	0.0038 U	0.0042 U	0.0045 U	0.0037 U	0.0036 U
Endrin ketone				0.0066 U	0.023 U	0.0039 U	0.0038 U	0.012	0.0091 P	0.0082 P	0.014
gamma-BHC (Lindane)	0.52	2.2	50	0.0034 U	0.012 U	0.002 U	0.002 U	0.0022 U	0.0023 U	0.0019 U	0.0019 U
gamma-Chlordane				0.0034 U	0.59	0.002 U	0.002 U	0.0022 U	0.0023 U	0.042	0.0019 U
Heptachlor	0.15	0.65	50	0.0034 U	0.012 U	0.002 U	0.002 U	0.0022 U	0.0023 U	0.0019 U	0.0019 U
Heptachlor epoxide				0.0034 U	0.012 U	0.002 U	0.002 U	0.0027 P	0.0098	0.0019 U	0.02
Methoxychlor	280	5200	50	0.034 U	0.12 U	0.02 U	0.02 U	0.097	0.023 U	0.019 U	0.14
Total PCB	0.49	2	50	0 U	0 U	0 U	0 U	0 U	0 U	0.76	0 U

300754

**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB148	SB149	SB150	SB151	SB152	SB153	SB154
Sample ID	Direct	Direct	Groundwater	SB148-2	SB149-2	SB150-2	SB151-2	SB152-2	SB153-2	SB154-2
Lab ID	Contact	Contact	Soil	0211111A	0211113A	0211115A	0211117A	0211119A	0211201A	0211203A
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00	2/14/00
Depth (feet)	Criteria	Criteria	Criteria	5-5.5	6-6.5	5.5-6	6-7	4-5	6-6.5	5.5-6
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	2	9	50	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2	9	500	NA	NA	NA	NA	NA	NA	NA
Aldrin	0.04	0.17	50	0.0022 U	0.0035	0.01	0.0022 P	0.0019 U	0.0026	0.0025 P
alpha-BHC				0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U
alpha-Chlordane				0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U
Aroclor-1016				0.043 U	0.04 U	0.04 U	0.04 U	0.036 U	0.038 U	0.04 U
Aroclor-1248				0.043 U	0.04 U	0.04 U	0.04 U	0.036 U	0.038 U	0.04 U
Aroclor-1254				0.043 U	0.04 U	0.42	0.04 U	0.036 U	0.038 U	0.04 U
Aroclor-1260				0.043 U	0.04 U	0.36	0.04 U	0.036 U	0.038 U	0.04 U
beta-BHC				0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U
delta-BHC				0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U
Dieldrin	0.042	0.18	50	0.0043 U	0.004 U	0.004 U	0.004 U	0.0036 U	0.0038 U	0.004 U
Endosulfan II				0.0043 U	0.004 U	0.004 U	0.004 U	0.0036 U	0.0038 U	0.004 U
Endosulfan sulfate				0.0043 U	0.004 U	0.004 U	0.004 U	0.0036 U	0.0038 U	0.004 U
Endrin	17	310	50	0.0043 U	0.004 U	0.0064 P	0.0039 JP	0.0051	0.0038 U	0.004 U
Endrin aldehyde				0.0043 U	0.004 U	0.004 U	0.004 U	0.0036 U	0.0038 U	0.004 U
Endrin ketone				0.0043 U	0.004 U	0.0087 P	0.0076	0.0047 P	0.0053 P	0.0041
gamma-BHC (Lindane)	0.52	2.2	50	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U
gamma-Chlordane				0.0022 U	0.0021 U	0.0078 P	0.0021 U	0.0019 U	0.0017 JP	0.0016 J
Heptachlor	0.15	0.65	50	0.0022 U	0.0021 U	0.0021 U	0.0021 U	0.0019 U	0.0019 U	0.0021 U
Heptachlor epoxide				0.0022 U	0.003 P	0.0085 P	0.0052 P	0.0019 U	0.0019 U	0.0021 U
Methoxychlor	280	5200	50	0.022 U	0.021 U	0.038 P	0.047	0.019 U	0.019 U	0.021 U
Total PCB	0.49	2	50	0 U	0 U	0.78	0 U	0 U	0 U	0 U

300755

**Subsurface Soil Samples  
Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	SB155	SB156	SB157	SE01	SE01	SE03	TP01
Sample ID	Direct	Direct	Groundwater	SB155-2	SB156-2	SB157-2	SE01-1	SE01-2	SE03-1	TP01-1
Lab ID	Contact	Contact	Soil	0211205A	0211207A	0211209A	9714169	9714170	9714469	9714168
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	2/14/00	2/14/00	2/14/00	8/5/97	8/5/97	8/12/97	8/4/97
Depth (feet)	Criteria	Criteria	Criteria	5.5-6	3.5-4	6-7	2-3	2-3	4-5	3-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	NA	NA	NA	0.12 JPD	0.11 JPD	0.45 D	0.0036 U
4,4'-DDE	2	9	50	NA	NA	NA	0.0039 U	0.0039 U	1.7 D	0.24 PD
4,4'-DDT	2	9	500	NA	NA	NA	0.0039 U	0.0039 U	0.44 D	0.0036 U
Aldrin	0.04	0.17	50	0.0012 JP	0.12	0.31	0.002 U	0.0019 U	0.043 PDJ	0.025 P
alpha-BHC				0.0019 U	0.0096 U	0.0091 U	0.002 U	0.0019 U	0.0015 JP	0.0018 U
alpha-Chlordane				0.0019 U	0.0096 U	0.0091 U	0.002 U	0.0019 U	0.14 PDJ	1.2 PD
Aroclor-1016				0.037 U	0.19 U	0.18 U	0.039 U	0.039 U	0.041 U	0.036 U
Aroclor-1248				0.037 U	0.19 U	0.18 U	0.078 U	0.078 U	0.081 U	0.071 U
Aroclor-1254				0.037 JP	3.6	8.1	0.039 U	0.039 U	0.041 U	0.036 U
Aroclor-1260				0.095 P	2.6	7	0.039 U	0.039 U	0.041 U	0.036 U
beta-BHC				0.0019 U	0.0096 U	0.0091 U	0.039 U	0.039 U	0.041 U	0.036 U
delta-BHC				0.0019 U	0.0096 U	0.0091 U	0.039 U	0.039 U	2.8 PD	0.036 U
Dieldrin	0.042	0.18	50	0.0037 U	0.019 U	0.16 P	15 PD	15 PD	1.5 PD	6.8 D
Endosulfan II				0.0037 U	0.019 U	0.018 U	0.002 U	0.0019 U	0.002 U	0.0018 U
Endosulfan sulfate				0.0037 U	0.019 U	0.018 U	0.002 P	0.00098 JP	0.002 U	0.0018 U
Endrin	17	310	50	0.0037 U	0.043 P	0.11 P	0.0039 U	0.0039 U	0.12 PDJ	0.0036 U
Endrin aldehyde				0.0037 U	0.019 U	0.018 U	0.002 U	0.0019 U	0.002 U	0.0018 U
Endrin ketone				0.0037 U	0.055 P	0.018 U	0.0039 U	0.0039 U	0.0041 U	0.0036 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0019 U	0.0096 U	0.0091 U	0.0039 U	0.0039 U	0.0041 U	0.0036 U
gamma-Chlordane				0.0019 U	0.051 P	0.13 P	0.0039 UJ	0.19 UJ	0 R	0.093 UJ
Heptachlor	0.15	0.65	50	0.0019 U	0.0096 U	0.0091 U	0.0039 U	0.0039 U	0.0041 U	0.0036 U
Heptachlor epoxide				0.0019 U	0.0096 U	0.23 P	0.0039 U	0.0039 U	0.0041 U	0.025 P
Methoxychlor	280	5200	50	0.019 U	0.14 P	0.52	0.002 U	0.0019 U	0.001 JP	0.0032 P
Total PCB	0.49	2	50	0.132	6.2	15.1	0.14 PD	0.11 PD	0.1 D	2.5 D

300756

**Subsurface Soil Samples**  
**Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	TP05	TP06	TP09	TP10	TP13	TP14	TP17
Sample ID	Direct	Direct	Groundwater	TP05-1	TP06-1	TP09-1	TP10-1	TP13-1	TP14-1	TP17-1
Lab ID	Contact	Contact	Soil	9714171	9714172	9714315	9714316	9714317	9714319	9714464
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	8/5/97	8/6/97	8/7/97	8/7/97	8/8/97	8/8/97	8/11/97
Depth (feet)	Criteria	Criteria	Criteria	3-4	3-4	3-4	4-5	3-4	3-4	4-5
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0035 U	0.036 P	0.32 JPD	0.028 P	0.0053 U	0.0038 U	0.0042 U
4,4'-DDE	2	9	50	0.31 JD	0.0038 U	1 D	0.0078 P	0.0053 U	0.0038 U	0.0042 U
4,4'-DDT	2	9	500	0.024 P	0.0033 JP	0.019 P	0.0092 P	0.0053 U	0.0038 U	0.0042 U
Aldrin	0.04	0.17	50	0.0018 U	0.071 PD	0.73 PD	0.0025 U	0.0064	0.0019 U	0.0021 U
alpha-BHC				0.0018 U	0.0019 U	0.0019 U	0.0025 U	0.0026 U	0.0019 U	0.0021 U
alpha-Chlordane				0.1 JPD	0.25 PD	1.3 PD	0.0016 JP	0.081 PD	0.0019 U	0.0021 U
Aroclor-1016				0.035 U	0.038 U	0.038 U	0.05 U	0.053 U	0.038 U	0.042 U
Aroclor-1248				0.07 U	0.076 U	0.076 U	0.1 U	0.11 U	0.076 U	0.084 U
Aroclor-1254				0.035 U	0.038 U	0.038 U	0.05 U	0.053 U	0.038 U	0.042 U
Aroclor-1260				0.035 U	0.038 U	0.038 U	0.05 U	0.053 U	0.038 U	0.042 U
beta-BHC				0.035 U	0.038 U	0.038 U	0.05 U	0.053 U	0.038 U	0.042 U
delta-BHC				75 PD	4.5 D	60 D	0.05 U	0.32 P	0.038 U	0.042 U
Dieldrin	0.042	0.18	50	32 PD	2.2 PD	23 PD	0.05 U	0.053 U	0.038 U	0.042 U
Endosulfan II				0.0018 U	0.0019 U	0.0019 U	0.0025 U	0.0026 U	0.0019 U	0.0021 U
Endosulfan sulfate				0.0018 U	0.0019 U	0.0019 U	0.0025 U	0.0026 U	0.0019 U	0.0021 U
Endrin	17	310	50	0.0035 U	0.0038 U	0.0038 U	0.005 U	0.0053 U	0.0038 U	0.0042 U
Endrin aldehyde				0.0018 U	0.0019 U	0.0019 U	0.0025 U	0.0026 U	0.0019 U	0.0021 U
Endrin ketone				0.0035 U	0.0038 U	0.0038 U	0.005 U	0.0053 U	0.0038 U	0.0042 U
gamma-BHC (Lindane)	0.52	2.2	50	0.0035 U	0.0038 U	0.0038 U	0.005 U	0.0053 U	0.0038 U	0.0042 U
gamma-Chlordane				1.6 UJ	0.0038 UJ	0.0038 UJ	0.005 UJ	0.0053 UJ	0.0038 UJ	0 R
Heptachlor	0.15	0.65	50	0.0035 U	0.0038 U	0.0038 U	0.005 U	0.0053 U	0.0038 U	0.0042 U
Heptachlor epoxide				0.0035 U	0.0038 U	0.0038 U	0.005 U	0.0053 U	0.0038 U	0.0042 U
Methoxychlor	280	5200	50	0.0018 U	0.0019 U	0.0019 U	0.0025 U	0.0026 U	0.0019 U	0.0021 U
Total PCB	0.49	2	50	0.43 PD	0.25 D	1.4 PD	0.0048 P	0.11 D	0.0019 U	0.0021 U

300757

**Subsurface Soil Samples  
Positive Analytical Results - Pesticides and PCBs**

Sample Location	Residential	Non-Residential	Impact to	TP18	TP20	TP21	TP24
Sample ID	Direct	Direct	Groundwater	TP18-1	TP20-1	TP21-2	TP24-1
Lab ID	Contact	Contact	Soil	9714465	9714466	9714468	9714725
Date Sampled	Soil Cleanup	Soil Cleanup	Cleanup	8/11/97	8/12/97	8/12/97	8/13/97
Depth (feet)	Criteria	Criteria	Criteria	4-5	3.5-4.5	4-5	3-4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	3	12	50	0.0092	0.0052 U	0.056 PJ	0.0044 U
4,4'-DDE	2	9	50	0.0011 JP	0.0052 U	0.098 PDJ	0.0044 U
4,4'-DDT	2	9	500	0.004 U	0.0052 U	0.0088	0.0044 U
Aldrin	0.04	0.17	50	0.002 U	0.0026 U	0.011 PJ	0.0022 U
alpha-BHC				0.002 U	0.0026 U	0.0022 U	0.0022 U
alpha-Chlordane				0.002 U	0.0026 U	0.044 D	0.0022 U
Aroclor-1016				0.04 U	0.052 U	0.043 U	0.044 U
Aroclor-1248				0.08 U	0.1 U	0.087 U	0.088 U
Aroclor-1254				0.04 U	0.052 U	0.043 U	0.044 U
Aroclor-1260				0.04 U	0.052 U	0.043 U	0.044 U
beta-BHC				0.04 U	0.052 U	0.043 U	0.044 U
delta-BHC				0.076 PJ	0.052 U	0.52 PJ	0.044 U
Dieldrin	0.042	0.18	50	0.041 PJ	0.052 U	0.46 PJ	0.044 U
Endosulfan II				0.002 U	0.0026 U	0.0022 U	0.0022 U
Endosulfan sulfate				0.002 U	0.0026 U	0.0022 U	0.0022 U
Endrin	17	310	50	0.004 U	0.0052 U	0.0043 U	0.0044 U
Endrin aldehyde				0.002 U	0.0026 U	0.0022 U	0.0022 U
Endrin ketone				0.004 U	0.0052 U	0.0043 U	0.0044 U
gamma-BHC (Lindane)	0.52	2.2	50	0.004 U	0.0052 U	0.0043 U	0.0044 U
gamma-Chlordane				0 R	0 R	0 R	0 R
Heptachlor	0.15	0.65	50	0.004 U	0.0052 U	0.0043 U	0.0044 U
Heptachlor epoxide				0.004 U	0.0052 U	0.0043 U	0.0044 U
Methoxychlor	280	5200	50	0.002 U	0.0026 U	0.0046 PJ	0.0022 U
Total PCB	0.49	2	50	0.002 U	0.0026 U	0.044 D	0.0022 U

300758

**Table 15**  
**Soil Samples**  
**Positive Analytical Results - TPH**

Sample Location	SB50	SB51	SB52	SB53	SB53	SB56	SB57	SB58	SB59	SB60	SB61
Sample ID	SB50-1	SB51-1	SB52-1	SB53-1	SB53-2	SB56-2	SB57-1	SB58-1	SB59-1	SB60-1	SB61-1
Lab ID	9713146	9713145	9713144	9713142	9713143	9713205	9713207	9713209	9713213	9713147	9713214
Date Sampled	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97	7/22/97	7/22/97	7/22/97	7/22/97	7/21/97	7/22/97
Depth (feet)	5.5 - 6	5.5 - 6	5 - 5.5	3.5 - 4	7.5 - 8	6.5 - 7	6.5 - 7	5.5 - 6	5.5 - 6	3.5 - 4	3.5 - 4
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Petroleum Hydrocarbons	202	2790	1910	67	50	34	30	3190	19000	236	4820

300759



**Table 16  
Particle Size Analysis**

Sample Location	SB01	SB03	SB05	SB07	SB09	SB12	SB13	SB14	SB16	SB19	SB38
Sample ID	SB01-3	SB03-3	SB05-3	SB07-3	SB09-3	SB12-3	SB13-3	SB14-3	SB16-3	SB19-3	SB38-3
Lab ID	9712240	9712253	9712250	9712245	9712628	9712256	9712650	9712644	9712648	9712949	9710849
Date Sampled	7/10/97	7/10/97	7/10/97	7/10/97	7/14/97	7/10/97	7/15/97	7/15/97	7/15/97	7/17/97	6/19/97
Depth (feet)	5 - 6	5 - 6	5 - 6	5 - 6	3 - 5	5 - 6	5 - 6	6 - 8	6 - 7	5 - 6	5 - 6
<b>Particle size (% Finer)</b>											
Sieve Size 3/4 In. (Mesh)	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1/2 In. (Mesh)	84.91	87.34	95.28	97.75	91.02	92.26	85.79	96.9	96.17	100	97.92
Sieve Size 1/4 In. (Mesh)	74.61	78.22	88.97	89.89	79.01	80.93	73.29	79.95	87.09	87.73	91.28
Sieve Size No.4 (4.76mm Mesh)	68.7	74.03	86.7	86.31	72.83	73.83	69.63	71.03	81.08	81.33	86.72
Sieve Size No.10 (2.00mm Mesh)	55.26	62.79	72.37	76.61	57.82	60.3	52.55	53.15	65.13	59.77	70.47
Sieve Size No.30 (0.60mm Mesh)	44.09	52.96	60.52	67.24	46.64	44.41	36.04	42.32	50.62	38.74	53.95
Sieve Size No.50 (0.297mm Mesh)	32.62	41.51	48.61	55.15	36.41	34.68	16.37	33.64	39.86	27.98	38.12
Sieve Size No.100 (0.150mm Mesh)	21.79	29.74	36.75	41.04	27.27	24.87	0.26	23.55	27.01	18.94	25.2
Sieve Size No.140 (0.105mm Mesh)	20.94	28.7	35.77	39.63	26.52	24.51	0	22.62	26.36	17.85	23.09
Sieve Size No.170 (0.088mm Mesh)	16.56	23.42	28.87	28.15	23.19	20.25	0	18.44	19.12	12.8	18.99
Sieve Size No.200 (0.075mm Mesh)	12.32	19.2	23.02	19.32	18.5	15.97	0	14.57	14.39	10.26	16.08
< No.200 (Mesh)	12.32	19.2	23.02	19.32	18.5	15.97	0	14.57	14.39	10.26	16.08

**Total Organic Carbon (mg/kg)**

Total Organic Carbon	42600	53200	112000	42600	44200	142000	26500	61500	73400	77400	50000
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**Total Organic Halogen (mg/kg)**

Total Organic Halogen	89.4	404	286	209	199	169	0 U	195	0. U	33.2	13.6
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300760

**Table 17**  
**Solid Waste Sample**  
**Positive Analytical Results**

Sample Location	TP21
Sample ID	TP21-1
Lab ID	9714467
Date Sampled	8/12/97
Depth (feet)	4-5
Units	mg/kg

**Semivolatile**

4-Methylphenol	0.084	J
bis(2-Ethylexyl)phthalate	0.11	J
Di-n-butylphthalate	0.069	J
Phenanthrene	0.098	J
Total Semivolatile TIC	9744	J
Total Semivolatile	9744.361	

**Pesticide/PCB**

4,4'-DDE	0.0065	P
Aldrin	0.0019	JP
Aroclor-1260	0.011	JP
Total PCB	0.011	JP

**Metal**

Aluminum	210	E
Arsenic	9.1	
Barium	5.4	N*
Calcium	358	B
Copper	1.3	B
Cyanide	15.5	
Iron	82.6	*
Lead	0.41	B
Magnesium	96.8	B
Manganese	1.6	B
Mercury	0.06	N
Selenium	2.8	
Sodium	93000	E
Zinc	6.8	E*

**Compatibility**

Solids, Percent	62.4 %
Air/Water Reactivity	0 U
Flash Point	>200 F
Peroxides & Oxidizers	0 U
pH	9.48
Cyanide, Reactive	0 U
Sulfide, Reactive	0 U

**Table 18.**  
**Sewer Basin Samples**  
**Positive Analytical Results**

Sample Location	Residential	Non-Residential	Impact to	SD01	SD02
Sample ID	Direct Contact	Direct Contact	Groundwater	SD01-1	SD02-1
Lab ID	Soil Cleanup	Soil Cleanup	Soil Cleanup	9714727	9714728
Date Sampled	Criteria	Criteria	Criteria	8/14/97	8/14/97
Depth (feet)					
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Volatiles</b>					
1,1,1-Trichloroethane	210	1000	50	0 U	14 J
1,1-Dichloroethane	570	1000	10	21	0 U
1,1-Dichloroethene	8	150	10	7	0 U
1,2-Dichloroethene (total)	79	1000	1	880 D	0 U
1,2-Dichloropropane	10	43		0 U	63
#VALUE!	1000	1000	50	4.6	190
Acetone	1000	1000	100	0 U	110
Benzene	3	13	1	1 J	0 U
Chlorobenzene	37	680	1	7.4	0 U
Chloroform	19	28	1	0 U	4.7 J
Ethylbenzene	1000	1000	100	64 JD	82
Methylene Chloride	49	210	1	4.8 B	98 B
Styrene	23	97	100	33	39
Tetrachloroethane	4	6	1	2700 D	100
Toluene	1000	1000	500	580 D	5500 D
Trichloroethane	23	54	1	340 D	22 J
Xylene (total)	410	1000	10	320 D	810 D
Total Volatiles TIC				1092 J	2400 J
Total Volatiles				6034.8	9432.7

**Semivolatiles**

1,2-Dichlorobenzene	5100	10000	50	0 U	930 D
#VALUE!				7 JD	0 U
bis(2-Ethylhexyl)phthalate	49	210	100	24 JD	0 U
Butylbenzylphthalate	1100	10000	100	0 U	53 D
Di-n-butylphthalate	5700	10000	100	0 U	200 D
Dibutylphthalate	10000	10000	50	0 U	2000 D
Naphthalene	230	4200	100	9.2 JD	0 U
Total Semivolatiles TIC				1935	9833
Total Semivolatiles				1975.2	13916

**Pesticides/PCB**

alpha-Chlordane				0.34	0 U
Endosulfan I				0.33 D	0.35
gamma-BHC (Lindane)	0.52	2.2	50	0.11 P	0.047 P
gamma-Chlordane				0.62 D	0 U
Heptachlor epoxide				0 U	0.52 P

**Metals**

Aluminum				13000	3380
Antimony	14	340		74.6 BN	26.5 N
Arsenic	20	20		10.8	38.7
Barium	700	47000		649 *	1980 *
Beryllium	1	1		1.4 B	0 U
Cadmium	1	100		29.3	10.8
Calcium				48300	18300
Chromium	500	500		143 *	434 *
Cobalt				25.7	109
Copper	600	600		137 E	2320 E
Cyanide	1100	21000		1.3	5.4
Iron				24300 *	51800 *
Lead	400	600		1590	2710
Magnesium				10800 *	3250 *
Manganese				420	554
Mercury	14	270		1.7 N	0.59 N
Nickel	250	2400		40	819
Potassium				1270 B	1450 B
Selenium	63	3100		3.1	0 U
Silver	110	4100		7.5	24.6
Sodium				989 B	13800
Vanadium	370	7100		17.4	10.5 B
Zinc	1500	1500		1530	3110

**Table 19**  
**Shallow Groundwater Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	Ground	MW1S	MW1S	MW1S	MW1S	MW2S	MW2S
Sample ID	Water	MW1S-1	MW1S-2	MW1S-3	MW1S-4	MW2S-1	MW2S-3
Lab ID	Quality	9714711	9716235	18718	000111701A	9714722	18717
Date Sampled	Standard	8/14/97	9/16/97	11/10/98	1/19/00	8/15/97	11/10/98
Depth (feet)		4-14	4-14	4-14	4-14	6-16	6-16
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1,1-Trichloroethane	30	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane		NA	NA	NA	10 U	NA	NA
1,1-Dichloroethane	50	10 U	10 U	10 U	10 U	10 U	4 J
1,2-Dichlorobenzene	600	NA	NA	NA	10 U	NA	NA
1,2-Dichloroethane	2	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	70	10 U	10 U	10 U	NA	10 U	2 J
1,2-Dichloropropane	1	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	300	10 U	10 U	8 J	10 U	200	160
2-Hexanone		10 U	10 U	10 U	10 U	10 U	19
4-Methyl-2-Pentanone	400	10 U	10 U	10 U	10 U	10 U	160
Acetone	700	18	10 U	22	10 U	1400 D	220 D
Benzene	1	10 U	10 U	1 J	10 U	17	31
Carbon Disulfide	800	10 U	10 U	10 U	10 U	59	26
Carbon Tetrachloride	2	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	50	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane		10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	6	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	70	NA	NA	NA	10 U	NA	NA
Cyclohexane		NA	NA	NA	10 U	NA	NA
Ethylbenzene	700	10 U	10 U	10 U	10 U	17	12
Isopropylbenzene		NA	NA	NA	10 U	NA	NA
Methyl acetate		NA	NA	NA	10 U	NA	NA
Methylcyclohexane		NA	NA	NA	10 U	NA	NA
Methylene Chloride	3	9 JB	4 JB	10 U	10 U	5 JB	10 U
Methyl-t-butyl ether		NA	NA	NA	10 U	NA	NA
Styrene	100	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	1	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	1000	9 J	5 J	2 J	2 J	110	140
trans-1,2-Dichloroethene	100	NA	NA	NA	10 U	NA	NA
Trichloroethene	1	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	5	10 U	10 U	10 U	10 U	10 U	10 U
Xylene (total)	1000	10 U	10 U	10 U	10 U	56	42
Total TICS		0	35	1312	0	243	2791
Total Volatiles		27	40	1345	2	2102	3607

