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REPORT ON

REMEDIAL INVESTIGATION FOR OPERABLE UNIT 3

FOR THE

ANNISTON PCB SITE (DOCKET NO. CV-02-PT-0749-E)

Prepared for:

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EXECUTIVE SUMMARY

On behalf of Solutia Inc. (Solutia) and Pharmacia Corporation (P/S), Golder Associates Inc. (Golder) has prepared this Remedial Investigation Report (RI Report) for Operable Unit 3 (OU-3) of the Anniston PCB Site (Site). This RI Report has been prepared in accordance with the requirements of the Partial Consent Decree (CD) (Docket No. CV-02-PT-0749-E) between the United States Environmental Protection Agency (EPA) and P/S. The United States District Court for the Northern District of Alabama entered the CD on August 4, 2003.

The CD requires performance of a Remedial Investigation/Feasibility Study (RI/FS) at the Anniston PCB Site. The requirements for the RI/FS are identified in Appendix A of the CD, RI/FS Agreement, and further defined in Appendix B of the CD, Statement of Work (SOW). The SOW provides a description of the tasks to be performed for the completion of the RI/FS. The tasks include: scoping, community relations, site characterization, treatability studies, baseline risk assessment, development and screening of remedial alternatives, and detailed analysis of remedial alternatives. The requirements of the site characterization task include the preparation of a RI Report. This RI Report for OU-3 summarizes the results of field investigations to characterize the Solutia plant site, the closed South Landfill, and the closed West End Landfill (collectively, Facility), describes the nature and extent of contamination, reviews the fate and transport of contaminants, and presents a summary of the Human Health Risk Assessment (HHRA).

This RI Report includes data collected during the implementation of the OU-3 Field Sampling Plan (FSP) and the OU-3 FSP Addendum. In addition to these data, a substantial amount of other Site characterization data exists. These other data have been collected under a variety of regulatory programs including: the National Pollutant Discharge Elimination System (NPDES) Program under the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and their state counterparts. While these other data have been previously submitted to the EPA, selected portions of these data are included in this report to facilitate the understanding of the OU-3 site characterization.

P/S conducted a Screening-Level Ecological Risk Assessment (SLERA) for the OU-3 area. The SLERA was presented with the RI/FS Work Plan (BBL, 2004a). A data gap was identified in the

SLERA pertaining to a qualitative evaluation of ecological receptors inhabiting OU-3. As a result of this data gap, requirements for additional habitat surveys and biological assessments were presented in the OU-3 FSP to:

- Assess the type and quality of terrestrial habitat present in OU-3;
- Assess the use of OU-3 habitat by avian and terrestrial wildlife; and
- Assess the presence and composition of invertebrate, avian, and mammalian communities in OU-3.

These surveys and assessments were conducted on June 14 and 15, 2005. Results from these surveys and assessments are presented herein because they were part of the OU-3 FSP results. The results have also been presented in the SLERA Report (BBL, 2005), which was approved by the EPA on November 8, 2007.

Investigation and Remediation Activities

Prior to initiating the RI program, extensive investigations of soil, surface water/sediment, ambient air, and groundwater were conducted as part of the environmental programs at the Facility dating back over 30 years. These investigations included the RCRA Facility Investigation and Confirmatory Sampling (RFI/CS) Program and the Supplemental RFI/CS Program. These investigations formed the basis for the Conceptual Site Model (CSM) and scope of work for the RI Program. For soils, the previous investigations focused on individual solid waste management units (SWMUs) or waste management areas (WMAs). For groundwater, sampling was focused in areas with known contamination (i.e. in the vicinity of SWMU 1 and the Old Limestone Bed Surface Impoundment) and at the perimeter of the Facility. One of the conclusions that has been drawn from these investigations is that the site should be considered as a single source rather than evaluated on a SWMU basis. Therefore, in this RI Report, the data (RFI/CS, RI, etc.) are combined and reviewed by media rather than by potential source area except that individual SWMU locations were considered when attempting to identify sources of soil or groundwater contamination.

Numerous interim measures have been completed at individual SWMUs and at other locations at the Facility. These interim measures have included among other things, landfill capping,

contaminated soil excavation, in-plant surface improvements (pavements), decommissioning of units and tank removals, and installation of groundwater corrective action systems. As a result of these interim measures, the majority of the plant surface area is covered with gravel, asphalt, or concrete pavement, which limits access to underlying soils.

Detections of soil impacts in SWMU-specific areas have been documented in this RI Report. The installation and maintenance of the caps, covers, and closings have reduced the potential for further groundwater impacts from occurring. SWMU-specific treatment for remedial purposes would not address the on-site groundwater impacts that can no longer be exclusively linked to various SWMU sources. Treating the site as a single source for the purposes of groundwater remediation is the most appropriate method for addressing the remaining groundwater impacts.

Physical Characteristics Investigation Results

The stratigraphy of the Facility consists of residuum underlain by bedrock. The residuum consists of low permeability silts and clays that are products of bedrock weathering. Locally, the residuum extends to depths of over 100 feet below ground surface (bgs) and acts as a semi-confining unit to the underlying Shady Dolomite bedrock. The residuum becomes denser with depth and has been loosely divided into two units, the shallow residuum and the deep residuum. The transition between the units is located approximately 45 feet bgs. Across most of the Facility, the deep residuum is underlain by the Shady Dolomite formation, which is typically described as an argillaceous to sandy dolostone to dolomitic limestone.

Horizontal groundwater flow in the shallow residuum is generally northward with a northwest component in the vicinity of the WMA II Corrective Action System and a northeast component in the northeast part of the Facility. The horizontal groundwater flow in the deep residuum and shallow bedrock is generally to the north-northwest throughout most of the Facility. The horizontal rate of groundwater flow in the shallow residuum was calculated to vary from approximately 0.53 feet/year to 5.3 feet/year, while the deep residuum was calculated to vary from approximately 0.51 feet/year to 5.1 feet/year.

An evaluation was performed to identify active groundwater wells in the vicinity of the Facility, and only four active wells were identified within a one-mile radius of the Facility. None of these wells are used for drinking water since all residents in the area obtain water from the local water utility.

A biological survey and quantitative habitat assessment were performed to evaluate habitat characteristics in OU-3. The findings of this assessment were used to support an analysis of the relationship between ecological receptors and exposures at the Facility. Habitats were assessed based on a general description of primary habitat, approximate percent cover of habitat types, dominant vegetation, vegetation density, vegetation height, bordering land use, and evidence of natural or anthropogenic disturbance. In general, the habitat of the four areas evaluated was poor, reflecting maintenance activities (cutting and mowing), low plant diversity, and poor soil conditions. Since the Facility is expected to continue operations for the foreseeable future, a risk-management decision was made that no further assessment of ecological risk is necessary. Any actions taken to protect human health risk at the Facility will reduce risk to ecological receptors. If all operations at the Facility cease, ecological risks should be re-evaluated.

Nature and Extent of Contamination

This list of Constituents of Interest (COIs) identified in the RCRA RFI/CS was included by the EPA as Table 1 of the RI/FS Agreement for the Site (Appendix F to the CD). P/S collected a subset of samples within OU-3 and analyzed those samples for a broad range of chemical constituents. The results of these analyses were evaluated to determine the Constituents of Potential Concern (COPCs) selected for the Site. The COPCs for OU-3 were identified as part of the HHRA process.

Soil samples were collected within the area of the plant, the closed South and West End Landfills during the RFI/CS and RI Programs. The more prevalent constituents detected in soils at the Facility consisted of polychlorinated biphenyls (PCBs), benzo(a)pyrene, arsenic, cobalt, lead, manganese, mercury, and nickel. Within the plant area, the majority of soil samples were taken within areas covered with gravel, asphalt pavement, or concrete pavement. These covers prevent direct contact and minimize or reduce the potential for erosion of underlying soils. These areas are maintained and inspected as part of the plant's ongoing operation and maintenance programs.

One exception is the grassy area north of the Former Phosphoric Acid Basin where one sample (SSRI-11) indicated elevated levels of PCBs, arsenic and lead relative to the rest of the Facility. Although this area is generally unoccupied and unused, there is the potential for direct contact with these surface soils.

At the closed South and West End Landfills, surface soil samples were collected from the top cover material after implementing the cover system upgrades and analyzed for PCBs. The concentrations in samples from the closed South Landfill ranged from non detect to 10 milligrams per kilogram (mg/kg), and from the closed West End Landfill ranged from non detect to 21 mg/kg. Additional characterization data for the closed South and West End Landfills are included as Appendix A-1.

The hydrogeology at the Facility has been well studied, and extensive investigations have been performed. Local areas of groundwater impacts exist within the Facility. However, downgradient wells generally exist that demonstrate that contaminants are not migrating from the Facility. With the exception of the areas of OW-21A and OW-10, where contaminants have been confirmed at the downgradient boundary, groundwater capture systems have been installed to prevent migration from the Facility. The following key points summarize groundwater characteristics at the Facility:

- Transport of groundwater and any dissolved constituents is governed by the groundwater flow paths. Some of the infiltrating water moves laterally within the residuum, while another component of this groundwater movement is controlled by the downward gradient present within the residuum. Because the horizontal hydraulic conductivity is generally much greater than the vertical hydraulic conductivity, the majority of the groundwater flux is in the horizontal direction.

- The groundwater flow rate in the shallow residuum is low, calculated to range from 0.53 feet/year to 5.3 feet/year based on Darcy's equation and porous media flow. Higher velocities can be present with preferential flow through secondary porosity features. However, the lateral extent of interconnectivity appears low as widespread groundwater impacts were not noted. In addition, transport by colloidal-size particles is possible, but again, the lack of widespread contamination suggests that this is not a significant mechanism across the Facility.

- An evaluation of existing data at the Facility indicates that the most prevalent constituents detected in groundwater are PCBs, parathion, para-nitrophenol (PNP), 1,2-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, pentachlorophenol, o,o,o-triethylphosphorothioate, cobalt, mercury, and manganese. Other COIs have been detected, but the detections have been sporadic and the areal extent localized.

- There are five main areas with PCB detections; north of the closed South Landfill, the Old Limestone Bed, the vicinity of OW-21A, the vicinity of OWR-13/OWR-14D, and the vicinity of OW-10/OWR-11. Elevated PCB concentrations found in groundwater in the areas of the closed South Landfill and the Old Limestone Bed likely originated from these units. The Former PCB Production Area was located in the south central portion of the Facility and is likely responsible for the detections observed in the OWR-13/OWR-14D area, which is located downgradient of the former production area. Observation well OWR-11 was installed to evaluate the groundwater quality in the vicinity of the former north and south Phosphoric Acid Basins. The detections at observation wells OWR-11 and OW-10 are likely a remnant impact associated with the Phosphoric Acid Basins.

- Low level concentrations of PCBs detected in the deep residuum and shallow bedrock wells represent a progressive vertical concentration decline from shallow groundwater to deeper groundwater. The semi-confining unit observed in the deep residuum during previous investigations extends through the weathered bedrock zone, to the top of bedrock. As a result, more significant impacts are generally restricted to groundwater in the shallow residuum.

- The potential for colloidal transport as a mechanism for PCB migration at monitoring wells OW-08A, OW-16A, OW-21A, and OWR-15D was investigated by collecting filtered samples and analyzing the samples for PCBs. The sample results were non detect for all the filtered samples.

- During a later investigation of site bedrock, filtered groundwater samples were collected from wells T-05 and T-06. These results indicated that either colloidal particles were present with PCBs adsorbed to the particles, or that PCBs were present in the dissolved phase. Colloidal-size particles were also examined during the OU-1/OU-2 groundwater investigations. In general, these results indicate that colloidal-size particles were detected with this sampling. Consequently, colloidal transport is possible, although a large site-side plume does not appear to have coalesced.

- Parathion and PNP have been detected in groundwater in three main areas: north of the closed South Landfill, the Old Limestone Bed, and the vicinity of OW-21A. The detections in each of these areas are likely associated with the closed South Landfill, acidic wastewater neutralization, and a localized source near OW-21A, respectively. There were no detections of PNP or parathion in soil samples collected at these locations.

- Volatile organic compounds are present in groundwater in the vicinity of OW-16A and OWR-15D, the WMA II Corrective Action System, and in the vicinity of the OW-21/21A area. However, all detected concentrations were less than the constituent concentration limit (CCL) for each constituent.

- o,o,o-triethylphosphorothioate and pentachlorophenol are both present in groundwater at the closed South Landfill and the WMA II Corrective Action System. Only pentachlorophenol exceeded the CCL. However, with the exception of an OWR-05D detection and detections in MW-20A, pentachlorophenol has not been detected in groundwater since 1998. As a result, the analysis for pentachlorophenol was removed from the RCRA monitoring program except for well MW-20A.

- Historical data indicate that cobalt is present in groundwater throughout the Facility. However, no concentrations have exceeded the CCL of 730 micrograms per liter (µg/l).

- Manganese concentrations in groundwater were detected above the CCL in a number of locations spread out across the Facility. However, the magnitude and distribution are consistent with background levels and do not seem to have a common source as concentrations well below the CCL were detected among the locations where exceedances were noted.

- Mercury in groundwater is most frequently detected around the Old Limestone Bed Surface Impoundment, the former PCB Production Area, downgradient of the Phosphoric Acid Basins, and to a lesser extent the SWMU 1 area.

- There was no visual evidence to support the presence of dense non-aqueous phase liquid (DNAPL) at depth, although the presence of localized DNAPL ganglia as a source of groundwater impacts could not be ruled out.

A number of actions have been taken to reduce the transport of COIs off of the Facility. These actions include closure of the former South and West End Landfills, the lining and re-routing of storm drains, and numerous corrective actions in former production areas of the plant. The effectiveness of these actions has been demonstrated through quarterly surface water sampling conducted in accordance with the Facility's NPDES Permit. Some areas of the Facility do not drain to the upgraded stormwater collection system. These areas are primarily in the northwest portion of the Facility and include the closed West End Landfill and adjacent areas. Since there were no detections of PCBs measured from December 1997 through May 2001, monitoring of DSN 006 (outfall for the West End Landfill) was discontinued. The monitoring of DSN 004 (which represents DSN 003, DSN 004, and DSN 005) for the

northern plant area was also discontinued under the current NPDES permit following the shutdown of the PNP plant.

Although historical emissions of PCBs from the facility and South and West End Landfills may have occurred, an extensive air pathway monitoring study was conducted documenting that air impacts are currently low, consistent with ambient conditions in other areas of the United States, and concluding that the closed South and West End Landfills, and Facility are not now considered a unique source for PCBs in air.

Contaminant Fate and Transport

The fate and transport characteristics for the prevalent constituents were reviewed and the potential migration routes were considered. Most areas of impacted soil are under cover systems making the release from soil to surface water unlikely. Releases from impacted areas to groundwater are possible with infiltration though permeable cover systems into impacted soil. Surface water is controlled on site via a system of sewers and ditches. All process related water is piped to the Facility's former waste water treatment facility (WWTF) and then discharged to the Anniston publicly-owned treatment works (POTW). Precipitation falling at the Facility is collected in ditches and discharged via an NPDES regulated outfall. Consequently, constituent concentrations in surface water have been sporadic and low. Thus, surface water is not considered a significant migration pathway from the Facility. Groundwater migration is controlled by natural and man-made means. Migration is limited because the rate of groundwater flow is very low and there are natural attenuation processes for parathion and PNP and natural adsorption for PCBs and metals. These natural processes combined with the existing interceptor well systems control the migration of constituents from the Facility. In addition, perimeter monitoring has indicated that with only two potential exceptions (OW-21A and OW-10 areas), impacted groundwater is contained within the Facility boundary.

The contaminant migration behavior for the prevalent constituents of interest (PCBs, parathion, PNP, 1,2-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, benzo(a)pyrene, pentachlorophenol, o,o,o-triethylthiophosphorothioate, arsenic, cobalt, lead, mercury, manganese, and nickel) was reviewed. Although some research has provided positive indications for the degradation of PCBs in the natural environment, adsorption primarily controls PCB distribution.

With a low solubility and a high partitioning coefficient, PCBs are not very mobile in groundwater. As a result, areas with PCBs detected in groundwater are generally localized and represent a number of discrete releases, instead of wide-spread occurrences. PNP and parathion are more mobile in groundwater, however, both degrade biologically. Volatile organic compounds and semi-volatile organic compounds (with the exception of PNP as described above) are not prevalent across the Facility, and only isolated detections have been reported above the appropriate CCLs.

The prevalent metals at the Facility have varying degrees of mobility. For instance, mercury has a high partitioning coefficient limiting its mobility, while manganese's mobility varies widely depending on the cation exchange capacity. However, the clay soils and the relatively low concentrations measured for many of the metals act to limit mobility at the Facility. Groundwater migration from the closed South Landfill and the SWMUs in the vicinity of WMA II, which were initial source areas, is currently being addressed by two groundwater corrective action systems.

Baseline Risk Assessment

A biological survey and habitat assessment were performed to evaluate habitat characteristics in OU-3. Since the Facility is expected to continue operations for the foreseeable future, a risk-management decision was made that no further assessment of ecological risk is necessary. Any actions taken to protect human health risk at the Facility will reduce risk to ecological receptors. If all operations at the Facility cease, ecological risks should be re-evaluated.

The HHRA completed by CDM Federal Programs Corporation (CDM) under the direction of the EPA, was finalized on February 1, 2008 (CDM, 2008). The purpose of the HHRA was to characterize the potential risks to human health associated with exposure to COIs identified at the Facility. The COPCs for the Facility were identified in the HHRA, and, the final list of COCs to be used throughout the FS was developed based upon these COPCs.

The OU-3 area covers approximately 138 acres and includes the active plant area, buildings, access roads, smaller grassed areas, and the closed South and West End Landfills. Many interim measures have been implemented at the Facility resulting in approximately 72% of the area being

covered with asphalt pavement, concrete pavement, buildings, soil or gravel covers reducing the potential for direct contact with contaminated soil. Throughout OU-3, approximately 27% of the area is covered with impervious covers such as buildings, asphalt and concrete pavement, and HDPE liner systems. An additional 19% is covered with relatively impervious grass and soil covers. The soil covers placed to isolate PCBs from direct contact typically have a low permeability (the permeability of in-place residual soils are on the order of 1.0×10^{-5} to 1.0×10^{-7} cm/sec) and are thus relatively impervious. Approximately 26% of the OU-3 area is covered with gravel covers to prevent direct contact and reduce the mobilization of PCB-containing soil. In the HHRA, OU-3 was separated into four areas - the Facility area; the closed South Landfill, the closed West End Landfill; and off-site areas. A description of each is provided as follows:

- Facility Area – the Facility area covers approximately 68 acres and includes the active plant area and administration building. Currently, the Facility is used for industrial purposes only and is under 24-hour security controls restricting access to authorized personnel only. In addition, the use of groundwater for any purpose, as well as non-industrial land use, is strictly prohibited by deed restrictions. The plant mandates health and safety procedures in accordance with OSHA for its workers.

- Closed South Landfill – this landfill covers approximately 53 acres where significant interim measures have been completed. These measures effectively prevent exposures to landfill contents. The landfill has been closed with engineered caps with vegetative covers and is enclosed with fencing and other access controls (warning signs and locked gates). These controls are effective at reducing the potential for trespassing. Operation and maintenance of the landfill interim corrective measures are on-going and include mowing, general maintenance and routine inspections of the landfill caps, fencing, access controls, surface water management structures, and access roads.

- Closed West End Landfill – this landfill covers approximately 17 acres. Similar to the closed South Landfill, significant interim measures have been completed at the closed West End Landfill. These measures effectively prevent exposures to landfill contents. The landfill has been closed with engineered caps with vegetative covers and is enclosed with fencing and other access controls (warning signs and locked gates). These controls are effective at reducing the potential for trespassing. Operation and maintenance of the landfill interim corrective measures are on-going and include mowing, general maintenance and routine inspections of the landfill caps, fencing, access controls, surface water management structures, and access roads.

- Off-site Areas – the areas immediately surrounding the Facility include commercial properties, vacant property owned by Solutia, and some residential properties. Only four active wells were identified within a one-mile radius of the Facility, none of which are used for drinking water since all residents in the area obtain water from the local water utility[1].

The media evaluated in the HHRA included surface soil, subsurface soil, ambient air, and groundwater. Surface water is not a medium of concern at the Site as there are no permanent surface water bodies within OU-3. The potentially exposed receptors identified in the HHRA include the operations area worker, operations and maintenance (O&M) worker, construction worker, trespasser, and off-site resident. Different receptors were evaluated for different areas within OU-3. For example, in the Facility area the receptors include the operations area worker, O&M worker, construction worker, and trespasser while the landfills only include the O&M worker and trespasser. Off-site receptors include residents. Each receptor is exposed to media differently as described below.

The HHRA calculated risks for each receptor based on two conditions: current use and future use. The current use is the more relevant when assessing risk since it is meant to assess existing conditions within OU-3. The future use scenarios assume that no further remedial actions are implemented at the site and that some of the interim measures already completed, such as covered surfaces within the plant area and deed restrictions for groundwater use, are no longer maintained. Risks calculated for future conditions are hypothetical and should only be used to guide risk management decisions.

The HHRA considered several current and future use scenarios and receptors. The following presents a summary of the conclusions of the HHRA:

- Risks for the current facility operations area worker slightly exceed the EPA's acceptable risk range. These risk estimates were calculated from data that included concentrations from one soil sampling location in a remote, unoccupied portion of the Facility Area. If data from SSRI-11 were excluded, risk estimates would fall within the EPA's acceptable risk range;

- Risks for the current facility O&M worker and trespasser are within or only slightly exceed the EPA's acceptable risk limit;

[1] Note that these areas are actually part of OU-2; however, they include monitoring wells that monitor OU-3.

- Risk for the facility construction worker exceed the EPA's acceptable risk range for non-carcinogenic exposure;
- Exposure to ambient air alone does not pose unacceptable risks to any of the receptors evaluated including the off-site resident;
- No unacceptable risks were associated with the closed West End Landfill, and risks at the closed South Landfill were below or only slightly within the EPA risk range; and
- Risks associated with future, hypothetical groundwater exposures exceed the EPA's acceptable risk range.

Summary and Conclusions

As part of the FS process, remedial action objectives (RAOs) should be developed for the Facility consisting of media-specific goals for protecting human health and the environment. The specific media to address for OU-3 include soil and groundwater. For soil, RAOs should be developed to address direct contact, inhalation, or ingestion of soil by potential receptors on the plant site area. Additional RAOs for soil should address the migration of COCs in soil to surface water and groundwater. For groundwater, RAOs should be developed to address the potential migration of contaminated groundwater from the Facility as well as the potential for receptors to come in contact with or ingest groundwater. The RAOs for both soil and groundwater should also be developed to address future releases at the Facility.

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1.0 INTRODUCTION

1.1 Purpose of the Report

On behalf of Solutia Inc. (Solutia) and Pharmacia Corporation (P/S), Golder Associates Inc. (Golder) has prepared this Remedial Investigation Report (RI Report) for Operable Unit 3 (OU-3) of the Anniston Polychlorinated Biphenyl (PCB) Site (Site). This RI Report has been prepared in accordance with the requirements of the Partial Consent Decree (CD) (Docket No. CV-02-PT-0749-E) between the United States Environmental Protection Agency (EPA) and P/S. The United States District Court for the Northern District of Alabama entered the CD on August 4, 2003.

The CD requires performance of a Remedial Investigation/Feasibility Study (RI/FS) at the Anniston PCB Site. The requirements for the RI/FS are identified in Appendix A of the CD, RI/FS Agreement, and further defined in Appendix B of the CD, Statement of Work (SOW). The SOW provides a description of the tasks to be performed for the completion of the RI/FS. The tasks include: scoping, community relations, site characterization, treatability studies, baseline risk assessment, development and screening of remedial alternatives, and detailed analysis of remedial alternatives. The requirements of the site characterization task include the preparation of a RI Report. This RI Report for OU-3 summarizes the results of field investigations to characterize the Solutia plant site, the closed South Landfill, and the closed West End Landfill (collectively, Facility); describes the nature and extent of contamination; reviews the fate and transport of contaminants; and presents a summary of the Human Health Risk Assessment (HHRA).