300763

**Table 19**  
**Shallow Groundwater Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	MW2S	MW3S	MW3S	MW4S	MW4S	MW4S	MW5S
Sample ID	MW2S-4	MW3S-1	MW3S-3	MW4S-1	MW4S-3	MW4S-4	MW5S-3
Lab ID	000111704A	9714715	18732	9714717	18727	000111708A	18726
Date Sampled	1/19/00	8/15/97	9/30/98	8/15/97	11/10/98	1/19/00	11/10/98
Depth (feet)	6-16	6-16	6-16	4-14	4-14	4-14	6-16
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	20 U	NA	NA	NA	NA	10 U	NA
1,1-Dichloroethane	5 J	10 U	8 J	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	NA	NA	NA	NA	10 U	NA
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	NA	10 U	13	10 U	10 U	NA	3 J
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	180	10 U	10 U	10 U	10	10 U	10 U
2-Hexanone	26	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	160	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	220 D	10 U	11	10 U	27	10 U	19
Benzene	32	10 U	1 J	10 U	10 U	10 U	310 D
Carbon Disulfide	31	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	16
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	3 J	NA	NA	NA	NA	10 U	NA
Cyclohexane	10 U	NA	NA	NA	NA	10 U	NA
Ethylbenzene	7 J	10 U	10 U	10 U	10 U	10 U	180
Isopropylbenzene	10 U	NA	NA	NA	NA	10 U	NA
Methyl acetate	120 D	NA	NA	NA	NA	10 U	NA
Methylcyclohexane	10 U	NA	NA	NA	NA	10 U	NA
Methylene Chloride	10 U	10 B	10 U	7 JB	10 U	10 U	10 U
Methyl-t-butyl ether	10 U	NA	NA	NA	NA	10 U	NA
Styrene	2 J	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	210 D	10 U	10 U	10 U	10 U	10 U	86
trans-1,2-Dichloroethene	10 U	NA	NA	NA	NA	10 U	NA
Trichloroethene	10 U	10 U	1 J	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	13	10 U	10 U	10 U	10 U
Xylene (total)	19	10 U	10 U	10 U	10 U	10 U	810 DE
Total TICS	2808	0	0	17	5	0	1471
Total Volatiles	3823	0	47	17	42	0	2895

**Table 19**  
**Shallow Groundwater Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	MW5S	MW6S	MW6S	MW7S	MW8S	MW8S	MW9S
Sample ID	MW5S-4	MW6S-3	MW6S-4	MW7S-3	MW8S-3	MW8S-4	MW9S-3
Lab ID	000111705A	18729	000111706A	18728	18730	000111707A	18722
Date Sampled	1/19/00	11/10/98	1/19/00	11/10/98	11/10/98	1/19/00	11/11/98
Depth (feet)	6-16	6-16	6-16	6-16	4-14	4-14	16-26
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1,1-Trichloroethane	10 U	10 U	1 J	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	10 U	NA	10 U	NA	NA	27	NA
1,1-Dichloroethane	10 U	1 J	19 U	5 J	10 U	10 U	3 J
1,2-Dichlorobenzene	1 J	NA	7 J	NA	NA	10 U	NA
1,2-Dichloroethane	10 U	10 U	12	9 J	10 U	10 U	10 U
1,2-Dichloroethene (total)	NA	10 U	NA	12	10 U	NA	14
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	2 J
2-Butanone	10 U	10 U	10 U	17	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	5 J	10 U	10 U	13	10 U	10 U	10 U
Acetone	10 U	27	10 U	63	11	27	8 J
Benzene	360 D	5 J	9 J	330 D	10 U	10 U	1 J
Carbon Disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	6 J	10 U	2 J	10 U	10 U	10 U	10 U
Chloroethane	13	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	1 J	10 U	2 J	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	1 J	NA	3 J	NA	NA	10 U	NA
Cyclohexane	34	NA	10 U	NA	NA	10 U	NA
Ethylbenzene	370 D	19	14	64	10 U	10 U	10 U
Isopropylbenzene	32	NA	10 U	NA	NA	10 U	NA
Methyl acetate	10 U	NA	10 U	NA	NA	10 U	NA
Methylcyclohexane	150	NA	1 J	NA	NA	10 U	NA
Methylene Chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl-t-butyl ether	10 U	NA	10 U	NA	NA	10 U	NA
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	1 J	10 U	10 U	10 U	10 U	2 J
Toluene	6 J	2 J	10 U	120	10 U	1 J	10 U
trans-1,2-Dichloroethene	10 U	NA	2 J	NA	NA	10 U	
Trichloroethene	10 U	2 J	3 J	1 J	10 U	10 U	3 J
Vinyl Chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylene (total)	20	66	5 J	220 D	10 U	10 U	10 U
Total TICS	1846	670	813	0	43	0	39
Total Volatiles	2845	793	874	854	54	55	72

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**Table 19**  
**Shallow Groundwater Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	MW9S	MW10S	MW10S	MW11S	MW11S	SB01	SB06
Sample ID	MW9S-4	MW10S-3	MW10S-4	MW11S-4	MW11S-5	SB01-5	SB06-5
Lab ID	000110305A	18720	000110306A	000110303A	0214903A	9712242	9712637
Date Sampled	1/18/00	11/11/98	1/18/00	1/18/00	2/17/00	7/10/97	7/15/97
Depth (feet)	16-26	8-18	8-18	11-21	11-21	5-9	6-11
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	5 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	10 U	NA	10 U	10 U	10 U	NA	NA
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	5	50 U
1,2-Dichlorobenzene	10 U	NA	10 U	10 U	10 U	NA	NA
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	5 U	10 U
1,2-Dichloroethene (total)	NA	2 J	NA	NA	NA	NA	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	5 U	10 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	5 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	5 U	10 U
4-Methyl-2-Pentanone	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Acetone	10 U	7 J	10 U	10 U	10 U	5 U	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U	5 U	10 U
cis-1,2-Dichloroethene	10 U	NA	1 J	10 U	10 U	9	NA
Cyclohexane	10 U	NA	10 U	10 U	10 U	NA	NA
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Isopropylbenzene	10 U	NA	10 U	10 U	10 U	NA	NA
Methyl acetate	10 U	NA	10 U	10 U	10 U	NA	NA
Methylcyclohexane	10 U	NA	10 U	10 U	10 U	NA	NA
Methylene Chloride	10 U	10 U	10 U	10 U	10 U	8 JB	0 R
Methyl-t-butyl ether	10 U	NA	10 U	9 J	17	NA	NA
Styrene	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	2 J	10 U
Toluene	10 U	10 U	10 U	10 U	10 U	5 U	2 J
trans-1,2-Dichloroethene	10 U	NA	10 U	10 U	10 U	5 U	NA
Trichloroethene	10 U	10 U	10 U	10 U	10 U	2 J	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U	10 U	5 U	10 U
Xylene (total)	10 U	10 U	10 U	10 U	10 U	10 U	3 J
Total TICS	NA	8	0	12	0	NA	NA
Total Volatiles	NA	17	1	21	17	NA	NA

300766

**Table 19**  
**Shallow Groundwater Samples**  
**Positive Analytical Results - Volatiles**

Sample Location	SB07	SB07	SB10	SB13	SB14	SB15	SB16
Sample ID	SB07-4	SB07-5	SB10-4	SB13-4	SB14-4	SB15-5	SB16-4
Lab ID	9712246	9712247	9712641	9712651	9712645	9712633	9712649
Date Sampled	7/10/97	7/10/97	7/15/97	7/15/97	7/15/97	7/14/97	7/15/97
Depth (feet)	6-10	6-10	6-11	10-15	5-10	5-10	6-11
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1,1-Trichloroethane	50 U	100 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	50 U	100 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	50 U	100 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	NA	NA	10 U	10 U	10 U	10 U	1 J
1,2-Dichloropropane	50 U	100 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	50 U	100 U	10 U	10 U	10 U	10 U	120
2-Hexanone	50 U	100 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Acetone	50 U	100 U	10 U	10 U	10 U	10 U	630 D
Benzene	530	560	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Chloroform	50 U	100 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	73	40 J	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	540	630	10 U	10 U	10 U	10 U	3 J
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	94 JB	190 JB	0 R	9 JB	0 R	0 R	0 R
Methyl-t-butyl ether	NA	NA	NA	NA	NA	NA	NA
Styrene	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	50 U	100 U	4 J	10 U	10 U	10 U	10 U
Toluene	150	150	10 U	1 J	10 U	10 U	120
trans-1,2-Dichloroethene	50 U	100 U	NA	NA	NA	NA	NA
Trichloroethene	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	50 U	100 U	10 U	10 U	10 U	10 U	10 U
Xylene (total)	2720	3280	10 U	10 U	10 U	10 U	9 J
Total TICS	NA	NA	NA	NA	NA	NA	NA
Total Volatiles	NA	NA	NA	NA	NA	NA	NA

300767



**Shallow Groundwater Samples**  
**Positive Analytical Results - Semi-Volatiles**

Sample Location	Ground	MW1S	MW1S	MW2S	MW2S	MW3S	MW4S	MW4S	MW5S	MW5S	MW6S
Sample ID	Water	MW1S-3	MW1S-4	MW2S-3	MW2S-4	MW3S-3	MW4S-3	MW4S-4	MW5S-3	MW5S-4	MW6S-3
Lab ID	Quality	18718	000111701B	18717	000111704B	16000	18727	000111708B	18726	000111705B	18729
Date Sampled	Standard	11/10/98	1/19/00	11/10/98	1/19/00	9/30/98	11/10/98	1/19/00	11/10/98	1/19/00	11/10/98
Depth (feet)		4-14	4-14	6-16	6-16	6-16	4-14	4-14	6-16	6-16	6-16
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1-Biphenyl		NA	10 U	NA	3 J	NA	NA	10 U	NA	10 U	NA
1,2-Dichlorobenzene	600	10 U	NA	10 U	NA	10 U	10 U	NA	10 U	NA	2 J
2,4-Dimethylphenol	100	10 U	10 U	2000 U	10 U	10 U	10 U	10 U	13	10 U	10 U
2-Methylnaphthalene		3 J	4 J	10 U	34	10 U	10 U	10 U	5 J	10 U	98 D
2-Methylphenol		10 U	10 U	2100 D	10 U	10 U	10 U	10 U	4 J	10 U	10 U
4-Methylphenol		19	19	3100 D	3800 NJ	10 U	10 U	10 U	8 J	10 U	10 U
Acenaphthene	400	10 U	10 U	1 J	10 U	10 U	10 U	10 U	10 U	1 J	4 J
Anthracene	2000	10 U	10 U	10 U	10 U	10 U	1 J	10 U	10 U	10 U	10 U
Benzo(a)Anthracene	10	10 U	10 U	10 U	10 U	10 U	1 J	10 U	10 U	10 U	10 U
Benzo(a)Pyrene	20	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)Ether	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3 J
bis(2-Ethylhexyl)Phthalate	30	10 U	10 U	1 J	8 JB	12 B	10 U	1 JB	10 U	3 JB	10 U
Caprolactam		NA	10 U	NA	10 U	NA	NA	10 U	NA	10 U	NA
Carbazole		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3 J	4 J
Chrysene	20	10 U	10 U	10 U	10 U	10 U	7 J	10 U	10 U	10 U	10 U
Dibenzofuran		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 J
Diethylphthalate	5000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	33	10 U	10 U
Di-n-Butylphthalate	900	10 U	10 U	10 U	10 U	1 BJ	10 U	1 J	10 U	10 U	10 U
Fluoranthene	300	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	300	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 J	4 J
Indeno(1,2,3-cd)Pyrene	20	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	300	3700 D	1800 D	12000 D	9800 D	10 U	3 J	10 U	120 D	81 E	110 D
N-Nitrosodiphenylamine (I)	20	24	17	390 DJ	440 JD	10 U	10 U	10 U	3 J	2 J	10 U
Phenanthrene		10 U	10 U	10 U	10 U	10 U	2 J	10 U	10 U	10 U	10 U
Phenol	4000	10 U	10 U	2600 D	3100 D	10 U	10 U	10 U	19	10 U	10 U
Pyrene	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total TICS		447	401	2377	3919	151	6	173	1441	716	1101
Total Volatiles		4193	2241	22569	21096	151	20	174	1646	804	1328

300768

**Shallow Groundwater Samples  
Positive Analytical Results - Semi-Volatiles**

Sample Location	MW6S	MW7S	MW8S	MW8S	MW9S	MW9S
Sample ID	MW6S-4	MW7S-3	MW8S-3	MW8S-4	MW9S-3	MW9S-4
Lab ID	000111706B	18728RE	18730	000111707B	18722	000110305B
Date Sampled	1/19/00	11/10/98	11/10/98	1/19/00	11/11/98	1/18/00
Depth (feet)	6-16	6-16	4-14	4-14	16-26	16-26
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1-Biphenyl	10 U	NA	NA	10 U	NA	10 U
1,2-Dichlorobenzene	NA	10 U	10 U	NA	10 U	NA
2,4-Dimethylphenol	10 U	17	10 U	10 U	10 U	10 U
2-Methylnaphthalene	2 J	22	10 U	10 U	10 U	10 U
2-Methylphenol	10 U	19	10 U	3 J	10 U	10 U
4-Methylphenol	10 U	35	10 U	3 J	10 U	10 U
Acenaphthene	10 U	2 J	10 U	10 U	10 U	10 U
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)Anthracene	10 U	10 U	10 U	2 J	10 U	10 U
Benzo(a)Pyrene	10 U	10 U	10 U	2 J	10 U	10 U
bis(2-Chloroethyl)Ether	10 U	10 U	10 U	10 U	10	3 J
bis(2-Ethylhexyl)Phthalate	5 JB	10 U	3 J	2 JB	2 J	15
Caprolactam	10 U	NA	NA	1 J	NA	10 U
Carbazole	10 U	12	10 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	2 J	10 U	10 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	10 U	10 U	10 U	10 U	1 J	10 U
Di-n-Butylphthalate	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10 U	10 U	10 U	4 J	10 U	10 U
Fluorene	10 U	2 J	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)Pyrene	10 U	10 U	10 U	1 J	10 U	10 U
Naphthalene	10 U	46	4 J	4 J	10 U	10 U
N-Nitrosodiphenylamine (1)	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	10 U	10 U	10 U	2 J	10 U	10 U
Phenol	10 U	39	10 U	10 U	10 U	10 U
Pyrene	10 U	10 U	10 U	3 J	10 U	10 U
Total TICs	736	793	59	1929	233	36
Total Volatiles	738	987	66	1956	246	54

300769

Shallow Groundwater Samples  
Positive Analytical Results - Metals

Sample Location	Ground	MW1S	MW1S	MW1S	MW2S	MW2S	MW2S	MW3S	MW3S	MW4S	MW4S	MW4S
Sample ID	Water	MW1S-2	MW1S-3	MW1S-4	MW2S-2	MW2S-3	MW2S-4	MW3S-2	MW3S-3	MW4S-2	MW4S-3	MW4S-4
Lab ID	Quality	9716235	18718	000111701D	9716238	18717	000111704D	9716240	16000	9716242	18727	000111708D
Date Sampled	Standard	9/16/97	11/10/98	1/19/00	9/16/97	11/10/98	1/19/00	9/16/97	9/30/98	9/16/97	11/10/98	1/19/00
Depth (feet)		4-14	4-14	4-14	6-16	6-16	6-16	6-16	6-16	4-14	4-14	4-14
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	200	51800	12000	17400	1810	6910	4870	4980	2440 N	10300	37200	769
Antimony	20	0 R	6.1 B	22.8 B	30.6 BN	43.6 B	44.2 B	24.9 UN	2.6 U	24.9 UN	16.8 B	3.9 B
Arsenic	8	9800	1660	4230	5200	8040	3990	68.4	78.4	23.1	69.5	3.5 B
Barium	2000	7170 N	1820	4990	6620 N	13300	16100	82 BN	69.4 B	416 N	1320	554
Beryllium	20	2.5 B	1 U	2 B	0.2 U	1 U	0.42 B	0.33 B	0.2 U	0.3 B	1.5 B	0.41 U
Cadmium	4	7	3.5 B	3.4 B	4.3 U	3.1 B	1.4 B	4.3 U	0.2 U	4.3 U	33.1	4.3 B
Calcium		71900	27000	65500	444000	850000	826000	53700	61700	78300	132000	132000
Chromium	100	1090	188	678	193	930	698	16.5	8.7 B	41	177	2 B
Cobalt		32.5 B	8.6 B	19.5 B	6.1 U	4.7 B	0.31 U	6.1 U	2.6 B	6.1 U	12.7 B	0.66 B
Copper	1000	221 E	47.4	101	31.4 E	17.6 B	50.6	24.4 BE	7.5 B	34.9 E	164	7.9 B
Iron	300	94300	22900	83700	3560 J	17800	18000	20300	27400	21400	65500	2080
Lead	10	0 R	110	74.3	0 R	167	232	0 R	11.1	0 R	526	21
Magnesium		254000	318000	276000	24000	539000	123000	19900	23300	19500	36300	15700
Manganese	50	1200	220	71.1	55.3	241	226	137	161	785	941	304
Mercury	2	0 R	0.2 UN*	0.1 U	0 R	1.6 N*	0.38	0 R	0.2 U	0 R	2.7 N*	0.1 U
Nickel	100	71.2	19.2 B	44.6	15.9 B	30.5 B	24.7 B	12.7 U	3.9 B	18.8 B	49.2	1.3 B
Potassium		23400	23000	21200	23400	30200	22900	9600	10100	13900	19900	10400
Selenium	50	0 R	4.3 UN	7.7	0 R	8.9 N	5 B	0 R	3 U	0 R	19.8 N	4.9 U
Silver	30	4.7 B	2.1 U	6.2 B	2.9 U	15.2	1.9 B	2.9 U	1.8 U	2.9 U	6.7 B	1.8 U
Sodium	50000	55300	65400	66200	70800	84200	48500	39200	38000	24500	25200	12700
Thallium	10	0 R	5.2 U	1.6 U	0 R	5.2 U	1.6 U	0 R	3.7 U	0 R	5.2 U	2.3 B
Vanadium		125	33.8 B	61.9	25.1 B	51	37.1 B	13.1 B	3.9 B	17.1 B	84.5	2.3 B
Zinc	5000	4220	768	3100	231	646	1350	120	49.1	204	1080	132

300770

21  
**Shallow Groundwater Samples**  
**Positive Analytical Results - Metals**

Sample Location	MW5S	MW5S	MW6S	MW6S	MW7S	MW8S	MW8S	MW9S	MW9S	MW10S	MW10S
Sample ID	MW5S-3	MW5S-4	MW6S-3	MW6S-4	MW7S-3	MW8S-3	MW8S-4	MW9S-3	MW9S-4	MW10S-3	MW10S-4
Lab ID	18726	000111705D	18729	000111706D	18728	18730	000111707D	18722	000110305D	18720	000110306D
Date Sampled	11/10/98	1/19/00	11/10/98	1/19/00	11/10/98	11/10/98	1/19/00	11/11/98	1/18/00	11/11/98	1/18/00
Depth (feet)	6-16	6-16	6-16	6-16	6-16	4-14	4-14	16-26	16-26	8-18	8-18
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	16700	17.6 U	44300	9280	8280	929	44200	2960	4690	8440	2800
Antimony	11.9 B	3.3 B	16.3 B	6.7 B	5 B	3.9 U	18.3 B	3.9 U	1.6 U	3.9 U	1.6 U
Arsenic	2880	3510	1200	394	274	13.7	115	4.5 U	2.1 B	551	553
Barium	1540	346	566	526	113 B	425	1850	315	171 B	8520	1520
Beryllium	1 U	0.41 U	2.4 B	1.1 B	1 U	1 U	2.5 B	1 U	0.41 U	1 U	0.41 U
Cadmium	7	0.17 B	3 B	2.6 B	2 B	2.7 B	55.5	1.4 B	5.9	2.8 B	0.23 B
Calcium	61800	77500	105000	115000	29000	162000	240000	59200	140000	107000	135000
Chromium	190	19.1	412	137	201	14.7	323	6.3 B	3 B	30.7	7.1 B
Cobalt	8.9 B	2.8 B	12.8 B	17.8 B	5.1 B	3.5 B	43.5 B	10.6 B	10.6 B	1 U	0.31 U
Copper	142	6 B	193	83.6	40	6.7 U	707	22 B	13 B	24.2 B	4.4 B
Iron	34000	3990	100000	40800	15300	22900	104000	4010	1600	23500	14900
Lead	400	2.9 B	210	99.7	32.1	17.4	1470	12.8	36.7	255	63.8
Magnesium	194000	172000	40600	52800	17900	63900	57500	39200	17300	34800	47600
Manganese	358	38.8	1160	590	134	1840	1580	1280	188	587	719
Mercury	1.7 N*	0.1 U	1.6 N*	0.1 U	0.2 UN*	0.2 UN*	0.1 U	0.2 UN*	0.1 U	0.2 UN*	0.1 U
Nickel	57	36.4 B	72.5	47.8	18.1 B	6.8 B	135	33.6 B	36.4 B	14 B	6 B
Potassium	39900	36700	29800	32800	43600	23500	16700	10200	13000	21100	20600
Selenium	8.8 N	4.9 U	37.9 N	5	4.6 BN	9.2 N	4.9 U	4.3 UN	23	8.2 N	4.9 U
Silver	3.7 B	2.3 B	3.3 B	3.7 B	2.1 U	3.9 B	8.9 B	2.4 B	1.8 U	2.6 B	1.8 U
Sodium	229000	185000	279000	281000	572000	17800	14800	116000	30100	50500	52400
Thallium	5.2 U	4.3 B	5.2 U	1.6 U	5.2 U	5.2 U	1.6 U	5.2 U	1.6 U	5.2 U	2.4 B
Vanadium	49.6 B	2 B	132	57.3	62.3	1.6 U	143	5.9 B	4.8 B	25.6 B	6.5 B
Zinc	391	15.6 U	1150	1310	52	41.6	2970	97.6	357	252	685

300771

**Shallow Groundwater Samples  
Positive Analytical Results - Metals**

Sample Location	MW11S	MW11S
Sample ID	MW11S-4	MW11S-5
Lab ID	000110303D	0214903D
Date Sampled	1/18/00	2/17/00
Depth (feet)	11-21	11-21
Units	ug/l	ug/l
Aluminum	15600	5860
Antimony	1.6 U	1.6 U
Arsenic	2.7 B	2.8 B
Barium	304	297
Beryllium	0.79 B	0.64 B
Cadmium	2.3 B	2.4 B
Calcium	39000	36100
Chromium	8.7 B	15.2
Cobalt	9.6 B	8.8 B
Copper	8.3 B	9.4 B
Iron	3050	6300
Lead	65.3	27.6
Magnesium	20600	25300
Manganese	323	144
Mercury	0.1 U	0.1 UN
Nickel	12.4 B	17.9 B
Potassium	5080	5540
Selenium	5.5	21 N
Silver	1.8 U	1.8 U
Sodium	21800	24700
Thallium	1.6 U	1.6 U
Vanadium	12.8 B	14.4 B
Zinc	541	560