Initially, P/S elected, and the EPA agreed, to subdivide the Anniston PCB Site into four OUs. The description of and rationale for defining the OUs were provided in the Phase I Conceptual Site Model (CSM) Report (BBL, 2003). Subsequently, P/S, in consultation with the EPA, determined that OU-1 and OU-2 could be combined into a single OU. The OUs are now defined as:

OU-1/OU-2 – Residential Properties/Non-Residential Properties;

OU-3 – Facility (including the landfills); and

OU-4 – Choccolocco Creek.

P/S have submitted and the EPA has approved a single "global" RI/FS Work Plan (BBL, 2004a) applicable to all OUs. The RI/FS Work Plan provides a framework for completing the investigations and feasibility studies for the entire Site. In addition, a single Health and Safety Plan (HSP) (BBL, 2004b) and a single Quality Assurance Project Plan (QAPP) (Arcadis, 2008) have been submitted and approved for the entire Site. Details that pertain to individual OUs, such as data collection activities, have been provided in OU-specific Field Sampling Plans (FSPs) (e.g., OU-3 FSP [Golder 2005a]).

The EPA approved the OU-3 FSP with comments on January 14, 2005. Revision 2 of the FSP (which addressed the EPA's comments) was submitted on February 17, 2005. Implementation of the FSP commenced following the EPA's approval of the Site-wide QAPP on April 21, 2005. Initial field work began on June 1, 2005 and was completed in August 2005. The results of the initial field activities for OU-3 were provided in the Preliminary Site Characterization Summary Report (Preliminary SCSR) (Golder, 2005b) submitted to the EPA on December 13, 2005. On January 3, 2006, an Addendum to the Preliminary SCSR was submitted to the EPA detailing interim measures and PCB characterization data for the Monsanto Chemical Company (MCC) Warehouse (Solutia, 2006). Following review of the Preliminary SCSR, the EPA provided comments on the report on May 3, 2006. The comments were addressed by P/S in a letter to the EPA dated May 23, 2006. Following submission of this response letter, the EPA further commented on the depth extent of PCB-impacted groundwater and whether the potential presence of a dense non-aqueous phase liquid (DNAPL) may serve as a source of elevated PCB detections in groundwater. In response to the EPA's comments, P/S submitted the OU-3 FSP Addendum No. 1 (Golder, 2006a) on June 9, 2006 for the installation, sampling and analysis of two additional bedrock wells at the Facility. Following this submission, the EPA requested clarification regarding the Study Boundaries and the Decision Rules proposed in the addendum. The OU-3 FSP Addendum No. 1 – Revised (OU-3 FSP Addendum) (Golder, 2006b), submitted on August 13, 2006, provided such clarifications, reflecting discussions held between the EPA and P/S technical personnel on August 3, 2006. The OU-3 FSP Addendum was approved by the EPA on September 26, 2006, and field work was conducted in October and November 2006. The results of these field activities were presented to the EPA in the Preliminary Site Characterization Summary Addendum Report (Preliminary SCSR Addendum) (Golder, 2007a) dated February 2007. The EPA approved the Preliminary SCSR Addendum on November 8, 2007.

This RI Report includes data collected during the implementation of the OU-3 FSP and the OU-3 FSP Addendum. In addition to these data, a substantial amount of other Site characterization data exists. These other data have been collected under a variety of regulatory programs including: the National Pollutant Discharge Elimination System (NPDES) Program under the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and their state counterparts. While these other data have been previously submitted to the EPA, selective portions of these data are included in this report to facilitate the understanding of the OU-3 site characterization.

P/S conducted a Screening-Level Ecological Risk Assessment (SLERA) for the OU-3 area. The SLERA was presented with the RI/FS Work Plan (BBL, 2004a). A data gap was identified in the SLERA pertaining to a qualitative evaluation of ecological receptors inhabiting OU-3. As a result of this data gap, requirements for additional habitat surveys and biological assessments were presented in the OU-3 FSP to:

- Assess the type and quality of terrestrial habitat present in OU-3;
- Assess the use of OU-3 habitat by avian and terrestrial wildlife; and
- Assess the presence and composition of invertebrate, avian, and mammalian communities in OU-3.

These surveys and assessments were conducted on June 14 and 15, 2005. Results from these surveys and assessments are presented herein because they were part of the OU-3 FSP results. The results have also been presented in the SLERA Report (BBL, 2005), which was approved by the EPA on November 8, 2007.

1.2 Report Organization

The balance of Section 1.0 provides a background description of the OU-3 area. Specific information includes: a physical description of the Facility, a description of the environmental setting, a description of the manufacturing processes conducted at the Facility, and a description of the regulatory history.

Section 2.0 of the report presents a description of numerous investigations conducted and remedial programs implemented at the Facility. The results of these investigations and remedial

programs are later used to describe the physical characteristics of environmental media in OU-3 and the contaminant distribution within each environmental medium including soil, groundwater, surface/stormwater, and air.

Section 3.0 of the report provides a physical description of OU-3. This section relies on data generated from investigations discussed in Section 2.0. In addition, regional literature was used to aid in formulating the physical description of the area.

Section 4.0 of the report presents the results and conclusions concerning the nature and extent of contaminants at the Facility. The results are presented by media (soils, groundwater, surface/stormwater, and air) and include discussions of former source areas. The results from the various investigations and remedial programs described in Section 2.0 are presented with a thorough discussion of the nature and extent of contamination for each medium. Spatial and temporal trends are used to evaluate transport pathways.

The physical site characteristics, source characteristics, and extent of contaminants presented in Sections 3.0 and 4.0 are used to analyze contaminant fate and transport in Section 5.0. The available data on contaminant releases, concentration monitoring, and extent of impacts are used to assess the rate of migration, mechanisms of transport, and contaminant fate.

Section 6.0 presents a summary of the ecological assessment conducted by P/S and the HHRA conducted by CDM Federal Programs Corporation (CDM) under the direction of the EPA (CDM, 2008). An evaluation of the potential threat to human health and the environment is presented assuming no further remedial action will be performed. The intent of this section is to provide sufficient information to adequately characterize the potential risk from the Facility.

Section 7.0 summarizes the RI Program and includes discussions on the nature, extent, and resulting risk of the contaminants of concern within the specific media of concern. Data limitations are discussed, and conclusions and recommendations for remedial action objectives (RAOs) are presented.

Tables and figures, which present background information or portray data, are included at the end of the text. Select historical data collected at the Facility prior to the construction of the numerous interim measures completed in the mid to late 1990s are presented in Appendix A. The geophysical report from 1992 is presented as Appendix B. Historical boring logs and monitoring well construction logs are provided in Appendix C. Aquifer performance test response data are included as Appendix D. Groundwater calculations are presented as Appendix E. Groundwater Constituent Concentration Limit (CCL) calculations are provided in Appendix F. Appendix G includes laboratory data, and Appendix H includes the data validation discussions from each report previously submitted in the RI Program. Appendix I includes analytical results for Outfall DSN 002 as per the Facility's State Indirect Discharge (SID) Permit. Appendix J includes information regarding monitored natural attenuation for parathion and 4-nitrophenol (para-nitrophenol, PNP). The HHRA is included as Appendix K, and Remedial Goal Options (RGOs) are included in Appendix L.

1.3 OU-3 Background

1.3.1 OU-3 Description

OU-3[2] is located in Calhoun County in the north-central part of Alabama (Figure 1-1) and has been subject to environmental investigation and interim/corrective actions for approximately 30 years. The Facility is currently active and operates in accordance with a variety of environmental permits. Environmental activities at the Facility have included a combination of investigative and remedial efforts conducted pursuant to these permits. The environmental response efforts under RCRA included the general areas of the Solutia Facility, which were termed the "On-Site" area, and areas downstream of the Solutia Facility, termed the "Off-Site" area. The "On-Site" area includes the manufacturing plant and the two closed Facility landfills and is generally synonymous with OU-3. The borders of OU-3, depicted on Figure 1-2, are the railroad to the north, the closed South Landfill and Highway 202 to the south, Clydesdale Avenue to the east, and First Avenue to the west. Any groundwater impacts that originate within the Facility and have migrated beyond the physical boundaries of OU-3 described above are also included in OU-3.

[2] In this report, the OU-3 area is referred to as the "Site", "OU-3", "the Facility", or "on-Facility."

1.3.2 Environmental Setting

1.3.2.1 Climate

Calhoun County is characterized as humid sub-tropical, with hot summers, mild winters, and some precipitation during all months of the year. Precipitation is primarily in the form of rainfall with an average of 54 inches per year, the majority of which occurs during the winter. Droughts are infrequent, and the average annual evapotranspiration rate in the area is approximately 42 inches. The mean annual temperature is 62 degrees Fahrenheit (F) and ranges from approximately 43 degrees F in January to 80 degrees F in July.

Based on data collected in Anniston from April 1, 2003 to March 31, 2004 (ENSR, 2004), the atmosphere is generally thermally stable (category D through F during most of the year). Based on these data, the prevailing winds generally originate from the southeast approximately 11% of the year and from the west-southwest approximately 8% of the year. Additionally, the winds are calm 17% of the year (i.e., 0-1 miles per hour or less).

1.3.2.2 Physiography and Topography

Topography in the area is characterized by flat to gently rolling, northeastward trending valleys that are paralleled by ridges and mountains. The highest point at the Facility, at approximately 940 feet above mean sea level (msl), is near the southern property line. The ground surface declines rapidly across the closed South Landfill (moving south to north) and then slopes gently to the north across the rest of the Facility.

The majority of the ground surface in the plant area is covered by gravel, concrete, or asphalt. The adjacent closed landfills and surrounding areas are primarily grass covered. Existing surface types across the Facility are displayed on Figure 1-3 and further discussed in Section 1.3.2.4.

1.3.2.3 Drainage

There are many natural and man-made features at the Facility that govern surface water drainage. The most influential natural features are the steep side slopes of Coldwater Mountain near the closed South Landfill and the moderately-dipping slopes which trend southwest to northeast across the production area of the Facility. During precipitation events, these moderate-to-steep

slopes formerly contributed significant quantities of surface water flow across the closed South Landfill, to the north and northwest across the Facility into various man-made ditches. This flow generally discharged into the 11th Street Ditch north of the Facility. The 11th Street Ditch discharges in an easterly direction to Snow Creek. Groundwater flow from the Facility generally flows in this same direction and eventually discharges into Snow Creek. Snow Creek in turn flows to the south and eventually drains into Choccolocco Creek, which in turn flows to the west into Lake Logan Martin on the Coosa River.

In the past, when surface water came into contact with affected soils or Facility production areas, constituents could have become entrained in the water and subsequently transported off of the Facility. Consequently, extensive interim/corrective measures conducted under the RCRA Program, consisting of caps and covers over affected areas, upgraded storm sewers, diversion ditches, retention basins, and various drainage structures, have been constructed at the Facility with the goal of controlling stormwater run-on and run-off and mitigate the transport of constituents. These interim/corrective measures are discussed later in this report.

1.3.2.4 Demography and Land Use

Land use information for the areas around the Facility was developed based on a review of aerial photographs from 1999 and confirmed as part of a parcel by parcel land use inventory conducted in 2001 for properties within the floodplain of Snow Creek (Golder, 2001). The land uses reflect the urbanized nature of the area surrounding the Facility and includes heavy industry, manufacturing, residences, and light commercial.

The Facility itself is largely occupied by buildings, parking lots, other areas actively used for industrial purposes, and impervious surfaces. As shown in Figure 1-3, impervious surfaces (buildings, roads, parking lots, impervious landfill covers and concrete or asphalt surfaces) make up approximately 27% of the total area of the Facility. Other types of engineered covers, such as gravel or soil covers, occupy much of the remaining area (approximately 45% of the total area).

In addition, the property where the Facility is located (including the landfills) is encumbered by a legal deed restriction. The deed restriction prohibits residential development or any use of groundwater for industrial, potable, or irrigation purposes. A copy of the deed restriction was

provided in the RCRA Facility Investigation/Confirmatory Sampling (RFI/CS) Report (Golder, 2002).

1.3.2.5 Regional Geology and Hydrogeology

Approximately 90 percent of Calhoun County, including the Facility, lies within the Valley and Ridge physiographic province of the southern Appalachian Highlands. The Facility is located in the Weisner Ridges subsection of the Valley and Ridge province, which consists of maturely dissected, faulted and folded ridges of high relief separated by flat to gently rolling valleys. Regional geologic maps indicate that tightly folded Weisner Formation sandstones underlie Coldwater Mountain southeast of the Facility. Sandstones and mudstones of the Rome Formation and sandy dolostone and dolomitic limestone of the Shady Dolomite underlie the valley where the Facility is located. Much of this valley is covered with a mantle of unconsolidated alluvial, residual and/or colluvial soils up to 100 feet thick, making delineation of geologic structures difficult to interpret.

The Jacksonville Fault, a regional thrust fault, extends northeastward from the Town of Bynum, Alabama through Anniston, Piedmont, and Jacksonville. A regional map of the fault estimates that the fault occurs northwest of the northern boundary of the Facility, as illustrated along with the bedrock geology of the area on Figure 1-4 (Osborne and Szabo, 1984; and Warman and Causey, 1962). The fault is mapped as a northeast-trending thrust fault that dips gently to the southeast. Although the magnitude of dip on the fault surface is not published, the fault is considered to be a low-angle thrust fault (pers. comm. with Mr. W. Edward Osborne of the Geologic Survey of Alabama [GSA]). This fault juxtaposes older Shady Dolomite, Rome Formation and Weisner Formation rocks to the southeast with younger Conasauga Formation and Knox Group rocks to the northwest. High-angle reverse and normal faults are also shown to occur in this geologic terrain.

Calhoun County is underlain by carbonate rocks (limestone and dolostone), which form important aquifers, and silicate rocks (quartzite, sandstone, shale, and siltstone), which typically yield less water to wells. The carbonate rocks are typically the most prolific groundwater producing units and locally yield sufficient water for industrial and municipal use. Groundwater yield from carbonate rocks is controlled by solution-enlarged joints and bedding planes and interconnectivity

of these features. Lesser quantities of groundwater are obtained from sandstone, shale, mudstone, and quartzite units present in the County. These groundwater sources can be sufficient for domestic uses; however, it is difficult to obtain sufficient amounts of groundwater from these sources for municipal or industrial uses. The groundwater yield from these rocks is controlled by discontinuity orientation and interconnectivity, grain size, grain size distribution, and secondary permeability.

Regional groundwater flow is controlled by topography, primary sedimentary features, secondary permeability and porosity, and geologic structures of the underlying formations. Groundwater flow occurs in the overlying soil/residuum/saprolite and within the fresh, competent bedrock. Flow within the bedrock is largely controlled by interconnected discontinuities such as joints, bedding, faults and solution-enlarged conduits in carbonate rocks; flow within the unconsolidated alluvial, colluvial and residual soils occurs through pore space within the soil; and flow within the transitional zone occurs through both pore space within the soil and along discontinuities and solution-enlarged conduits in less weathered rock. Although vertical conductivity in these units varies, there is no readily identifiable regional confining layer or layers to isolate the units into separate systems.

Approximately 150 springs have been identified and located in the County during studies of the area. The discharge of these springs is variable, ranging from less than 1 gallon per minute (gpm) to over 17,000 gpm. Many of these springs are found along the trace of thrust faults and produce enough water for domestic uses and, in some instances, for municipal supply. It is estimated that 80 percent of these springs are used for domestic, farm, stock, municipal, industrial, or recreational water supplies.

Coldwater Spring, a major spring in the Anniston area, is located approximately 5 miles southwest of the Facility. The spring is the primary water source for the City of Anniston, Fort McClellan, Anniston Ordnance Depot, and other municipalities and communities within the County. Although the hydrogeology of the spring is considered to be highly complex, the recharge area for the spring is thought to generally include the area northwest of the crests of Coldwater and Choccolocco Mountain (Kidd, 2001). Groundwater is interpreted to move south and west along the Jacksonville Fault, joining groundwater from distant sources moving parallel to the fault at depth, ultimately discharging at Coldwater Spring. Based on

geochemical modeling (Robinson, 2004), the quality of water flowing from Coldwater Spring ranges from 1 to 25 percent rainwater and 75 to 99 percent groundwater, with a reported groundwater age of 15 years. The spring is reported to discharge from 24 to 33 million gallons per day (Robinson 2004).

1.3.3 Manufacturing History

A thorough discussion of the manufacturing history at the Facility was included in the RFI/CS Work Plan for the Anniston, Alabama Facility (Golder, 1997). As reported therein, manufacturing operations at the Facility began in 1917 with the production of ferro-manganese, ferro-silicon, ferro-phosphorous compounds, and phosphoric acid (added later) by the Southern Manganese Corporation. In 1927, the production of organic chemicals began with the introduction of biphenyl, which still remains a major product of the Facility. In 1930, Southern Manganese Corporation became Swann Chemical Company (Swann), which MCC purchased in May 1935. MCC created Solutia, the present owner, as a spin-off company in 1997.

A variety of organic and inorganic chemicals have been produced at the Facility during its history, including PCBs, parathion, phosphorus pentasulfide, and 4-nitrophenol. The Facility currently manufactures polyphenyl compounds (utilized in a variety of heat transfer fluid, plasticizer, and lubricant applications). These compounds have been produced for many years using the same raw materials and intermediates, even though there have been several expansions and process modifications. In addition, the Facility commenced the manufacture of phosphate ester-based non-flammable hydraulic fluids in 2006. A summary description of the various manufacturing and associated support processes is provided below.

- Polyphenyl Production (1927 to Present) - Polyphenyls are manufactured from benzene and cumene (isopropyl benzene) in a continuous pyrolysis unit. The crude product is separated into various polyphenyl products including Santotar®.

- PNP Production (1965 to 2004) - PNP was manufactured by the hydrolysis of para-nitrochlorobenzene (PNCB). PNCB and sodium hydroxide were reacted and acidified with sulfuric acid before the product was filtered and dried.

- Therminol® Production (1983 to Present) - Therminol® is produced from polyethylbenzene. Distillation residues (Therminol® ends) are managed in a totally enclosed treatment facility. The ends are blended with Santotar® and burned as a non-hazardous back-up fuel in the Facility's boiler.

- Parathion and Methyl Parathion Production (1957 to 1986) - Parathion (or Niran®) and methyl parathion were produced on a seasonal basis. These materials were produced by reacting ethanol or methanol with phosphorus pentasulfide to form 'thio acid.' The thio acid was stripped, chlorinated and then distilled to produce an intermediate. The intermediate was either sold or reacted with acetone, PNP, and soda ash to produce crude parathion. Wet acetone from the operation was recovered in a solvent recovery system. The residue from the distillation of the chlorinated thio acid was recycled to a crystallizer. The filtrate was returned to the parathion process, and sulfur waste was returned to the production process or landfilled.

- Phosphorus Pentasulfide Production (1967 to 1988) - Phosphorus pentasulfide (P2S5) was produced by reacting elemental sulfur and phosphorus. The resulting phosphorus pentasulfide was drummed for sale or used in the parathion process.

- PCB Production (late 1929 to 1971) - The Facility manufactured Aroclors (PCBs) by reacting chlorine and biphenyl. Chlorine was produced at the Facility between 1952 and 1969 solely for this purpose. The manufacture of PCBs generated miscellaneous production-related wastes which were disposed in the West End Landfill prior to 1960 and in the South Landfill after 1960. The manufacture of PCBs ceased in 1971, and the associated production facilities were dismantled in 1972. Decommissioning included the removal of buildings and plant production equipment. Waste materials generated during these activities were placed into the South Landfill.

- Hydraulic Fluid Manufacturing (2006 to Present) – Various phosphate ester compounds (e.g. butyl and phenyl phosphates) are processed to produce non-flammable hydraulic fluids, primarily for use in aviation hydraulic systems. Facility operations are limited to the processing of base raw materials and packaging, and no actual production of the base stock materials occurs.

Section 2.2 provides more detailed descriptions of the various waste materials generated at the Facility, and the locations where the materials were placed (if known).

1.3.4 Regulatory History

The Facility operations began in advance of modern environmental regulations. However, as early as the 1970s, investigations and remedial activities began at the Facility. The Facility operated two hazardous waste management areas, or WMAs (WMA I and WMA II).

These WMAs were closed in compliance with provisions contained in the Facility's operating permit issued under the Alabama Hazardous Waste Management and Minimization Act (AHWMMA) and RCRA. Under provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA), an EPA contractor conducted a RCRA Facility Assessment (RFA) in 1991 to identify solid waste management units (SWMUs) that might be subject to potential corrective action. In December 1994, and as amended in July 1995, and May 1996, the Facility applied for the re-issuance, with modifications, of its AHWMMA Permit. In October 1996, the Alabama Department of Environmental Management (ADEM) issued a Draft Hazardous Waste Post-Closure Permit to regulate the Facility's post-closure responsibilities for WMA I and WMA II and to address corrective action for SWMUs and potential Areas of Concern (AOC) located both on and off of the Facility (RCRA Permit). This draft permit was finalized and issued on January 7, 1997 (No. ALD004019048) and subsequently modified on November 13, 1997, May 3, 2001, December 11, 2003, and May 5, 2006. A permit renewal application was submitted on July 10, 2006. On March 14, 2007, the renewal application was resubmitted to address ADEM's comments. A second set of comments were provided on June 10, 2008. These comments have been addressed by Solutia, and ADEM issued the final permit on October 31, 2008. Included as part of the requirements of this permit were the completion of a RCRA RFI/CS and post-closure care groundwater monitoring. The RFI/CS Program included investigations of soil, groundwater, surface/stormwater, and air. Discussions of these investigations along with results from the post-closure care groundwater monitoring are presented in later sections of this report.

On April 5, 1995, the Facility entered into a Consent Order with ADEM to develop and implement a sampling plan for sediments in the stormwater drainage system. The Facility collected sediment samples throughout the reach of the drainage ditches and soil samples extending outward on both sides of the ditches on the Facility's property and related areas. PCBs were reported at varying concentrations in the sediments of the drainage ditches that flow from the area of the closed South Landfill and from the production area to an area east of the manufacturing plant. PCBs were also reported at various concentrations in soil samples outside of the drainage ditches, but within areas potentially flooded by the drainage ditches during heavy rains.

On March 8, 1996, the Facility entered into a second Consent Order with ADEM that expanded and defined the scope of the Facility's ongoing investigation and remedial activities close to the Facility. Under this Consent Order, the Facility agreed to sample four additional areas for the presence of PCBs and to identify and sample other areas potentially affected by PCBs.

The Facility's obligations under the terms of both Consent Orders have been completed, and results of these activities have been reported to ADEM. These results confirm that PCBs released from the Facility are detected in areas directly adjacent to drainage ditches or in areas affected by stormwater flooding from these ditches. The drainage ditches in which PCBs have been detected ultimately flow toward the 11th Street Ditch joining Snow Creek just south of West 11th Street. Sediment samples have also been collected from Snow Creek, the 11th Street Ditch and other drainage ditches and analyzed for the presence of PCBs. The results of these analyses have been reported to the ADEM and the EPA.

Investigation and remedial work were also conducted in the vicinity of the Facility under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) pursuant to an Administrative Order on Consent (Removal Order) between the EPA and Solutia effective October 27, 2000, rescinded and replaced by a Removal Order effective October 5, 2001. The Removal Order provides for the performance of a time critical removal action to address PCB impacted residential properties within the Anniston PCB Site. The Removal Order also required a removal response for a portion of the 11th Street Ditch, sampling of a portion of the West 9th Street Creek, and a removal response at off-Facility areas related to activities previously completed at Quintard Mall and the Oxford Lake Softball Complex. This Removal Order is incorporated as Appendix C to the CD. A Non Time Critical (NTC) Removal Agreement (Appendix G to the CD) was issued to address residential properties within the Anniston PCB Site with PCB levels at or above 1 part per million. The NTC Removal Agreement was later modified by the issuance of a Stipulation and Agreement between the EPA and P/S (EPA, 2006) on July 18, 2006. The primary purpose of the Stipulation and Agreement was to address the phasing and extent for removal actions to be completed. Efforts taken to comply with the Removal Order and the NTC Removal Agreement are being addressed under OU-1/OU-2.

The Facility also maintains a NPDES Permit under the CWA. This permit, which has an effective date of January 1, 2007, regulates the discharge of stormwater run-off from stormwater

outfall DSN 012. The Facility's NPDES Permit previously allowed the discharge of non-contact cooling water and condensate through the on-site stormwater sewer system. However, in 1996, all of this process related water was re-piped to discharge to the Facility's former Waste Water Treatment Facility (WWTF). Consequently, only stormwater is discharged by the stormwater outfalls.

All process water from the Facility discharges from the Facility's former WWTF to the City of Anniston's Publicly-Owned Treatment Works (POTW) under provisions of the Facility's SID Permit (Permit No. IU 35-08-00048). The biological treatment component of the WWTF was decommissioned in conjunction with the PNP plant shutdown in 2004 such that the former WWTF currently consists of only an equalization basin with pH adjustment capabilities.

Prior to falling under CERCLA jurisdiction, P/S were in the process of gaining approval from ADEM under RCRA for the extensive interim measures that had been completed at the Facility. However, before P/S could complete the approval process, the EPA assumed regulatory control of the Site from ADEM. At that time, the completed interim measures became the baseline for considering additional remediation requirements in the CERCLA process, and any remedial actions required under CERCLA will be in addition to the extensive work already completed under RCRA. The HHRA and the Ecological Risk Assessment were completed using these existing conditions as the basis for the evaluations. Under the renewed RCRA Post-Closure Permit issued on October 31, 2008, ADEM retained authority over the groundwater monitoring and detection monitoring program for WMA I, and over the corrective monitoring program for WMA II. ADEM deferred the oversight of further action for 19 SWMUs to the EPA.

2.0 INVESTIGATION AND REMEDIATION ACTIVITIES

2.1 SWMUs and AOCs

Source and former source area investigations were initiated in 1979 and have continued to the present. During this time, a substantial database of information and analytical data has been generated for all environmental media of interest. From the time manufacturing operations began in 1917 until 1989, the Facility employed solid waste management practices that primarily relied upon the use of on-site landfills. Individual landfill cells were typically associated with specific production units. Thus, the types, quantities, and extent of wastes disposed of in each cell are fairly well defined (Golder, 2002).

Under the RCRA Permit, Solutia continued its initiatives to identify, develop, and implement necessary supplemental corrective measures. Releases from the Facility were addressed as they were identified. For example, landfill areas and wastewater basins have been controlled by capping and by the installation of groundwater corrective action systems, which have reduced the extent and concentration of constituents in groundwater during the time that these systems have been in operation. A perimeter control system has been selected as the appropriate method for addressing constituents in groundwater. The perimeter control system is defined as a groundwater capture system installed at the location where contaminants have been confirmed at the downgradient boundary. The control systems were established under the RCRA Program as the WMA II Corrective Action System and the SWMU 1 Corrective Action System. The WMA II Corrective Action System includes 11 recovery wells that intercept and prevent groundwater with concentrations potentially exceeding Maximum Contaminant Levels (MCLs) from migrating beyond the property perimeter. The SWMU 1 Corrective Action System includes an additional 11 recovery wells that intercept and prevent groundwater with concentrations potentially exceeding MCLs from migrating beyond the South Landfill. Monitoring wells, located downgradient of the perimeter control systems verify the effectiveness of the systems. Emphasis has been placed on evaluating the potential migration of constituents from the Facility.

Although the Facility's SWMUs and AOCs have been viewed as a single potential release source for both the RFI/CS Program and under the CD, the individual SWMU locations were considered when attempting to identify sources of soil or groundwater contamination. The following provides a brief list of each unit including its status as determined in the RFA. Interim measures

for each unit are described, where appropriate. More detailed descriptions are provided in Section 2.2 for the more significant former source areas identified at the Facility. The locations of those areas for which an RFI or CS was required by the RCRA Permit are presented on Figure 2-1.

- **Closed South Landfill (SWMU 1 and WMA I)** – This unit is a landfill and contains two RCRA regulated cells, collectively referred to as WMA I. This unit has been closed as a landfill. Groundwater from this unit is currently being managed by the SWMU I Corrective Action System. Post-closure monitoring is performed for WMA I under the RCRA Permit. Extensive investigations and interim measures have been completed at this unit. Additional details regarding the investigations and interim measures completed are included in Section 2.2.1. A RFI was required for this unit under RCRA. ADEM deferred the oversight of further action for SWMU 1 to the EPA.

- **Landfill Catchment Basins (SWMU 2)** – These former units captured stormwater run-off from WMA I and were closed as part of the WMA I closure. Additional details regarding investigations and interim measures completed for this unit are included in Section 2.2.1. A RFI was required for this unit under RCRA. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Western Landfill Corrective Action System (SWMU 3)** – This unit is a groundwater corrective action system for the closed South Landfill. This unit is now part of the SWMU 1 Corrective Action System and is described further in Section 2.2.1.

- **Leachate Storage Tank (SWMU 4)** – This former aboveground storage tank was located on the western edge of the closed South Landfill. The 1,000-gallon steel tank was mounted within a steel frame located on a concrete pad. The tank was used to store leachate from a portion of WMA I and extracted groundwater from the Western Landfill Corrective Action System. It was removed in 1996, and no further action was required for this unit under RCRA.

- **North Landfill Corrective Action System (SWMU 5)** – This unit is a groundwater corrective action system for the closed South Landfill. This unit is now part of the SWMU 1 Corrective Action System and is described further in Section 2.2.1.

- **Phosphate Landfill (SWMU 6)** – This unit was a neutralization pit, which provided pre-treatment of acidic scrubber water from the parathion furnace area prior to discharging to the Phosphoric Acid Basin (SWMU 12). A 2 to 8-inch thick gravel cover was installed in this area in the early 1980s. No releases were identified in the RFA. Additional details regarding the unit are

provided in Section 2.2.4. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Santotar® Pit (SWMU 7)** – This unit managed Santotar®. Santotar® (i.e., the still bottoms generated during the production of Santowax) consists of high molecular weight polyphenyls and has the consistency of asphalt. Contrary to what is stated in the RFA, Santotar® does not contain residual benzene and consists of mostly carbon and hydrogen. The unit was excavated 12 to 16 feet below existing ground surface, backfilled to grade with clay, and capped with a 7 to 12-inch gravel cover. No releases were identified for this SWMU in the RFA. However, confirmation sampling was required. As part of the RFI/CS, two soil samples were collected from the former Santotar® pit, SSR-8 and SSR-9. In the RFI/CS Report, the results from these samples were compared to the Tier 1 and Tier 2 soil screening criteria, and none of the results exceeded the criteria triggering further action. As a result, no additional measures were proposed for this unit under RCRA as described in Section 2.4. However, ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Old Limestone Bed Surface Impoundment (SWMU 8)** – This SWMU, managed wastes from the PNP and parathion processes. The Old Limestone Bed Surface Impoundment (OLBSI) was excavated and backfilled to grade with clay and a gravel and asphalt cover was installed. The unit was closed as a landfill with ADEM approved closure and post-closure monitoring plans in 1984 and 1985. Portions of the cover have been replaced with concrete. Groundwater from this unit is currently being managed by the WMA II Corrective Action System. Located on the northeast side of the impoundment was the Old Limestone Bed Storage Pad (SWMU 8A). The concrete pad measured 30 feet by 70 feet and was used to store potentially contaminated piping and equipment from dismantled production areas and empty drums prior to disposal. This unit was closed with the OLBSI. Extensive investigations and interim measures have been completed at this unit. A description of these activities is included in Section 2.2.2. A RFI was required for this unit under RCRA. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Lagoon (SWMU 9)** – This unit may have handled wastewater containing PNP, parathion, and methyl parathion. The earthen lagoon was removed and borrow fill was placed with a gravel cover. Groundwater from this unit is currently being managed by the WMA II Corrective Action System as further described in Section 2.2.2. A RFI was required for this unit under RCRA. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Limestone Bed Corrective Action System (SWMU 10)** – This unit is a groundwater corrective action system for the Old Limestone Bed. This unit is now referred to as the WMA II Corrective Action System and is described further in Section 2.2.2.

- **New Limestone Bed (SWMU 11)** – This RCRA regulated unit (WMA II) consisted of a limestone bed, storage area, and sump and was used to partially neutralize acidic wastewaters generated by the parathion intermediates operation. The area was closed as a landfill in 1988 by removing the unit to a depth of 12 feet below ground surface, backfilling, and vegetating. Post-closure monitoring is performed for this unit under RCRA. Extensive investigations and interim measures have been completed at this unit. A description of these activities is included in Section 2.2.2.

- **Phosphoric Acid Basins (SWMU 12)** – These units were used to neutralize acidic wastewaters from various production processes. The north basin was backfilled and the surface was seeded. The south basin was excavated, backfilled, and covered with asphalt. No releases were identified in the RFA. Additional details regarding the unit are provided in Section 2.2.4. Confirmation sampling was required for this unit under RCRA as described in Section 2.4. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Closed Container Storage Area (SWMU 13)** – This unit was located on the southwest corner of the South East Regional Distribution Center (a.k.a. the ACL Warehouse). This unit was closed in accordance with an ADEM approved closure plan in 1989. No further action was required for this unit under RCRA.

- **Hazardous Materials Storage Area (SWMU 14)** – This unit was located east of the Benzene Satellite Accumulation Area in the southeast portion of the Facility. It consisted of a metal building on a concrete pad. This unit stored mixed laboratory solvents, waste benzene solutions, waste polyphenyls, and spill absorbent materials that were generated at the Facility. Since no releases were identified in the RFA, no further action was determined by the ADEM and the EPA. Currently, access to this area is restricted.

- **Spent Nickel Catalyst Storage Area (SWMU 15)** – This unit was located north of the Therminol® Production Area in the center of the Facility. It consisted of a 20-foot by 20-foot concrete pad surrounded by a 3-foot concrete wall on two sides. Fifty-five-gallon drums were stored at this location on pallets. The nickel catalyst was composed of spent Raney nickel catalyst generated by the polyphenyl operations. Raney nickel catalyst is a special form of nickel which is comprised of finely divided spongy nickel particles prepared by leaching out aluminum under controlled conditions from a nickel – aluminum alloy (Vineeth Chemicals, 2008). Since no

releases were identified in the RFA, no further action was determined by the ADEM and the EPA.

- **Laboratory Satellite Accumulation Area (SWMU 16)** – This unit formerly stored 5-gallon plastic containers of hazardous waste. The waste consisted of waste laboratory solvents and off-specification PNP samples. Since no releases were identified in the RFA, no further action was determined by the ADEM and the EPA. Currently only 55-gallon drums of waste lab solvents are maintained in this area. These drums are stored on concrete in secondary containment with an overspill capacity. There is an overhang roof to protect against precipitation.

- **Scrap Yard Waste Oil Satellite Accumulation Area (SWMU 17)** – This unit managed used compressor oils and consisted of two concrete pads with roofs. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Benzene Satellite Accumulation Area (SWMU 18)** – This unit managed potentially contaminated soils. No further action was required for this unit under RCRA.

- **Trash Incinerator (SWMU 19)** – This unit was previously located in the central area of the closed South Landfill. It consisted of an incinerator with a TeePee burner that received non-hazardous paper waste from the Facility. This unit was removed in 1973, and no further action was required for this unit under RCRA.

- **Sulfur Incinerator (SWMU 20)** – This unit was previously located south of the ACL Warehouse in the northern portion of the Facility. It consisted of an incinerator that burned waste sulfur generated by the parathion production process. This unit closed in 1973, and no further action was required for this unit under RCRA.

- **Former Boiler (SWMU 21)** – This unit was previously located north of the PNP production unit on a concrete pad within a steel building. The unit operated as a boiler until 1989. The unit and steel building have been removed, but the concrete pad remains. No further action was required for this unit under RCRA.

- **Present Boiler (SWMU 22)** – This unit is located in the southern portion of the plant site, northeast of the Santotar® Tank (SWMU 27). Natural gas, No. 2 fuel oil, or a blend of Therminol® ends and Santotar® provide fuel for the boiler. The boiler is located on a concrete pad with a 1-foot high concrete secondary containment structure surrounding it. The unit operates under Alabama Air Pollution Control Commission Permit No. 301-0007-Z010. No further action was required for this unit under RCRA.

- **Satellite Accumulation Area of Compressed Oil (SWMU 23) –** This unit is located on the southern portion of the plant site, north of the Present Boiler (SWMU 22). The unit consisted of a 10-foot by 10-foot concrete pad, covered by a metal shed roof, used to store 55-gallon drums containing used oil from the hydrogen compressors. The unit has since been upgraded to 3-foot by 5-foot plastic bins capable of holding two 55-gallon drums. This unit is regulated under used oil regulations, and no further action was required for this unit under RCRA.

- **Boiler Satellite Accumulation Area (SWMU 24) –** This unit consists of one 55-gallon drum that receives line cleanings from the Boiler Feed Tank (SWMU 25). It is located on concrete, inside the secondary containment of the Present Boiler (SWMU 22). No further action was required for this unit under RCRA.

- **Boiler Feed Tank (SWMU 25)** – This unit managed Therminol® ends. Therminol® is produced from polyethylbenzene. The process produces Therminol® ends (the material managed at the Boiler Feed Tank), which are classified as a D018 hazardous waste because the material contains 1.0 part per million (ppm) of benzene. A waste analysis for Therminol® ends is included as Table 2-1. A leaking flange was observed during the RFA. The area around the flange was cleaned and the tank has since been dismantled. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Blending Tank (SWMU 26)** – This unit is located southeast of the Santotar® Tank (SWMU 27) in the southern portion of the Facility. It consists of an 11,800-gallon horizontal steel tank positioned on a concrete pad, surrounded by a 4-foot concrete wall. It was previously used as a benzene feed tank, then received Therminol® ends and Santotar® for blending into feed for the Present Boiler (SWMU 22). It currently receives blended fuel for feed into the Present Boiler. No further action was required for this unit under RCRA.

- **Santotar® Tank (SWMU 27)** – This unit managed Santotar®. The unit consists of a 22,000-gallon tank on a concrete pad. Black stains were observed on the concrete pad during the RFA. The investigation revealed the stains were associated with pipe insulation. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Therminol® Ends Tank (SWMU 28) –** This unit was located east of the Old Limestone Bed (SWMU 8). It consisted of a 150,000-gallon carbon steel tank on a sand base surrounded by a 6-foot concrete wall. Therminol® ends were stored in this unit for 90 days or less, prior to being blended with

Santotar® for use in the Present Boiler (SWMU 22). The tank was certified as a clean closure by ADEM in October 1993 and removed six months later. No further action was required for this unit under RCRA.

- **Wastewater Treatment Plant (SWMU 29) –** This unit is located on the western border of the Facility. It previously consisted of two holding tanks (SWMU 29A), two aeration basins (SWMU 29B), one clarifier (SWMU 29C), and one wet well (SWMU 29D). The two aeration basins were converted to holding tanks by 1991. The unit is currently used as an equalization basin and water is discharged via DSN 002 to the Anniston POTW, permitted under a SID Permit. No further action was required for this unit under RCRA.

- **Plant Corrective Action System (SWMU 30)** – This unit is a groundwater corrective action system for the plant site. This unit is now part of the SWMU 1 Corrective Action System and is described further in Section 2.2.1.

- **Steam Cleaning Pad (SWMU 31)** – This unit manages oily condensate from steam cleaning. The unit consists of a concrete pad with gravel cover on surrounding areas. No releases were identified in the RFA. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Drum Crusher (SWMU 32)** – This unit is located in the central portion of the Facility adjacent to the Hazardous Materials Storage Area (SWMU 14). It consists of an enclosed 3-foot by 4-foot by 6-foot drum crusher that receives old or damaged drums that are triple rinsed in the production area. No further action was required for this unit under RCRA.

- **South Scrap Yard (SWMU 33)** – This unit is located in the southern portion of the Facility, north of the Santotar® Pit (SWMU 7). It consists of used, decontaminated equipment stored directly on gravel, in addition to scrap metal stored in a dumpster. No further action was required for this unit under RCRA.

- **Old Boiler Scrap Yard (SWMU 34)** – This unit manages used, decontaminated equipment and scrap metal. The unit is covered with a 4-inch gravel cover. Some stained gravel was observed in the area during the RFA. Further investigation suggested that the staining was associated with rust deposits. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Acetone Recovery Column (SWMU 35)** – This unit is located west of the Old Boiler Scrap Yard (SWMU 34). It consists of an acetone distillation column approximately six stories high encircled by metal scaffolding. The unit operated until 1986 and currently remains unused. No further action was required for this unit under RCRA.

- **Carbon Towers (SWMU 36)** – This unit is located in the central portion of the Facility. It consists of four vertical towers encircled by metal scaffolding, packed with carbon. The unit received PNP production wastewater for filtering before being discharged to the former WWTF (SWMU 29). It operated until 2004, and no further action was required for this unit under RCRA.

- **Stormwater Drainage System – Production Area Portion (SWMU 37a)** – This system manages stormwater from within the production area of the Facility. The system had managed stormwater run-off from the polyphenyl, parathion, and PNP production areas. Extensive investigations and interim measures have been completed for this unit. Additional details regarding investigations and interim measures completed are included in Section 2.2.4. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Dumpsters (SWMU 38)** – This unit consisted of roll-off boxes used to receive various wastes from the Facility including waste from the Niran® and PNP production processes. No releases were identified in the RFA. No further action was required for this unit under RCRA.

- **Loading/Unloading Areas (SWMU 39)** – This unit consisted of five locations: SWMU 39A – Unlined Rail PCNB loading/unloading (L/U) Area; SWMU 39B – Benzene L/U Area and sump (paved rail unloading area with 2-inch high 40-foot long curbing, drained to a sump); SWMU 39C – Alimet L/U Area and sump (no longer used after 1991); SWMU 39D – PNP Warehouse L/U Area (truck ramp at PNP Warehouse); and SWMU 39E - ACL Warehouse L/U Area (two truck bays at ACL Warehouse – no longer used after 1995). No further action was required for this unit under RCRA.

- **Fire Training Area (SWMU 40)** – This unit is located near the Fire Training Building, east of the former WWTF (SWMU 29). Prior to the 1990s, this unit was used for fire brigade training purposes. Since the 1990s, it has been used for storage of a 55-gallon drum filled with water and diesel fuel for fire training exercises. When not in use, the drum is stored on a concrete pad under a metal shed roof. No further action was required for this unit under RCRA.

- **Former Parathion Production Area (SWMU 41)** – This unit was used to produce parathion. Production of parathion ceased in 1986, and the unit was decommissioned and covered with gravel. Additional details regarding the unit are provided in Section 2.2.4. Confirmation sampling was required for

this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Former PCB Production Area (SWMU 42)** – This unit was located northeast of the Benzene L/U Area, in the south central portion of the Facility. PCBs were manufactured at the Facility from 1929 to 1971. The area was decommissioned in 1972. Additional details regarding the unit are provided in Section 2.2.4. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Former Phosphorus Pentasulfide Production Area (SWMU 43)** – This unit was used to produce elemental phosphorus, phosphate salts, and phosphorous pentasulfide. Corrosive wastewaters from this unit were discharged to the Phosphoric Acid Basins. The production area buildings were demolished in 1988, and potentially affected soils were removed. The existing concrete slab was left in place, and other areas were covered with gravel. No releases were identified in the RFA. Additional details regarding the unit are provided in Section 2.2.4. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Waste Drum Satellite Accumulation Area (SWMU 44)** – This unit managed drums of Therminol® and Santotar® and potentially hazardous wastes waiting toxicity characteristic leachate procedure (TCLP) analysis. No releases were identified in the RFA. Confirmation sampling was required for this unit under RCRA as described in Section 2.4. In 2002, soil was excavated and removed from this area due to the detection of PCBs above the allowable screening level for exposure to plant workers (Golder, 2002). Subsequently, a 4-inch thick concrete cover was placed over the surface. The soil and groundwater data from this SWMU and adjacent to this SWMU will be evaluated as part of the FS to determine if additional remedial measures are required. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Hydrogen Sulfide Flare (SWMU 45)** – This unit was previously located within the Former Parathion Production Area (SWMU 41). It consisted of a flare that was used to burn off hydrogen sulfide from the parathion process. It was dismantled in 1988, and no further action was required for this unit under RCRA.

- **Former Holding Tanks, Aeration Basins and Clarifiers (SWMU 46)** – These units treated wastewaters that contained parathion, PNP and acetone still bottoms. These units were cleaned, demolished and closed in place; and

the area was covered with gravel. No releases were identified in the RFA. Additional details regarding the unit are provided in Section 2.2.4. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action is necessary under the RCRA Program. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **Closed West End Landfill (SWMU 47)** – This unit received production wastes and general trash from the Facility. More detailed information regarding this unit is included in Section 2.2.3. ADEM deferred the oversight of further action for this SWMU to the EPA.

- **The Monsanto Chemical Corporation Warehouse (MCC Warehouse) –** This unit housed PCB drumming and flaking operations until 1971. The building was identified as a potential source for low level PCBs detected in stormwater run-off from the Facility. This unit was added as a SWMU after the RFI/CS Program. Additional details regarding the unit are provided in Section 2.2.4.

- **Product Storage Tank (AOC A)** – This tank managed Santowax®. Santowax® is composed of tertiary and quaternary phenyls manufactured as part of the polyphenyl production process. Santowax® is hydrogenated with Raney nickel catalyst to produce Therminol®. The base of the secondary containment was previously graveled, and evidence of spills was noted during the RFA. The spill containment was upgraded with a concrete floor, and level control circuitry has been updated on the tank. Confirmation sampling was required for this unit under RCRA. As part of the RFI/CS, one soil sample was collected from the Product Storage Tank area, AOC-A-6A. In the RFI/CS Report, the result from this sample was compared to the Tier 1 and Tier 2 soil screening criteria and did not exceed the criteria triggering further action. As a result, no additional measures were proposed for AOC A. However, ADEM deferred the oversight of further action for AOC A to the EPA.

- **Underground Product Storage Tanks (AOC C)** – Product Underground Storage Tanks (USTs) were removed in the mid-1980s. The specific contents for each tank are unknown; however, conversations with Facility personnel indicate that PNP, parathion, acetone, gasoline, sulfur, and soda ash solution may have been stored in these tanks. No releases were identified in the RFA. Additional details regarding this unit are provided in Section 2.2.4. Confirmation sampling was required for this unit under RCRA as described in Section 2.4 and indicated that no further action was necessary under the RCRA Program. ADEM deferred the oversight of further action for this AOC C to the EPA.

Non-SWMU/AOC Areas

- In May 1995, prior to the placement of a geotextile and soil cover, soil and sediment samples were collected from the "walking trail area" located in the southeast corner of the plant site. The samples were field screened for PCBs, and approximately 10% of the field samples were submitted for laboratory analysis of PCBs. The results of these analyses are included in Appendix A-2. Of the samples collected, nine soil and eight sediment samples exceeded the screening level of 10 milligrams per kilogram (mg/kg). Laboratory concentrations ranged from 6.1 mg/kg to 157 mg/kg. Appendix A-2 provides the locations and results of the samples collected in the "walking trail area".

2.2 Former Source Areas

The following sections present a brief history of the investigations and remedial activities carried out in the vicinity of several former source areas (SWMUs and AOCs). The majority of these investigations and remedial activities were completed prior to the RFI/CS Program conducted in the late 1990s. A more thorough discussion of these investigations and remedial activities is presented in the RFI/CS Work Plan (Golder, 1997) and the RFI/CS Report (Golder, 2002).

2.2.1 Closed South Landfill and WMA I

The South Landfill operated with ten individual cells from 1960 to 1988 and was used for the disposal of production wastes, demolition materials, and trash from the Facility. The individual cell locations are shown on Figure 1-3. A description of the waste materials placed in each cell is as follows:

Cells 1E and 2E – These cells received waste that was generated by the phosphorus and chlorine processes, including empty used fiber drums, empty used sample containers, rubber overshoes, gloves, filter papers, etc. According to facility representatives, approximately 2,600 tons of waste per year was disposed of in these cells beginning after 1960. Available information indicates that PCB wastes were disposed in Cells 1E and 2E. No additional information is available.

Cell 3E – Waste placed in this cell included non-hazardous chemical wastes and PCB wastes. According to facility representatives, approximately 45 tons of waste per year was disposed of in this cell from the early 1980s to an unknown date. No additional information is available.