300772

**Shallow Groundwater Samples**  
**Positive Analytical Results - Pesticides/PCBs**

Sample Location	Ground	MW1S	MW1S	MW1S	MW2S	MW2S	MW2S	MW2S	MW3S	MW3S	MW3S
Sample ID	Water	MW1S-2	MW1S-3	MW1S-4	MW2S-1	MW2S-2	MW2S-3	MW2S-4	MW3S-1	MW3S-2	MW3S-3
Lab ID	Quality	9716235	18718	000111701C	9714722	9716238	18717	000111704C	9714715	9716240	16000
Date Sampled	Standard	9/16/97	11/10/98	1/19/00	8/15/97	9/16/97	11/10/98	1/19/00	8/15/97	9/16/97	9/30/98
Depth (feet)		4-14	4-14	4-14	6-16	6-16	6-16	6-16	6-16	6-16	6-16
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
4,4'-DDD	0.1	0.1 U	0.1 U	NA	0.037 JP	0.11 U	0.1 U	NA	0.1 U	0.11 U	0.1 U
4,4'-DDE	0.1	0.1 U	0.1 U	NA	0.1 U	0.11 U	0.1 U	NA	0.1 U	0.0049 JP	0.1 U
Aldrin	0.04	0.05 U	0.05 U	0.05 U	0.05 U	0.055 U	0.05 U	0.05 U	0.051 U	0.055 U	0.05 U
alpha-BHC	0.02	0.0069 JP	0.05 U	0.05 U	0.05 U	0.055 U	0.05 U	0.05 U	0.051 U	0.055 U	0.05 U
alpha-Chlordane		0.05 U	0.05 U	0.05 U	0.05 U	0.055 U	0.05 U	0.05 U	0.0042 JP	0.055 U	0.05 U
Aroclor-1242		1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U	1 U
Aroclor-1260		1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1.1 U	1 U
delta-BHC		0.05 U	0.05 U	0.05 U	0.05 U	0.055 U	0.05 U	0.05 U	0.051 U	0.055 U	0.05 U
Dieldrin	0.03	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U
Endosulfan I	0.4	0.05 U	0.05 U	0.05 U	0.05 U	0.047 JP	0.05 U	0.05 U	0.051 U	0.0052 JP	0.05 U
Endosulfan sulfate	0.4	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U	0.1 U	0.019 JP	0.11 U	0.1 U
gamma-Chlordane		0.05 U	0.05 U	0.05 U	0.05 U	0.56	0.05 U	0.05 U	0.051 U	0.055 U	0.05 U
Heptachlor	0.4	0.05 U	0.05 U	0.05 U	0.05 U	0.055 U	0.05 U	0.05 U	0.051 U	0.055 U	0.05 U
Total PCB	0.5	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300773

Shallow Groundwater Samples  
Positive Analytical Results - Pesticides/PCBs

Sample Location	MW4S	MW4S	MW4S	MW4S	MW5S	MW5S	MW6S	MW6S	MW7S	MW8S
Sample ID	MW4S-1	MW4S-2	MW4S-3	MW4S-4	MW5S-3	MW5S-4	MW6S-3	MW6S-4	MW7S-3	MW8S-3
Lab ID	9714717	9716242	18727	000111708C	18726	000111705C	18729	000111706C	18728	18730
Date Sampled	8/15/97	9/16/97	11/10/98	1/19/00	11/10/98	1/19/00	11/10/98	1/19/00	11/10/98	11/10/98
Depth (feet)	4-14	4-14	4-14	4-14	6-16	6-16	6-16	6-16	6-16	4-14
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
4,4'-DDD	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	0.1 U	NA	0.1 U	0.1 U
Aldrin	0.053 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.13 P	0.05 U	0.05 U
alpha-BHC	0.053 U	0.0016 JP	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	0.053 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.3 P	0.49	0.05 U	0.05 U
Aroclor-1242	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.2 P	1 U	1 U
Aroclor-1260	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2 P	1 U	1 U
delta-BHC	0.053 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.059 P	0.05 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan I	0.053 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Chlordane	0.053 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.23 P	0.6	0.05 U	0.05 U
Heptachlor	0.053 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.14 P	0.084	0.05 U
Total PCB	0 U	0 U	0 U	0 U	0 U	0 U	0 U	5.4	0 U	0 U

300774

**Shallow Groundwater Samples**  
**Positive Analytical Results - Pesticides/PCBs**

Sample Location	MW8S	MW9S	MW9S	MW10S	MW10S	MW11S	MW11S
Sample ID	MW8S-4	MW9S-3	MW9S-4	MW10S-3	MW10S-4	MW11S-4	MW11S-5
Lab ID	000111707C	18722	000110305C	18720	000110306C	000110303C	0214903C
Date Sampled	1/19/00	11/11/98	1/18/00	11/11/98	1/18/00	1/18/00	2/17/00
Depth (feet)	4-14	16-26	16-26	8-18	8-18	11-21	11-21
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
4,4'-DDD	NA	0.1 U	NA	0.1 U	NA	NA	NA
4,4'-DDE	NA	0.1 U	NA	0.1 U	NA	NA	NA
Aldrin	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1260	1 U	1 U	1 U	1 U	1 U	1 U	1 U
delta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.056 JP
Endosulfan I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.029 JP
Heptachlor	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCB	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300775



**Deep Groundwater Samples  
Positive Analytical Results - Volatiles**

Sample Location	Ground	MW1M	MW1M	MW1M	MW1M	MW1M	MW1M	MW2M	MW2M	MW2M	MW2M
Sample ID	Water	MW1M-1	MW1M-2	MW1M-3	MW1M-5	MW1M-5D	MW1M-6	MW2M-1	MW2M-2	MW2M-3	MW2M-4
Lab ID	Quality	9714712	9714713	9716236	18719	18741	000110308A	9714721	9716239	18721	000111702A
Date Sampled	Standard	8/14/97	8/14/97	9/16/97	11/10/98	11/10/98	1/19/00	8/15/97	9/16/97	11/10/98	1/19/00
Depth (feet)		50-60	50-60	50-60	50-60	50-60	50-60	53-63	53-63	53-63	53-63
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1-Dichloroethane	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	70	17	18	22	11	12	NA	5 J	24	61	NA
Acetone	700	10 U	10 U	10 U	8 J	12	10 U	10 U	10 U	8 J	10 U
Carbon disulfide	800	10 U	10 U	21	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	6	10 U	10 U	10 U	10 U	10 U	10 U	1 J	1 J	10 U	10 U
cis-1,2-Dichloroethene	70	NA	NA	NA	NA	NA	4 J	NA	NA	NA	38
Methylene chloride	3	10 JB	10 JB	5 JB	10 U	10 U	10 U	6 JB	4 JB	10 U	10 U
Methyl-t-butyl ether		NA	NA	NA	NA	NA	11	NA	NA	NA	10
Tetrachloroethene	1	10 U	8 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	1000	10 U	1 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	5	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total TICS		9	8	311	48	10	10	29	268	241	0
Total Volatiles		26	35	356	67	34	25	35	293	310	48

300776

**Deep Groundwater Samples  
Positive Analytical Results - Volatiles**

Sample Location	MW2M	MW3M	MW3M	MW3M	MW9D	MW9D	MW11M	MW11M	MW11M	SB08
Sample ID	MW2M-4D	MW3M-1	MW3M-2	MW3M-3	MW9D-3	MW9D-4	MW11M-4	MW11M-5	MW11M-6	SB08-4
Lab ID	000111703A	9714716	9716241	18731	18724	000110304A	000110302A	0214901A	0214902A	9712942
Date Sampled	1/19/00	8/15/97	9/16/97	9/30/98	11/11/98	1/18/00	1/18/00	2/17/00	2/17/00	7/16/97
Depth (feet)	53-63	47-57	47-57	47-57	44-54	44-54	46-56	46-56	46-56	34-37.5
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	2 J	2 J	2 J	10 U
1,2-Dichloroethene (total)	NA	2 J	3 J	16	10 U	NA	NA	NA	NA	15
Acetone	10 U	10 U	10 U	12	16	10 U	10 U	10 U	10 U	8 J
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 J
Chloroform	10 U	10 U	10 U	10 U	4 J	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	41	NA	NA	NA	NA	2 J	6 J	5 J	5 J	NA
Methylene chloride	10 U	6 JB	4 JB	10 U	10 U	10 U	10 U	10 U	10 U	3 JB
Methyl-t-butyl ether	10	NA	NA	NA	NA	10 U	25	25	24	NA
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total TICS	0	621	40	16	0	0	0	8	5	NA
Total Volatiles	51	623	43	44	20	2	33	40	36	NA

300777

**Deep Groundwater Samples  
Positive Analytical Results - Volatiles**

Sample Location	SB17	SB19	SB29
Sample ID	SB17-4	SB19-4	SB29-4
Lab ID	9712946	9712950	9712236
Date Sampled	7/17/97	7/17/97	7/9/97
Depth (feet)	48-51	55-58	47-50
Units	ug/l	ug/l	ug/l
1,1-Dichloroethane	10 U	10 U	5 U
1,2-Dichloroethene (total)	10 U	31	NA
Acetone	10 U	10 U	8
Carbon disulfide	10 U	10 U	5 U
Chloroform	10 U	10 U	5 U
cis-1,2-Dichloroethene	NA	NA	4 J
Methylene chloride	8 JB	3 JB	8 JB
Methyl-t-butyl ether	NA	NA	NA
Tetrachloroethene	10 U	10 U	5 U
Toluene	10 U	10 U	5 U
Vinyl chloride	10 U	10 U	5 U
Total TICS	NA	NA	NA
Total Volatiles	NA	NA	NA

300778

**Deep Groundwater Samples  
Positive Analytical Results - Semi-Volatiles**

Sample Location	Ground	MW1M	MW1M	MW1M	MW2M	MW2M	MW2M	MW3M	MW9D	MW9D	MW11M
Sample ID	Water	MW1M-5	MW1M-5D	MW1M-6	MW2M-3	MW2M-4	MW2M-4D	MW3M-3	MW9D-3	MW9D-4	MW11M-4
Lab ID	Quality	18719	18741	000110308B	18721	000111702B	000111703B	15999	18724	000110304B	000110302B
Date Sampled	Standard	11/10/98	11/10/98	1/19/00	11/10/98	1/19/00	1/19/00	9/30/98	11/11/98	1/18/00	1/18/00
Depth (feet)		50-60	50-60	50-60	53-63	53-63	53-63	47-57	44-54	44-54	46-56
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
2-Methylphenol		10 U	10 U	10 U	4 J	10 U	10 U	14 U	10 U	10 U	10 U
4-Methylphenol		10 U	10 U	10 U	7 J	10 U	10 U	14 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	10	10 U	10 U	10 U	10 U	10 U	10 U	14 U	10 U	10 U	3 J
Bis(2-ethylhexyl)phthalate	30	1 J	1 J	10 U	1 J	10 U	8 JB	20 B	3 J	1 J	10 U
Diethylphthalate	5000	10 U	10 U	10 U	10 U	10 U	10 U	4 J	10 U	10 U	10 U
Di-n-butylphthalate	900	10 U	10 U	10 U	10 U	1 J	10 U	2 BJ	10 U	10 U	10 U
Naphthalene	300	2 J	10 U	10 U	280 D	10 U	10 U	14 U	3 J	10 U	10 U
N-Nitrosodiphenylamine (1)	20	10 U	10 U	10 U	1 J	10 U	10 U	14 U	10 U	10 U	10 U
Phenol	4000	10 U	10 U	10 U	5 J	10 U	10 U	14 U	10 U	10 U	10 U
Total TICS		60	71	51	77	2	3844	81	20	37	173
Total Semi-Volatiles		63	72	51	375	3	3844	85	26	68	176

300779

## Deep Groundwater Samples

## Positive Analytical Results - Semi-Volatiles

Sample Location	MW11M	MW11M
Sample ID	MW11M-5	MW11M-6
Lab ID	0214901B	0214902B
Date Sampled	2/17/00	2/17/00
Depth (feet)	46-56	46-56
Units	ug/l	ug/l
2-Methylphenol	10 U	10 U
4-Methylphenol	10 U	10 U
Bis(2-chloroethyl)ether	4 J	3 J
Bis(2-ethylhexyl)phthalate	32	1 J
Diethylphthalate	10 U	10 U
Di-n-butylphthalate	10 U	10 U
Naphthalene	10 U	10 U
N-Nitrosodiphenylamine (1)	10 U	10 U
Phenol	10 U	10 U
Total TICS	99	111
Total Semi-Volatiles	135	115

**Deep Groundwater Samples**  
**Positive Analytical Results - Metals**

Sample Location	Ground	MW1M	MW1M	MW1M	MW1M	MW1M	MW11M	MW11M	MW11M	MW2M	MW2M
Sample ID	Water	MW1M-3	MW1M-4	MW1M-5	MW1M-5D	MW1M-6	MW11M-4	MW11M-5	MW11M-6	MW2M-2	MW2M-3
Lab ID	Quality	9716236	9716237	18719	18741	000110308D	000110302D	0214901D	0214902D	9716239	18721
Date Sampled	Standard	9/16/97	9/16/97	11/10/98	11/10/98	1/19/00	1/18/00	2/17/00	2/17/00	9/16/97	11/10/98
Depth (feet)		50-60	50-60	50-60	50-60	50-60	46-56	46-56	46-56	53-63	53-63
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	200	1060	3240	144 B	140 B	17.6 U	424	212	127 B	2970	238
Antimony	20	24.9 UN	24.9 UN	3.9 U	3.9 U	1.6 U	1.6 U	1.6 U	1.9 B	24.9 UN	3.9 U
Arsenic	8	106	112	85.6	85.5	10.1	1.8 U	1.8 U	1.8 U	385	469
Barium	2000	173 BN	170 BN	167 B	168 B	108 B	87.7 B	91.1 B	97.9 B	132 BN	444
Cadmium	4	4.3 U	4.3 U	0.95 B	0.92 B	0.61 B	1.8 B	0.52 B	0.16 U	4.3 U	2.3 B
Calcium		75200	75500	90100	89900	84000	94800	82400	89000	41500	82400
Chromium	100	11.3	9.4 U	2.1 B	2.1 B	0.33 U	0.33 U	2.1 B	2 B	9.4 U	8.6 B
Cobalt		6.1 U	7.4 B	6.5 B	5.9 B	1.6 B	10.8 B	10.1 B	10.7 B	9 B	13.5 B
Copper	1000	25.2 E	10 BE	66.9	6.7 U	2.7 B	15.6 B	9.8 B	10.2 B	13.3 BE	14.8 B
Iron	300	13700	13800	3750	3600	1040	147	370	286	9080	17000
Lead	10	0 R	0 R	6.2	2.9 B	2.6 U	8.6	6.2	7.9	0 R	11.9
Magnesium		22400	22500	27600	27500	24200	40300	35200	38100	14900	31200
Manganese	50	657	671	523	512	164	2390	2210	2350	344	770
Nickel	100	12.7 U	12.7 U	5.6 B	4.8 B	1.9 B	15.4 B	15.3 B	16.5 B	12.7 U	7.1 B
Potassium		26800	27600	28600	28400	25600	20800	16300	17900	13600	27700
Selenium	50	0 R	0 R	4.3 UN	4.3 UN	4.9 U	4.9 U	4.9 UN	4.9 UN	0 R	7.1 N
Silver	30	2.9 U	2.9 U	2.5 B	2.6 B	1.8 U	1.8 U	1.8 U	1.9 B	4 B	2.5 B
Sodium	50000	45200	45300	49300	49500	42900	117000	95300	103000	39900	58800
Thallium	10	0 R	0 R	5.2 U	5.2 U	1.6 U	8.2 B	1.6 U	1.6 U	0 R	5.2 U
Vanadium		2 U	2 U	1.6 U	1.6 U	0.48 U	9.4 B	9.9 B	10.6 B	2 U	1.6 U
Zinc	5000	94.6	52.6	41.8	40	30.9	78.3	62.8	66.5	42.1	73.6

300781

## Deep Groundwater Samples

## Positive Analytical Results - Metals

Sample Location	MW2M	MW2M	MW3M	MW3M	MW9D	MW9D
Sample ID	MW2M-4	MW2M-4D	MW3M-2	MW3M-3	MW9D-3	MW9D-4
Lab ID	000111702D	000111703D	9716241	15999	18724	000110304D
Date Sampled	1/19/00	1/19/00	9/16/97	9/30/98	11/11/98	1/18/00
Depth (feet)	53-63	53-63	47-57	47-57	44-54	44-54
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Aluminum	25 B	34.8 B	100 B	19.1 BN	517	22.7 B
Antimony	1.6 U	1.6 U	24.9 UN	2.6 U	3.9 U	1.6 U
Arsenic	528	540	2.5 UW	4.9 B	4.5 U	1.8 U
Barium	172 B	179 B	59.7 BN	80.1 B	181 B	122 B
Cadmium	0.16 U	0.16 U	4.3 U	1.5 B	1 B	2.4 B
Calcium	78500	77800	27000	76200	29300	42600
Chromium	2.3 B	2.3 B	9.4 U	1.2 B	2.2 B	0.33 U
Cobalt	17.3 B	17.5 B	6.1 U	14.6 B	2.2 B	3.4 B
Copper	4.8 B	4.2 B	4.3 BE	17.2 B	13.6 B	14.8 B
Iron	20900	21000	526	6150	621	643
Lead	3.2	3.4	0 R	3.4	11.8	3.1
Magnesium	24700	24500	8050	21800	7200	15300
Manganese	840	865	132	1390	115	238
Nickel	4.3 B	4.4 B	12.7 U	8.1 B	2.9 B	4.8 B
Potassium	27600	27500	17100	16000	3660 B	8820
Selenium	4.9 U	4.9 U	0 R	7.7	4.3 UN	4.9 U
Silver	1.8 U	2.3 B	2.9 U	1.8 U	2.1 U	1.8 U
Sodium	55100	54400	38000	40000	25400	37400
Thallium	3.4 B	3.5 B	0 R	4.7 B	5.2 U	2.9 B
Vanadium	0.48 U	0.48 U	2 U	0.7 U	1.8 B	0.5 B
Zinc	25.6	25.3	15.2 JB	65.3	28.6	135

300782

**Deep Groundwater Samples**  
**Positive Analytical Results - Pesticides/PCBs**

Sample Location	Ground	MW1M	MW1M	MW1M	MW1M	MW1M	MW1M	MW1M	MW2M	MW2M	MW2M
Sample ID	Water	MW1M-1	MW1M-2	MW1M-3	MW1M-4	MW1M-5	MW1M-5D	MW1M-6	MW2M-1	MW2M-2	MW2M-3
Lab ID	Quality	9714712	9714713	9716236	9716237	18719	18741	000110308C	9714721	9716239	18721
Date Sampled	Standard	8/14/97	8/14/97	9/16/97	9/16/97	11/10/98	11/10/98	1/19/00	8/15/97	9/16/97	11/10/98
Depth (feet)		50-60	50-60	50-60	50-60	50-60	50-60	50-60	53-63	53-63	53-63
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
alpha-BHC	0.02	0.052 U	0.054 U	0.05 U	0.016 JP	0.05 U	0.05 U	0.05 U	0.051 U	0.05 U	0.05 U
alpha-Chlordane		0.052 U	0.054 U	0.05 U	0.051 U	0.05 U	0.05 U	0.05 U	0.051 U	0.05 U	0.05 U
beta-BHC	0.2	0.052 U	0.054 U	0.05 U	0.051 U	0.05 U	0.05 U	0.05 U	0.051 U	0.05 U	0.05 U
Endosulfan I	0.4	0.052 U	0.054 U	0.05 U	0.051 U	0.05 U	0.05 U	0.05 U	0.051 U	0.05 U	0.05 U
Endosulfan sulfate	0.4	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methoxychlor	40	0.52 U	0.0094 JP	0.5 U	0.51 U	0.5 U	0.5 U	0.5 U	0.51 U	0.5 U	0.5 U
Total PCB		0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300783



Deep Groundwater Samples  
Positive Analytical Results - Pesticides/PCBs

Sample Location	MW2M	MW2M	MW3M	MW3M	MW3M	MW9D	MW9D	MW11M	MW11M	MW11M
Sample ID	MW2M-4	MW2M-4D	MW3M-1	MW3M-2	MW3M-3	MW9D-3	MW9D-4	MW11M-4	MW11M-5	MW11M-6
Lab ID	000111702C	000111703C	9714716	9716241	15999	18724	000110304C	000110302C	0214901C	0214902C
Date Sampled	1/19/00	1/19/00	8/15/97	9/16/97	9/30/98	11/11/98	1/18/00	1/18/00	2/17/00	2/17/00
Depth (feet)	53-63	53-63	47-57	47-57	47-57	44-54	44-54	46-56	46-56	46-56
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
alpha-BHC	0.05 U	0.05 U	0.051 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	0.05 U	0.05 U	0.082	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC	0.05 U	0.05 U	0.051 U	0.014 JP	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan I	0.05 U	0.05 U	0.051 U	0.015 JP	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan sulfate	0.1 U	0.1 U	0.029 JP	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methoxychlor	0.5 U	0.5 U	0.51 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Total PCB	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

300784

**Table 27  
Holding Tank Sample  
Positive Analytical Results**

Sample Location	Groundwater	HTANK
Sample ID	Quality	HTANK-1
Lab ID	Standard	9714724
Date Sampled		8/15/97
Depth (feet)		
Units	ug/l	ug/l

**Volatile**

1,2-Dichloroethene (total)	10	4 J
Methylene Chloride	2	9 JB
Total Volatile TIC		43 J
Total Volatile		56

**Semivolatiles**

Naphthalene	300	6 J
Total Semivolatiles TIC		184 J
Total Semivolatiles		190

**Pesticide/PCB**

Pesticide/PCB		0 U
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**Metal**

<b>Aluminum</b>	200	<b>4050</b>
<b>Arsenic</b>	8	<b>89</b>
Barium	2000	166 B
Calcium		63500
Cobalt		10.3 B
Copper	1000	20.5 B
<b>Iron</b>	300	<b>4790</b>
Lead	10	1.5 B
Magnesium		23600
<b>Manganese</b>	50	<b>299 E</b>
Potassium		19500
<b>Sodium</b>	50000	<b>58700</b>
Vanadium		3.1 B
Zinc	5000	71 E

**Table 28  
City Well Number 7 Samples  
Positive Analytical Results**

Sample Location	Groundwater	CW7	CW7	CW7
Sample ID	Quality	CW7-1	CW7-2	CW7-3
Lab ID	Standard	9714719	9714720	9716243
Date Sampled		8/15/97	8/15/97	9/16/97
Depth (feet)				
Units	ug/l	ug/l	ug/l	ug/l

**Volatile**

Chloromethane	30	0 U	0 U	1.7
Methylene Chloride	2	5.4 B	4.9 B	0.5

**Semivolatile**

bis(2-Ethylexyl)phthalate	30	3 J	4 J	0 U
Butylbenzylphthalate	100	1 J	1 J	0 U
Di-n-butylphthalate	900	0 U	1 J	1 J
Total Semivolatiles TIC		252 J	252 J	107 J
Total Semivolatiles		256	258	108

**Pesticide/PCB**

Dieldrin	0.03	0 U	0.0009 J	0.0024 JP
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**Metals**

Barium	2000	15.3 B	14.1 B	15.9 BN
Calcium		22900	22400	23000
Cobalt		0 U	7.2 B	0 U
Copper	1000	7.2 B	47.6	20.9 BE
<b>Iron</b>	300	<b>16700</b>	<b>16800</b>	<b>19300</b>
Lead	10	0 U	0 U	2.5 B
Magnesium		9930	9830	10200
<b>Manganese</b>	50	<b>301 E</b>	<b>300 E</b>	<b>327</b>
Mercury	2	0 U	0.1 BN*	0 U
Potassium		4490 B	4580 B	4860 B
Sodium	50000	27400	27900	29700
Zinc	5000	26.2 E	27.3 E	15.4 B