Cell 4E – Cell 4E is a RCRA-regulated unit that received hazardous wastes from the dumpsters located around the Facility. The cell managed ignitable wastes, methyl parathion, parathion, acetone, benzene, cumene, methylene chloride, methanol, PNP, and xylene. The unit operated from the late 1970s to 1988.

Cell 5E – Cell 5E is a RCRA-regulated unit that managed ignitable wastes, methyl parathion, parathion, acetone, benzene, cumene, methylene chloride, methanol, PNP, xylene, spent limestone, limestone, clay, acid brick, and concrete rubble. The unit received approximately 1,000 tons of spent limestone from the cleaning of the Old Limestone Bed in 1985 and approximately 3,000 tons of limestone, clay, acid brick and concrete rubble when the Old Limestone Bed was closed in 1988. The unit operated from 1981 to 1989. According to facility representatives, approximately 102,750 tons of parathion and PNP wastes were disposed of in Cells 4E and 5E combined.

Available information indicates that PCB waste placement in the former South Landfill was limited to Cells 1E, 2E and/or 3E, only.

Cells 1W, 2W, 2WA, 3W – These cells received waste materials that contained parathion, methyl parathion, asbestos, PNP, biological solids from the waste water treatment facility, and plant trash. According to facility representatives, approximately 300 tons of waste per year combined was disposed of in these cells from the late 1960s to 1975. In the late 1970s (approximately 1978), waste material from the north end of Cell 1W was excavated and relocated to the RCRA-regulated cell, 4E. This work was performed as part of the realignment of Highway 202. No additional information is available.

Cell 4W – This cell received waste materials that contained organophosphate contaminated sulfur, parathion, methyl parathion, asbestos, PNP, and biological solids from the waste water treatment facility, and plant trash. According to facility representatives, approximately 1,500 tons of waste per year was disposed of in this cell from 1973 to 1983. No additional information is available.

Two cells (Cells 4E and 5E), were operated as hazardous waste disposal cells under RCRA and are designated as WMA I in the RCRA Permit. Cells 4E and 5E are indicated on Figures 1-3 and

2-1. The cells of WMA I were closed with a RCRA-compliant cap in 1989, while the remaining cells in the closed South Landfill, closed prior to the effective date of RCRA, were covered with compacted soil and a vegetative layer.

Investigations of the closed South Landfill commenced in 1980 (Geraghty & Miller, 1980). From July through October of 1980, a hydrogeologic investigation was conducted in the landfill area. The investigation consisted of drilling 35 soil borings, some of which were converted to cased borings, and some of which were converted to monitoring wells. The investigation focused on developing an understanding of the local hydrogeology and detecting the presence of organophosphorus pesticides (OP) and PNP, which were the only constituents evaluated in this investigation. After the initial boring program, a water-level and water-quality monitoring program was conducted for the first six months of 1981. This was performed to better understand the extent, rate, and direction of movement of groundwater containing OP and PNP.

Following the hydrogeologic assessments and groundwater sampling program, the stormwater catchment basins located north of WMA I were closed with a clay cap and vegetative cover, and interceptor wells were installed to capture affected groundwater. Interceptor wells IW-1, IW-2, IW-3, and IW-4 were installed in 1982 to intercept and recover shallow groundwater from the western side of the subsequently closed South Landfill. Interceptor wells IW-5 and IW-6 were installed later in 1982, and IW-7, IW-8, IW-9, IW-10, IW-11, IW-12, and IW-13 were installed in late 1987 through early 1988. These wells were installed to intercept and recover groundwater along the northern side of the landfill (Geraghty & Miller, 1988). Interceptor wells IW-143 and IW-15 were installed in 1987, and the pumping operations began in early 1988 to intercept and recover groundwater from the plant site area downgradient of the closed South Landfill. These three systems (the west landfill, north landfill, and plant corrective action systems) have since been combined into one groundwater corrective action system (SWMU 1 Corrective Action System). Interceptor wells IW-1, IW-3, IW-4, and IW-15 were deactivated in 1998 pursuant to the RCRA Permit and are not in use, but the wells are still maintained. These interceptor wells are shown on Figure 2-2.

[3] In 2003, IW-14 was replaced with IW-14A to address construction problems with the original interceptor well.

The total discharge for all the wells in the SWMU 1 Corrective Action System averaged 243,000 gallons per year (approximately 0.5 gpm) during the period of July 2001 to July 2005. The total discharge for the period of July 2005 to July 2007 averaged 127,000 gallons per year (approximately 0.24 gpm). Groundwater from each of the recovery wells except IW-10 is pumped to the site equalization basin and then discharged to the Anniston POTW. Upon decommissioning of the on-site WWTF, Solutia sampled and analyzed the effluent from the piping network of the two groundwater extraction systems. The effluent was analyzed for total PCBs. Based on this analysis, Solutia determined that the presence of PCBs was limited to groundwater extracted from IW-10. As a result, groundwater from IW-10 is passed through a carbon filtration system prior to discharging to the Anniston POTW.

The two cells designated as WMA I were closed with a RCRA-compliant cap in 1989. From the bottom up, the RCRA-compliant cap consists of a 24-inch thick compacted clay base, a 12-inch thick sand drainage layer, a geotextile fabric layer, and a 24-inch thick soil cover layer with vegetation. The remaining cells in the South Landfill were covered with compacted soil and a vegetative layer. The landfill catch basins were also covered with a clay cap and vegetated. In 1997 and 1998, additional interim measures were constructed for the closed South Landfill to reduce infiltration into the landfill and prevent the transport of affected soils. These measures included the following:

- Upgraded portions of the cap on the closed South Landfill consisting of a 6-inch soil layer, a 40-mil thick textured high density polyethylene (HDPE) geomembrane, a geocomposite drainage layer, an 18-inch thick soil cover layer, and a 6-inch thick topsoil layer with vegetative cover. Additionally, a 12-inch thick soil cover and vegetative layer were placed above a non-woven geotextile layer over adjacent areas of the closed South Landfill. The limits for the upgraded portions of the cap are included on Figure 1-3;

- Construction of a retention structure to collect stormwater run-off from the closed South Landfill; and

- Diversion of stormwater run-on from unaffected areas upstream of the closed South Landfill, and installation of culverts to pass this stormwater through areas of affected soils prior to discharging off of the Facility. This allowed for the closure of ditches containing affected sediments.

The PCB concentrations measured in soil prior to placing the upgraded cover system at the closed South Landfill are included in the letter report in Appendix A-1. The samples were collected in

1996 under a Consent Decree with ADEM. This report also shows PCB concentrations in surface soil over the eastern cells south of WMA I where an upgraded cover system was not installed. Surface soil samples were collected from the closed South Landfill (following completion of the upgraded cover systems) and analyzed for PCBs. The PCB concentrations ranged from non detect to 10 mg/kg for the closed portions of the landfill, including the areas where no cover improvements were made.

The South Landfill is closed (ICF Kaiser Engineers, 1998) and subject to long-term monitoring and maintenance under provisions of the Facility's current RCRA Permit. This includes quarterly inspection (monthly for WMA I), access controls, and repairs as needed. ADEM retained authority over the groundwater monitoring and detection monitoring program for WMA-I.

2.2.2 WMA II and OLBSI

WMA II consisted of a limestone bed, storage area, and sump and was used to partially neutralize acidic wastewaters generated by the parathion intermediates operation, prior to biological treatment in the Facility's former WWTF from 1977 to 1988. From 1957 through June 1986, Monsanto produced parathion and methyl parathion on a seasonal basis. These materials were produced by reacting ethyl or methyl alcohol with phosphorus pentasulfide to form "thio acid". The thio acid was stripped and chlorinated before being distilled to produce an intermediate product and a residue. The intermediate product (parathion intermediate) was either sold or further reacted with acetone, PNP, and soda ash to produce crude parathion. The crude parathion was washed, dried, filtered, and drummed for sale. The OLBSI received acidic wastewater from the parathion intermediates operation from approximately 1960 to 1977. Both units are located in close proximity to each other along the northern plant boundary. Figure 2-1 indicates the locations of WMA II and OLBSI.

The first investigative work performed in the vicinity of the WMA II surface impoundment involved the installation of four soil borings in September and October of 1981. These borings were converted to monitoring wells and were sampled as part of the sampling completed in conjunction with the RCRA Groundwater Quality Assessment Program undertaken in 1984 (Golder, 2007b). Nine additional borings were installed in October and November of 1985 and were converted to monitoring wells. In June 1986, four borings were installed to better define

hydrogeologic conditions adjacent to the plant's northern boundary and to supplement data previously collected from the monitoring well network. Figure 2-2 includes the locations of these converted monitoring wells.

The OLBSI was excavated and backfilled to grade with a clay and gravel cover and then covered with asphalt pavement. The unit was closed in place with an ADEM approved closure in 1984 and 1985. Since then, portions of the cover have been replaced with concrete. The Old Limestone Bed Storage Pad was closed with the OLBSI. WMA II was closed as a landfill in 1988 by removing the unit to a depth of 12 feet below ground surface (bgs), backfilling and vegetating. Closure activities included the excavation of 7,000 cubic yards of limestone, the removal of the synthetic liner and the excavation of approximately 3 feet of subsoil from beneath the liner of the impoundment. The unit was then backfilled. The excavated limestone was disposed of in Cell 5E of the South Landfill. ADEM approved the closure in July 1988. Both areas are inspected as part of the routine operation and maintenance activities at the site.

A groundwater corrective action system (the WMA II Corrective Action System) was installed in 1988, and recovery operations began in February 1989. The WMA II system originally consisted of six interceptor wells (IW-16 through IW-21). Well DW-01 was subsequently incorporated into the interceptor well system in 1997 (Golder, 2002). In 2003, four additional interceptor wells were installed as part of the Supplemental RFI/CS Program to improve the effectiveness of the collection system (IW-22, IW-23, IW-24, and IW-25). The total discharge for all the wells in the WMA II Corrective Action System averaged 753,000 gallons per year (approximately 1.4 gpm) during the period of July 2001 to July 2005. The total discharge for the period of July 2005 through July 2007 averaged 639,000 gallons per year (approximately 1.2 gpm). Groundwater removed from the recovery wells is pumped to a collection tank, and then pumped to an equalization basin which discharges to the Anniston POTW. As reported in the RFI/CS Report (Golder, 2002), the WMA II system has been effective at recovering groundwater impacted with OP and PNP. The WMA II Corrective Action System is included on Figure 2-1.

In 1992, investigations of the profile of the bedrock surface and the groundwater quality and flow direction in the bedrock system were conducted to test the hypothesis that constituents of concern might collect and migrate horizontally along the bedrock surface as a preferred migration

pathway in the vicinity of the OLBSI and WMA II (Geraghty & Miller, 1992a, 1992b, and 1992c). The first phase included two investigations using geophysical methods to map the bedrock surface. The second phase consisted of a boring program in which shallow bedrock and deep residuum piezometers were installed (Geraghty & Miller, 1993). Appendix B includes reports by Geraghty & Miller that describe this work.

A seismic survey found different seismic signatures north and south of the railroad tracks located to the north of the plant. Additionally, a trough-shaped topographic low in the bedrock surface, trending northeast-southwest, was also indicated by the geophysical survey. The seismic signatures were initially interpreted to be competent bedrock. A cone penetrometer test (CPT) survey confirmed the existence of resistant refractive materials, which were also interpreted as competent bedrock. A subsequent boring program confirmed the presence of competent bedrock to the south of the railroad tracks at depths less than 130 feet, but bedrock was not encountered north of the railroad tracks to depths greater than 540 feet. Chert and laminated shale lenses were found at the geophysically-interpreted bedrock depth, and were considered the most likely refractors detected in the geophysical investigations. Although these lenses were only 4 to 6 inches thick, they were resistant enough to cause refusal of CPT rods. The CPT program is discussed in a letter report (Geraghty & Miller 1992a) included in Appendix B. The results for the geophysical bedrock investigations (Geraghty & Miller 1992b and 1992c) are also included in Appendix B.

The objective of the second phase of investigation was to evaluate groundwater quality in the shallow bedrock system. Nine borings were drilled. Five were converted to shallow bedrock piezometers (SBP-1 through SBP-5), and one was converted to a deep residuum piezometer (DOP-1). The boring program confirmed the presence of competent bedrock south of the railroad tracks (depths ranging from 82 to 129.5 feet bgs), but bedrock was not encountered north of the railroad tracks. The borings north of the railroad tracks ranged in depth from 250 to 540 feet bgs and did not encounter bedrock nor did they contain the characteristic odor of parathion or PNP. This difference in lithology encountered during drilling and the large difference in apparent thickness of residuum suggested the presence of a geologic discontinuity north of the railroad tracks. Water-level measurements from the piezometers taken in December 1992 indicated that the groundwater in the shallow bedrock aquifer appeared to flow northwest across the Facility

boundary. The RFI well OWR-02D was installed within the deep residuum at the southeast edge of the trough feature identified in the first phase of the 1992 investigation to a depth of 108 feet bgs. This well monitors the potential off-site migration of constituents within the deep residuum along this trough feature. The variable head test for OWR-02D resulted in the highest estimated hydraulic conductivity value out of all the tested wells, indicating a possible preferential flow pathway within the deep residuum along this feature. Variable head test details are presented in Section 3.1.4.1. The Phase II investigation report (Geraghty & Miller, 1993) is included in Appendix B.

WMA II and the OLBSI are closed and subject to long-term monitoring and maintenance pursuant to the Site's O&M Plan. This includes quarterly inspection (monthly for WMA II), access controls, and repairs as needed. The ADEM retained authority over the groundwater corrective action monitoring program for WMA-II.

2.2.3 Closed West End Landfill

The closed West End Landfill is located along the western boundary of the Facility and operated as a single landfill cell from approximately 1930 to approximately 1960, receiving production wastes and general trash from the Facility. No additional information is available.

A detailed investigation of the closed West End Landfill was completed in August 1994 and reported to ADEM. As part of the investigation, monitoring wells (WEL-1 through WEL-4) were installed around the landfill. The investigation concluded that the closed West End Landfill was not a source for groundwater impacts and that further monitoring was not required. However, in response to a request from the EPA, further groundwater sampling was conducted during the later stages of the RFI/CS Program as discussed in Section 4.4. The location of the closed West End Landfill is shown on Figure 2-1, and the locations of monitoring wells WEL-1 through WEL-4 are shown on Figure 2-2.

Following the 1994 investigation, ADEM and the EPA approved a plan for stormwater improvements and an upgrade to the cap that had been placed on the area. The specific remedial activities included the following:

- Construction of a multi-media cap on the closed West End Landfill and a soil cover on the area immediately around the landfill. The cap included a six-inch thick compacted clay foundation layer, a 60-mil thick textured HDPE geomembrane liner, a geosynthetic drainage layer consisting of a continuous non-woven geotextile and one-foot wide and one-inch thick geosynthetic wick drains placed every 50 feet, an 18-inch thick soil cover layer, and a vegetative layer. The geosynthetic drainage layer daylights into a ditch that runs along the toe of the western and northern slopes of the covered area; and

- Collection of stormwater run-off from the closed West End Landfill and installation of hard piping to transport run-off through areas of affected soils. This allowed the closure of drainage ditches with affected sediments. The DSN 006 stormwater outfall currently conveys drainage from the closed West End Landfill. The monitoring requirement for this outfall was removed from the NPDES Permit after no detections of PCBs were measured from December 1997 through May 2001. Some areas of the Facility do not drain to the upgraded stormwater collection system. These areas are primarily in the northwest portion of the Facility and include the closed West End Landfill and adjacent areas.

These measures were completed in 1996.

The PCB concentrations measured in soil prior to constructing the cover system over the closed West End Landfill are included in the letter report in Appendix A-1. The samples included were collected in 1994 through 1996 and reported to ADEM. P/S excavated and removed soil from the adjacent areas of the landfill prior to placing the soil cover (available information is included in Appendix A-3). The PCB concentrations included in this letter report represent the concentrations measured prior to and after conducting soil removal activities and capping the area.

Additionally, as reported by members of the remediation team, soil was excavated from outside the fence line of the West End Landfill along 1st Avenue to address PCBs found in soil/sediment and to improve drainage in the area. The area addressed includes a strip of grass between the road and the fence line approximately eight to ten feet wide. Post-excavation sample results for this area are included in Appendix A-1.

Surface soil samples were collected from the closed West End Landfill following completion of the cover systems and analyzed for PCBs. The PCB concentrations ranged from non detect to

21 mg/kg. The higher concentrations were measured along the fenceline adjacent to the Alabama Power Company switch yard.

Figure 1-3 depicts the surface cover for the areas adjacent to the West End Landfill. The soil cover extends to the fence line around the closed West End Landfill, and the cover is approximately two to three feet thick to the west and north of the landfill. Although topographic information was not available for the entire area, design and construction records indicate that a minimum of 18 inches of clean cover soil was placed over all of the adjacent landfill areas including around the sedimentation pond. The areas of the West End Landfill with elevated PCB concentrations were capped with a multi-media HDPE liner system or covered with clean soil and vegetative cover. Elevated PCB concentrations were also detected in the soil underlying the Alabama Power Company switch yard located within the limits of the West End Landfill property. The samples were collected from beneath the gravel present in the switch yard. Although no additional capping of this area was completed as part of the interim measures, Alabama Power maintains a substantial gravel cover over the area and restricts access to the switch yard to its employees only. The area is enclosed with a chain link fence, which remains locked to prevent unauthorized entry or trespass.

2.2.4 Production Areas

Many of the Facility's manufacturing processes were decommissioned prior to the RFI/CS Program which started in the middle to late 1990s. Certain investigations and remedial activities occurred with each decommissioning. Details concerning the decommissioning are presented below. Further details may be found in the RFI/CS Report (Golder, 2002). Unless otherwise noted, the locations of the following production areas are shown on Figure 2-1.

2.2.4.1 Former Phosphate "Landfill"

The Former Phosphate Landfill was shown in the RFA report to be located in the southwest corner of the Facility, although the exact location of the unit could not be verified by plant personnel. The landfill description is a misnomer since this area was used as a staging area for phosphorus slag and tailings received from the phosphorus furnaces. Landfilling was unlikely to have occurred at this location due to its proximity to active production areas.

This area was used as a neutralization pit for the treatment of acidic wastewater and likely contained limestone as a treatment media. The suspect area was approximately 150 feet long by 170 feet wide. Examination of historical Facility maps shows that the area coincided with the location of the neutralization basin operated as part of the parathion production process. This basin received acidic wastewater from the scrubber system of the sulfur incinerator which was used to burn residues from intermediates of the parathion production process. The effluent from the neutralization basin was discharged through the plant sewer system to the Phosphoric Acid Basins. Currently, the area is covered with two to eight inches of gravel.

2.2.4.2 Phosphoric Acid Basins

The Phosphoric Acid Basins (North and South Basins) were located along the eastern border of the Facility. The two unlined impoundments consisted of limestone beds which were used to neutralize acidic wastewaters from the former parathion, PCB, and phosphorous production areas. Non-contact cooling and stormwater from the upslope catchment area were also discharged into these basins.

The North Basin may have started operation in the 1920s and was approximately 50 feet wide and 140 feet long. This basin was most recently used for the retention of non-contact cooling water and storm water from the upslope catchment area. Inspection of the basin did not indicate the presence of any hazardous materials requiring removal or disposal. Consequently, the basin was decommissioned in 1994 with an in-place closure without excavation. The limestone bed materials, in the depth range of 3 to 10 feet below grade, were left in place.

The South Basin was installed around 1970 and was approximately 200 feet long and varied in width between 40 feet and 60 feet. In 1988 or 1989, the South Basin was excavated to a depth of approximately 10 to 12 feet below grade and the excavated material was placed in Cell 5E of WMA I. The excavation was then backfilled with clay. The South Basin is mostly covered by an asphalt parking lot. The balance of this basin and the entire North Basin are grass covered.

2.2.4.3 Former Parathion Production Area

The Former Parathion Production Area was located in the vicinity of the former WWTF in the northwest portion of the Facility. The unit was decommissioned after parathion production

ceased in 1986. Decommissioning activities included removal of plant buildings, production equipment, and subsurface piping. Soils in the immediate vicinity of the unit were excavated to a maximum depth of 20 feet below grade. All waste materials from the decommissioning and soils removed were placed in Hazardous Waste Cell 5E of WMA I. The excavated area was backfilled with clean soils from an off-site borrow area. Currently, gravel covers the ground surface. The gravel cover was inspected as part of the RFI/CS and found to be in good condition over the entire SWMU.

2.2.4.4 Former PCB Production Area

The Former PCB Production Area was located northeast of the Benzene L/U Area, in the south central portion of the Facility. The area was approximately 100 feet wide by 180 feet long. PCBs were manufactured at the Facility from 1929 to 1971. Wastes from the unit were disposed of in the West End Landfill prior to 1960 and in the South Landfill after 1960.

The area was decommissioned in 1972. Decommissioning activities included the removal of buildings and plant production equipment. The concrete floor remained. Waste materials generated during these activities were placed in the South Landfill. A layer of asphalt was added to the concrete surface in the mid 1980s. In the 1990s, the area was capped with a supplemental asphalt cover 1 to 2 inches thick. No information was available regarding excavations that may have been performed during closure of the PCB Production Area or the concentrations of contaminated soil that may have been removed from the area.

2.2.4.5 Former Phosphorous Production Area

The Former Phosphorous Production Area was located west of the Acetone Recovery Column and east of the ACL warehouse, in the northern portion of the Facility. The area was approximately 205 feet wide by 551 feet long. Between the 1920s and the late forties or early fifties, elemental phosphorus and phosphate salts were produced in this area. Subsequently, phosphorous pentasulfide was manufactured between approximately 1965 and 1988.

The Phosphorous Pentasulfide Production Area was decommissioned after production ceased in 1988. Decommissioning activities included the removal of potentially affected soils, buildings and plant production equipment, which were placed in the South Landfill. Most of the area

was covered with concrete during the active life of the phosphorous pentasulfide operation. Those areas which were not covered by concrete were covered with gravel during the decommissioning.

2.2.4.6 Former Holding Tanks, Aeration Basins and Clarifiers

The former holding tanks, aeration basins and clarifiers, located immediately north of the former WWTF, operated from 1961 until 1988. The units were similar in size and function to the replacement WWTF holding tanks, aeration basins and clarifiers, which were decommissioned upon shutdown of the parathion production unit. The units functioned in the treatment of wastewater through a biological process. The holding tanks stored process wastewater prior to biological treatment in the aeration basins and clarifiers. The wastewater treated at the WWTF contained primarily parathion, PNP, and acetone still bottoms. The 1988 decommissioning of the holding tanks, aeration basins and clarifiers included the cleaning, demolition, and landfilling of the structures in-place. During this process, the still bottoms were removed. A gravel layer covers the footprint (approximately 330 feet long by 160 feet wide) of the former unit. The gravel cover was inspected during the RFI/CS and found to be in good condition over the entire SWMU.

2.2.4.7 Underground Product Storage Tanks

The Underground Product Storage Tanks consisted of three USTs which were removed in the mid-1980s from locations in the northwest portion of the Facility. According to Facility personnel, the USTs stored products related to the parathion manufacturing process. The age and capacity of the USTs are unknown. A corporate-wide UST elimination program prompted the removal of the USTs.

2.2.4.8 Stormwater Drainage System

The stormwater drainage system is a Facility-wide network of catch basins, sewers, and lined and unlined storm drainage ditches. The system includes approximately 22,150 linear feet of underground piping and open trenches. The majority of the system consists of piping of varying age and construction, including vitrified clay, reinforced concrete and polyethylene materials. Pipe sizes range from 2 inches to 36 inches in diameter. The Facility NPDES Permit previously allowed the discharge of non-contact cooling water and condensate through the stormwater sewer

system. However, in 1996, all of this process related water was re-piped to discharge to the former WWTF. Consequently, only stormwater is discharged by the sewer system. The stormwater system is permitted by ADEM and currently includes one regulated and monitored NPDES outfall (DSN 012). Table 2-6 provides a list of existing and former stormwater outfalls at the Facility. Note that DSN 001, DSN 003 through DSN 011, and DSN 013 either no longer exist, have been re-directed to DSN 012 (therefore, no longer monitored individually), or have been removed as a monitored outfall based on previous sampling results.

In 1997, additional sewer system enhancements were constructed. These enhancements included sealing a number of unused collection sewers, which discharged into a trunk main that was lined with an epoxy resin-impregnated felt liner. The trunk main discharges to one of the previously designated NPDES monitoring points, DSN 001, which discharges to DSN 012. Some areas of the Facility do not drain to the upgraded system. These areas are primarily in the northwest corner of the Facility and include the closed West End Landfill and adjacent areas. The DSN 006 stormwater outfall currently conveys drainage from the closed West End Landfill. The monitoring requirement for this outfall was removed from the NPDES Permit after no detections of PCBs were measured from December 1997 through May 2001. The locations of the storm-water drainage upgrades and the current and previous NPDES outfalls are shown on Figure 2-3.

All process wastewater from the Facility is discharged to the Anniston POTW through discharge point DSN 002, permitted through the Facility's SID Permit (IU 35-08-00048). Solutia submits discharge-monitoring reports (DMRs) on a monthly basis to ADEM and the Anniston Water Works and Sewer Board. Treated water from the Anniston POTW is discharged directly to Choccolocco Creek through NPDES Permit No. AL0022195. Copies of the DMRs and the semi-annual monitoring reports generated from the SID permit from October 2007 to October 2008 are provided in Appendix I.

2.2.4.9 MCC Warehouse

The MCC Warehouse is a pre-engineered, slab on grade, single span, rigid frame steel building measuring 360 feet long by 120 feet wide. The building was identified as a potential source for

low level PCBs detected in stormwater run-off from the Facility. Interim remedial measures were completed and included the following:

- Removal of all visible PCB residues and subsequent cleaning of all exterior foundation walls and drainage ditches;
- Removal of loose dust and debris from affected areas;
- Dismantling and replacing affected building components (e.g. siding and supports);
- Decontamination of affected areas of the concrete floor, steel columns, exterior foundation walls and concrete ditches;
- Encapsulation of decontaminated concrete surfaces; and
- Placement of an asphalt cap over an adjacent rail spur.

The completion of these measures was reported to ADEM in September 2002. A voluntary industrial hygiene survey conducted at the MCC Warehouse during the winter and summer months of 2004 indicated airborne PCB concentrations well below the Occupational Safety and Health Administration (OSHA) permissible exposure levels (PEL). A total of 23 personnel and area samples were collected, with 15 (65%) of the samples showing no detectable levels of PCBs. The maximum PCB concentration detected was 0.0013 milligrams per cubic meter ([mg/m^3], approximately 750 times below the OSHA PEL of 1 mg/m^3) in an area sample collected at the MCC Warehouse drumming station during the summer months. The data were presented to the EPA in the Addendum to the Preliminary SCSR (Solutia, 2006).

2.3 Groundwater Detection/Corrective Action Program

The current RCRA Permit has an effective date of October 31, 2008. Under RCRA, two groundwater monitoring programs (the detection monitoring program and the corrective action effectiveness program) are currently in effect at the Facility. Both programs consist of semi-annual and annual sampling and water level measurements.

The Groundwater Detection Monitoring Program consists of three downgradient point-of-compliance monitoring wells and one background well, all of which monitor WMA I

including closed Hazardous Waste Cells 4E and 5E in the eastern portion of the closed South Landfill.

The Corrective Action Effectiveness Program consists of monitoring for two corrective action systems: the WMA II Corrective Action System and the SWMU 1 Corrective Action System. Each of the corrective action systems includes a series of recovery wells and monitoring wells. The monitoring wells are subdivided into effectiveness wells, point-of-compliance wells, and boundary wells.

The monitoring wells included in the two programs and the constituents sampled in each of the wells are presented in Table 2-2. Figure 2-4 presents the locations of the monitoring wells included in the two programs.

As these monitoring programs have been in existence for over 20 years, large amounts of data exist concerning the detection monitoring and monitoring of the corrective actions systems. These data are submitted to the ADEM and the EPA in semi-annual reports. Sections 3.0 and 4.0 present data from the detection monitoring and the corrective action systems monitoring programs.

2.4 RFI/CS Program

A RFI/CS Program was implemented for the Facility under Corrective Action Program provisions of the RCRA Permit. The final RFI/CS Report was submitted in October 2002 (Golder, 2002) and approved by the EPA and the ADEM. Solutia submitted (and ADEM/EPA approved) a Supplemental RFI/CS Work Plan, which included a previously submitted Supplemental Soil Sampling Plan and a Revised Interim Measures Plan to provide additional data for Corrective Measures Study (CMS) evaluations. The Supplemental RFI/CS Report was submitted in May 2003 (Golder, 2003). As presented below, the investigations and remedial activities conducted under this program have been subdivided under two headings for soil and groundwater related investigations.

2.4.1 Soil Investigations

In accordance with the RFI/CS Work Plan, seventeen surface or near-surface soil samples were collected from various locations across the Facility. In addition, five subsurface samples were collected. Soil sample locations are shown on Figure 2-5. These samples were obtained to evaluate the potential for off-site migration from different SWMUs, confirm the effectiveness of existing corrective measures (landfill caps), and investigate areas that exhibited visual indications of residual staining. The constituents sampled at each location are presented on Table 2-3. As indicated in the RFI/CS Report (Golder, 2002), based on site-specific risk evaluations, the only additional corrective measure proposed for the on-Facility area soils was a cover system over SWMU 44 to address PCB concentrations in soil. This area has subsequently been capped with concrete.

In accordance with the Supplemental RFI/CS Work Plan, the following additional soil sampling investigations were conducted:

- Four soil samples were collected and analyzed for PCBs at the Scrap Yard-Oil Satellite Accumulation Area, the Boiler Feed Tank, the former Steam Cleaning Pad, and the Product Storage Tank;
- Nine samples were collected in the vicinity of the Phosphoric Acid Basins and analyzed for PCBs; two of the samples were also analyzed for mercury;
- Eight composite soil samples were collected from the surface of the closed South Landfill Cap and analyzed for PCBs; and,
- One soil sample was collected in the vicinity of the Former PCB Production Area and analyzed for polychlorinated dibenzofurans (PCDFs).

The sample locations are shown on Figure 2-5. The constituents sampled at each location are presented on Table 2-3. The results are presented in Section 4.3. Sampling data collected prior to the RFI/CS Program on the closed South Landfill are also included on Figure 2-5. Additional characterization data for the landfill is included in Appendix A-1. These samples were collected prior to constructing the upgraded cover system on the landfill.

Prior to the RFI/CS Program, drainage ditches with affected sediments had been closed and surface water had been rerouted, often through piping. Since no creeks, streams, or significant

ditches holding water remain on the Facility, sediment has not been sampled or analyzed as a separate media from soil in the RFI/CS.

2.4.2 Groundwater Investigations

During the RFI/CS Program, a Facility-wide groundwater sampling investigation was conducted to provide supplemental information on the geology, hydrogeology, and groundwater quality underlying the Facility. Twelve new monitoring wells (five shallow and seven deep) were installed during the investigation. For each well installed, soil lithology was determined. Hydraulic conductivity testing was performed on each new well and some existing wells. Water level measurements were also recorded.

Groundwater samples were collected from the 12 new monitoring wells (OWR-01D, OWR-01S, OWR-02D, OWR-02S, OWR-03D, OWR-03S, OWR-04D, OWR-05D, OWR-06D, OWR-07D, OWR-08S, and OWR-09S) and eight existing wells (MW-01B, OW-09, OW-10, CB-85, WEL-01, WEL-02, WEL-03 and WEL-04). The existing wells were included in the RFI/CS Program to provide additional groundwater quality points along the perimeter of the Facility. Samples were collected from the wells installed in the shallow residuum to either investigate specific SWMUs or confirm perimeter containment. Groundwater samples were collected from the deep residuum observation wells to determine if Facility related constituents were migrating downward. Biological and inorganic parameters were also collected from seven wells (CB-85, OW-10, MW-01B, OWR-01S, OWR-01D, OWR-02S and OWR-02D) to provide data for potential corrective action strategies. Each of these tasks was performed in accordance with the ADEM approved RFI/CS Work Plan (Golder, 1997). The monitoring well locations are shown on Figure 2-2. The constituents sampled at each well are presented on Table 2-4. The results are presented in Section 4.4.

In accordance with the Supplemental RFI/CS Work Plan, four additional observation wells (OWR-10, OWR-11, OWR-12, and OWR-13) were installed to obtain groundwater quality information at specific SWMUs; one observation well (OW-21) was abandoned and re-installed (OW-21A); four additional interceptor wells (IW-22, IW-23, IW-24, and IW-25) were installed to upgrade the WMA II Corrective Action System; and interceptor well IW-14 was abandoned and re-installed as IW-14A. The locations of these wells are shown on Figure 2-2.

During the Supplemental RFI/CS Program, an angled boring (AB-1) was drilled to determine the hydraulic properties of the interface (contact) of the discontinuity discussed in Section 2.2.2. This angled boring, advanced 30 degrees from vertical, was to be used to identify any brecciated or preferential, higher-permeability flow paths at the discontinuity contact, if present, that might act as a transport route for groundwater. The boring was advanced using a 4.25-inch inside diameter hollow stem auger (HSA). Continuous soil sampling was conducted throughout the length of the borehole using a five-foot CME™-sampler inside the HSA. Once bedrock was encountered, air-rotary drilling was employed to advance the boring into the rock about five feet to confirm competent bedrock, and identify the refusal material. After the boring was completed, a single-shot borehole camera was used to confirm the borehole inclination at the middle and bottom of the hole. The borehole was then abandoned (tremie-grouted) with a cement-bentonite slurry.

2.5 RI Program

A RI Program was implemented for the Facility in accordance with the EPA approved OU-3 FSP (Golder, 2005a). Discussions of the OU-3 investigations undertaken pursuant to the OU-3 FSP are provided below under the headings of soil investigations and groundwater investigations.

2.5.1 Soil Investigations

Soil sample results from the RFI/CS and Supplemental RFI/CS Programs provided good coverage of suspected contaminant sources (AOCs, SWMUs, and WMAs) on the Facility. However, due to the nature of the investigative programs for which the data were collected, the samples from these programs were biased as the samples were collected only at areas of suspected contamination. In addition, a preponderance of the data was collected from surface soil with only limited analysis of subsurface soil. Consequently, P/S agreed that additional surface and subsurface soil data were needed to further characterize areas of the Facility and provide the data necessary for completing the HHRA. In accordance with the OU-3 FSP, the following soil sampling investigations were conducted to address these issues:

- Fourteen surface and subsurface soil samples were collected and analyzed for PCBs to augment the RFI/CS data set by providing a broader geographic sample coverage and providing sufficient samples to allow for the calculation of a 95% Upper Confidence Limit (UCL) Exposure Point Concentration for risk assessment purposes;

- The PCB results were reviewed, and three sample locations were selected to represent areas of high, medium, and low PCB concentrations. These locations were sampled and analyzed for a broad suite of parameters as listed on Table 2-3; and

- Two surface samples were collected at the closed West End Landfill to determine the PCB concentrations in the cover soils above the landfill cap.

The sample locations are shown on Figure 2-5. The constituents sampled at each location are presented on Table 2-3. The results are discussed in Section 4.3. Additional characterization data for the landfills are presented in Appendix A-1.

2.5.2 Groundwater Investigations

After the conclusion of the RFI/CS and Supplemental RFI/CS Programs, P/S identified groundwater data gaps for areas of the Facility and collected additional groundwater samples to address these data gaps. The following groundwater investigations were conducted in accordance with the OU-3 FSP to address these issues.

The deep residuum zone was investigated in two additional areas. One area was in the vicinity of OW-16A. A deep residuum well (OWR-15D) was installed at this location to determine whether impacts detected at OWR-05D have migrated laterally or whether impacts from the shallow residuum are migrating to the deeper zones. The second area of investigation was in the vicinity of OWR-13 (Former PCB Production Area). A deep residuum well (OWR-14D) was installed at this location to assess the potential for vertical migration of contaminants into the deeper zone. These two wells were sampled for the parameters listed in Table 2-4. The well locations are shown on Figure 2-2.

To provide an understanding of the source of the impacted groundwater reported in well OW-21A, located north of the Facility boundary, one temporary well (T-04) was installed south (upgradient) of well OW-21A. Groundwater from this well was sampled and analyzed for the parameters listed in Table 2-4. A groundwater sample was also collected from monitoring well MW-07 to determine the nature and downgradient extent of PCBs and other constituents reported at well OW-21A. This well is approximately 100 feet down-gradient of OW-21A, as shown on Figure 2-2. This well was redeveloped prior to sampling. The sample from MW-07 was analyzed for cobalt, PCBs, parathion and PNP (Table 2-4). An additional temporary well

upgradient from OW-21A was to be installed as part of the RI Program. However, utilities and the presence of the railroad tracks prevented its installation at the location described in the OU-3 FSP. Further movement of the well upgradient was not a viable option as the location would have coincided with the WMA II Corrective Action System.

MW-14 was sampled for the constituents included on Table 2-4 to evaluate the nature and extent of groundwater impacts (if present) in this area. Monitoring wells OWR-01S, OW-09, and OW-10 were sampled for the constituents included on Table 2-4 to confirm that these constituents are not migrating off the northeastern portion of the Facility. In addition, three temporary monitoring wells (T-01 through T-03) were installed and sampled to provide more robust well coverage in this area of the Facility. One additional round of groundwater samples was collected in the area of the closed West End Landfill. The samples were collected from OWR-07D, OWR-10, WEL-01, WEL-02, and WEL-03 and analyzed for the parameters listed on Table 2-4. P/S agreed to collect samples for a broad suite of analytical parameters at three well locations chosen to represent high, medium, and low PCB concentrations along a flow line. Samples were collected from wells OW-08A, OW-09, and OW-16A for this purpose. In addition, select perimeter wells (MW-14, OWR-01S, OW-10, and the four temporary wells discussed above) were also sampled for the broad suite of parameters listed in Table 2-4. The methodology for well installation and sampling is described in detail in the Preliminary SCSR (Golder, 2005b). Copies of boring logs and well installation logs are included as Appendix C. The locations of these wells are shown on Figure 2-2.

Based on a review of the Preliminary SCSR, the EPA raised concerns regarding colloidal transport as a potential mechanism responsible for the presence of PCBs in the deep residuum. To address this issue, P/S agreed with the EPA's suggestion to collect samples using a 1.0-micron filter as part of the RCRA groundwater monitoring event in April 2006. Samples from observation wells with historic detections of unfiltered PCBs (OW-08A, OW-16A, OW-21A, and OWR-15D) were collected for total PCB and 1.0-micron filtered PCB analysis. In addition, during a later investigation of the site bedrock, groundwater samples filtered using the 1.0-micron filter were also collected.

The EPA also had questioned the depth extent of PCB-impacted groundwater and whether the potential presence of a DNAPL may serve as a source of elevated PCB detections in groundwater.

P/S addressed this concern in two ways. Initially, a groundwater sample was collected from SBP-03 as part of the April 2006 RCRA groundwater monitoring program. Subsequently, two bedrock wells (T-06 and T-05) were installed in a line between OWR-14D and OWR-15D in accordance with the OU-3 FSP Addendum (Golder, 2006b). During the installation of these wells, weathered bedrock (the base of the residuum) was encountered at a depth of approximately 60 feet bgs (weathered dolostone) and the lithology observed in the core samples was dry. A water producing zone was not encountered until approximately 115 feet bgs. P/S conducted groundwater depth profiling at approximately 115 feet bgs at both well locations to determine the correct placement depth of the monitoring well screens. The desired well installation depth was to coincide with the sample depth where the field PCB concentration was measured below 0.5 micrograms per liter (µg/l) or where the PCB concentration profile and stratigraphy dictated that further depth profiling was unnecessary. Two groundwater samples were collected from each well at the following depths: a) T-05 from 115 to 125 feet bgs and 125 to 135 feet bgs, and b) T-06 from 115 to 116 feet bgs and 121 to 125 feet bgs. The samples were filtered and analyzed for PCBs using the RaPID Assay PCB Field Test Kit. Following consultation with the EPA's representative, the temporary shallow bedrock monitoring wells were installed to 128 feet bgs and 125 feet bgs for T-05 and T-06, respectively. Observations of core samples indicated no visual evidence of DNAPL at depth. Samples collected from the two wells were analyzed for the constituents listed on Table 2-5. The semi-confining unit observed in the deep residuum during previous investigations extends through the weathered bedrock zone, to the top of bedrock. As a result, PCB impacts are generally restricted to groundwater in the shallow residuum, with low level impacts in the deep residuum (shallower than approximately 80 feet bgs – the depth of OWR-14D). The procedures and results of this field sampling program are included in the Preliminary SCSR Addendum (Golder, 2007a). Copies of boring logs and well installation logs are included as Appendix C. The locations of these wells are shown on Figure 2-2.

2.6 Groundwater Investigation for Non-Residential Properties

A groundwater investigation was conducted in March and April of 2008 on the Solutia-owned Northside Property immediately adjacent to the Solutia Facility. The investigation was conducted as part of a broader investigation for the non-residential portion of OU-1/OU-2. Prior to the investigation, groundwater sampling had been performed in the southern portion of the Northside Property in connection with WMA II. The groundwater data associated with OW-21A, T-04,

SBP-3, and MW-7 indicated a localized area of impact in the immediate vicinity of OW-21A. Other wells sampled in the southern portion of the Northside Property (MW-08, MW-09A, and MW-14) showed no detections of PCBs. While the data indicated a localized impact area, no groundwater data were available in the northern (presumed downgradient) portion of the Northside Property beyond MW-07.

For this investigation, two shallow, temporary wells were installed north of the OW-21A area. One of these two wells (T-09) was installed with the intent of being directly downgradient of the T-04/OW-21A/MW-07 location, while the second well (T-10) was installed east of the first, to provide for potential variations in groundwater flow direction.

Two additional temporary wells (T-08 and T-12) were installed in an area located further east, but remaining on the Northside Property. These two wells were installed downgradient of an area that had been previously covered with an HDPE geomembrane. The cover system had been installed in this area due to PCB impacts in the soil (i.e., PCB impacts above 500 mg/kg). This study was set up specifically to address the question as to whether PCB-impacted soil stored under cover systems would act as a source for groundwater contamination. The conceptual model established for this potential source considered downward leaching of precipitation as the only mechanism for groundwater impact, as all of the PCB –impacted soil on the Northside Property was above the water table.

The locations for these wells are shown on Figure 2-2. Each of these wells was sampled and analyzed for PCBs by both Aroclor and homolog methods. Filtered samples were collected using a 2.0-micron filter[4] and a 0.1-micron filter. A more detailed discussion of the investigation is presented in the June 2008 Groundwater Report for Non-Residential Properties in Operable Unit 1/Operable Unit 2 (Golder, 2008).

2.7 Surface Water/Stormwater Program

Surface water/stormwater samples have been collected on a quarterly and semi-annual basis in accordance with the Facility's NPDES Permit (No. AL0001201). The locations of the NPDES outfalls are shown on Figure 2-3, and a description of each outfall location is included in

[4] At the request of the EPA, a 2.0-micron filter was used in place of a 1.0-micron filter.

Table 2-6. Analytical sampling data from the NPDES Program have been provided on Table 2-7. The constituents monitored for each outfall vary due to changes in how the Facility addressed stormwater and changes to the Facility's NPDES Permit.

One stormwater outfall (DSN 012) is currently regulated at the Facility under a NPDES Permit, and one non-stormwater discharge point, DSN 002, is regulated under a SID Permit from the Facility's former WWTF. Outfall DSN 012 discharges stormwater flow from the plant site area, closed South Landfill, and east side properties. Stormwater outfall DSN 012 is sampled quarterly for flow; pH, BOD; COD; oil and grease; total suspended solids (TSS); total dissolved solids (TDS); and, PCBs. The outfall sample analytical results for DSN 012 are included in Table 2-7.

In addition to the NPDES Program, surface water samples were collected during the RFI/CS Program in June and July 1998 to assess the possible migration of constituents by surface water routes from the Facility production areas. Two NPDES outfall points (DSN 004 and DSN 005) were sampled after precipitation events that produced enough water flow to the outfall points. The analytical results are included in Table 2-7.

Other stormwater outfalls at the Facility that are no longer included as part of the Facility's NPDES Permit include:

- DSN 001 – This stormwater outfall historically served as a Facility process water discharge point. The discharge point was removed from the NPDES Permit after all process related water was re-routed to outfall DSN 002 and flow from the outfall was conveyed by piping to outfall DSN 012;
- DSN 004 – This stormwater outfall discharges stormwater flow from the Facility production area and represented flow from outfalls DSN 003, DSN 004 and DSN 005. The monitoring point continues to discharge stormwater but was removed from monitoring following the shutdown of the PNP plant when the new NPDES Permit was issued in January 2007;
- DSN 006 – Presently, this stormwater outfall is actively conveying drainage from the closed West End Landfill. The monitoring requirement for this outfall was removed from the NPDES Permit, however, after no detections of PCBs were measured from December 1997 through May 2001; and

- DSN 007 thru 011 – These stormwater outfalls were used to monitor surface water from the closed South Landfill. The outfalls were eliminated from the NPDES Permit when improvements were made to the stormwater conveyance system on the closed South Landfill that converted these to internal outfalls, which all flow to outfall DSN 012.

2.8 Air Monitoring Program

The Phase I CSM Report (BBL, 2003) summarized the results of air samples collected at or near the Facility between 2000 and 2002 by both P/S and the EPA. Five stations were monitored by P/S (the East (1), South (2), West (3), North (4), and Northeast (5) Stations) for PCBs from January 25, 2000 to December 18, 2002. Duplicate samples were collected from the East (1) Station location. The EPA monitored eight additional locations in June 2000. These locations are defined in Table 2-8 and presented in Figure 2-6.

Following the 2000 to 2002 monitoring, P/S conducted an ambient air monitoring program near the Facility. The program was designed to monitor the air pathway in the area surrounding the Facility and aid in identifying any PCB source not yet distinguished by the Facility using air pathway analysis. The program included three additional stations (Near East (6), Northwest (7), and Far West (8)). ADEM approved the design of the program which was outlined in the RFI/CS Air Monitoring Work Plan (Revision 2.0) dated October 2002 (ENSR, 2002). Details of the program included monthly monitoring of ambient PCBs and continuous collection of meteorological monitoring data over the course of a one-year period from April 2003 through March 2004. Full details concerning the air sampling program can be found in the RFI/CS Air Monitoring Report, dated July 2004 (ENSR, 2004).

Meteorological monitoring occurred continuously during the 12-month program at the "6-Near East" sampling station (see Figure 2-6), which had site exposure, site accessibility, meteorological conditions similar to those in potential source areas, as well as proximity to existing power and telephone lines. Meteorological monitoring parameters were directly measured and the standard deviation of the wind direction was automatically calculated. Initial, semi-annual, and final calibrations were performed on all sensor instrumentation to ensure the validity of the data. Events affecting validity were documented.

Ambient air monitoring took place at eight sites (see Figure 2-6): four sites (one in each of the four directional quadrants) to provide information about fence line ambient PCB concentrations, one site at a location previously used by the EPA for ambient PCB monitoring, and three additional sites to facilitate collection of data representative of conditions upwind and downwind of the Facility. During the 12-month monitoring period, 24 sampling sessions were conducted at a rate of two sessions per month, measuring parameters that included the mono through deca PCB congener class sums. The following five types of samples were collected (via EPA Method TO-4A) during this program: 24-hour continuous samples (filter and PUF analyzed together), 24-hour continuous samples (filter and PUF analyzed separately), nocturnal/diurnal samples, field blanks, and co-located samples. After sample collection, valid samples were analyzed using gas chromatography/mass spectrometry. Results from the air sampling programs are discussed in Section 4.6.