**Table 29**  
**Soil Samples**  
**Volatile TIC Frequency**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
Methane, dibromofluoro	98	12 JN	mg/kg	SB70-2	Surface Soil
Methane, dibromofluoro	98	12 JN	mg/kg	SB95-3	Subsurface soil
Unknown	95	1338 J	mg/kg	SB56-2	Subsurface Soil
Unknown Hydrocarbon	83	351 J	mg/kg	SB59-1	Subsurface Soil
Unknown Aromatic	36	263 J	mg/kg	SB61-1	Subsurface Soil
Benzene, 1 - ethyl - 2 - methyl	34	180 J	mg/kg	SB59-1	Subsurface Soil
Benzene, 2, 4 - dichloro - 1 - (tri	28	193 J	mg/kg	SB31-2	Surface Soil
Benzene, 1 - ethyl - 3 - methyl	21	240 J	mg/kg	SB16-3	Subsurface Soil
Benzene, 1 - ethyl - 4 - methyl	17	230 J	mg/kg	SB59-1	Subsurface Soil
Unknown oxygenated hydrocarbon	13	25 J	mg/kg	SB129A4	Subsurface soil
Ethane, 1, 1, 2 - trichloro - 1, 2,	13	26 J	mg/kg	SB47-3	Subsurface Soil
Benzene, 1 - methyl - 3 - propyl	11	92 J	mg/kg	SB59-1	Subsurface Soil
Naphthalene	11	60 J	mg/kg	SB19-2	Surface Soil
Undecane	10	73 NJ	mg/kg	SB129A3	Subsurface soil
Pentane, 2 - methyl	9	99 J	mg/kg	SB05-2	Surface Soil
Hexane	9	36 J	mg/kg	SB55-1	Subsurface Soil
Benzene, 2 - ethyl - 1, 4 - dimethy	9	14 J	mg/kg	SB53-1	Subsurface Soil
BENZENE, 1 -METHYL- 4 - ( 1 -METHY	9	55 NJ	mg/kg	SB129A4	Subsurface soil
Benzene, 1, 2, 3 - trimethyl	9	6.5 J	mg/kg	SB52-1	Subsurface Soil
Cyclohexane, methyl	8	36 J	mg/kg	SB52-1	Subsurface Soil
Hexane isomer	8	6.8 J	mg/kg	SB113-3	Subsurface soil
Benzene, (1 - methylethyl)	8	30 J	mg/kg	SB05-3	Subsurface Soil
Azulene	8	36 NJ	mg/kg	SB127A2	Surface Soil
BENZENE, 1, 2, 4, 5 -TETRAMETHYL	8	58 NJ	mg/kg	SB129A4	Subsurface soil
BENZENE, 1, 3, 5 -TRIMETHYL-	7	36 NJ	mg/kg	SB128-1	Subsurface soil
BENZENE, 1, 2, 3 -TRIMETHYL-	7	45 NJ	mg/kg	SB129A3	Subsurface soil
Benzene, 1 - chloro - 4 - (trifluo	6	45.8 J	mg/kg	SB38-3	Subsurface Soil
D - Limonene	6	39 NJ	mg/kg	SB129A3	Subsurface soil
Heptane, 3 - methyl	6	50 J	mg/kg	SB52-1	Subsurface Soil
Cyclopentane, methyl-	6	82 J	mg/kg	SB05-2	Surface Soil
Nonane	6	7.2 J	mg/kg	TP01-1	Subsurface Soil
Dichlorobenzotrifluoride isomer	6	820 J	mg/kg	SB114-2	Surface Soil
Benzene, 1, 2, 3, 4 - tetramethyl	6	28 J	mg/kg	SB05-3	Subsurface Soil
Pentane	6	26 J	mg/kg	SB55-1	Subsurface Soil
Pentane isomer	6	7.1 J	mg/kg	SB113-3	Subsurface soil
Octane, 3, 6 - dimethyl	5	3.2 J	mg/kg	SB18-3	Surface Soil
BENZENE, 1 -ETHYL- 2, 3 -DIMETHY	5	73 NJ	mg/kg	SB129A3	Subsurface soil
Benzene, 1, 3 - dichloro	5	5.1 J	mg/kg	SB18-6	Subsurface Soil
Benzene, 1, 2, 4 - trimethyl	5	190 J	mg/kg	SB16-3	Subsurface Soil
Benzene, propyl	5	32 J	mg/kg	SB58-1	Subsurface Soil
Unknown terpene	4	52 J	mg/kg	SB111-4	Subsurface soil
Cyclotetrasiloxane, Octameth	4	12 J	mg/kg	SB04-2	Surface Soil
DECANE	4	32 NJ	mg/kg	SB129A3	Subsurface soil
Benzene, 1 - methyl - 3 - (1 - methy	4	52 J	mg/kg	SB16-3	Subsurface Soil
Cyclohexane, 1, 4 - dimethyl	4	5.3 J	mg/kg	TP09-1	Subsurface Soil
BENZENE, 1, 2, 3, 4 -TETRAMETHYL	4	75 NJ	mg/kg	SB129A3	Subsurface soil
Hexane, 3 - methyl	4	190 J	mg/kg	SB56-2	Subsurface Soil
Methane, dichlorofluoro	4	10 J	mg/kg	TP18-1	Subsurface Soil
.alpha. - Pinene (A C N)	4	11 J	mg/kg	SB18-6	Subsurface Soil

**Table 30**  
**Soil Samples**  
**Volatile TIC Maximum Concentrations**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
Unknown	95	1338 J	MG/KG	SB56-2	Subsurface Soil
Dichlorobenzotrifluoride isomer	6	820 J	mg/kg	SB114-2	Surface Soil
Unknown Hydrocarbon	83	351 J	MG/KG	SB59-1	Subsurface Soil
Unknown Aromatic	36	263 J	MG/KG	SB61-1	Subsurface Soil
Benzene, 1 - ethyl - 3 - methyl	21	240 J	MG/KG	SB16-3	Subsurface Soil
Benzene, 1 - ethyl - 4 - methyl	17	230 J	MG/KG	SB59-1	Subsurface Soil
Ethene, 1, 2-dichloro-, (E)-	1	210 J	MG/KG	SB33-4	Subsurface Soil
Benzene, 2, 4 - dichloro - 1 - (tri	28	193 J	MG/KG	SB31-2	Surface Soil
Hexane, 3 - methyl	4	190 J	MG/KG	SB56-2	Subsurface Soil
Benzene, 1, 2, 4 - trimethyl	5	190 J	MG/KG	SB16-3	Subsurface Soil
Benzene, 1 - ethyl - 2 - methyl	34	180 J	MG/KG	SB59-1	Subsurface Soil
Benzene, 1, 2 - dimethyl	1	140 J	MG/KG	SB56-2	Subsurface Soil
NAPHTHALENE	2	120 NJ	mg/kg	SB126A3	Subsurface soil
Pentane, 2 - methyl	9	99 J	MG/KG	SB05-2	Surface Soil
Benzene, 1 - methyl - 3 - propyl	11	92 J	MG/KG	SB59-1	Subsurface Soil
Cyclopentane, methyl-	6	82 J	MG/KG	SB05-2	Surface Soil
BENZENE, 1, 2, 3, 4 -TETRAMETHYL	4	75 NJ	mg/kg	SB129A3	Subsurface soil
BENZENE, 1 -ETHYL- 2, 3 -DIMETHY	5	73 NJ	MG/KG	SB129A3	Subsurface soil
Undecane	10	73 NJ	MG/KG	SB129A3	Subsurface soil
BENZENE, 2 -BUTENYL-	1	62 NJ	mg/kg	SB129A3	Subsurface soil
BENZENE, 1 -ETHYL- 2, 4 -DIMETHY	2	60 J	mg/kg	SB58-1	Subsurface Soil
Naphthalene	11	60 J	MG/KG	SB19-2	Surface Soil
BENZENE, 1, 2, 4, 5 -TETRAMETHYL	8	58 NJ	mg/kg	SB129A4	Subsurface soil
1H - Indene, 2, 3 - dihydro - 1, 6 - d	1	56 J	MG/KG	SB61-1	Subsurface Soil
BENZENE, 1 -METHYL- 4 - ( 1 -METHY	9	55 NJ	mg/kg	SB129A4	Subsurface soil
Octane, 4 - methyl	1	55 J	MG/KG	SB59-1	Subsurface Soil
Unknown terpene	4	52 J	mg/kg	SB111-4	Subsurface soil
Benzene, 1 - methyl - 3 - ( 1 - methy	4	52 J	MG/KG	SB16-3	Subsurface Soil
1 -PHENYL- 1 -BUTENE	1	51 NJ	mg/kg	SB129A4	Subsurface soil
Heptane, 3 - methyl	6	50 J	MG/KG	SB52-1	Subsurface Soil
Benzene, 1 - chloro - 4 - (trifluo	6	45.8 J	MG/KG	SB38-3	Subsurface Soil
BENZENE, 1, 2, 3 -TRIMETHYL-	7	45 NJ	mg/kg	SB129A3	Subsurface soil
BENZENE, 1 -METHYL- 3 -PROPYL-	2	44 NJ	mg/kg	SB129A3	Subsurface soil
BENZENE, 1 -METHYL- 2 - ( 1 -METHY	2	44 NJ	mg/kg	SB129A3	Subsurface soil
DODECANE	2	40 NJ	mg/kg	SB129A3	Subsurface soil
Benzene, 1, 3, 5 - trimethyl	2	40 J	MG/KG	SB33-4	Subsurface Soil
D - Limonene	6	39 NJ	MG/KG	SB129A3	Subsurface soil
Chlorobenzotrifluoride isomer	2	37 J	mg/kg	SB114-2	Surface Soil
Cyclohexane, methyl	8	36 J	MG/KG	SB52-1	Subsurface Soil
Hexane	9	36 J	MG/KG	SB55-1	Subsurface Soil
Azulene	8	36 NJ	mg/kg	SB127A2	Surface Soil
BENZENE, 1, 3, 5 -TRIMETHYL-	7	36 NJ	mg/kg	SB128-1	Subsurface soil
BENZENE, 1 -METHYL- 3 - ( 1 -METHY	2	33 NJ	mg/kg	SB129A4	Subsurface soil
DECANE	4	32 NJ	mg/kg	SB129A3	Subsurface soil
Hexadecanoic acid	1	32 J	MG/KG	TP17-1	Subsurface Soil
Benzene, propyl	5	32 J	MG/KG	SB58-1	Subsurface Soil
Benzene, 1 - methyl - 2 - ( 1 - methy	2	32 J	MG/KG	SB16-3	Subsurface Soil
BENZENE, 4 -ETHYL- 1, 2 -DIMETHY	3	31 NJ	mg/kg	SB129A3	Subsurface soil
Hexadecane	1	31 J	MG/KG	SB56-2	Subsurface Soil
BENZENE, 1 -ETHYL- 3 -METHYL-	3	31 NJ	mg/kg	SB128-2	Subsurface soil
1, 13 - Tetradecadiene	1	31 J	MG/KG	SB56-2	Subsurface Soil
Benzene, ( 1 - methylethyl)	8	30 J	MG/KG	SB05-3	Subsurface Soil
Benzene, 1, 2, 3, 4 - tetramethyl	6	28 J	MG/KG	SB05-3	Subsurface Soil

**Table 31**  
**Soil Samples**  
**Semi-Volatile TIC Frequency**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
Unknown PAH	930	37J	mg/kg	SB112-3	Subsurface soil
Unknown	678	76J	mg/kg	SB23A-2	Subsurface soil
Unknown oxygenated hydrocarbon	233	67J	mg/kg	SB62-3	Subsurface soil
Unknown Oxygenated PAH	150	33J	mg/kg	SB11A-2	Subsurface soil
Unknown Hydrocarbon	124	150J	mg/kg	SB23A-2	Subsurface soil
Unknown Aromatic	61	41J	mg/kg	SB62-3	Subsurface soil
Unknown carboxylic acid	40	8.6J	mg/kg	SB62-3	Subsurface soil
n-Hexadecanoic acid	39	120NJ	mg/kg	SB126B3	Subsurface soil
9,10-Anthracenedione	33	300NJ	mg/kg	SB140-2	Subsurface soil
Trimethylnaphthalene Isomer	33	2.1J	mg/kg	SB86-3	Subsurface soil
Unknown alkyl phenol	30	100J	mg/kg	SB126B3	Subsurface soil
Dibenzothiophene	28	330NJ	mg/kg	SB140-2	Subsurface soil
Unknown alkyl amide	27	7J	mg/kg	SB46A-2	Subsurface soil
Butylbenzene isomer	25	6.4J	mg/kg	SB09A-2	Subsurface soil
Benzonaphthofuran isomer	25	19J	mg/kg	SB112-3	Subsurface soil
Octadecanoic acid	24	30NJ	mg/kg	SB126B3	Subsurface soil
Dimethylnaphthalene isomer	23	0.98J	mg/kg	SB70-1	Surface Soil
Benzonaphthothiophene isomer	23	0.68J	mg/kg	SB107-3	Subsurface soil
Methyldibenzofuran isomer	19	5J	mg/kg	SB112-3	Subsurface soil
7H-Benz {DE} Anthracen-7-one	19	1.3NJ	mg/kg	SB118B4	Subsurface soil
Hexadecanoic acid	18	1.4NJ	mg/kg	SB141-1	Surface Soil
Unknown alkyl amine	17	12J	mg/kg	SB129A1	Surface Soil
Naphthalene, 1-methyl-	14	3.6JN	mg/kg	SB75-3	Subsurface soil
Anthracene, 2-methyl	13	770NJ	mg/kg	SB140-2	Subsurface soil
Perylene	13	22NJ	mg/kg	SB127B3	Subsurface soil
Unknown phthalate	13	7J	mg/kg	SB09A-2	Subsurface soil
Benzocarbazole isomer	13	1.2J	mg/kg	SB129A1	Surface Soil
Pentylbenzene isomer	13	9.6J	mg/kg	SB03A-1	Surface Soil
11H-Benzo{B} Fluorene	12	1.8NJ	mg/kg	SB140-2	Subsurface soil
Erucylamide	12	4.4JN	mg/kg	SB82-3	Subsurface soil
Heptachlorobiphenyl isomer	12	1.2J	mg/kg	SB19A-2	Subsurface soil
Phthalic anhydride	12	3.9JN	mg/kg	SB114-1	Surface Soil
Heptachlorobiphenyl isomer	12	1.2J	mg/kg	SB02A-2	Subsurface soil
Trimethylbenzene Isomer	12	11J	mg/kg	SB129A4	Subsurface soil
11H-Benzo{A} Fluorene	11	2NJ	mg/kg	SB127B3	Subsurface soil
Unknown siloxane	9	0.33J	mg/kg	SB122A3	Subsurface soil
Cyclopenta (DEF) Phenanthrenon	9	72NJ	mg/kg	SB127B3	Subsurface soil
Unknown amide	9	7.1J	mg/kg	SB129A1	Surface Soil
4H-Cyclopenta {DEF} Phenanthre	9	1600NJ	mg/kg	SB140-2	Subsurface soil
n - Hexadecanoic acid	9	3.5NJ	mg/kg	SB136-2	Subsurface soil
MethylDibenzothiophene	9	53J	mg/kg	SB127B3	Subsurface soil
NONYLPHENOL ISOMER	8	81J	mg/kg	SB126B3	Subsurface soil
Unknown terpene	7	0.32J	mg/kg	SB114-1	Surface Soil
Pyrene, 1-Methyl	7	1.2NJ	mg/kg	SB118B3	Subsurface soil
Unknown alkyl benzene	7	4.7J	mg/kg	SB129A4	Subsurface soil
Phenanthrene, 1-Methyl	6	200NJ	mg/kg	SB127B3	Subsurface soil
Hexachlorobiphenyl isomer	6	1.5J	mg/kg	SB02A-2	Subsurface soil
Fluoranthene, 2-Methyl-	6	2.3NJ	mg/kg	SB118B4	Subsurface soil
Anthracene, 9-Methyl	6	740NJ	mg/kg	SB140-2	Subsurface soil

**Table 32**  
**Soil Samples**  
**Semi-Volatile TIC Maximum Concentrations**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
4H-Cyclopenta (DEF) Phenanthrene	9	1600 NJ	mg/kg	SB140-2	Subsurface soil
Anthracene, 2-methyl	13	770 NJ	mg/kg	SB140-2	Subsurface soil
Anthracene, 9-Methyl	6	740 NJ	mg/kg	SB140-2	Subsurface soil
Naphthalene, 2-Phenyl	1	640 NJ	mg/kg	SB140-2	Subsurface soil
Unknown diterpene	2	420 J	mg/kg	SB62-3	Subsurface soil
Anthracene, 1-Methyl	2	340 NJ	mg/kg	SB140-2	Subsurface soil
Dibenzothiophene	28	330 NJ	mg/kg	SB140-2	Subsurface soil
Phenanthrene, 3,6-Dimethyl	3	330 NJ	mg/kg	SB140-2	Subsurface soil
9,10-Anthracenedione	33	300 NJ	mg/kg	SB140-2	Subsurface soil
Dibenzofuran, 4-methyl	4	260 NJ	mg/kg	SB140-2	Subsurface soil
Phenanthrene, 2,7-Dimethyl	1	240 NJ	mg/kg	SB140-2	Subsurface soil
Phenanthrene, 2,5-Dimethyl	1	230 NJ	mg/kg	SB140-2	Subsurface soil
Anthracene, 1,2,3,4-Tetrahyd	1	220 NJ	mg/kg	SB140-2	Subsurface soil
Naphthalene, 1-Phenyl	1	210 NJ	mg/kg	SB140-2	Subsurface soil
9H-Fluorene, 2-Methyl	1	210 NJ	mg/kg	SB140-2	Subsurface soil
Phenanthrene, 1-Methyl	6	200 NJ	mg/kg	SB127B3	Subsurface soil
CHOLESTEROL	3	200 JN	mg/kg	SB23A-2	Subsurface soil
Unknown Hydrocarbon	124	150 J	mg/kg	SB23A-2	Subsurface soil
2-Phenyl naphthalene	3	140 NJ	mg/kg	SB127B3	Subsurface soil
n-Hexadecanoic acid	39	120 NJ	mg/kg	SB126B3	Subsurface soil
2 -PENTANONE, 4 -HYDROXY- 4 -MET	1	100 NJ	mg/kg	SB137-2	Subsurface soil
Unknown alkyl phenol	30	100 J	mg/kg	SB126B3	Subsurface soil
9,10-Dimethylanthracene	5	99 NJ	mg/kg	SB127B3	Subsurface soil
9H-Fluorene-9-one	2	90 NJ	mg/kg	SB127B3	Subsurface soil
2 - PENTANONE, 4 -HYDROXY- 4 - MET	1	86 NJ	mg/kg	SB142-1	Surface Soil
NONYLPHENOL ISOMER	8	81 J	mg/kg	SB126B3	Subsurface soil
Unknown	678	76 J	mg/kg	SB23A-2	Subsurface soil
Cyclopenta (DEF) Phenanthrenon	9	72 NJ	mg/kg	SB127B3	Subsurface soil
Phenanthrene, 4,5-Dimethyl-	3	72 NJ	mg/kg	SB127B3	Subsurface soil
Unknown oxygenated hydrocarbon	233	67 J	mg/kg	SB62-3	Subsurface soil
2,4,6-Cycloheptatrien-1-one	1	63 NJ	mg/kg	SB127B3	Subsurface soil
Phenanthrene, 3,6-Dimethyl	1	56 NJ	mg/kg	SB127B3	Subsurface soil
MethylDibenzothiophene	9	53 J	mg/kg	SB127B3	Subsurface soil
Desmosterol	1	50 J	mg/kg	SB23A-2	Subsurface soil
Oleic Acid	4	47 J	mg/kg	SB23A-2	Subsurface soil
Benzene, 2, 4 - dischloro - 1 (tri	2	43 JN	mg/kg	SB114-3	Subsurface soil
Unknown Aromatic	61	41 J	mg/kg	SB62-3	Subsurface soil
Unknown PAH	930	37 J	mg/kg	SB112-3	Subsurface soil
2 - FURAN CARBOXALDEHYDE, 5 - (HY	1	36 NJ	mg/kg	SB132A3	Subsurface soil
NAPHTHALENE, 2 -METHYL-	1	36 NJ	mg/kg	SB132A3	Subsurface soil
Benzo{E} Pyrene	2	35 NJ	mg/kg	SB140-2	Subsurface soil
Unknown Oxygenated PAH	150	33 J	mg/kg	SB11A-2	Subsurface soil
Octadecanoic acid	24	30 NJ	mg/kg	SB126B3	Subsurface soil
SILANE, CHLOROTRIPROPYL-	1	26 NJ	mg/kg	SB129A1	Surface Soil
Perylene	13	22 NJ	mg/kg	SB127B3	Subsurface soil
Methylindan isomer	4	20 J	mg/kg	SB03A-1	Surface Soil
Unknown triterpene	4	20 J	mg/kg	SB75-3	Subsurface soil
Tetramethylbenzene isomer	2	19 J	mg/kg	SB03A-1	Surface Soil

**Table 33**  
**Groundwater Samples**  
**Volatile TIC Frequency**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
Unknown oxygenated hydrocarbon	20	170 JN	ug/l	MW2S-3	Monitoring well
Unknown	12	41 J	UG/L	MW2S-3	Monitoring well
Butylbenzene isomer	12	43 J	ug/l	MW6S-3	Monitoring well
Naphthalene	12	2200 JN	ug/l	MW2S-3	Monitoring well
Unknown Hydrocarbon	9	96 J	UG/L	MW2S-1	monitoring well
Propylbenzene isomer	8	93 J	ug/l	MW5S-3	Monitoring well
METHYLINDAN ISOMER	7	26 J	ug/l	MW6S-3	Monitoring well
Trimethylbenzene Isomer	6	150 J	ug/l	MW5S-3	Monitoring well
Unknown terpene	6	1300 JN	ug/l	MW1S-3	Monitoring well
Unknown siloxane	5	33 J	ug/l	MW6S-3	Monitoring well
UNKNOWN ALKYL BENZENE	4	23 J	ug/l	MW5S-4	Monitoring well
INDANE	4	130 NJ	ug/l	MW5S-4	Monitoring well
Hexane isomer	3	41 J	ug/l	MW5S-3	Monitoring well
MTBE	3	21 JN	ug/l	MW9S-3	Monitoring well
METHANETHIOL	2	15 JN	ug/l	MW2S-3	Monitoring well
Heptane isomer	2	73 J	ug/l	MW5S-3	Monitoring well
EthylcycloHexane isomer	2	22 JN	ug/l	MW5S-3	Monitoring well
DimethylcycloHexane isomer	2	23 J	ug/l	MW5S-3	Monitoring well
METHANETHIOL	2	15 NJ	ug/l	MW2S-4	Monitoring well
CYCLOALKANE (CY)	2	14 J	ug/l	MW2S-4	Monitoring well
BENZENE, 1,2,3-TRIMETHYL	2	470 NJ	ug/l	MW5S-4	Monitoring well
Azulene	2	2600 NJ	ug/l	MW2S-4	Monitoring well
CYCLOPENTANE, METHYL-	2	64 NJ	ug/l	MW5S-4	Monitoring well
UNKNOWN ACID	2	12 NJ	ug/l	MW11S-4	Monitoring well
Methyl Naphthalene isomer	2	22 JN	ug/l	MW2S-3	Monitoring well
Methylnaphthalene isomer	2	10 J	ug/l	MW8S-3	Monitoring Well
Methyltetralin isomer	2	7 J	ug/l	MW6S-3	Monitoring well
Naphthalene	2	150 JN	ug/l	MW5S-3	Monitoring well
BICYCLO[2.2.1] HEPTAN-2-ONE	1	16 NJ	ug/l	MW2S-4	Monitoring well
BENZO[B]THIOPENE	1	22 NJ	ug/l	MW5S-4	Monitoring well
BENZENE,CYCLOPROPYL-	1	10 NJ	ug/l	MW6S-4	Monitoring well
BENZENE,4-ETHYL-1,2-DIMETHY	1	120 NJ	ug/l	MW5S-4	Monitoring well
BENZENE,1-METHYL-4-(1-METHY	1	8 NJ	ug/l	MW6S-4	Monitoring well
BENZENE,1-CHLORO-4-(TRIFLUO	1	450 NJ	ug/l	MW6S-4	Monitoring well
BENZENE, PROPYL-	1	63 NJ	ug/l	MW5S-4	Monitoring well
Tetralin isomer	1	29 J	ug/l	MW6S-3	Monitoring well
BENZENE, 1-ETHYL-2-METHYL-	1	150 NJ	ug/l	MW5S-4	Monitoring well
Cyclohexane , methyl-	1	250 JN	ug/l	MW5S-3	Monitoring well
BENZENE, 1,2,3,5-TETRAMETHYL	1	80 NJ	ug/l	MW5S-4	Monitoring well
Benzene, 1, 2, 3 - trimethyl - (8	1	7 J	UG/L	MW2S-1	monitoring well
BENZENE, (3-METHYL-2-BUTENYL	1	20 NJ	ug/l	MW5S-4	Monitoring well
UNKNOWN ALCOHOL	1	26 J	ug/l	MW2S-4	Monitoring well
3,4-DICHLOROBENZOTRIFLUORIDE	1	300 NJ	ug/l	MW6S-4	Monitoring well
BENZENE, 1-METHYL-3-(1-METHY	1	70 NJ	ug/l	MW5S-4	Monitoring well
Dimethylnaphthalene isomer	1	8 J	ug/l	MW8S-3	Monitoring Well
Methylnaphthalene isomer	1	26 J	ug/l	MW6S-3	Monitoring well
Methane, dichlorofluoro	1	9 NJ	ug/l	MW2S-4	Monitoring well
INDENE	1	27 NJ	ug/l	MW5S-4	Monitoring well
INDAN, 1-METHYL	1	42 NJJ	ug/l	MW5S-4	Monitoring well



**Table 34**  
**Groundwater Samples**  
**Volatile TIC Maximum Concentration**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
Azulene	2	2600 NJ	ug/l	MW2S-4	Monitoring well
Naphthalene	12	2200 JN	ug/l	MW2S-3	Monitoring well
Unknown terpene	6	1300 JN	ug/l	MW1S-3	Monitoring well
BENZENE, 1,2,3-TRIMETHYL	2	470 NJ	ug/l	MW5S-4	Monitoring well
BENZENE, 1-CHLORO-4-(TRIFLUO	1	450 NJ	ug/l	MW6S-4	Monitoring well
3,4-DICHLOROBENZOTRIFLUORIDE	1	300 NJ	ug/l	MW6S-4	Monitoring well
Cyclohexane, methyl-	1	250 JN	ug/l	MW5S-3	Monitoring well
Unknown oxygenated hydrocarbon	20	170 JN	ug/l	MW2S-3	Monitoring well
BENZENE, 1-ETHYL-2-METHYL-	1	150 NJ	ug/l	MW5S-4	Monitoring well
Trimethylbenzene Isomer	6	150 J	ug/l	MW5S-3	Monitoring well
Naphthalene	2	150 JN	ug/l	MW5S-3	Monitoring well
Methanethoil (8CIACI)	1	140 J	UG/L	MW2S-1	monitoring well
INDANE	4	130 NJ	ug/l	MW5S-4	Monitoring well
BENZENE, 4-ETHYL-1,2-DIMETHY	1	120 NJ	ug/l	MW5S-4	Monitoring well
HEXANE, 2-METHYL-	1	98 NJ	ug/l	MW5S-4	Monitoring well
Unknown Hydrocarbon	9	96 J	UG/L	MW2S-1	monitoring well
Propylbenzene isomer	8	93 J	ug/l	MW5S-3	Monitoring well
1-PHENYL-1-BUTENE	1	84 NJ	ug/l	MW5S-4	Monitoring well
BENZENE, 1,2,3,5-TETRAMETHYL	1	80 NJ	ug/l	MW5S-4	Monitoring well
Heptane isomer	2	73 J	ug/l	MW5S-3	Monitoring well
BENZENE, 1-METHYL-3-(1-METHY	1	70 NJ	ug/l	MW5S-4	Monitoring well
CYCLOPENTANE, METHYL-	2	64 NJ	ug/l	MW5S-4	Monitoring well
BENZENE, PROPYL-	1	63 NJ	ug/l	MW5S-4	Monitoring well
Cyclohexane	1	59 JN	ug/l	MW5S-3	Monitoring well
CYCLOHEXANE, 1,3-DIMETHYL-	1	48 NJ	ug/l	MW5S-4	Monitoring well
Chlorotrifluorobenzene isomer	1	43 J	ug/l	MW6S-3	Monitoring well
Butylbenzene isomer	12	43 J	ug/l	MW6S-3	Monitoring well
INDAN, 1-METHYL	1	42 NJ	ug/l	MW5S-4	Monitoring well
Unknown	12	41 J	UG/L	MW2S-3	Monitoring well
Hexane isomer	3	41 J	ug/l	MW5S-3	Monitoring well
Unknown siloxane	5	33 J	ug/l	MW6S-3	Monitoring well
NAPHTHALENE, 1,2,3,4-TETRAHY	1	32 NJ	ug/l	MW5S-4	Monitoring well
HEPTANE	1	31 NJ	ug/l	MW5S-4	Monitoring well
Tetralin isomer	1	29 J	ug/l	MW6S-3	Monitoring well
INDENE	1	27 NJ	ug/l	MW5S-4	Monitoring well
NAPHTHALENE, 2-METHYL	1	26 NJ	ug/l	MW2S-4	Monitoring well
UNKNOWN ALCOHOL	1	26 J	ug/l	MW2S-4	Monitoring well
METHYLINDAN ISOMER	7	26 J	ug/l	MW6S-3	Monitoring well
Methylnaphthalene isomer	1	26 J	ug/l	MW6S-3	Monitoring well
UNKNOWN ALKYL BENZENE	4	23 J	ug/l	MW5S-4	Monitoring well
DimethylcycloHexane isomer	2	23 J	ug/l	MW5S-3	Monitoring well
Methyl Naphthalene isomer	2	22 JN	ug/l	MW2S-3	Monitoring well
BENZO[B]THIOPENE	1	22 NJ	ug/l	MW5S-4	Monitoring well
EthylcycloHexane isomer	2	22 JN	ug/l	MW5S-3	Monitoring well
MTBE	3	21 JN	ug/l	MW9S-3	Monitoring well
BENZENE, (3-METHYL-2-BUTENYL	1	20 NJ	ug/l	MW5S-4	Monitoring well
BICYCLO[2.2.1] HEPTAN-2-ONE	1	16 NJ	ug/l	MW2S-4	Monitoring well
METHANETHIOL	2	15 NJ	ug/l	MW2S-4	Monitoring well
METHANETHIOL	2	15 JN	ug/l	MW2S-3	Monitoring well

**Table 35**  
**Groundwater Samples**  
**Semi-Volatile TIC Frequency**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
Unknown	208	1300 J	ug/l	MW2S-3	Monitoring well
Unknown oxygenated hydrocarbon	60	1100 J	ug/l	MW2S-4	Monitoring well
Unknown carboxylic acid	15	270 J	ug/l	MW2S-4	Monitoring well
Unknown Hydrocarbon	11	44 J	ug/l	MW9D-4	Monitoring well
n-Hexadecanoic acid	7	1300 NJ	ug/l	MW8S-4	Monitoring well
Butylbenzene isomer	7	35 J	ug/l	MW6S-3	Monitoring well
Trimethylbenzene Isomer	6	120 J	ug/l	MW6S-3	Monitoring well
DODECANOIC ACID	6	6 NJ	ug/l	MW6S-4	Monitoring well
Ethane, 1, 2 - bis (2 - chloroetho	5	12 JN	ug/l	MW9S-3	Monitoring well
Octadecanoic acid	5	150 NJ	ug/l	MW2S-4	Monitoring well
Unknown phosphate	4	10 J	ug/l	MW3S-3	Monitoring well
Caprolactam	3	22 JN	ug/l	MW2M-3	Monitoring well
BENZENESULFONAMIDE, N-ETHYL	3	4 NJ	ug/l	MW11M-4	Monitoring well
BENZENESULFONAMIDE, 4 -METHYL	2	5 J	ug/l	MW11M-6	Monitoring well
BENZENESULFONAMIDE, N-ETHYL-	2	12 NJ	ug/l	MW5S-4	Monitoring well
BENZENE, 1,2,4,5-TETRAMETHYL	2	23 JN	ug/l	MW6S-3	Monitoring well
BENZENESULFONAMIDE, N-BUTYL-	2	63 JN	ug/l	MW6S-3	Monitoring well
Naphthalenecarboxylic acid	2	9 J	ug/l	MW7S-3	Monitoring well
Naphthalene, 1-methyl-	2	70 JN	ug/l	MW7S-3	Monitoring well
BENZENESULFONAMIDE, 4-METHYL	2	13 J	ug/l	MW5S-4	Monitoring well
BENZOFURAN	2	120 NJ	ug/l	MW5S-4	Monitoring well
Methyltetralin isomer	2	27 J	ug/l	MW6S-3	Monitoring well
Benzoic acid, methyl- isomer	2	53 J	ug/l	MW7S-3	Monitoring well
Benzoic acid, tert-butyl-is	2	4 J	ug/l	MW10S-3	Monitoring well
ACETIC ACID, OCTADECYL ESTER	2	9 NJ	ug/l	MW8S-4	Monitoring well
BUTYLCYCLOHEXANONE ISOMER	2	3 J	ug/l	MW11M-5	Monitoring well
ETHANONE, 1-(4-HYDROXY-3,5-D	2	52 JN	ug/l	MW2S-3	Monitoring well
Cyclohexane, isocyanato-	2	6 NJ	ug/l	MW9D-4	Monitoring well
E-11,13-TETDECADIEN-1-	2	6 NJ	ug/l	MW11S-4	Monitoring well
DIPHENYLAMINE	2	150 NJ	ug/l	MW2S-4	Monitoring well
Dimethylnaphthalene isomer	2	33 J	ug/l	MW6S-3	Monitoring well
HEXANOIC ACID, 3, 5, 5 -TRIMETH	2	6 NJ	ug/l	MW11M-4	Monitoring well
Unknown alkyl phenol	2	3 J	ug/l	MW11M-6	Monitoring well
1 (2H)-NAPHTHALENONE, 3,4-DIH	2	24 NJ	ug/l	MW6S-4	Monitoring well
UNKNOWN ORGANIC PHOSPHATE	2	3 J	ug/l	MW11M-6	Monitoring well
PHENOL, TERT-BUTYL- ISOMER	2	59 J	ug/l	MW5S-3	Monitoring well
UNKNOWN ORGANIC PHOSPHATE	2	3 J	ug/l	MW11M-5	Monitoring well
THIOPHENE, TETRAHYDRO-, 1, 1-	2	2 NJ	ug/l	MW11M-6	Monitoring well
1-PHENANTHRENECARBOXYLIC ACI	2	48 JN	ug/l	MW1S-3	Monitoring well
Tolyacetic acid isomer	2	21 J	ug/l	MW7S-3	Monitoring well
BENZENESULFONAMIDE, 4 -METHYL	2	5 NJ	ug/l	MW11M-5	Monitoring well
TRIBUTYL PHOSPHATE	2	3 NJ	ug/l	MW11M-4	Monitoring well
THIOPHENE, TETRAHYDRO-, 1, 1-	2	2 NJ	ug/l	MW11M-5	Monitoring well
1-NAPHTHALENOL	2	17 N	ug/l	MW1S-4	Monitoring well
4,4'-DIFLUOROBIPHENYL	2	4 NJ	ug/l	MW11M-4	Monitoring well
Butylbenzoate isomer	1	3 J	ug/l	MW3S-3	Monitoring well
BUTANOIC ACID, 4-BUTOXY-	1	33 NJ	ug/l	MW5S-4	Monitoring well
1,4-Methanonaphthalene-6-car	1	8 JN	ug/l	MW7S-3	Monitoring well

**Table 36**  
**Groundwater Samples**  
**Semi-Volatile TIC Maximum Concentrations**

Parameter Name	Total Positive Results	Maximum Result	Units	Sample	Sample Type
PHENOL,4-METHYL	1	3800 NJ	ug/l	MW2M-4D	Monitoring well
Unknown	208	1300 J	ug/l	MW2S-3	Monitoring well
n-Hexadecanoic acid	7	1300 NJ	ug/l	MW8S-4	Monitoring well
Unknown oxygenated hydrocarbon	60	1100 J	ug/l	MW2S-4	Monitoring well
INDOLE	1	340 NJ	ug/l	MW2S-4	Monitoring well
2-METHYL-1,3,2-DITHIARSOLANE	1	290 NJ	ug/l	MW2S-4	Monitoring well
Unknown carboxylic acid	15	270 J	ug/l	MW2S-4	Monitoring well
TETRADECANOIC ACID	1	240 NJ	ug/l	MW8S-4	Monitoring well
9-Octadecanoic acid	1	180 NJ	ug/l	MW8S-4	Monitoring well
Octadecanoic acid	5	150 NJ	ug/l	MW2S-4	Monitoring well
DIPHENYLAMINE	2	150 NJ	ug/l	MW2S-4	Monitoring well
1 (3H) - Isobenzofuranone	1	140 JN	ug/l	MW2S-3	Monitoring well
9-OCTADECENOIC ACID, (E) -	1	130 NJ	ug/l	MW2S-4	Monitoring well
Trimethylbenzene Isomer	6	120 J	ug/l	MW6S-3	Monitoring well
BENZOFURAN	2	120 NJ	ug/l	MW5S-4	Monitoring well
Benzenepropanoic acid, 4-hyd	1	110 JN	ug/l	MW2S-3	Monitoring well
Phenol,tert-butyl- isomer	1	110 J	ug/l	MW7S-3	Monitoring well
Benzenebutanoic acid	1	94 JN	ug/l	MW2S-3	Monitoring well
CYCLIC OCTAATOMIC SULFUR	1	89 NJ	ug/l	MW2S-4	Monitoring well
Phthalic anhydride	1	85 JN	ug/l	MW5S-3	Monitoring well
Trimethylbenzene	1	84 J	ug/l	MW5S-3	Monitoring well
ETHANE, 1-ETHOXY-1-METHOXY	1	83 NJ	ug/l	MW5S-4	Monitoring well
Napthalene, 1-methyl-	1	82 JN	ug/l	MW6S-3	Monitoring well
EICOSANE	1	76 NJ	ug/l	MW10S-4	Monitoring well
Naphthalene, 1-methyl-	2	70 JN	ug/l	MW7S-3	Monitoring well
Methylindan isomer	1	70 J	ug/l	MW7S-3	Monitoring well
Indan, 1-methyl-	1	67 JN	ug/l	MW7S-3	Monitoring well
Benzoic acid , p-tert-butyl-	1	64 JN	ug/l	MW5S-3	Monitoring well
Hexadecanoic acid	1	63 NJ	ug/l	MW6S-4	Monitoring well
BENZENESULFONAMIDE, N-BUTYL-	2	63 JN	ug/l	MW6S-3	Monitoring well
PHENOL, TERT-BUTYL- ISOMER	2	59 J	ug/l	MW5S-3	Monitoring well
Benzoic acid, methyl- isomer	2	53 J	ug/l	MW7S-3	Monitoring well
ETHANONE, 1-(4-HYDROXY-3,5-D	2	52 JN	ug/l	MW2S-3	Monitoring well
1-PHENANTHRENECARBOXYLIC ACI	2	48 JN	ug/l	MW1S-3	Monitoring well
Phenol,2-(1-methylethyl)-	1	48 JN	ug/l	MW5S-3	Monitoring well
Benzene, -1butenyl-,(E)-	1	46 JN	ug/l	MW6S-3	Monitoring well
Unknown Hydrocarbon	11	44 J	ug/l	MW9D-4	Monitoring well
Phenol, 4,4'-(1-methylethyl)	1	43 JN	ug/l	MW6S-3	Monitoring well
BENZO[B] THIOPHENE	1	42 NJ	ug/l	MW1S-4	Monitoring well
BENZENESULFONAMIDE,N-ETHYL	1	40 NJ	ug/l	MW2S-4	Monitoring well
Napthalene, 1,2,3,4-tetrahy	1	38 JN	ug/l	MW6S-3	Monitoring well
Indane	1	36 JN	ug/l	MW5S-3	Monitoring well
TRANS-2-PHENYL-1-CYCLOPROPAN	1	36 NJ	ug/l	MW6S-4	Monitoring well
O,O S-TRIETHYL DITHIOPHOSPHA	1	36 NJ	ug/l	MW6S-4	Monitoring well
Butylbenzene isomer	7	35 J	ug/l	MW6S-3	Monitoring well
Dimethylnaphthalene isomer	2	33 J	ug/l	MW6S-3	Monitoring well
4-Hydroxy-2-methylacetopheno	1	33 JN	ug/l	MW6S-3	Monitoring well
BUTANOIC ACID, 4-BUTOXY-	1	33 NJ	ug/l	MW5S-4	Monitoring well
Propylbenzene isomer	1	33 J	ug/l	MW5S-3	Monitoring well

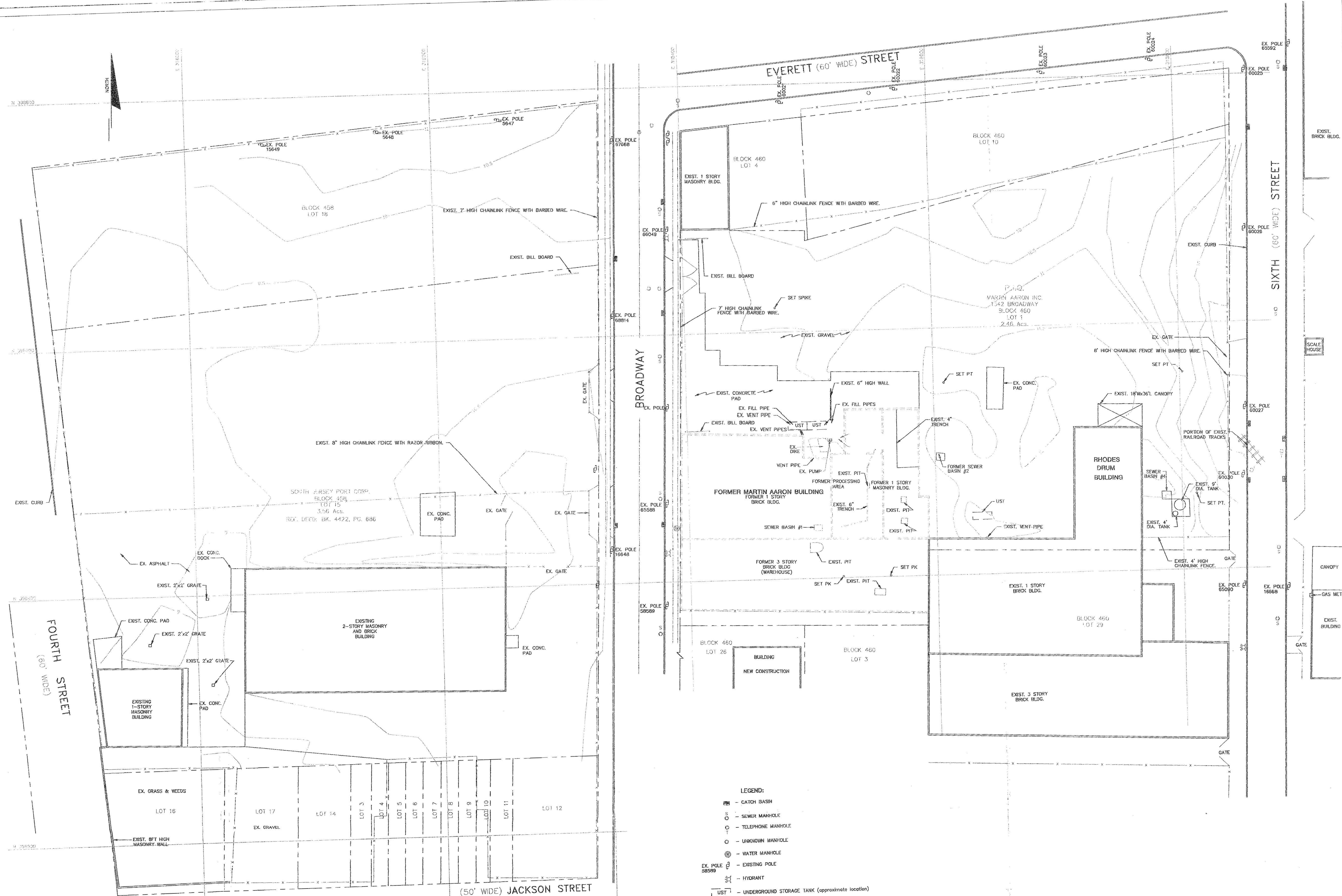


Figure 1  
 SITE LOCATION  
 MARTIN AARON SITE  
 CAMDEN CITY, CAMDEN COUNTY, NEW JERSEY  
 SCALE 1" = 2000'



Source: U.S.G.S. 7.5 MIN. QUADRANGLE, CAMDEN, N.J. AND PHILADELPHIA, PA, PHOTOREVISED 1976.

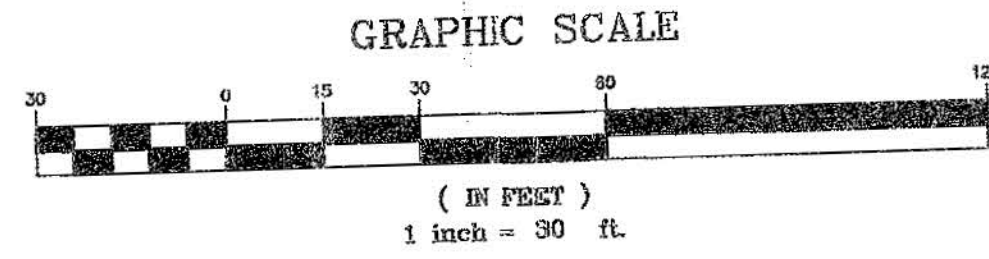
L. Robert Kimball and Associates



- LEGEND:**
- ☐ - CATCH BASIN
  - OS - SEWER MANHOLE
  - O - TELEPHONE MANHOLE
  - - UNKNOWN MANHOLE
  - W - WATER MANHOLE
  - EX. POLE - EXISTING POLE
  - H - HYDRANT
  - UST - UNDERGROUND STORAGE TANK (approximate location)

**NOTES:**

- P.I.O. REFERENCE DEED: BOOK 3074, PG. 603, SCHWENGER TO MARTIN AARON, INC. DATED 6-17-68, FILED IN THE CAMDEN COUNTY CLERK'S OFFICE.
- COORDINATES BASED ON NAD 1983, ELEVATIONS BASED ON NAVD 1988, AS CONVERTED FROM VALUES PUBLISHED FOR N.J. GEODETIC CONTROL MONUMENTS #3924 AND #3925, CONVERSIONS ACCOMPLISHED VIA ARMY TOPOGRAPHIC ENGINEERING CENTER "CDRPSCON V4.1".