2.9 Potable Well Survey

As part of the RFI/CS Program, P/S initially investigated private potable well usage in a one-mile radius of the Facility, as shown on Figure 2-7, by determining which residents were customers of the local water utility. Although the utility would not provide customer-specific information, the utility confirmed that it provided water service to all of the area within a one-mile radius of the Facility. In addition to this initial investigation, residential properties sampled within a one-mile radius of the Facility as part of the Removal Order were visually inspected, and no private potable wells were identified during the sampling activities. Additionally, ADEM completed a water supply well survey for the area (ADEM, 2000). This report stated that only one active water supply well is located within four miles of the ADEM site (located on the Union Foundry property approximately one mile from the Facility).

During the Supplemental RFI/CS Program, Solutia placed an advertisement in the local newspaper in order to obtain additional confirmation that no potential groundwater receptors are located within a one-mile radius downgradient of the Facility. This advertisement ran for three consecutive days, including a Sunday.

During the RI Program, P/S conducted a door-to-door survey of private wells within a one-mile radius around the Facility. If the owner or occupant of the residence or business was not

available, a flyer was left requesting that the owner or occupant contact P/S if the property had a well. If the parcel was vacant land, field personnel surveyed the parcel to determine if wells were present. If wells were identified by any of the methods described, the type of water usage, the well construction method, the number and age of users, and the volume and rate of water usage were documented. The results of the potable well survey are discussed in Section 3.2.

2.10 Summary

Prior to initiating the RI program, extensive investigations of soil, surface water/sediment, ambient air, and groundwater were conducted as part of the RCRA Program at the Facility dating back over 30 years. These investigations formed the basis for the site conceptual model and scope of work for the RI Program. For soils, the previous investigations focused on individual SWMUs or WMAs. For groundwater, sampling was focused in areas with known contamination (i.e. in the vicinity of SWMU 1 and the OLBSI) and at the perimeter of the Facility. One of the conclusions that has been drawn from these investigations is that the site should be considered as a single source rather than evaluated on a SWMU basis. Therefore, as discussed in Section 4.0, the data (RFI/CS, RI, etc.) are combined and reviewed by media rather than by potential source area except that individual SWMU locations were considered when attempting to identify sources of soil or groundwater contamination.

Numerous interim measures have been completed at individual SWMUs and at other locations at the Facility. These interim measures have included among other things, landfill capping, contaminated soil excavation, in-plant surface improvements (pavements), decommissioning of units and tank removals, and installation of groundwater corrective action systems. As a result of these interim measures, the majority of the plant surface area is covered with gravel, asphalt, or concrete pavement, which limits access to underlying soils. One exception is the grassy area north of the employee parking lot.

3.0 PHYSICAL CHARACTERISTICS INVESTIGATION RESULTS

3.1 Geology/Hydrogeology

3.1.1 Bedrock Geology

Regional geologic mapping shows the area within the vicinity of the Facility to be underlain by rocks of the Weisner Formation, Shady Dolomite, and Rome Formation. Coldwater Mountain, southeast of the Facility, is primarily underlain by the Weisner Formation, which is composed of sandstone, shale, and quartzite. The Shady Dolomite is present along the lower slopes of Coldwater Mountain and within the valley in which the Facility is located. Although this formation is reported to be up to 500 feet thick, only the lower 150 to 200 feet of the Shady Dolomite is considered to be present in the Anniston area, due to folding, thrust faulting, and erosion. The Shady Dolomite is reported to consist of light bluish-gray to pale-yellowish gray, thick-bedded, argillaceous to sandy dolostone and dolomitic limestone with lenses and layers of chert. The Shady Dolomite weathers to dark reddish-brown, clay to sandy clay with variable amounts of chert gravel, cobbles and boulders. This residuum is the result of in-situ chemical weathering, and the soil is comprised primarily of the insoluble residue remaining from solutioning of the carbonate bedrock. The Rome Formation, which stratigraphically overlies the Shady Dolomite and locally underlies the Facility, is reported to primarily consist of red-green shale/siltstone interbedded with red/light gray sandstone with minor limestone/dolostone units. The Rome Formation typically does not weather as deeply as the Shady Dolomite, consisting generally of silty to sandy clay with sandstone and/or mudstone fragments in the clay matrix.

The structural geology of Anniston-Coldwater Mountain-Bynum Sector is characterized by a large, complex anticlinal structure, which forms Coldwater Mountain (Osborne and Szabo, 1984). This structure, referred to as the Coldwater Anticline, formed on the hanging wall of the Jacksonville Fault due to compressional forces associated with movement along the fault. Unpublished mapping by the Geological Survey of Alabama shows that the Coldwater Anticline is actually comprised of a series of tightly folded anticlines and synclines. Geologic cross sections (located on Figure 3-1 and presented as Figures 3-2 and 3-3) were constructed from the southern flank of Coldwater Mountain to the southeast, across the Facility, and ending just south of the Jacksonville Fault (as mapped by USGS), to the northwest using data recorded on boring logs for various wells and piezometers at the Facility. As shown in Figure 3-2, the Shady

Dolomite underlies most of the Facility, except for the extreme southern end, which is underlain by the Weisner Formation, and the northern end, where the Rome Formation is shown to occur.

Throughout previous investigations, the Lower Cambrian formations in northwest Georgia have been interpreted to occur in a series of stacked thrust sheets near the Emerson-Great Smoky Fault, which is the boundary between the Blue Ridge/Piedmont and Valley and Ridge Physiographic Provinces. The normal basal Cambrian stratigraphy consists of the Wilson Ridge Formation, Weisner Quartzite (Chilhowee Group equivalents), and the Shady Dolomite. The basis of the stacked thrust sheet interpretations was the repetition of major geologic units and lithologies such as a sequence of (the youngest) Shady Dolomite, overlain by an upright sequence of Wilson Ridge, Weisner, and Shady Dolomite. In the Cartersville area, such thrust sheets locally repeat 4 to 5 or more times as intact, upright Lower Cambrian sequences. Intense faulting is associated with the units that have a more clastic component (i.e. shale), are generally weaker, and are more lithologically heterogeneous, such as the Weisner and Wilson Ridge; however, intense faulting associated with a series of imbricate thrusts is less likely to occur wholly within the Shady Dolomite Formation due to its lithologic homogeneity and its characteristic of being a highly competent dolostone. Indications of imbrications entirely within the Shady Dolomite Formation have not been recognized in the southeastern fold and thrust belt (personal communication: John Costello, Georgia Environmental Protection Division).

To confirm the presence of stacked thrust sheets, the repetition of several major geologic units must occur. Regional geologic mapping by Warman and Causey (1962) and Osborne and Szabo (1984) do not indicate the presence of multiple geologic units crossing the project site. Fill and residual soils cover the ground surface at the site; and subsurface geology has primarily been inferred based on interpretations of soil and rock core borings made by various workers over several decades. Based on these boring interpretations, the site is considered to be primarily underlain by residual soils and rock of the Shady Dolomite Formation. The northwest corner of the site is interpreted to be underlain by residual soil and rock of the Rome Formation where it is in an inferred fault contact with the Shady Dolomite Formation.

The Jacksonville Fault is projected to occur below the Facility; however, it was not encountered in a boring advanced over 950 feet bgs[5] at the site, so the actual depth below ground surface beneath the Facility is unknown. Although this fault is interpreted to function as a conduit for groundwater flow (discussed in Section 1.3.2.5), recharge to the fault is unlikely to occur at the Facility due to the significant thickness (60 to 100 feet) of low-permeability clay residuum overlying bedrock (Golder, 2007b). Additionally, although a downward gradient exists, groundwater has been demonstrated to predominantly flow laterally beneath the Facility (Golder, 2007b).

3.1.2 Discontinuity Investigation

As described in Section 2.2.2, a discontinuity was interpreted to occur in the northwest portion of the site using surface geophysics supplemented with a CPT and borehole drilling program. The depth to bedrock was encountered between 82 to 129.5 feet bgs in borings south of the discontinuity, and bedrock was not encountered at depths up to 540 feet north of the discontinuity. Lithologic characteristics of soil samples also differed in borings advanced south versus north of the discontinuity. The discontinuity can either be interpreted to represent a steep southeast-dipping reverse fault (as shown on Figure 3-2) or a steep northwest-dipping normal fault, either of which would juxtapose the older Shady Dolostone and the younger Rome Formation. Alternatively, tight secondary folding within the hanging wall of the Coldwater Mountain Anticlinorium associated with faulting along the deep-seated Jacksonville Thrust would provide a mechanism for abruptly upturned geologic units in normal stratigraphic position. Indication of near-vertical bedding was not provided in regional mapping or on boring logs used to develop geologic interpretations for this portion of the site; additionally, indication of normal or reverse faulting was not provided in regional mapping, leaving interpretation of the Rome Formation and Shady Dolomite in this area uncertain.

During the Supplemental RFI/CS Program, the potential for the discontinuity to be a groundwater conduit was investigated by advancing an angled boring (AB-1) 109.5 linear feet through the area in which the discontinuity was interpreted to occur. The boring was advanced from the north side of the discontinuity location towards the south at a 30 degree angle. The estimated distance from

[5] A former site production well was drilled to a depth of 958 feet bgs. Evidence of the fault was not recorded in the boring log for that well.

the ground surface to the discontinuity was 50 to 60 feet. The location of the AB-1 boring is shown on Figure 3-4. Drilling logs for the borehole were provided in the Supplemental RFI/CS Report (Golder, 2003) and are included in Appendix C. No brecciated areas or zones of enhanced permeability were observed. Residual soils encountered during drilling consisted of a very stiff, dry to moist, and mottled silty clay with minor occurrences of chert gravel from approximately 10 feet bgs until bedrock was encountered at a linear drilling depth of 102 feet (corresponding to approximately 88 feet bgs at a location 51 feet away from the boring start point). The residual soil encountered contained shale fragments indicative of the Rome Formation. Samples of bedrock recovered from the boring consisted of weathered to fresh olive gray shale from 102 to 103 feet. Light-gray limestone was encountered below the shale and appeared to be fresh and competent bedrock. The boring was terminated in this limestone unit. A pathway for groundwater transport from the Facility was not found in the angled boring that was installed. Recharge to the fault is unlikely to occur at the Facility due to the significant thickness (60 to 100 feet) of low-permeability clay residuum overlying bedrock (Golder, 2007b).

3.1.3 OU-3 Soil Stratigraphy and Hydrogeology

During each subsurface Facility investigation, soil samples and drill cuttings from the soil boring programs were visually identified and logged by a field geologist. For investigations conducted prior to the RFI/CS investigations, a review of these boring logs was conducted to compile a thorough understanding of the near surface stratigraphy at the Facility. This information was presented in the RFI/CS Work Plan (Golder, 1997). As discussed in that document, and again in the RFI/CS Report (Golder, 2002), the stratigraphy consists of residuum underlain by bedrock.

3.1.3.1 Residuum

Carbonate rocks in the southeastern United States have typically experienced deep, subtropical weathering that result in a thick sequence of residual soil in direct contact with fresh rock. The Shady Dolomite is known throughout the region for having a thick residual soil cover commonly exceeding 100 feet. This thick residuum is not necessarily a function of structural deformation but related to deep weathering in a subtropical climate. The residual soils at the site range in thickness from about 60 to 100 feet, as shown on Figures 3-2 and 3-3 and generally consist of silts and clays that are significantly lower in permeability relative to the underlying carbonate bedrock. Because of the relatively lower permeability, this residual soil layer behaves as a semi-

confining unit to the underlying Shady Dolomite. In general, boring logs indicate the residuum becomes denser with depth, as expected in a typical weathering profile. For this reason, the residuum has been loosely divided into two units at the Facility.

The material from the surface to a depth of approximately 45 feet bgs is referred to as the shallow residuum. This material consists of fine- to coarse-grained sandy to silty clays across most of the Facility. Seams of white and purple clay were observed in some borings. Sand- and silt-filled fractures (<1 centimeter [cm]), chert gravel zones, and localized "pockets" of highly weathered sandstone and quartzite were observed in several borings. The material from approximately 45 feet bgs to the top of weathered bedrock is referred to as the deep residuum. The deep residuum is characterized by the same silty clay materials as the shallow residuum. However, there are localized areas within the deep residuum consisting of dense clay with little or no secondary permeability, particularly in the northern portion of the Facility. Locally, these areas could act as groundwater flow barriers.

3.1.3.2 Bedrock

Evidence of different, interlayered geologic formations was not observed in borings T-05 and T-06. Material observed in these borings consisted of an interlayered sequence of fresh Shady Dolomite and variably weathered material, ranging from residual clays and silts, to residual mudstones and siltstones. This variably weathered material is considered to be the product of differential chemical solutioning of the adjacent dolostone and is not considered to represent different geologic formations juxtaposed by a complex sequence of thrust faults. The interlayered material occurs on a scale of inches to generally less than 5 feet. Stacked thrust sheets generally occur on the scale of 100s to 1000s of feet, and are not known to occur wholly within the Shady Dolomite Formation.

Although slickensides were not observed on the fresh rock core in borings T-05 and T-06, slickensides can locally be developed in soils or soft rock during the drilling process. These modern slickensides (which are indicators of recent movement) are very localized features, are not indicators of faulting and should not be confused with tectonic slickensides (which are indicators of faulting) that occur on hard rock surfaces. Additionally, stylolites were not observed on the fresh rock core. Stylolites are developed from pressure solutioning along bedding planes

and represent less permeable zones than the surrounding rock because the stylolitic surface is highly irregular and represents the concentration of insoluble material. Although slickensides and stylolites were not observed in the rock core for borings T-05 and T-06, even if they were present, these features do not support the hypothesis of stacked thrust sheets beneath the site.

Because the Shady Dolomite has experienced chemical solutioning due to its overall composition, once encountered, the bedrock can occur as a sequence of fresh to slightly weathered beds interlayered with unconsolidated materials that are likely the result of void infilling or in-situ solutioning along bedding. This interlayered zone has been encountered at the site in several borings at depths starting between about 55 feet bgs to over 100 feet bgs, as shown on Figures 3-2 and 3-3. The interlayered nature of the rock and soil is considered to primarily be a function of in-situ chemical solutioning. However, rocks that are folded are commonly associated with fracturing. If the Shady Dolomite was folded in this area, it is considered likely that the rock was fractured as well. Fracturing can promote greater depths of weathering, particularly in a subtropical weathering environment. Depth to competent bedrock (i.e. greater than 20 feet of continuously fresh rock) was encountered in borings variably between about 100 feet bgs up to about 145 feet bgs. This vertical variation in depth to bedrock is characteristic of dolomitic or limestone bedrock. In areas where the bedrock has not been solutioned, permeability is likely even lower than the overlying residuum and interlayered zone of rock and soil.

During the RFI/CS Program, undisturbed Shelby Tube samples of the cohesive soils were obtained for geotechnical laboratory testing from both the shallow and deep residuum. Laboratory analyses of the undisturbed cohesive soil samples included grain size, Atterberg Limits, natural moisture content, in-situ density, vertical permeability, and calculation of porosity. Results of the laboratory soil tests were presented in the RFI/CS Report (Golder, 2002). The grain size and Atterberg Limits results indicate that the cohesive soils are predominantly low to high plasticity silts and clays with the Unified Soil Classification System (USCS) designation ranging from MH and ML to CH and CL.

3.1.3.3 Hydrogeology

Total porosity values were estimated from wet and dry weight from the undisturbed soil samples, with results ranging from approximately 30 percent to 60 percent. The porosity values exhibited

no apparent trend relative to depth or spatial location. The variability of the results is attributed to the highly heterogeneous nature of the soil and the different weathering rates of the soil constituents.

Based on observations made during the boring investigations, the laboratory values of total porosity do not provide a reasonable basis for estimating the effective porosity of the residuum as a whole. The presence of wetted fractures, the apparent secondary permeability features such as weathered chert gravel and sand lenses, and the in-situ fabric of the weathered residuum could all result in higher seepage velocities. Although there did not appear to be any interconnectivity between these features among adjacent borings, the effective porosity has been estimated at between 2 percent to 20 percent. Effective porosity is a measure of the interconnectedness of actual porosity. This range of values is likely a better estimate of the mass effective porosity of the groundwater flow regime in residuum at the Facility.

As reported in the RFI/CS Report (Golder, 2002), investigations conducted at the Facility have determined that the near-surface geology consists of two water-bearing zones; the residuum and the variably solutioned Shady Dolomite. Water levels in the residuum generally occur under unconfined (water table) conditions and reflect recent and seasonal variations in precipitation. Typically, the water table surface is a reflection of the ground surface and shallow groundwater flow follows topography. Groundwater elevations in the shallow residuum range from less than 730 feet msl in the northwestern portion of the site to greater than 750 feet msl in the southeastern portion of the site, as shown on Figures 3-2 and 3-3. The predominant lateral groundwater flow direction within the residuum is generally to the north. This flow direction is a result of a relatively steep gradient that exists across the northern face of Coldwater Mountain, trending into a much flatter gradient across the production area of the Facility. Based on hydraulic head data, the vertical flow direction appears to be downward, from the residuum to the bedrock. It is noted that gradients are both downward and generally to the north. As evidenced by the groundwater corrective action systems, interconnection of secondary porosity features is limited, meaning there is very little water movement regardless of direction. Vertical permeability values obtained from the laboratory analysis ranged from 2.3×10^{-5} ft/day to 0.23 ft/day, with a geometric mean of 6.4×10^{-4} ft/day (Golder 2002). Table 3-1 provides the measured groundwater elevations for October 2007. The shallow residuum potentiometric map is shown as Figure 3-5.

There is a distinct northeast component of flow in the shallow residuum in the northeast portion of the Facility. However, in the deep residuum, there is a northwest component of flow. This general northwest component of flow is also present in the shallow residuum along the northern plant boundary in the vicinity of the WMA II Corrective Action System.

The shallow groundwater is influenced by anthropogenic features such as backfilled excavations, caps, etc., which produce variable hydraulic conductivities and groundwater recharge rates. Also, two groundwater extraction systems (the SMWU I Corrective Action System and the WMA II Corrective Action System) influence the groundwater flow patterns in localized areas of the Facility. The second water-bearing zone characterized at the Facility primarily occurs within the bedrock and/or within the overlying zone of interlayered soil and rock. Groundwater elevations in this water-bearing zone range from less than 660 feet msl in the northern portion of the plant site to over 675 feet msl at the closed South Landfill, as shown on Figures 3-2 and 3-3.

The stratigraphic interval in between these two water-bearing zones is generally dry with only localized zones of moisture, as demonstrated in T-05 and T-06 during the 2006 bedrock investigation. Prior to encountering a water-bearing zone at about 665 feet msl to 660 feet msl, these borings encountered several localized moist zones; however, none of these zones were capable of producing sustainable yield. As shown on the logs for T-05 and T-06, a thin layer of fresh to highly weathered dolostone was first encountered at approximately 60 feet bgs (which corresponds to about 700 feet msl to 705 feet msl in the borings). Alternating zones of clay, silt, and sand (with and without dolostone fragments) were encountered interlayered with fresh to highly weathered dolostone beds extending from about 700 feet msl to 705 feet msl to approximately 635 feet msl to about 645 feet msl, in T-05 and T-06, respectively. As indicated in Figure 3-2, with the exception of BR-04, the weathered dolostone layer appears to increase in thickness from the northwest to the southeast. This sequence of interlayered rock and unconsolidated material is considered to represent preferential chemical solutioning of the rock along bedding planes. The unconsolidated material either represents in-situ weathering or material infilling void space in the rock. Below about 635 feet msl to 645 feet msl, the solutioned rock sequence is dominated by more layers of fresh to variably weathered rock and fewer interlayers of unconsolidated material than observed above this interval. The upper contact of bedrock is considered to occur around 700 feet msl to 705 feet msl where relatively intact layers

of rock begin to occur. The top of competent rock (defined by 20 continuous feet of fresh rock) is not interpreted to have been encountered in these holes.

3.1.4 Aquifer Testing

Several aquifer tests have been performed in conjunction with previous groundwater investigations conducted at the Facility. The tests have included variable head tests and pumping tests for determining horizontal hydraulic conductivity. The results of the aquifer testing are presented in Tables 3-2, 3-3, and 3-4. The results of the variable head testing are discussed in Section 3.1.4.1, and the results of the pumping tests are presented in Section 3.1.4.2. The variable head and pump test response data are included in Appendix D.

3.1.4.1 Variable Head Tests

During the RFI/CS Program, variable head tests were performed on all observation wells and piezometers installed during the program and on select existing wells. The Bouwer and Rice Method (1989) was used to analyze the response of water level versus time. The results of the variable head tests are summarized in Table 3-2.

The hydraulic conductivity values ranged from 1.2 x 10^{-4} feet/day to 1.4 feet/day across the Facility, and the geometric mean value of all of the tests conducted during the RFI/CS Program was calculated to be 2.0 x 10^{-2} feet/day. Values for observation wells and piezometers with the screened intervals within the shallow residuum (i.e., 0 to 45 feet bgs) at the Facility yielded a geometric mean hydraulic conductivity of 1.5 x 10^{-2} feet/day. Values for observation wells and piezometers with the screened intervals in the deep residuum (greater than 45 feet deep) at the closed South Landfill yielded a geometric mean hydraulic conductivity of 1.6 x 10^{-1} feet/day, while values derived from deep residuum tests conducted across the plant site yielded a geometric mean hydraulic conductivity of 6.5 x 10^{-3} feet/day.

3.1.4.2 Aquifer Pumping Tests

Pumping tests were performed on five interceptor wells during the RFI/CS Program (wells IW-6, IW-10, IW-11, IW-14, and IW-15[6]) at the SWMU I Corrective Action System. The data derived from these tests were analyzed using a variety of methods as presented in the RFI/CS Report (Golder, 2002). The results of each pumping test are presented in Table 3-3.

Transmissivity (T) and hydraulic conductivity (K) values were obtained by curve matching methods using Aquifer Test, a software package developed by Waterloo Hydrogeologic. This software package allows various curve matching techniques to be applied to determine aquifer characteristic values for a variety of aquifer types. Late time, steady-state data could not be collected during the prescribed testing periods for each test due to the low transmissivity of the residuum. Therefore, specific yield values were not obtained.

As described in Section 3.1.4.1, a geometric mean hydraulic conductivity value of 1.6×10^{-1} feet/day was derived from variable head tests conducted on deep residuum wells and piezometers on the closed South Landfill (Table 3-2). The geometric mean hydraulic conductivity from pumping tests conducted on the deep residuum wells IW-6, IW-10, and IW-11 on the closed South Landfill was estimated at 8.2×10^{-2} feet/day (Table 3-3).

The hydraulic conductivity from pumping tests conducted on well IW-14 at the plant site was estimated at 2.9×10^{-2} feet/day. This well is screened predominantly in the shallow residuum. Earlier variable head test data for PZR-05 (located next to IW-14) indicated an estimated hydraulic conductivity value of 2.1×10^{-2} feet/day. The higher hydraulic conductivity values measured from the pumping test were inferred to have resulted from a greater degree of interconnection with secondary porosity features.

A separate pumping test was performed at the WMA II Corrective Action System in a 1996 investigation. Interceptor wells IW-16 and IW-19 were used for the test along with nearby interceptor wells and piezometers which were used as observation wells. Analysis of the data collected during this investigation yielded a geometric mean of the calculated hydraulic

[6] Due to problems associated with a broken water main in the vicinity of this well, the pumping test at IW-15 was halted before completion and the data were not analyzed.

conductivity values of 6.0 x 10^{-3} ft/day. This value is lower than the values derived from the RFI/CS Program pump tests. As discussed in the RFI/CS Report (Golder, 2002), variable head tests conducted previously on wells in this area also produced lower values for hydraulic conductivity than elsewhere on the Facility. These data indicate that the residuum underlying the northern boundary of the Facility is less transmissive than elsewhere at the Facility.

Overall, the hydraulic parameters derived from the aquifer testing during the RFI/CS Program are in the same range as values from previous investigations, and are in general agreement with literature values for the high plasticity silts and clays that comprise the residuum underlying the Facility. A summary of the estimated aquifer hydraulic parameters from previous investigations and regional literature is presented in Table 3-4.