**SITE LAYOUT AND TOPOGRAPHY**  
**MARTIN AARON SITE RI/RAA**  
 CAMDEN, CAMDEN COUNTY, NEW JERSEY

let's protect our earth

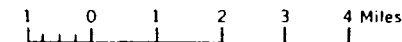
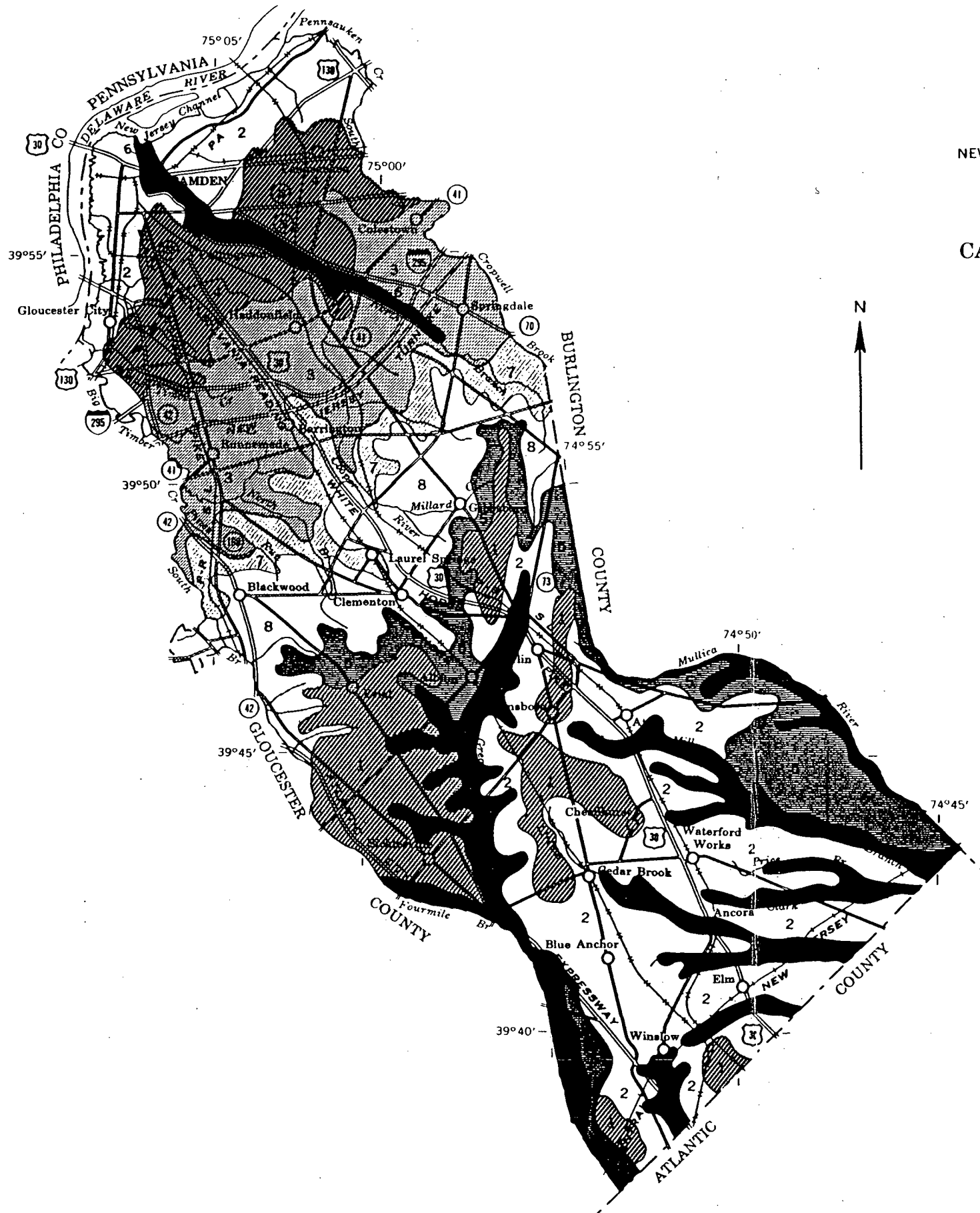
STATE OF NEW JERSEY  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF PUBLICLY FUNDED SITE REMEDIATION

L. ROBERT KIMBALL & ASSOCIATES, INC.  
 EBENSBURG, PA & PLEASANTVILLE, NJ









DATE: 2/99      SCALE: AS SHOWN      FIGURE: 2

U. S. DEPARTMENT OF AGRICULTURE  
 SOIL CONSERVATION SERVICE  
 NEW JERSEY AGRICULTURAL EXPERIMENT STATION

**GENERAL SOIL MAP  
 CAMDEN COUNTY, NEW JERSEY**

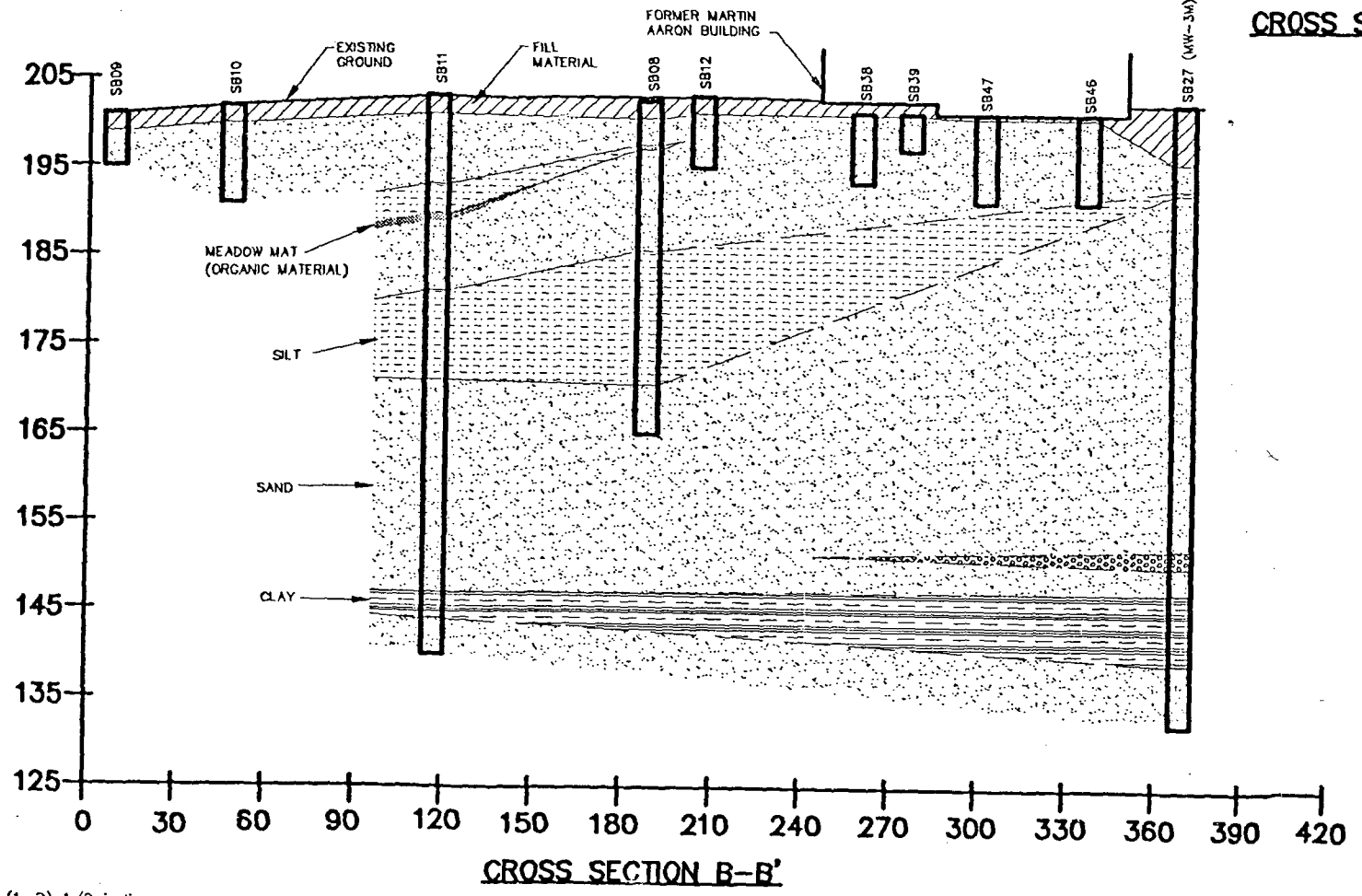
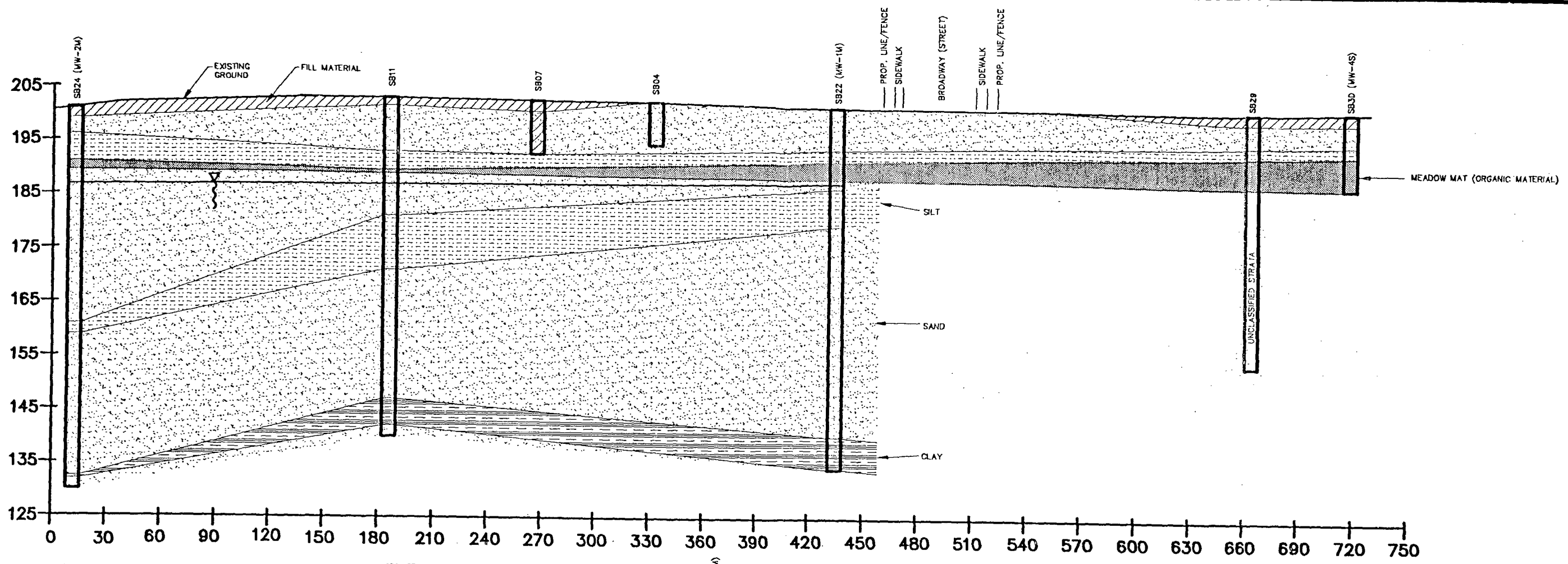


**SOIL ASSOCIATIONS**

-  1 Aura-Downer association: Gently sloping gravelly and sandy soils
-  2 Downer-Woodstown-Dragston association: Gently sloping, grayish-brown sandy soils
-  3 Freehold-Holmdel-Collington association: Gently to strongly sloping soils from greensand
-  4 Howell-Urban land association: Gently sloping, brown silty and clayey soils
-  5 Lakewood-Lakehurst-Lakeland association: Level to steep, gray sandy soils
-  6 Muck-Alluvial land association: Wet soils mainly along streams
-  7 Marlton-Kresson association: Gently sloping to steep, olive clay soils
-  8 Westphalia-Nixonton-Barclay association: Nearly level to steep, fine sandy soils

July 1965

Figure: 3

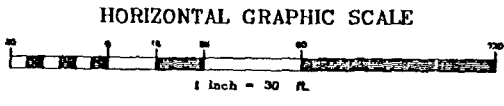
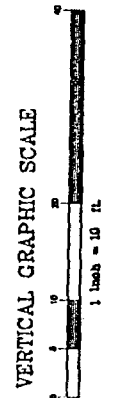


**CROSS SECTION A-A'**

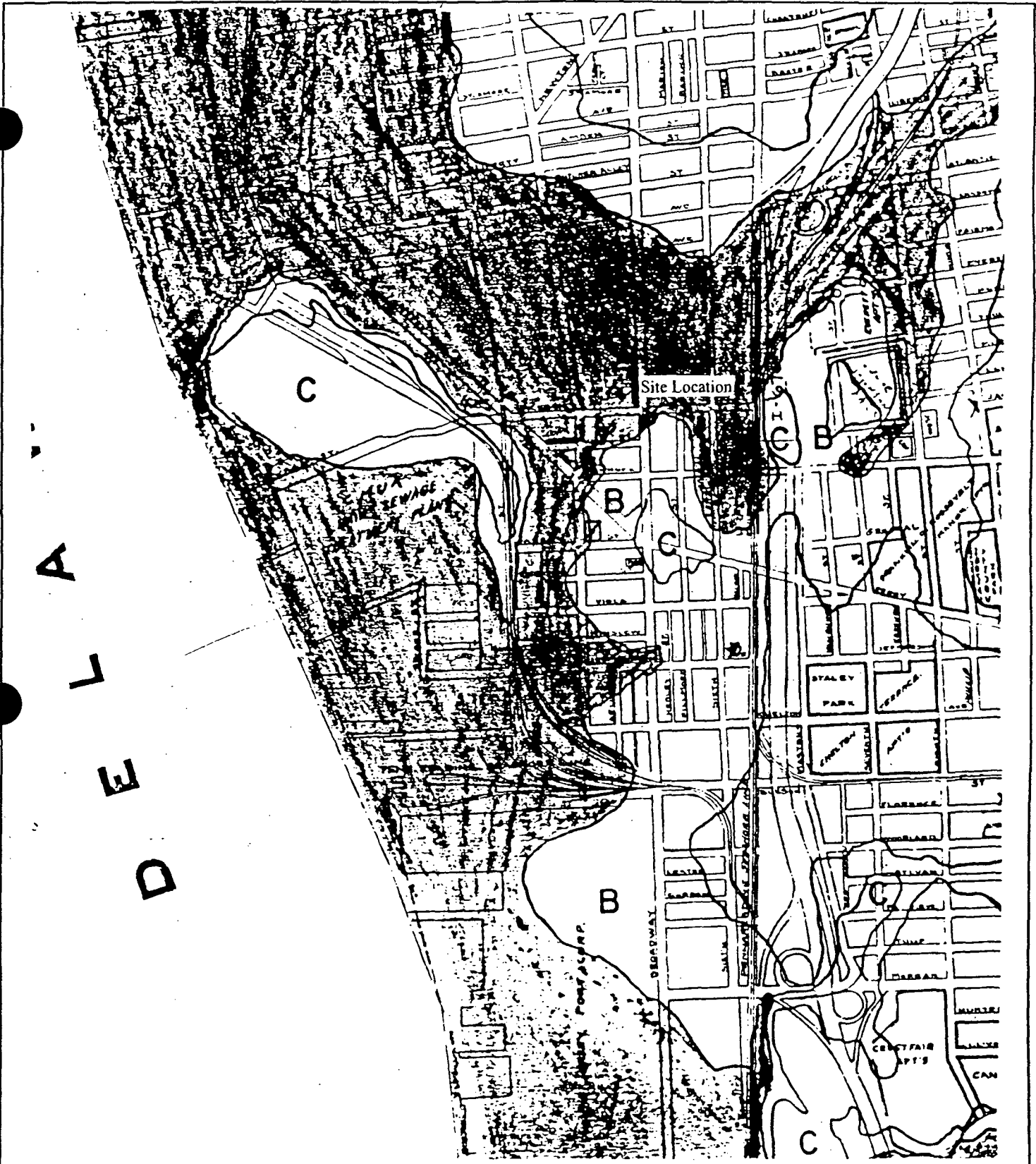
**CROSS SECTION B-B'**

**LEGEND**

- FILL MATERIAL
- SAND
- SILT
- MEADOW MAT (ORGANIC MATERIAL)
- CLAY
- GRAVEL (MED.-CRS.)
- PHREATIC SURFACE (WATER TABLE)



<b>GEOLOGIC CROSS SECTIONS</b>		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
<small>Let's protect our earth</small> STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & PLEASANTVILLE, NJ		
DATE: 2/99	SCALE: AS SHOWN	FIGURE: 4



**FLOOD INSURANCE RATE MAP**

Source: Federal Emergency Management Agency (FEMA)  
 City of Camden; 1989  
 Approximate Scale 1" = 400 feet

**FIGURE 5**

Martin Aaron RI/RAA  
 Camden, Camden County, New Jersey







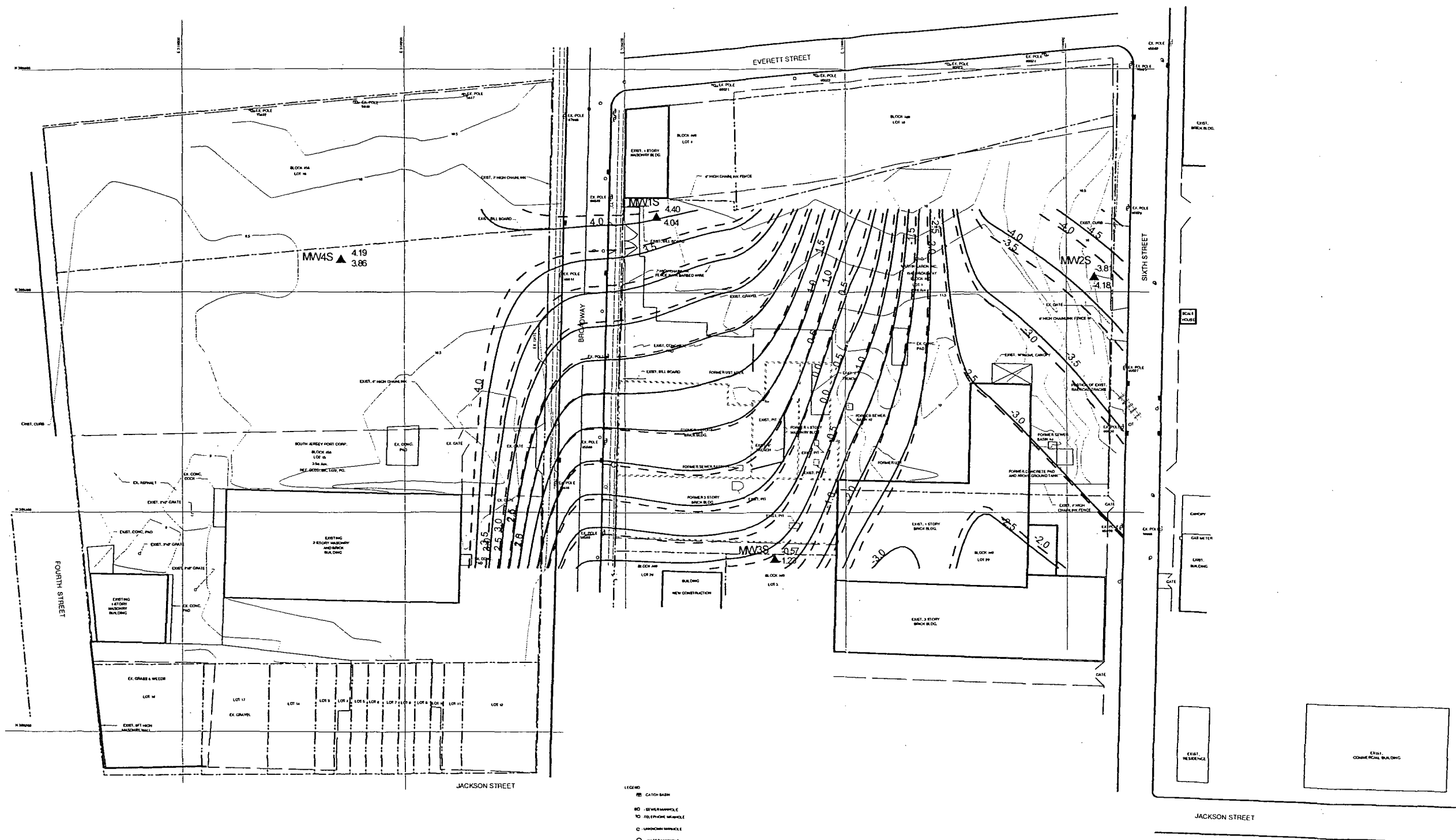
NATIONAL WETLAND INVENTORY MAP

Source: U.S. Dept. of the Interior  
Camden, NJ; Date 1977  
Approximate Scale: 1" = 2000 feet

FIGURE 6

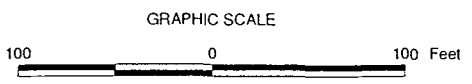
Martin Aaron RI/RAA  
Camden, Camden County, New Jersey






- LEGEND
- RE CATCH BASIN
  - NO - SEWER MANHOLE
  - TO TELEPHONE MANHOLE
  - - WATER MANHOLE
  - - WATER MANHOLE
  - EX. PILE CAP
  - EX. PILE
  - - HYDRANT

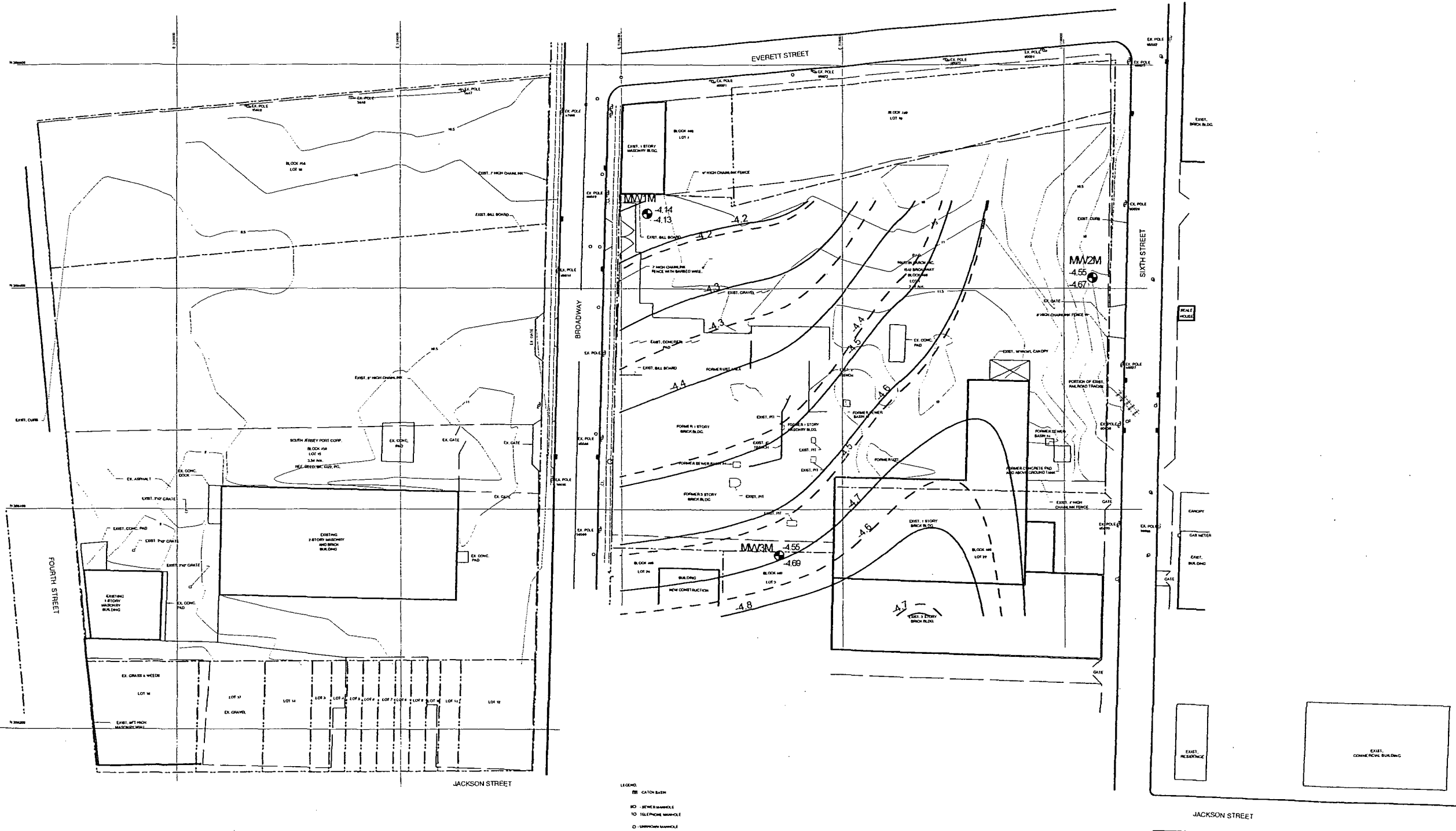
- EXPLANATION
- MW1S ▲ -3.88
  - ▲ -4.52 Monitoring Well Showing Groundwater Elevation Values
  - 8/14/97 Groundwater Elevation - Shallow Wells
  - 9/15/97 Groundwater Elevation - Shallow Wells



NOTES:

- P.L.G. REFERENCE DEED BOOK 3074, PG. 693 SCHMERLING TO MARTIN AARON INC. DATED 6-17-66, FILED IN THE CAMDEN COUNTY CLERKS OFFICE.
- COORDINATES BASED ON NAD 1983, ELEVATIONS BASED ON NAVD1988, ASCONVERTED FROM VALUES PUBLISHED FOR N.J. GEODETIC CONTROL MONUMENTS #3924 AND #3925. CONVERSIONS ACCOMPLISHED VIA ARMY TOPOGRAPHIC ENGINEERING CENTER "CORPSCON V4.1".