3.1.5 Groundwater Flow Rate and Direction

Shallow and deep residuum and shallow bedrock potentiometric maps were prepared using data collected in April 2007 (Figures 3-5, 3-6, and 3-7). These data are summarized on Table 3-1. Additionally, two generalized cross sections, Figures 3-8 and 3-9, were constructed to illustrate the potentiometric surface and direction of groundwater flow in the residuum and bedrock aquifers. The location of these sections is presented on Figure 3-1. Each of the potentiometric maps and cross sections show a general northward direction of groundwater flow. The deep residuum potentiometric map (Figure 3-6) and the shallow bedrock potentiometric map (Figure 3-7) show groundwater flow to the north-northwest throughout most of the Facility. The shallow residuum potentiometric map (Figure 3-5) shows flow with a northwest component in the vicinity of the WMA II Corrective Action System but a northeast component of flow towards the Central Staging and Soil Management Area (CSSMA) in the northeast portion of the Facility. This northeast flow component is consistent with data collected from OWR-09S (located near the retention basin) and the monitoring wells installed at the CSSMA which had water elevations around 700 feet msl (Golder, 2004). The differing flow directions between the shallow residuum and the other two units suggests that groundwater flow in the shallow residuum is more directly influenced by the surficial man-made features, such as ditches, covers, and pumping wells.

Potentiometric maps were also developed for the RFI/CS Report (Golder, 2002) and the Supplemental RFI/CS Report (Golder, 2003). In addition, potentiometric maps have been

developed for the RCRA groundwater monitoring program on a quarterly basis (prior to the May 2006 RCRA Post-Closure Permit Modification) and a semi-annual basis as per the current permit monitoring requirements. These potentiometric maps are submitted to both the ADEM and the EPA. The maps generated from the October 2007 data provide a consistent groundwater flow pattern compared to the maps presented in the RFI/CS Report, the Supplemental RFI/CS Report, and each of the semi-annual post-closure monitoring reports.

The horizontal velocity of groundwater flow (v) is dependent on hydraulic conductivity (k), the local hydraulic gradient (i), and the effective porosity (n). The formula used to calculate this velocity based on Darcy's Law is as follows:

$$v = ki/n$$

To be more representative of the interpreted groundwater flowpath, variable head aquifer testing hydraulic conductivity values were used instead of pump test values. Based on the variable head aquifer testing results discussed above, the geometric mean hydraulic conductivity values of the shallow residuum and deep residuum at the Facility are 1.5×10^{-2} feet/day and 6.5×10^{-3} feet/day, respectively (See Table 3-2). The hydraulic gradient across the Facility in the shallow residuum is approximately 1.9×10^{-2} feet/foot. This value was calculated using the water level measurement data from October 2007 between monitoring wells OW-16A and OWR-01S (see Figure 3-5). The effective porosity of the residuum has been assumed to vary between 2 percent to 20 percent. Using these values and Darcy's Law, the horizontal rate of groundwater flow in the shallow residuum has been calculated to range from approximately 0.53 feet/year to 5.3 feet/year. The hydraulic gradient across the Facility in the deep residuum is approximately 4.25×10^{-2} feet/foot. This value was calculated using the water level measurement data from October 2007 between monitoring wells OWR-05D and OWR-04D (see Figure 3-6). Using these values and Darcy's Law, the horizontal rate of groundwater flow in the deep residuum has been calculated to range from approximately 0.51 feet/year to 5.1 feet/year (calculations provided in Appendix E).

3.2 Potable Well Survey

As part of the RFI/CS Program, Solutia contacted the local water utility who confirmed that they provided service to the area surrounding the Facility. ADEM completed a water supply well

survey for the area as part of its preliminary assessment of an industrial facility in the vicinity of the Solutia plant (ADEM, 2000). The ADEM report stated that only one active water supply well is located within four miles of that site. The well is located on the Union Foundry property, which is located approximately one mile from the Facility.

During the Supplemental RFI/CS Program, Solutia prepared an advertisement in the local paper to obtain additional confirmation that there are no potential groundwater receptors within a one-mile radius downgradient of the Facility. The advertisement included a request that people in the area contact Solutia if they have a private potable well located on their property. Three property owners responded to the advertisement and reported wells on their properties at the locations shown on Figure 2-7. The three properties include two that were residential (1407 Mulberry Avenue and 1107 Crawford Street) and one that was commercial (1100 West 10th Street). The wells at these properties were subsequently investigated by Solutia. While only two of the properties were within the one-mile radius, none of the wells were actively in use, nor were the wells in any condition to be used in the future. Pictures of, and field inspection notes concerning these wells were presented in the Supplemental RFI/CS Report (Golder, 2003). Solutia recommended that the owners of the wells properly abandon them.

During the RI Program, a door-to-door survey of private wells within a one-mile radius around the Facility was conducted. The field team surveyed 2,545 properties. If the owner or occupant of the residence or business was not available, a flyer was left requesting that the owner or occupant contact P/S if the property had a well. There were 1,030 properties where fliers were left and the owner/occupant never responded to the flier. There were 167 parcels that were either inaccessible or vacant/wooded and the owner(s) could not be identified. Thirteen properties (20 parcels) were reported as having a well that was closed and/or not in use. Four properties (11 parcels) were identified during the survey as having active wells. The four properties are occupied by commercial facilities as follows:

- Parcel 2502 (Cowboys – Monitoring Wells);
- Parcels 2509/ 2361/ 3024 (Huron Valley Steel – Monitoring Wells/ Geological Survey Well [to be abandoned]);
- Parcels 3964/ 3970/ 3979/ 3985 (Sears Texaco – Observation Wells); and

- Parcels 210839/ 210840/ 26 (Union Foundry – One Well Permitted for drinking water, used only for process water).

The locations of the active wells identified are presented on Figure 2-7. Information concerning the well's status and use is presented in Table 3-5 for the 17 properties where active and closed wells were identified. A historical data review identified seven industrial or not-in-use wells that were located in the vicinity of the Facility. They are summarized in Table 3-6. Only one of these wells (Union Foundry) was identified in the door-to-door survey.

3.3 Ecological Assessment

The EPA guidance on conducting ecological risk assessments defines exposure pathways as "the paths of stressors from the source(s) to the receptors" (EPA, 1998). The EPA (1992) describes a *complete* exposure pathway in terms of four components:

1. A source and mechanism of chemical release;
2. A retention or transport medium;
3. A receptor at a point of potential exposure to the affected medium; and
4. An exposure route at the exposure point.

If any of these four components are not present, then a potential exposure pathway is considered incomplete and not evaluated further in a risk assessment. If all four components are present, a pathway is considered complete. Complete exposure pathways can be further delineated into those expected to be insignificant due to minimal or unappreciable exposure potential (or secondary pathways) and those expected to have more significant exposure potential (primary exposure pathways). The exposure pathway analysis in the SLERA Report (BBL, 2005) was enhanced by explicitly considering the quality of habitats available in OU-3 to determine whether these areas have the capacity to retain a significant number of ecological receptors.

The SLERA Report (BBL, 2005) reviewed the habitat characteristics (ecological setting) for the Facility. The areas evaluated included the closed West End Landfill, the maintained grounds, the open area (the employee park), and the closed South Landfill. Habitats were assessed on three separate occasions (October of 2001, May of 2002 and October of 2003). The Facility area is described as largely occupied by buildings, parking lots, areas actively used for industrial

purposes, and impervious surfaces. As a result, "habitat" in this area is primarily characterized by impervious surfaces (e.g., pavement, structures), with small strips and medians of mowed and maintained lawns and decorative plantings. Based on the direct observation of habitat characteristics, the SLERA Report (BBL, 2005) concludes, "there does not appear to be a functional ecosystem within OU-3. Furthermore, the Facility is fenced off, potentially restricting terrestrial wildlife access to the area."

In June of 2005, a detailed biological survey and habitat assessment were performed to supplement the information previously provided. The findings of this quantitative assessment were used to support a more detailed analysis of the relationship between ecological receptors and exposures at the Facility. Habitats were assessed based on a general description of primary habitat, approximate percent cover of habitat types, dominant vegetation, vegetation density, vegetation height, bordering land use, and evidence of natural or anthropogenic disturbance. To assure a conservative bias in the screening analysis, observations were conducted in the most favorable habitat available at each location. In this "patchy" landscape, the areas of favorable habitat were generally small and isolated by intervening areas entirely lacking functional habitat.

In general, the habitat of the four areas evaluated was poor, reflecting maintenance activities (cutting and mowing), low plant diversity, and poor soil conditions. The low diversity of herbaceous vegetation and the lack of woody vegetation resulted in fairly low "KP Value Scores"[7] across the Facility. The only exception was the open area (employee park), which supports nature trails through a forested area. Although the open area earned a KP Value Score of 5.25 which characterizes this area as having "fair" habitat quality, the employee park is highly disturbed by daily activities and is actively maintained. Therefore, this isolated area of more diverse habitat is not a focus for exposure due to the daily disturbance and ongoing maintenance activities. Since the Facility is expected to continue operations for the foreseeable future, a risk-management decision was made that no further assessment of ecological risk is necessary. Any actions taken to protect human health risk at the facility will reduce risk to ecological receptors. If all operations at the Facility cease, ecological risks should be re-evaluated.

[7] The KP Value Score is the habitat quality score on a scale of 1.0 to 10.0, resulting from the characteristics of the highest quality habitats in the evaluation area. Ranking is: Poor – 1.0-3.0; Fair – 3.1-5.5; Good - 5.6-7.9; Excellent – 8.0-10.0. Score is determined using Kansas Department of Wildlife and Parks Method for quantitative evaluation of terrestrial wildlife habitat quality (BB&L, Inc., 2005).

3.4 Summary

The stratigraphy of the Facility consists of residuum underlain by bedrock. The residuum consists of low permeability silts and clays that are products of bedrock weathering. Locally, the residuum extends to depths of over 100 feet bgs and acts as a semi-confining unit to the underlying Shady Dolomite bedrock. The residuum becomes denser with depth and has been loosely divided into two units, the shallow residuum and the deep residuum. The transition between the units is located approximately 45 feet bgs. Across most of the Facility, the deep residuum is underlain by the Shady Dolomite formation, which is typically described as an argillaceous to sandy dolostone to dolomitic limestone.

Groundwater in the shallow residuum generally flows northward with a northwest component in the vicinity of the WMA II Corrective Action System and a northeast component in the northeast part of the Facility. Groundwater in the deep residuum and shallow bedrock generally flows to the north-northwest throughout most of the Facility. The horizontal rate of groundwater flow in the shallow and deep residuum is calculated to range from 0.53 feet/year to 5.3 feet/year and 0.51 feet/year to 5.1 feet/year, respectively.

An evaluation was performed to identify active groundwater wells in the vicinity of the Facility, and only four active wells were identified. These wells are used as monitoring wells or for process water. No active potable groundwater wells were identified within a one-mile radius of the Facility.

A biological survey and quantitative habitat assessment were performed to evaluate habitat characteristics in OU-3. The findings of this assessment were used to support an analysis of the relationship between ecological receptors and exposures at the Facility. Habitats were assessed based on a general description of primary habitat, approximate percent cover of habitat types, dominant vegetation, vegetation density, vegetation height, bordering land use, and evidence of natural or anthropogenic disturbance. In general, the habitat of the four areas evaluated was poor, reflecting maintenance activities (cutting and mowing), low plant diversity, and poor soil conditions. Since the Facility is expected to continue operations for the foreseeable future, a risk-management decision was made that no further assessment of ecological risk is necessary. Any actions taken to protect human health risk at the Facility will

reduce risk to ecological receptors. If all operations at the Facility cease, ecological risks should be re-evaluated.

4.0 NATURE AND EXTENT OF CONTAMINATION

4.1 Constituents of Interest

The identification of Constituents of Interest (COIs) was developed in the RFI/CS Work Plan (Golder, 1997) and summarized in the Phase I CSM Report (BBL, 2003). Within the RFI/CS Work Plan, a list of preliminary COIs was identified through a review of:

- Historical data associated with previous investigations and remediation programs;
- The Facility's production and waste processes;
- Potential aerobic and anaerobic degradation products related to production and waste processes; and
- Previously identified constituents at the Facility.

This preliminary selection step is consistent with the EPA's guidance, which recommends that a preliminary identification of potential exposure includes the identification of the "types of chemicals expected at the site" (EPA, 1989a). Since the preliminary COI selection process outlined in both the RFI/CS Report (Golder, 2002) and the Phase I CSM Report (BBL, 2003) focused on chemicals associated with Facility-specific activities, these chemicals are the Site-related compounds that would be "expected" to be present at the Facility or be potentially detected at elevated concentrations on the Facility grounds.

Again consistent with the EPA's guidance, this list of preliminary COIs underwent a screening process including the use of risk-based screening concentrations. The chemicals identified through this process were reviewed to exclude those chemicals with low health or environmental risks that have not been reported at levels in excess of regulatory limits or relevant screening values, and those chemicals that have not been reported in groundwater. This review process was described in the RFI/CS Work Plan (Golder, 1997), and included a review of over 3,500 individual sample results from the Facility. The resulting list, provided below, includes 17 non-metals (i.e., OPs, SVOCs, and VOCs) and 11 metals that were designated as COIs associated with the "historical and ongoing operation" of the Facility.

Organophosphorus Pesticides

- Parathion
- Methyl parathion
- Tetraethyldithiopyrophosphate (Sulfotepp)

Volatile Organic Compounds

- Chlorobenzene
- Isopropyl benzene (Cumene)
- Methylene chloride
- 1,1,2,2-Tetrachloroethane

Semi-Volatile Organic Compounds

- 1,2-Dichlorobenzene
- 1,4-Dichlorobenzene
- 2,4-Dichlorophenol
- Para-nitrophenol (PNP) (4-Nitrophenol)
- Polychlorinated biphenyls (PCBs)
- Phenol
- Pentachlorophenol
- 2,4,5-Trichlorophenol
- 2,4,6-Trichlorophenol
- o,o,o-Triethylphosphorothioate

Metals

- Arsenic
- Barium

- Beryllium
- Cadmium
- Chromium
- Cobalt
- Lead
- Manganese
- Mercury
- Nickel
- Vanadium

These COIs were approved by the ADEM and the EPA in the RFI/CS Work Plan (Golder, 1997) on April 21, 1998, and in the Off-Site RFI/CS Work Plan (BBL, 1999) approved by the ADEM and the EPA on August 5, 1999. The list of COIs was included by the EPA as Table 1 of the RI/FS Agreement for the Site (Appendix F to the CD). Sampling efforts conducted at the Facility focused on collecting and analyzing samples for these COIs. However, P/S collected a subset of samples within OU-3 and analyzed those samples for a broad range of chemical constituents (EPA, 2003 and EPA, 2005). The results of these analyses were evaluated to determine the Constituents of Potential Concern (COPCs) selected for the Site. The COPCs for OU-3 were identified as part of the HHRA process as discussed in Section 6.0.

4.2 Former Source Areas

Many of the Facility's manufacturing processes (potential source areas) were decommissioned prior to the RFI/CS Program conducted in the late 1990s. As discussed in Section 2.0, these potential source areas were either removed to one of the landfills or were left in place with a variety of interim cover systems. The soil and groundwater results discussed below present a further evaluation of potential source areas at the Facility.

4.3 Soils

During the RFI/CS Program, Supplemental RFI/CS Program, and RI Program, approximately 75 surface and subsurface soil samples were collected. A discussion of the selection of sample locations is presented in Section 2.0. A summary of the results of the sampling conducted is presented in Tables 4-1 and 4-2. The soil samples can be divided into two groups based on their location, samples from the plant site and samples from the landfill caps. In addition, the samples can be divided into biased and non-biased samples. For the RFI/CS and Supplemental RFI/CS Program, biased samples were collected specifically around suspected source areas. During the RI Program, unbiased samples were collected using a grid-like pattern around open areas of the Facility.

4.3.1 Facility Areas and Landfills

4.3.1.1 Plant Site

The plant site soil sample results are presented in Tables 4-1 and 4-2, and all sample locations are shown on Figures 4-1 and 4-2. A summary of the results for each area is presented below.

4.3.1.1.1 Former Phosphate "Landfill"

Samples SSR-6 and SSR-7 were taken between 0.67 feet and 2 feet bgs and analyzed for the list of COIs. The detections were:

- SSR-6: Total PCBs (9.3 mg/kg), arsenic (7.9 mg/kg), barium (38 mg/kg), chromium (23 mg/kg), cobalt (8.9 mg/kg), lead (48 mg/kg), manganese (690 mg/kg), mercury (0.33 mg/kg), nickel (39 mg/kg), and vanadium (50 mg/kg); and
- SSR-7: Total PCBs (229 mg/kg), arsenic (12 mg/kg), barium (62 mg/kg), chromium (48 mg/kg), cobalt (17 mg/kg), lead (220 mg/kg), manganese (620 mg/kg), mercury (1.4 mg/kg), nickel (2400 mg/kg), and vanadium (51 mg/kg).

Former Santotar® Pit - Samples SSR-8 and SSR-9 were collected between 0.58 feet and 3 feet bgs and analyzed for the list of COIs. The samples had the following detections:

- SSR-8: Total PCBs (0.034 mg/kg), arsenic (10 mg/kg), barium (52 mg/kg), chromium (18 mg/kg), cobalt (9.8 mg/kg), lead (41 mg/kg), manganese

(520 mg/kg), mercury (0.093 mg/kg), nickel (12 mg/kg), and vanadium (45 mg/kg); and

- SSR-9: Total PCBs (282 mg/kg), arsenic (14 mg/kg), barium (780 mg/kg), beryllium (0.78 mg/kg), cadmium (0.92 mg/kg), chromium (14 mg/kg), cobalt (12 mg/kg), lead (150 mg/kg), manganese (12,000 mg/kg), mercury (0.46 mg/kg), nickel (120 mg/kg), and vanadium (26 mg/kg).

4.3.1.1.2 Phosphoric Acid Basins

One surface soil sample (SSR-3) was collected from a location downgradient of the basins at a depth of 0.5 feet to 2.5 feet bgs. Three subsurface soil samples (SSR-4, SSR-5, and SSR-15 [duplicate sample for SSR-4]) were collected downgradient or within the northern-most basin at depths terminating at 4.5 feet to 10 feet bgs. Each of the samples was analyzed for the list of COIs. Nine samples (SWMU-12-24A thru SWMU-12-24I) were collected around the northern basin at a depth from 0 to 24 inches bgs and analyzed for PCBs and mercury for SWMU-12-24B and SWMU-12-24G. The detections were:

- SSR-3: Total PCBs (2.2 mg/kg), arsenic (3.1 mg/kg), barium (22 mg/kg), chromium (7.4 mg/kg), cobalt (2.2 mg/kg), lead (25 mg/kg), manganese (220 mg/kg), mercury (0.052 mg/kg), nickel (5.7 mg/kg), and vanadium (10 mg/kg);

- SSR-4: Total PCBs (104 mg/kg), arsenic (4.2 mg/kg), barium (43 mg/kg), chromium (19 mg/kg), cobalt (5 mg/kg), lead (41 mg/kg), manganese (120 mg/kg), mercury (1.1 mg/kg), nickel (7.5 mg/kg), vanadium (33 mg/kg). Other results include cation exchange capacity (9.4 meq/100g), and organic carbon (1,600 mg/kg);

- SSR-5: Total PCBs (106 mg/kg), arsenic (11 mg/kg), barium (51 mg/kg), chromium (38 mg/kg), cobalt (6.1 mg/kg), lead (52 mg/kg), manganese (610 mg/kg), mercury (1.8 mg/kg), nickel (15 mg/kg), and vanadium (42 mg/kg);

- SSR-15 (Primary): Total PCBs (65 mg/kg, estimated), chlorobenzene (0.0088 mg/kg), arsenic (7.2 mg/kg), barium (36 mg/kg, estimated), beryllium (0.62 mg/kg), chromium (40 mg/kg), cobalt (4.3 mg/kg), lead (42 mg/kg), manganese (100 mg/kg), mercury (3.3 mg/kg, estimated), nickel (8.6 mg/kg, estimated), and vanadium (52 mg/kg);

- SSR-15 (Duplicate): Total PCBs (861 mg/kg, estimated), chlorobenzene (0.017 mg/kg), arsenic (8.2 mg/kg), barium (28 mg/kg, estimated), chromium (37 mg/kg), cobalt (4 mg/kg), lead (40 mg/kg), manganese (120 mg/kg), mercury (1.1 mg/kg), nickel (6.7 mg/kg), and vanadium (47 mg/kg);

- SWMU-12-24A: Total PCBs (26.2 mg/kg);
- SWMU-12-24B: Total PCBs (0.54 mg/kg, estimated), and mercury (0.091 mg/kg);
- SWMU-12-24C: Total PCBs (84 mg/kg);
- SWMU-12-24D: Total PCBs (9.11 mg/kg, estimated);
- SWMU-12-24E: Total PCBs (169 mg/kg);
- SWMU-12-24F: Total PCBs (28.1 mg/kg);
- SWMU-12-24G: Total PCBs (41.2 mg/kg), and mercury (0.94 mg/kg);
- SWMU-12-24H: Total PCBs (4.44 mg/kg, estimated); and
- SWMU-12-24I: Total PCBs (18 mg/kg).

4.3.1.1.3 Scrap Yard Oil Satellite Accumulation Area

Sample SSR-20 (primary and duplicate samples) was collected from 0.25 feet to 0.5 feet bgs in the center of the unit and analyzed for total petroleum hydrocarbons (TPH). No detections were reported in the primary sample. TPH was detected in the duplicate sample at 12 mg/kg.

4.3.1.1.4 Steam Cleaning Pad

Sample SSR-22 and a duplicate sample were collected from 0.33 feet to 0.5 feet bgs in a stained area and analyzed for TPH. No detections were reported. Sample SWMU-31-6A was collected from the surface to 0.5 feet bgs and contained 13.7 mg/kg of total PCBs.

4.3.1.1.5 Old Boiler Scrap Yard

Sample SSR-21 was collected 0.33 feet to 0.5 feet bgs and analyzed for the list of COIs. The sample had the following detections:

- SSR-21: Total PCBs (0.56 mg/kg, estimated), methyl parathion (0.049 mg/kg, estimated), ethyl parathion (0.056 mg/kg, estimated), arsenic (5.7 mg/kg), barium (49 mg/kg), chromium (16 mg/kg), cobalt (9.1 mg/kg), lead (28 mg/kg), manganese (670 mg/kg), mercury (0.30 mg/kg), nickel (8.6 mg/kg), and vanadium (40 mg/kg).

4.3.1.1.6 Former Parathion Production Area

Sample SSR-2 was collected from the surface to 2 feet bgs in an open grassy area downgradient of the production area. One shallow soil sample SSR-16 was collected from a depth of 0.83 feet to 3 feet bgs. Two deeper soil samples SSR-10 (primary and duplicate samples) and SSR-11 were taken from depths of 19 to 21 feet and 6 to 10 feet below ground surface, respectively. Each sample was analyzed for the list of COIs. These samples had the following detections:

- SSR-2: Total PCBs (11.2 mg/kg), arsenic (7.6 mg/kg), barium (150 mg/kg), beryllium (1.0 mg/kg), chromium (20 mg/kg), cobalt (9.1 mg/kg), lead (88 mg/kg), manganese (590 mg/kg), mercury (0.21 mg/kg), nickel (18 mg/kg), and vanadium (39 mg/kg);

- SSR-16: Arsenic (13 mg/kg), barium (38 mg/kg), beryllium (0.83 mg/kg), chromium (25 mg/kg), cobalt (7.4 mg/kg), lead (15 mg/kg), manganese (310 mg/kg), mercury (0.056 mg/kg), nickel (18 mg/kg), and vanadium (41 mg/kg);

- SSR-10 (Primary): Total PCBs (0.087 mg/kg, estimated), arsenic (6.8 mg/kg, estimated), barium (25 mg/kg), beryllium (1.5 mg/kg, estimated), chromium (17 mg/kg, estimated), cobalt (22 mg/kg, estimated), lead (39 mg/kg, estimated), manganese (680 mg/kg, estimated), mercury (0.076 mg/kg, estimated), nickel (17 mg/kg, estimated), vanadium (55 mg/kg), cation exchange capacity (15 meq/100g), and fraction organic carbon (130 mg/kg);

- SSR-10 (Duplicate): Total PCBs (0.065 mg/kg, estimated), arsenic (9 mg/kg, estimated), barium (21 mg/kg), beryllium (1.9 mg/kg, estimated), chromium (21 mg/kg, estimated), cobalt (45 mg/kg, estimated), lead (20mg/kg, estimated), manganese (1,100 mg/kg, estimated), mercury (0.011 mg/kg, estimated), nickel (26 mg/kg, estimated), vanadium (67 mg/kg). Other results include cation exchange capacity (15 meq/100g), fraction organic carbon (130 mg/kg), and total organic carbon (200 mg/kg); and

- SSR-11: Total PCBs (0.20 mg/kg), arsenic (13 mg/kg), barium (23 mg/kg), beryllium (0.69 mg/kg), chromium (16 mg/kg), cobalt (6.9 mg/kg), lead (18 mg/kg), manganese (250 mg/kg), mercury (0.032 mg/kg), nickel (11 mg/kg), and vanadium (25 mg/kg).