<b>Shallow Groundwater Contour Map</b> 8/14/97 and 9/15/97		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
 <b>Kimball</b> L. Robert Kimball & Associates		L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ
DATE: 6/00	SCALE AS SHOWN	FIGURE: 8



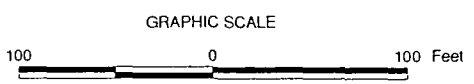
- LEGEND
- ☐ CATCH BASIN
  - ⊙ SEWER MANHOLE
  - ⊙ TELEPHONE MANHOLE
  - ⊙ UNIDENTIFIED MANHOLE
  - WATER MANHOLE
  - ⊙ FENCING POLE
  - ⊙ HYDRANT

**EXPLANATION**

MV1M  
 ● -3.88  
 ● -4.52  
 Monitoring Well Showing Groundwater Elevation Values


▲▲▲▲▲  
 8/14/97 Groundwater Elevation - Deep Wells

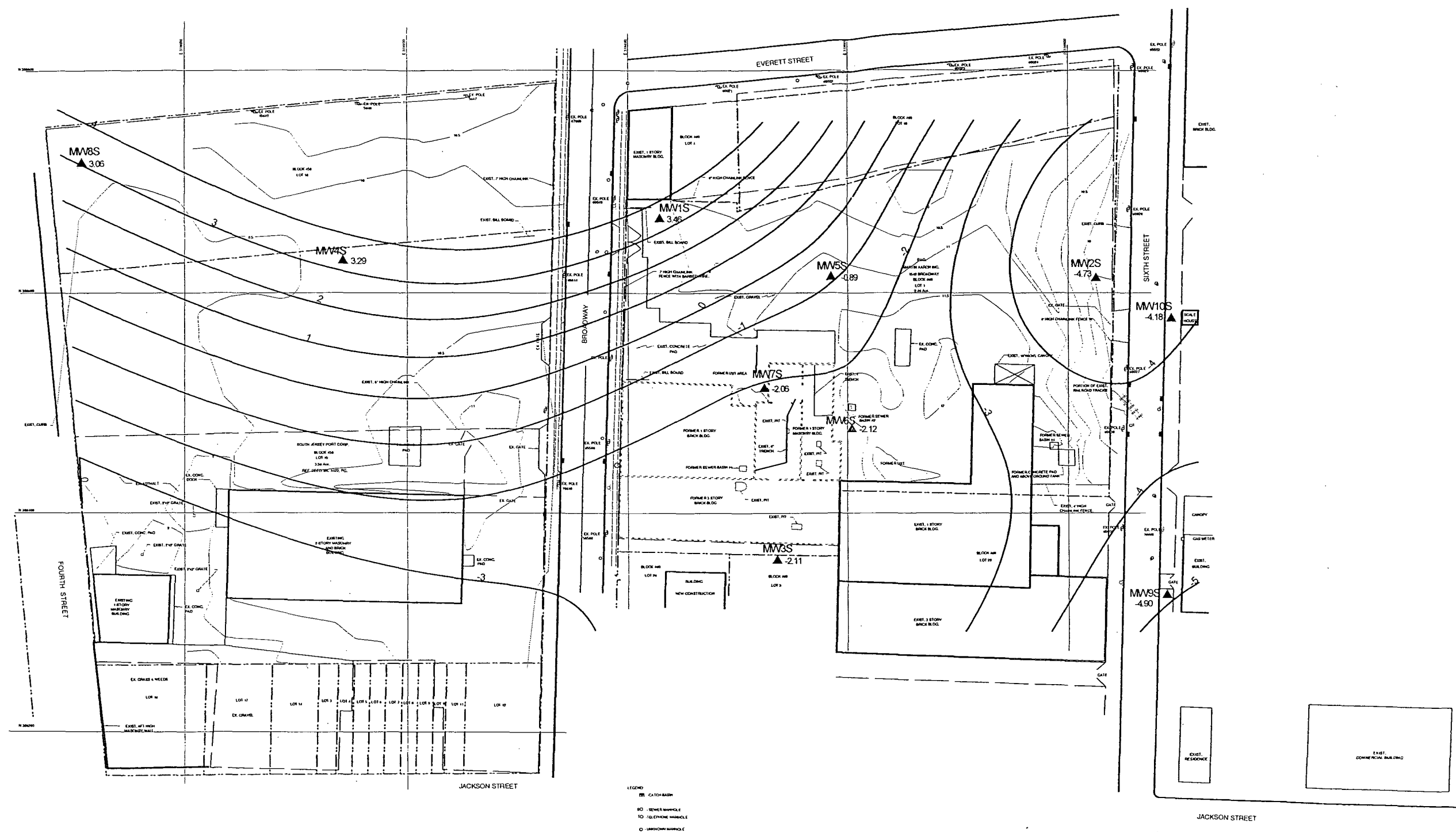
▲▲▲▲▲  
 9/15/97 Groundwater Elevation - Deep Wells



NOTES:

1. P.L.O. REFERENCE DEED BOOK 3074, PG. 603 SCHMERLING TO MARTIN AARON INC. DATED 6-17-66, FILED IN THE CAMDEN COUNTY CLERKS OFFICE.
2. COORDINATES BASED ON NAD 1983, ELEVATIONS BASED ON NAVD1988, ASCONVERTED FROM VALUES PUBLISHED FOR N.J. GEODETIC CONTROL MONUMENTS 83024 AND 10325. CONVERSIONS ACCOMPLISHED VIA ARMY TOPOGRAPHIC ENGINEERING CENTER "CORPSON V4.1".

<b>Deep Groundwater Contour Map</b> 8/14/97 and 9/15/97		
MARTIN AARON SITE R1/R4A CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
 <b>Kimball</b>		L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ
DATE: 6/00	SCALE AS SHOWN	FIGURE: 9

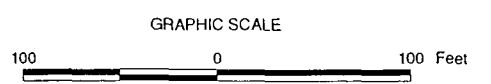


- LEGEND
- ▭ CATCH-BASIN
  - ⊙ SEWER MANHOLE TO TELEPHONE MANHOLE
  - TELEPHONE MANHOLE
  - LAMPHOUSE MANHOLE
  - WATER MANHOLE
  - ⊙ EXISTING POLE
  - ⊙ HYDRANT

**EXPLANATION**


MW1S ▲ -4.52 Monitoring Well Showing Groundwater Elevation Values

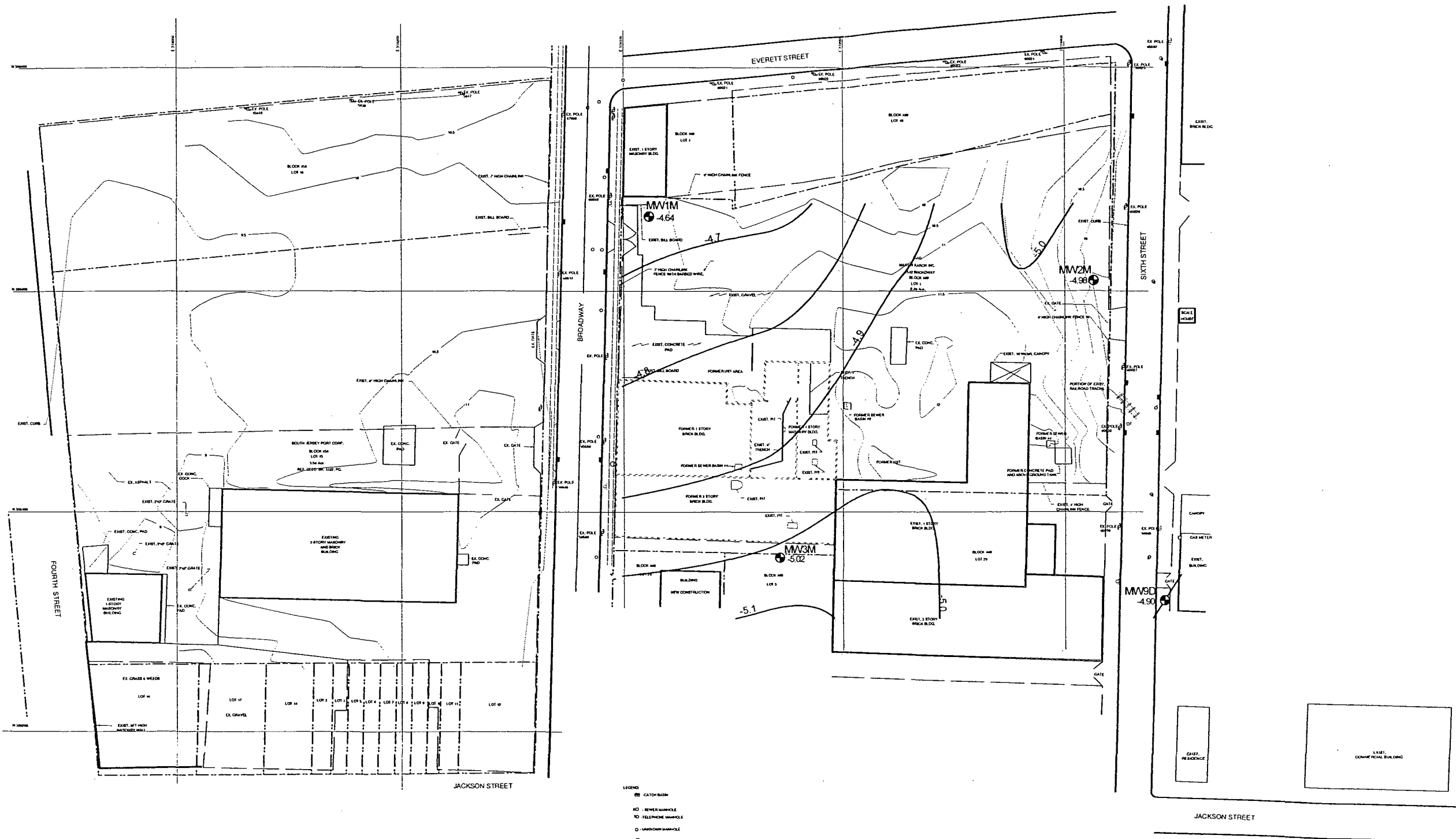
~ 11/10/98 Groundwater Elevation - Shallow Wells



NOTES:

1. P.I.G. REFERENCE DEED BOOK 3074, PG. 603 SCHMERLING TO MARTIN AARON INC. DATED 6-17-66, FILED IN THE CAMDEN COUNTY CLERKS OFFICE.
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<b>Shallow Groundwater Contour Map</b> 11/10/98		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
 <b>Kimball</b> L. Robert Kimball & Associates		L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ
DATE: 6/00	SCALE AS SHOWN	FIGURE: 10

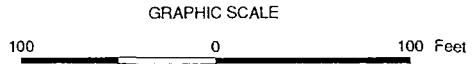


- LEGEND
- ☐ CATCH BASIN
  - ⊖ SEWER MANHOLE
  - ⊖ TELEPHONE MANHOLE
  - ⊖ LANDFILL MANHOLE
  - ⊖ WATER MANHOLE
  - ⊖ EX. POLE
  - ⊖ EXISTING POLE
  - ⊖ UTILITY

**EXPLANATION**


MW1M  
 ● -3.88 Monitoring Well Showing Groundwater Elevation Values

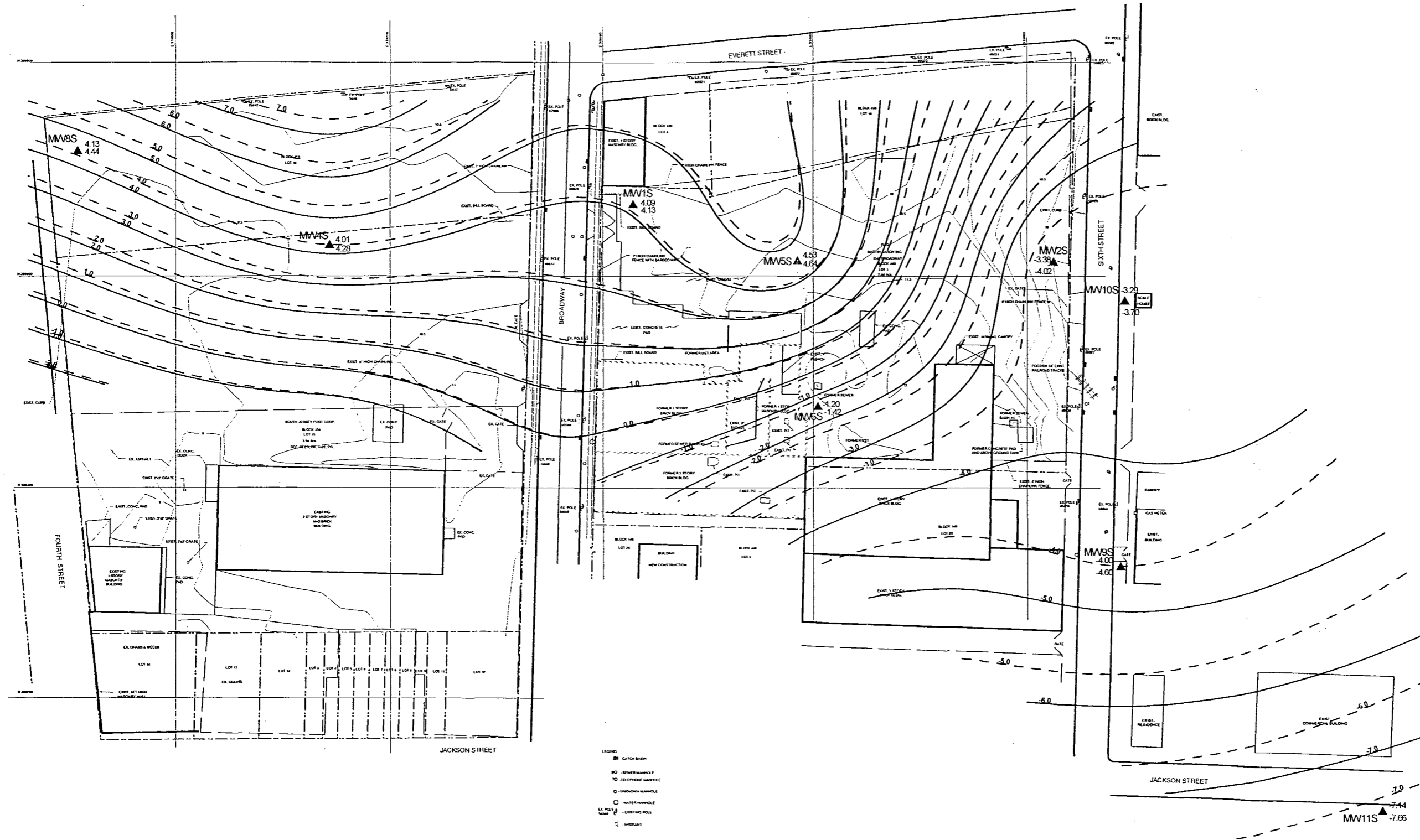
— 11/10/98 Groundwater Elevation - Deep Wells



NOTES:

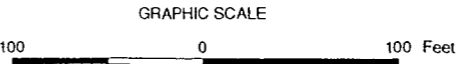
- P.L.O. REFERENCE DEED BOOK 3074, PG. 603 SCHMERLING TO MARTIN AARON INC. DATED 6-17-66. FILED IN THE CAMDEN COUNTY CLERKS OFFICE.
- COORDINATES BASED ON NAD 1983. ELEVATIONS BASED ON NAVD1988. ASCONVERTED FROM VALUES PUBLISHED FOR N.J. GEODETIC CONTROL MONUMENTS #3924 AND #3925. CONVERSIONS ACCOMPLISHED VIA ARMY TOPOGRAPHIC ENGINEERING CENTER "CORPSCOON V4.1".

<b>Deep Groundwater Contour Map</b> 11/10/98		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
 <b>Kimball</b> L. Robert Kimball & Associates		L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ
DATE: 6/00	SCALE AS SHOWN	FIGURE: 11



- LEGEND
- ☐ CATCH BASIN
  - ⊙ BENCH MARK
  - ⊙ TELEPHONE MARK
  - ⊙ UNIDENTIFIED MARK
  - ⊙ WATER MARK
  - ⊙ LIGHTING POLE
  - ⊙ UTILITY

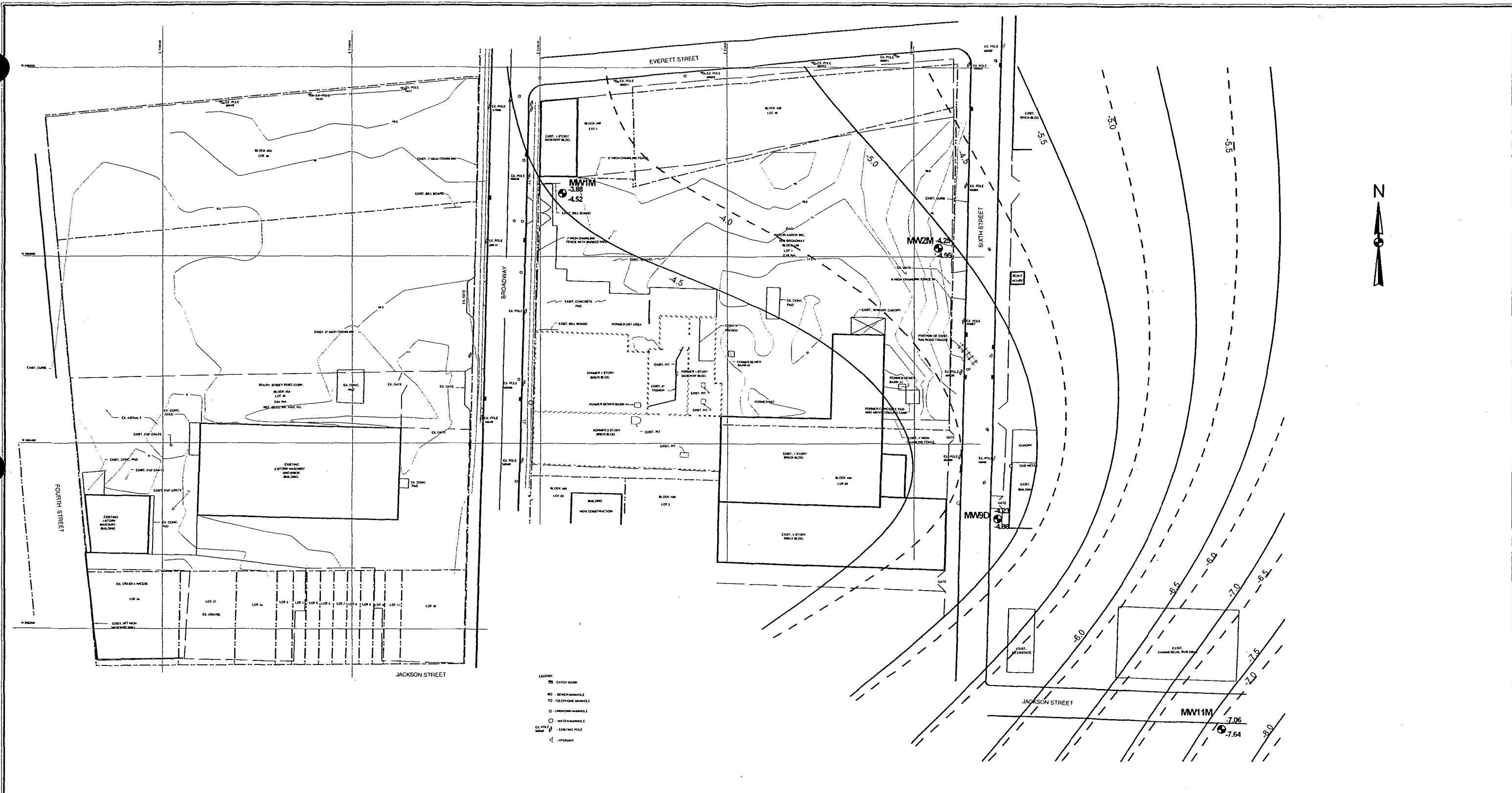
- EXPLANATION**
- MW1S  
▲ -3.88  
▲ -4.52  
Monitoring Well Showing Groundwater Elevation Values
  - 1/18/00 Groundwater Elevation - Shallow Wells
  - 2/17/00 Groundwater Elevation - Shallow Wells



NOTES:

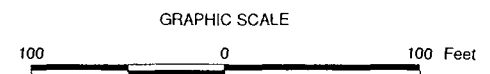
- P.I.Q. REFERENCE DEED BOOK 3074, PG. 603 SCHMERLING TO MARTIN AARON INC. DATED 6-17-66, FILED IN THE CAMDEN COUNTY CLERK'S OFFICE.
- COORDINATES BASED ON NAD 1983, ELEVATIONS BASED ON NAVD1988, ASCONVERTED FROM VALUES PUBLISHED FOR N.J. GEODETIC CONTROL MONUMENTS #3924 AND #3925. CONVERSIONS ACCOMPLISHED VIA ARMY TOPOGRAPHIC ENGINEERING CENTER "CORPSON V4.1".

<b>Shallow Groundwater Contour Map</b> 1/18/00 and 2/17/00		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
		L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ
DATE: 6/00	SCALE AS SHOWN	FIGURE: 12



- LEGEND:
- CATCH BASIN
  - MANHOLE TO TELEPHONE MANHOLE
  - LAMP/POLE MANHOLE
  - WATER MANHOLE
  - EXISTING POLE
  - HYDRANT

- EXPLANATION**
- MW1M  $\bullet$  -3.88  
 $\bullet$  -4.52 Monitoring Well Showing Groundwater Elevation Values
  - 1/18/00 Groundwater Elevation - Deep Wells
  - 2/17/00 Groundwater Elevation - Deep Wells



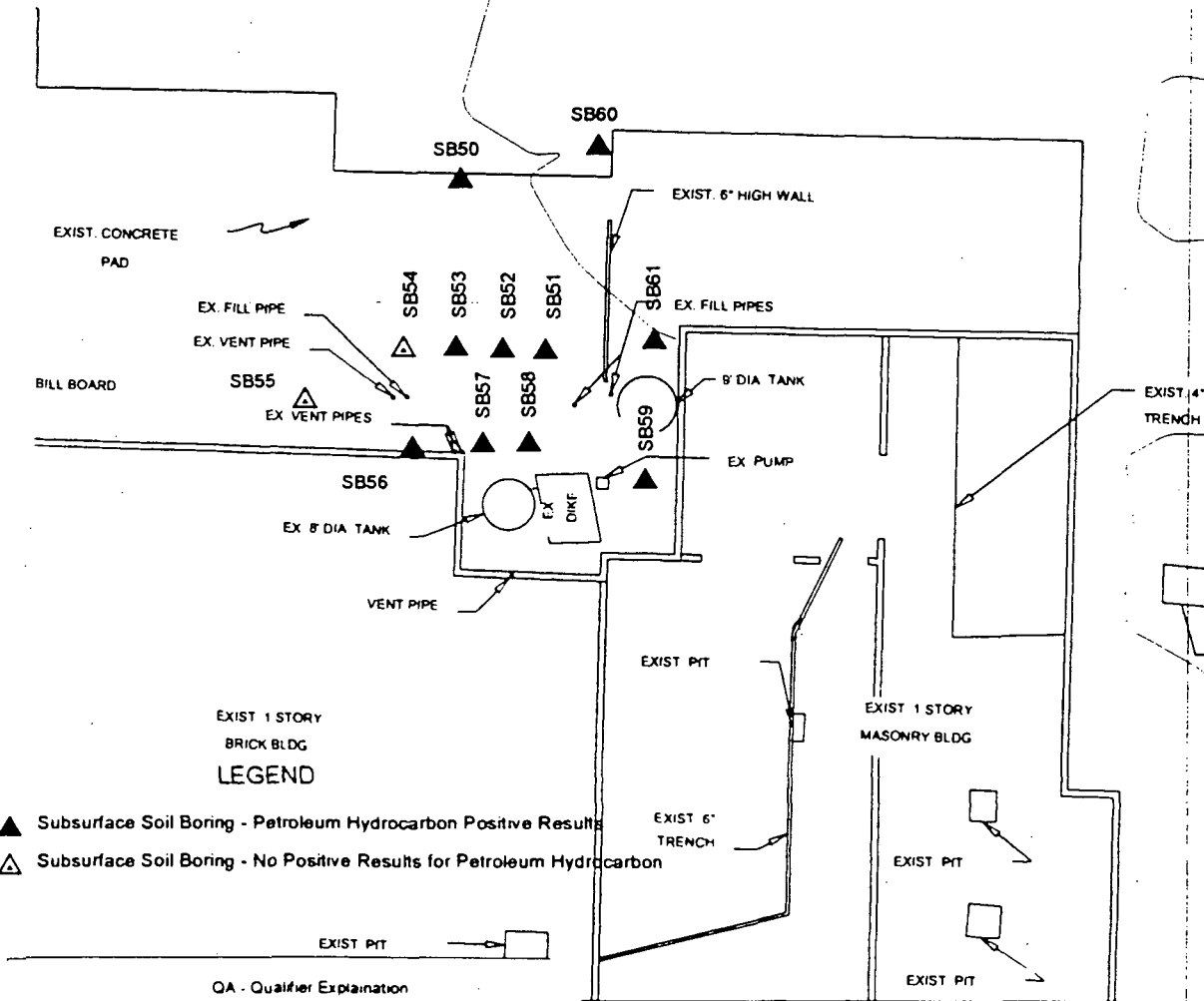
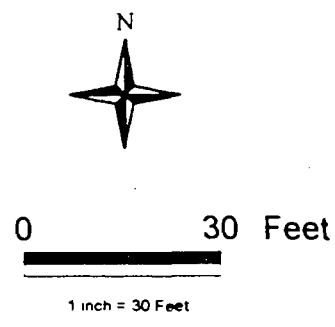
NOTES:

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<b>Deep Groundwater Contour Map</b> 1/18/00 and 2/17/00	
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY	
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION	
	L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ
DATE: 6/00	SCALE AS SHOWN
FIGURE: 13	

### Soil Boring- Petroleum Hydrocarbon Positive Results

Location	Sample	Parameter	Depth (ft)	Result	Qual	Unit
SB50	SB50-1	TPH	5.5 - 6	202		MG/KG
SB51	SB51-1	TPH	5.5 - 6	2790		MG/KG
SB52	SB52-1	TPH	5 - 5.5	1910		MG/KG
SB53	SB53-1	TPH	3.5 - 4	67		MG/KG
	SB53-2	TPH	7.5 - 8	50		MG/KG
SB56	SB56-2	TPH	6.5 - 7	34		MG/KG
SB57	SB57-1	TPH	6.5 - 7	30		MG/KG
SB58	SB58-1	TPH	5.5 - 6	3190		MG/KG
SB59	SB59-1	TPH	5.5 - 6	19000		MG/KG
SB60	SB60-1	TPH	3.5 - 4	236		MG/KG
	SB61-1	TPH	3.5 - 4	4820		MG/KG



- ▲ Subsurface Soil Boring - Petroleum Hydrocarbon Positive Results
- △ Subsurface Soil Boring - No Positive Results for Petroleum Hydrocarbon

QA - Qualifier Explanation

- U - Indicates compound was analyzed for but not detected
- J - Indicates an estimated value
- B - Used when the analyte is found in the associated blank as well as the sample
- E - Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis
- D - Identifies all compounds identified in an analysis at a secondary dilution factor

**PETROLEUM HYDROCARBON POSITIVE RESULTS**  
 MARTIN AARON SITE RI/RAA  
 CAMDEN, CAMDEN COUNTY, NEW JERSEY

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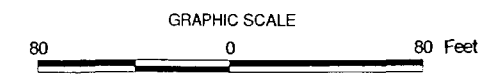
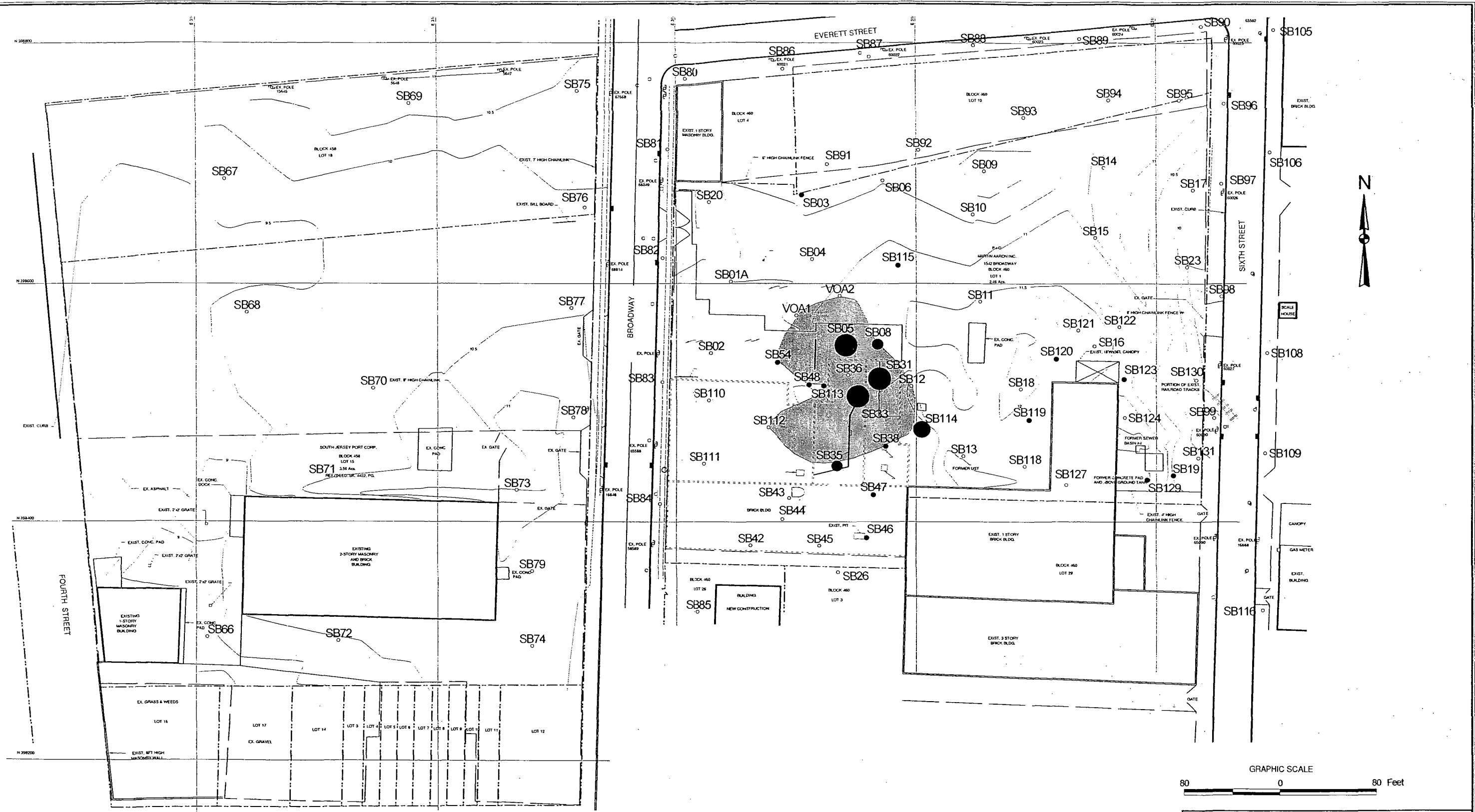
STATE OF NEW JERSEY  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF PUBLICALLY FUNDED SITE REMEDIATION

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L ROBERT KIMBALL & ASSOCIATES, INC  
 EBENSBERG, PA & PLEASANTVILLE, NJ

Figure 24





NOTES:  
 1. P.I.Q. REFERENCE DEED BOOK 3074, PG. 603 SCHMERLING TO MARTIN AARON INC. DATED 6-17-66, FILED IN THE CAMDEN COUNTY CLERK'S OFFICE.  
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**LEGEND**

- ☐ CATCH BASIN
- ⊙ SEWER MANHOLE
- ⊙ TELEPHONE MANHOLE
- ⊙ UNKNOWN MANHOLE
- ⊙ WATER MANHOLE
- ⊙ EXISTING POLE
- ⊙ HYDRANT

**Total Volatile Concentration Range Surface Soil (mg/kg)**

- 0 - 100
- 100 - 200
- 200 - 1000
- 1000 - 10000
- > 10000

Estimated Extent of Surface Soil Above 1000 mg/kg Total Volatiles

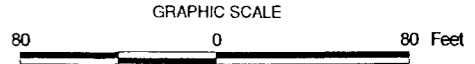
**Total Volatiles - Surface Soil**

MARTIN AARON SITE RI/RAA  
 CAMDEN, CAMDEN COUNTY, NEW JERSEY

STATE OF NEW JERSEY  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF PUBLICLY FUNDED SITE REMEDIATION

**Kimball** L. ROBERT KIMBALL & ASSOCIATES, INC.  
 EBENSBURG, PA & TRENTON, NJ

DATE: 6/00      SCALE AS SHOWN      FIGURE: 27



- LEGEND:
- TP - CATCH BASIN
  - SO - SEWER MANHOLE
  - TD - TELEPHONE MANHOLE
  - D - UNKNOWN MANHOLE
  - W - WATER MANHOLE
  - EX. POLE 16668 - EXISTING POLE
  - EX. POLE 16669 - EXISTING POLE
  - H - HYDRANT

Total Volatile Concentration Range Subsurface Soil (mg/kg)

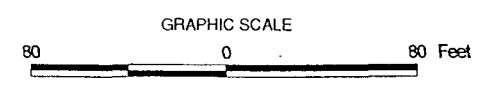
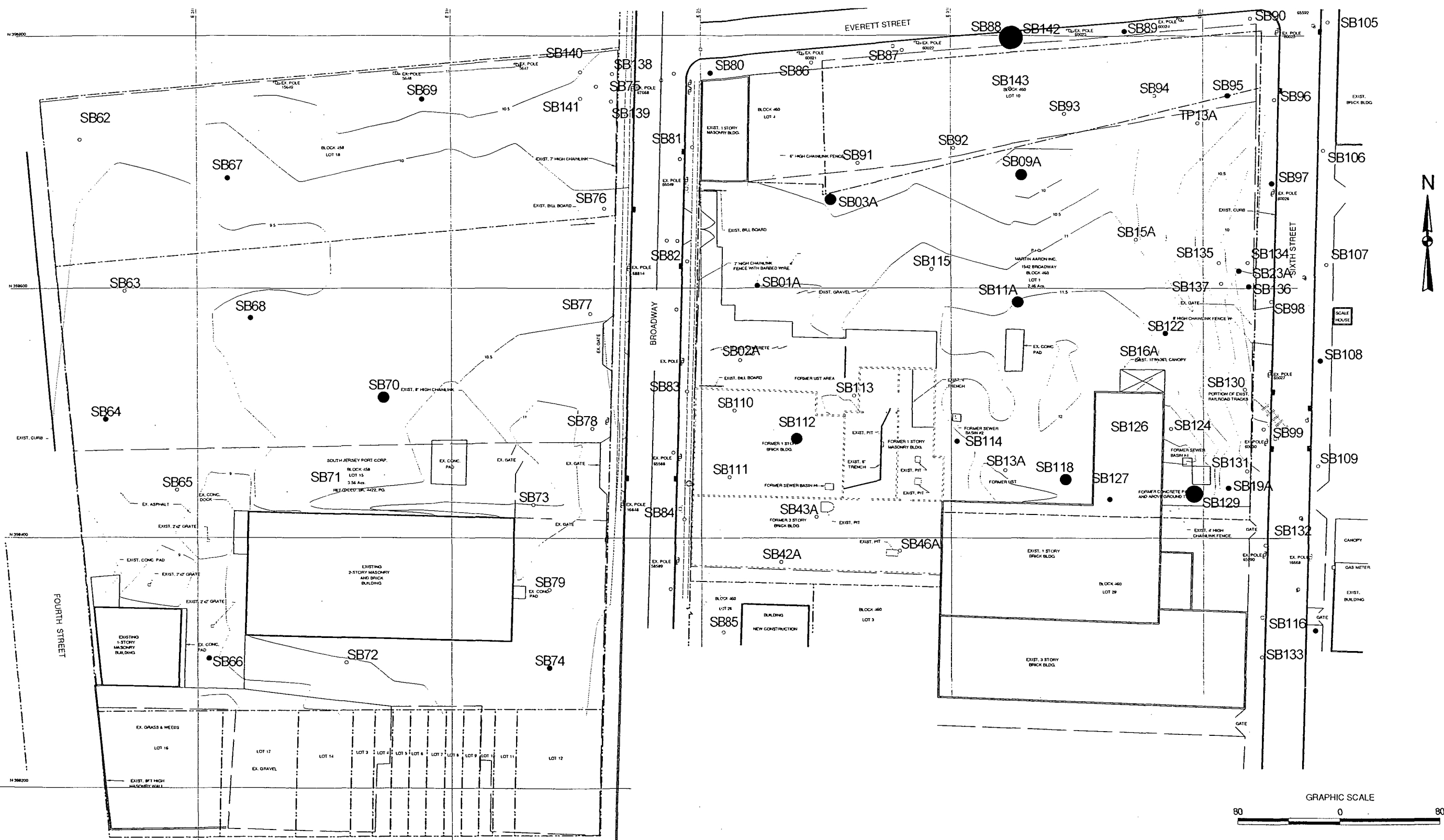
- 0 - 50
- 50 - 250
- 250 - 500
- 500 - 1000
- > 1000

Estimated Extent of Subsurface Soil Above 1000 mg/kg Total Volatiles

NOTES:

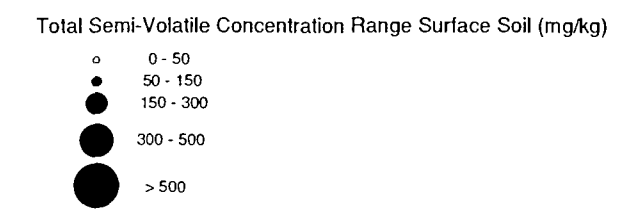
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<b>Total Volatiles - Subsurface Soil</b>		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
<b>Kimball</b> L. ROBERT KIMBALL & ASSOCIATES, INC. EBENSBURG, PA & TRENTON, NJ		
DATE: 6/00	SCALE AS SHOWN	FIGURE: 28



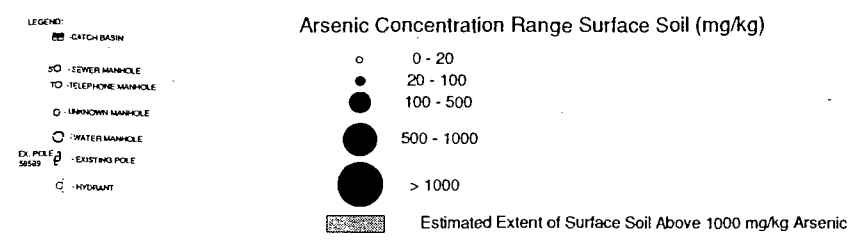
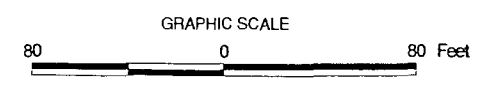
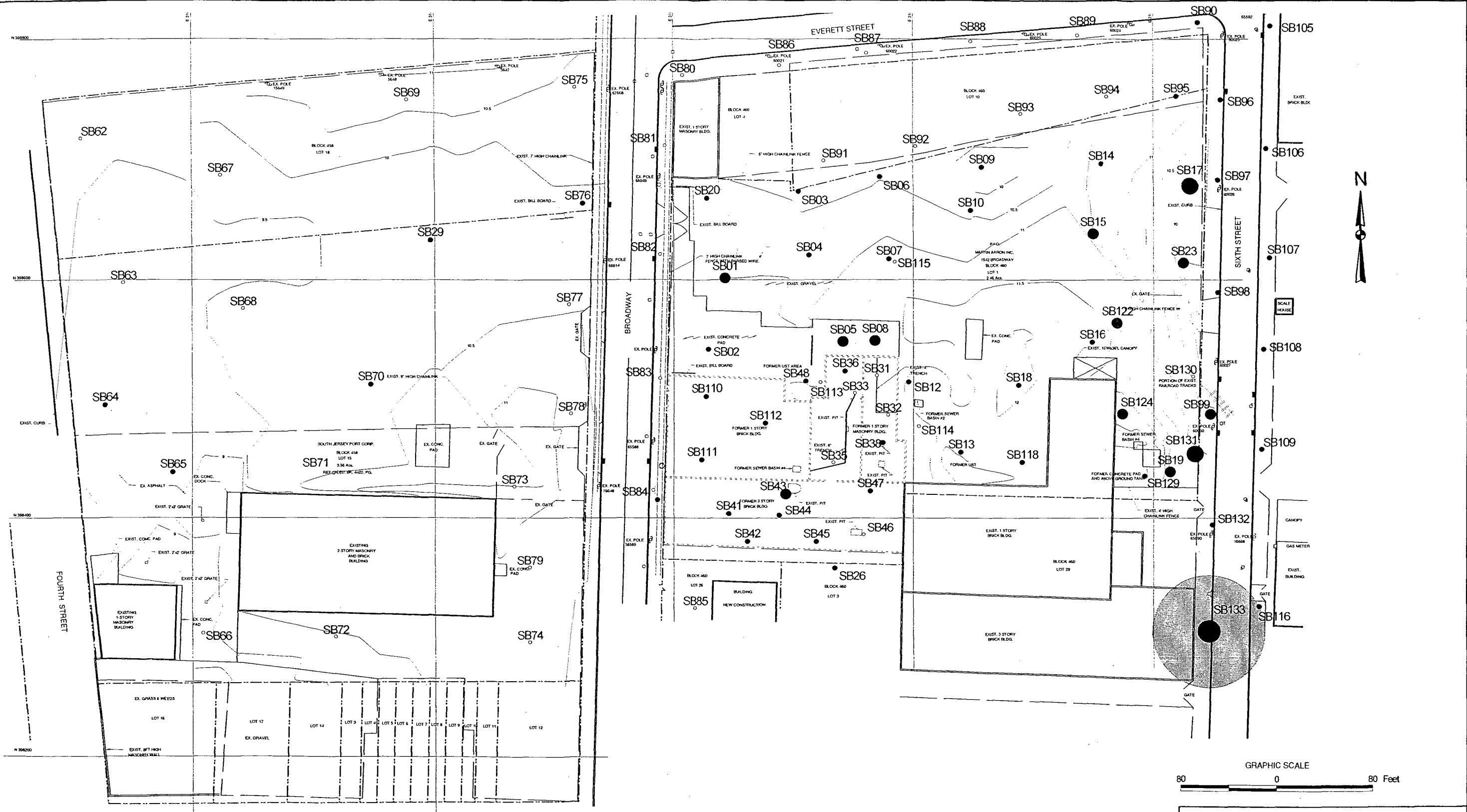
NOTES:  
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- LEGEND:
- CATCH BASIN
  - SEWER MANHOLE
  - TELEPHONE MANHOLE
  - UNKNOWN MANHOLE
  - WATER MANHOLE
  - EXISTING POLE
  - HYDRANT



<b>Total Semi-Volatiles - Surface Soil</b>		
MARTIN AARON SITE RI/RAA CAMDEN, CAMDEN COUNTY, NEW JERSEY		
STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF PUBLICLY FUNDED SITE REMEDIATION		
<b>L. ROBERT KIMBALL &amp; ASSOCIATES, INC.</b> EBENSBURG, PA & TRENTON, NJ		
DATE: 6/00	SCALE AS SHOWN	FIGURE: 29





- LEGEND:**
- ▭ CATCH BASIN
  - SEWER MANHOLE
  - TELEPHONE MANHOLE
  - UNKNOWN MANHOLE
  - WATER MANHOLE
  - EXISTING POLE
  - HYDRANT

**NOTES:**

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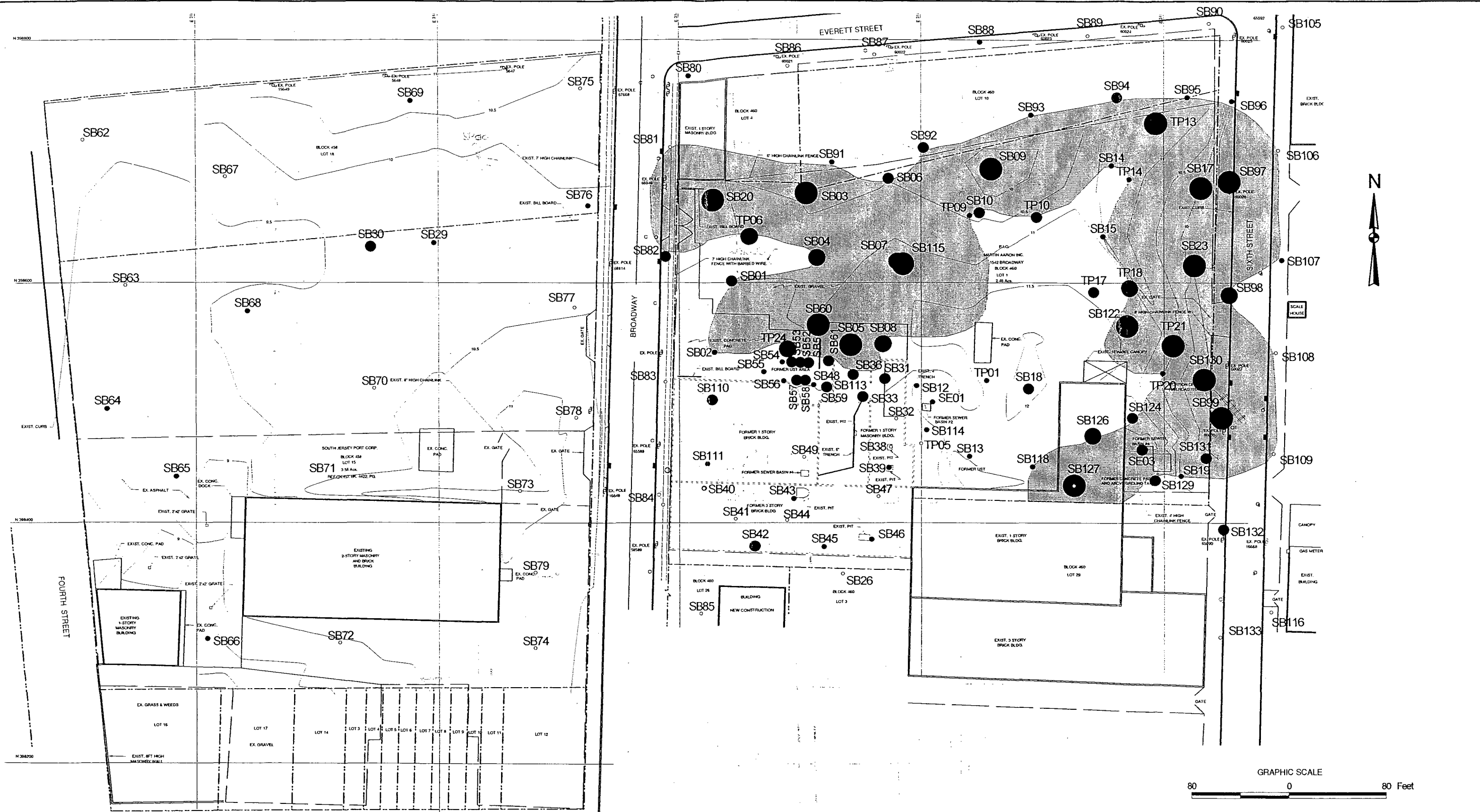
**Arsenic Distribution - Surface Soil**

MARTIN AARON SITE RI/RAA  
CAMDEN, CAMDEN COUNTY, NEW JERSEY

STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF PUBLICLY FUNDED SITE REMEDIATION

**Kimball** L. ROBERT KIMBALL & ASSOCIATES, INC.  
EBENSBURG, PA & TRENTON, NJ

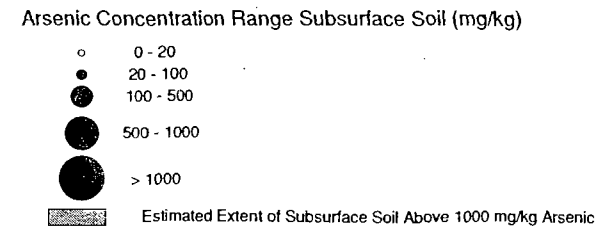
DATE: 6/00      SCALE AS SHOWN      FIGURE: 31



NOTES:

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- LEGEND:
- CATCH BASIN
  - SEWER MANHOLE
  - TELEPHONE MANHOLE
  - UNKNOWN MANHOLE
  - WATER MANHOLE
  - EXISTING POLE
  - HYDRANT



**Arsenic Distribution - Subsurface Soil**

MARTIN AARON SITE R/RAA  
CAMDEN, CAMDEN COUNTY, NEW JERSEY

STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF PUBLICLY FUNDED SITE REMEDIATION

**Kimball** L. ROBERT KIMBALL & ASSOCIATES, INC.  
EBENSBURG, PA & TRENTON, NJ

DATE: 6/00 SCALE: AS SHOWN FIGURE: 32