4.3.1.1.7 Former PCB Production Area

Samples SSR-12 and SSR-13 were collected from 6 to 8 feet bgs and analyzed for the list of COIs. These samples were collected at this depth since the area had been previously covered by

approximately four feet of asphalt/concrete as an interim measure. Field notes taken during this sampling event indicate the presence of an asphalt and concrete mixture to this depth. The detections in each of these samples were:

- SSR-12: Total PCBs (0.67 mg/kg), chlorobenzene (0.017 mg/kg), arsenic (6.9 mg/kg), barium (85 mg/kg), beryllium (0.75 mg/kg), chromium (23 mg/kg), cobalt (3.2 mg/kg), lead (23 mg/kg), manganese (100 mg/kg), mercury (0.050 mg/kg), nickel (9.0 mg/kg), and vanadium (41 mg/kg); and

- SSR-13: Total PCBs (16 mg/kg), arsenic (5.2 mg/kg), barium (110 mg/kg), beryllium (1 mg/kg), cadmium (0.73 mg/kg), chromium (110 mg/kg), cobalt (7.5 mg/kg), lead (36 mg/kg), manganese (360 mg/kg), mercury (0.046 mg/kg), nickel (33 mg/kg), and vanadium (36 mg/kg).

4.3.1.1.8 Former Phosphorus Pentasulfide Production Area

Sample SSR-19 was collected from 0.67 feet to 3 feet bgs and analyzed for the list of COIs. The sample had the following detections:

- SSR-19: Total PCBs (0.51 mg/kg, estimated), barium (65 mg/kg), cobalt (47 mg/kg), lead (52 mg/kg), manganese (2600 mg/kg), mercury (0.055 mg/kg), nickel (69 mg/kg), and vanadium (93 mg/kg).

4.3.1.1.9 Waste Drum Satellite Accumulation Area

Soil sample SSR-18 (primary and duplicate samples) was collected from 0.25 feet to 0.5 feet bgs at the accumulation area and analyzed for the list of COIs. Samples SWMU-42-6A (primary sample) and SWMU-42-6B (duplicate sample) were collected at 0.5 feet below the ground surface. These two samples were collected during the Supplemental RFI/CS Program to further evaluate the results from SSR-18. The two samples (SWMU-42-6A and SWMU-42-6B) were analyzed for ten PCDF congeners, see Table 4-2. The detections in each of these samples were:

- SSR-18 (Primary): Total PCBs (16,620 mg/kg, estimated), methyl parathion (0.1 mg/kg, estimated,), arsenic (33 mg/kg, estimated), barium (55 mg/kg, estimated), chromium (10 mg/kg, estimated), cobalt (4.3 mg/kg, estimated), lead (110 mg/kg, estimated), manganese (370 mg/kg, estimated), mercury (0.42 mg/kg, estimated), nickel (11 mg/kg), and vanadium (15 mg/kg, estimated);

- SSR-18 (Duplicate): Total PCBs (9,800 mg/kg, estimated), methyl parathion (0.1 mg/kg, estimated,), arsenic (19 mg/kg, estimated), barium (30 mg/kg, estimated), chromium (19 mg/kg, estimated), cobalt (3.3 mg/kg, estimated),

lead (85 mg/kg, estimated), manganese (270 mg/kg, estimated), mercury (0.28 mg/kg, estimated), nickel (13 mg/kg), and vanadium (9.7 mg/kg, estimated);

- SWMU 42-6A: 2,3,7,8-Tetrachlorodibenzofuran (181 picogram per kilogram [pg/kg]), 1,2,3,7,8-Pentachlorodibenzofuran (167 pg/kg), 2,3,4,7,8-Pentachlorodibenzofuran (210 pg/kg), 1,2,3,4,7,8-Hexachlorodibenzofuran (381 pg/kg), 1,2,3,6,7,8-Hexachlorodibenzofuran (337 pg/kg), 2,3,4,6,7,8-Hexachlorodibenzofuran (174 pg/kg), 1,2,3,7,8,9-Hexachlorodibenzofuran (81 pg/kg), 1,2,3,4,6,7,8-Heptachlorodibenzofuran (2,450 pg/kg), 1,2,3,4,7,8,9-Heptachlorodibenzofuran (278 pg/kg), and 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (3,810 pg/kg); and

- SWMU 42-6B: 2,3,7,8-Tetrachlorodibenzofuran (157 pg/kg), 1,2,3,7,8-Pentachlorodibenzofuran (149 pg/kg), 2,3,4,7,8-Pentachlorodibenzofuran (182 pg/kg), 1,2,3,4,7,8-Hexachlorodibenzofuran (336 pg/kg), 1,2,3,6,7,8-Hexachlorodibenzofuran (298 pg/kg), 2,3,4,6,7,8-Hexachlorodibenzofuran (154 pg/kg), 1,2,3,7,8,9-Hexachlorodibenzofuran (72.1 pg/kg), 1,2,3,4,6,7,8-Heptachlorodibenzofuran (2,130 pg/kg), 1,2,3,4,7,8,9-Heptachlorodibenzofuran (247 pg/kg), and 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (3,200 pg/kg).

The 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) toxicity equivalent (TEQ) calculated for the average congener concentrations (average of original and duplicate) for SWMU 42-6 is 0.24 micrograms per kilogram (µg/kg). The location of the sample was selected based on proximity to sample SSR-18, which exhibited the highest concentration of PCBs measured on the Facility during the RFI/CS Program.

4.3.1.1.10 Former Holding Tanks, Aeration Basins and Clarifiers

Sample SSR-17 was collected from 1.25 to 3.5 feet bgs and analyzed for the list of COIs. The sample exhibited the following detections:

- SSR-17: Total PCBs (0.21 mg/kg), arsenic (12 mg/kg), barium (350 mg/kg), chromium (12 mg/kg), cobalt (74 mg/kg), lead (35 mg/kg), manganese (5500 mg/kg), mercury (0.049 mg/kg), nickel (98 mg/kg), and vanadium (67 mg/kg).

4.3.1.1.11 Underground Product Storage Tanks

One soil sample (SSR-14) collected from 10 to 12 feet bgs immediately north of the location of the former eastern most underground storage tank location was analyzed for the list of COIs. The sample had detections of PCBs and metals as follows:

- SSR-14: Total PCBs (6.4 mg/kg), arsenic (4.7 mg/kg), barium (48 mg/kg), chromium (16 mg/kg), cobalt (6 mg/kg), lead (250 mg/kg), manganese (68 mg/kg), mercury (0.079 mg/kg), nickel (8.4 mg/kg), and vanadium (30 mg/kg).

4.3.1.1.12 Product Storage Tank

Sample AOC-A-6A was collected from the surface to 0.5 feet bgs and had a total PCB concentration of 5.7 mg/kg (estimated).

4.3.1.1.13 Scrap Yard Oil Satellite Accumulation Area

Sample SWMU-17-6A was collected from the surface to 0.5 feet bgs and had a total PCB concentration of 4.1 mg/kg (estimated).

4.3.1.1.14 Boiler Feed Tank

Sample SWMU-25-6A was collected six inches below the grass cover and had a total PCB concentration of 38.6 mg/kg.

4.3.1.1.15 Facility Area

Fifteen surface samples were collected at various locations within the Facility (Figure 2-5). Sample SSR-1 was collected from 0 to 2 feet bgs. Samples SSRI-01-06 through SSRI-14-06 were collected from 0 to 0.5 feet below the existing ground surface. Fourteen depth samples (SSRI-01 through SSRI-14) were also collected at these locations within the interval of 3 to 4 feet below the existing ground surface. The complete analytical results for these samples are presented in Tables 4-1 and 4-2. A summary of the PCB detections is presented below:

- SSR-1: Total PCBs (0.023 mg/kg);
- SSRI-01-06: Total PCBs (none detected);
- SSRI-01-36: Total PCBs (6.86 mg/kg, estimated);
- SSRI-02-06: Total PCBs (0.175 mg/kg, estimated);
- SSRI-02-36: Total PCBs (40.4 mg/kg);
- SSRI-03-06: Total PCBs (1.17 mg/kg, estimated);

- SSRI-03-36: Total PCBs (0.59 mg/kg, estimated);
- SSRI-04-06 (Primary Sample): Total PCBs (10.86 mg/kg, estimated);
- SSRI-04-06 (Duplicate Sample): Total PCBs (12.2 mg/kg, estimated);
- SSRI-04-36: Total PCBs (6.6 mg/kg, estimated);
- SSRI-05-06: Total PCBs (37.6 mg/kg);
- SSRI-05-36: Total PCBs (85 mg/kg);
- SSRI-06-06: Total PCBs (31 mg/kg);
- SSRI-06-36 (Primary Sample): Total PCBs (0.865 mg/kg, estimated);
- SSRI-06-36 (Duplicate Sample): Total PCBs (0.744 mg/kg, estimated);
- SSRI-07-06: (Primary Sample):Total PCBs (250 mg/kg, estimated);
- SSRI-07-06 (Duplicate Sample): Total PCBs (126 mg/kg);
- SSRI-07-42: Total PCBs (56 mg/kg, estimated);
- SSRI-08-06: Total PCBs (none detected);
- SSRI-08-36: Total PCBs (none detected);
- SSRI-09-06: Total PCBs (38.4 mg/kg, estimated);
- SSRI-09-36: Total PCBs (13.1 mg/kg, estimated);
- SSRI-10-06: Total PCBs (11.8 mg/kg, estimated);
- SSRI-10-36: Total PCBs (0.22 mg/kg, estimated);
- SSRI-11-06 (Primary): Total PCBs (930 mg/kg, estimated);
- SSRI-11-06 (Duplicate): Total PCBs (154 mg/kg, estimated);
- SSRI-11-36: Total PCBs (1.89 mg/kg, estimated);
- SSRI-12-06: Total PCBs (none detected);
- SSRI-12-36 (Primary): Total PCBs (none detected);
- SSRI-12-36 (Duplicate): Total PCBs (none detected);

- SSRI-13-06: Total PCBs (2.0 mg/kg, estimated);
- SSRI-13-36: Total PCBs (none detected);
- SSRI-14-06: Total PCBs (0.63 mg/kg, estimated); and
- SSRI-14-36: Total PCBs (none detected).

Three of these samples (SSRI-04-06, SSRI-07-06, and SSRI-11-06) were also analyzed for an expanded list of parameters as included in Table 2-3. These samples were analyzed for organophosphorous and chlorinated pesticides, the Target Compound List (TCL)/Target Analyte List (TAL) group of compounds, dioxins, furans, and PCB congeners. The results of the analyses are included in Tables 4-1 and 4-2. Included with the expanded parameter list was a second separate analysis performed for total PCBs using the same Aroclor method. Resampling of these locations yielded PCB results of 12.2 mg/kg, 126 mg/kg, and 154 mg/kg for SSRI-04-06, SSRI-07-06, and SSRI-11-06, respectively, reported above as duplicate samples. The TCL/TAL list of parameters and organophosphorous and chlorinated pesticides concentrations reported for these samples are presented as follows:

- SSRI-04-06: 1,1 biphenyl (140 µg/kg estimated), benzo(a)anthracene (46 µg/kg estimated), benzo(a)pyrene (24 µg/kg estimated), benzo(b)flouranthene (50 µg/kg estimated), benzo(g,h,i)perylene (40 µg/kg estimated), bis(2-ethylhexyl) phthalate (110 µg/kg estimated), chrysene (1900 µg/kg estimated), flouranthene (42 µg/kg estimated), phenanthrene (74 µg/kg estimated), pyrene (820 µg/kg estimated), carbon disulfide (2.3 µg/kg estimated), aluminum (11,000 mg/kg), arsenic (3.8 mg/kg), barium (41 mg/kg), beryllium (0.47 mg/kg estimated), cadmium (0.52 mg/kg estimated), calcium (59,000 mg/kg), chromium (14 mg/kg), cobalt (2.5 mg/kg), copper (13 mg/kg), iron (19,000 mg/kg), lead (11 mg/kg), magnesium (34,000 mg/kg), manganese (160 mg/kg), mercury (0.17 mg/kg), nickel (33 mg/kg), potassium (1,800 mg/kg), sodium (150 mg/kg), vanadium (25 mg/kg), and zinc (25 mg/kg);
- SSRI-07-06: 1,1 biphenyl (45 µg/kg estimated), anthracene (41 µg/kg estimated), benzo(a)anthracene (180 µg/kg estimated), benzo(a)pyrene (180 µg/kg estimated), benzo(b)flouranthene (210 µg/kg estimated), benzo(g,h,i)perylene (130 µg/kg estimated), benzo(k)flouranthene (88 µg/kg estimated), bis(2-ethylhexyl) phthalate (200 µg/kg estimated), chrysene (290 µg/kg estimated), dibenzo(a,h)anthracene (41 µg/kg estimated), di-n-butylphthalate (49 µg/kg estimated) flouranthene (410 µg/kg), flourene (28 µg/kg estimated), indeno(1,2,3-cd)pyrene (59 µg/kg estimated), phenanthrene (230 µg/kg estimated), pyrene (340 µg/kg estimated), acetone (25 µg/kg estimated), aluminum (13,000 mg/kg), arsenic (7 mg/kg), barium

(170 mg/kg), beryllium (0.82 mg/kg), cadmium (0.64 mg/kg), calcium (24,000 mg/kg), chromium (13 mg/kg), cobalt (11 mg/kg), copper (19 mg/kg), iron (21,000 mg/kg), lead (41 mg/kg), magnesium (12,000 mg/kg), manganese (830 mg/kg), mercury (2.6 mg/kg), nickel (15 mg/kg), potassium (1,000 mg/kg), sodium (360 mg/kg), vanadium (23 mg/kg), and zinc (62 mg/kg); and

- SSRI-11-06: Heptachlor epoxide (380 µg/kg), 1,1 biphenyl (61 µg/kg estimated), 2-methylnaphthalene (32 µg/kg estimated), anthracene (120 µg/kg estimated), benzo(a)anthracene (830 µg/kg), benzo(a)pyrene (1,900 µg/kg), benzo(b)flouranthene (2,100 µg/kg), benzo(g,h,i)perylene (2,100 µg/kg), benzo(k)flouranthene (1,500 µg/kg), bis(2-ethylhexyl) phthalate (57 µg/kg estimated), carbazole (62 µg/kg estimated), chrysene (1,400 µg/kg), dibenzo(a,h)anthracene (620 µg/kg), dibenzofuran (31 µg/kg estimated), flouranthene (940 µg/kg), indeno(1,2,3-cd)pyrene (1,300 µg/kg), naphthalene (37 µg/kg estimated), phenanthrene (470 µg/kg), pyrene (1,200 µg/kg), acetone (35 µg/kg estimated), cyanide (0.65 mg/kg), aluminum (19,000 mg/kg), antimony (8.7 mg/kg), arsenic (390 mg/kg), barium (230 mg/kg), beryllium (0.8 mg/kg), cadmium (4.7 mg/kg), calcium (24,000 mg/kg), chromium (23 mg/kg), cobalt (5 mg/kg), copper (280 mg/kg), iron (26,000 mg/kg), lead (4,700 mg/kg), magnesium (850 mg/kg), manganese (670 mg/kg), mercury (1.1 mg/kg), nickel (26 mg/kg), potassium (1,500 mg/kg), selenium (4.5 mg/kg), silver (12 mg/kg), sodium (400 mg/kg), vanadium (31 mg/kg), and zinc (610 mg/kg).

These three soil samples (SSRI-04-06, SSRI-07-06, and SSRI-11-06) were also analyzed for PCB congeners and homolog groups using Method 1668A. These soil sample locations were selected for the congener and homolog analysis since they represented low, medium, and high measured PCB concentrations within the Facility based on Aroclor analyses. The results are presented in Table 4-2. A review of the analytical data indicated that the correlation of the Aroclor results and the homolog results was good for relatively lower PCB concentration levels. However, higher concentrations of total Aroclors did not yield comparable results to the results generated by the homolog method. The table below presents the total PCB data from each method along with a calculation of the relative percent difference (RPD).

Sample	Units	Total PCBs by Aroclor Method	Total PCBs by Homolog Method	RPD[8]
SSRI-04-06	mg/kg	12.2	12.16*	0.3%
SSRI-07-06	mg/kg	126	7,684*	194%
SSRI-11-06	mg/kg	154	1,193*	154 %

Note "*" indicates that the data were qualified as estimated values during data validation. Also note that Aroclor values are from samples collected at the same time as the congener samples.

The Aroclor analyses were performed in accordance with the prescribed method, though some samples required dilution due to the elevated concentrations of target compounds. The calibration range of the 8082 Method is sufficiently high (ppb to ppm levels) such that the diluted samples yielded concentration results that were within the calibration range of the instruments. However, the laboratory experienced significant problems while performing the congener/homolog analyses. The initial sample analyses resulted in detector overload causing instrument malfunction. The laboratory spent several days cleaning and replacing parts, ensuring that the contamination had been removed and that the instrument was performing in accordance with method requirements. Some of the samples required re-extraction due to a method blank that was apparently contaminated. The samples themselves required several analyses each in order to achieve the acceptance criteria. All of these problems are attributed to the nature of the sample matrix, the PCB concentration levels in the samples, and the analytical methods used. The PCB congener analysis (Method 1668A) was developed to detect part-per-trillion (ppt) and part-per-quadrillion (ppq) levels of PCBs in environmental samples. Based on the analytical problems, the data validation procedure qualified all of the congener analyses as estimated values. Given the level of Aroclors present in the soil samples, the use of Method 1668A cannot be deemed appropriate for these samples.

In May 1995, prior to the placement of a geotextile and soil cover, soil and sediment samples were collected from the "walking trail area" located in the southeast corner of the plant site. The samples were field screened for PCBs, and approximately 10% of the field samples were submitted for laboratory analysis of PCBs. The results of these analyses are included in

[8] RPD equals positive difference of two concentrations divided by the average concentration multiplied by 100.

Appendix A-2. Of the samples collected, nine soil and eight sediment samples exceeded the screening level of 10 mg/kg. Laboratory concentrations ranged from 6.1 mg/kg to 157 mg/kg. Appendix A-2 provides the locations and results of the samples collected in the "walking trail area."

4.3.1.2 Landfill Caps

The results of samples collected on the landfill covers are presented in Table 4-1 and are shown on Figure 4-1. Figure 1-3 shows the extensive interim measures that already have been completed at the landfills. A summary of the results for each area is presented below.

4.3.1.2.1 Closed South Landfill Cap

Four initial composite samples (SL-3A, SL-3B, SL-3C, and SL-3D) were collected on the closed South Landfill (after completion of interim measures) and analyzed for PCBs. The results were 0.168 mg/kg (SL-3A), 0.07 mg/kg (SL-3B), 6.29 mg/kg (SL-3C), and non detect (SL-3D). Four additional composite samples (SLGM-3A, SLGM-3B, SLGM-3C, and SLGM-3D) were collected from the uppermost topsoil cover overlying the portion of the closed South Landfill that has been capped with a geomembrane cover system. The samples were collected at a depth from 0 to three inches below ground surface and analyzed for PCBs. SLGM-3A had no PCBs reported above the detection limit. SLGM-3B, SLGM-3C and SLGM-3D had total PCB concentrations of 0.071 mg/kg (estimated), 0.23 mg/kg (estimated), and 0.073 mg/kg (estimated), respectively. As shown on Figure 4-1, five additional samples (LFSL-89, LFSL-93, LFSL-94, LFSL-99, and LFSL-103) were collected on the closed South Landfill prior to the RFI/CS Program. The results of these analyses were 10 mg/kg, 4.1 mg/kg, 1.3 mg/kg, 6.7 mg/kg, and non detect, respectively. Additional characterization data for the South Landfill are included in Appendix A-1.

4.3.1.2.2 Closed West End Landfill Cap

Surface soil samples were collected from the closed West End Landfill following completion of the cover systems and analyzed for PCBs. The PCB concentrations ranged from non detect to 21 mg/kg. The higher concentrations were measured along the fence line adjacent to the Alabama Power Company switch yard.

The PCB concentrations measured in soil prior to constructing the cover system at the West End Landfill are shown on Figures A-3 through A-7 included in Appendix A-1 titled "Concentration of PCB's in Soil at the Anniston West End Landfill", "Concentrations of PCBs in Ditch Samples at the Anniston West End Landfill", "West End Historical Soil Sampling Locations", "West End Present Soil Sampling Locations", and "West End Landfill Ditch Samples (adjacent to 1st Avenue)." The samples included on these figures were collected in 1994 through 1996 and reported to ADEM. P/S excavated and removed soil from the adjacent areas of the landfill prior to placing the soil cover (available documentation is included in Appendix A-3). With the exception of Figure A-6, the PCB concentrations shown on these figures represent the concentrations measured prior to conducting soil removal activities and capping the area. Figure A-6 represents post-excavation PCB concentrations (confirmation sampling) prior to placing the soil cover on the adjacent areas. As shown on Figure 2 of Appendix A-1, the areas of the West End Landfill with elevated PCB concentrations were capped with a multi-media HDPE liner system or covered with clean soil and vegetative cover.

Additionally, as reported by members of the remediation team, soil was excavated from outside the fence line of the West End Landfill along 1st Avenue to address PCBs found in soil/sediment and to improve drainage in the area. The area addressed includes a strip of grass between the road and the fence line approximately eight to ten feet wide. Post excavation sample results for this area are included as Figure A-8 of Appendix A-1 (Post Excavation Soil Sample Results 1st Avenue).

As shown on Figure A-3, PCBs were also detected in the soil underlying the Alabama Power Company switch yard located within the limits of the West End Landfill property. The samples were collected from beneath the gravel present in the switch yard. Although no additional capping of this area was completed as part of the interim measures, Alabama Power maintains a substantial gravel cover over the area and restricts access to the switch yard to its employees only. The area is enclosed with a chain link fence, which remains locked to prevent unauthorized entry or trespass.

4.3.2 Prevalent Constituents

The RFA identified several source or former source areas (SWMUs and AOCs) at the Facility with potentially affected soils. Confirmatory samples were collected from several of these areas and from areas not covered by engineering controls for analysis of COIs. Samples were also collected around the open areas of the Facility and analyzed for PCBs. Three of the surface samples (SSRI-04-06, SSRI-07-06, and SSRI-11-06) collected within the Facility area as part of the RI Program were also analyzed for an expanded list of parameters as included in Table 2-3. Results of these analyses are presented in Section 4.3.1. A frequency of detections summary was developed for soil data collected within OU-3. The summary is included as Table 4-3 and includes the minimum and maximum detections, mean concentrations measured, detection frequency and percentage of detections. Based on a qualitative evaluation of the results presented on this table, the more prevalent constituents detected in soils at the Facility consist of PCBs, benzo(a)pyrene, arsenic, cobalt, lead, manganese, mercury, and nickel.

A similar evaluation was conducted for groundwater as described in Section 4.4.2. Based on this analysis, the more prevalent constituents detected in groundwater at the Facility consist of PCBs, parathion, 4-nitrophenol, 1,2-dichorobenzene, 1,4-dichlorobenzene, chlorobenzene, pentachlorophenol, o,o,o-triethylphosphorothioate, cobalt, manganese, and mercury. Throughout the remainder of this section on nature and extent of contamination and in the following section on contaminant fate and transport, the report will focus on the following constituents that should be regarded as surrogate parameters for discussions regarding the various parameter groupings:

PCBs, Parathion and 4-Nitrophenol

Volatile Organic Compounds

- 1,2-Dichlorobenzene
- 1,4-Dichlorobenzene
- Chlorobenzene

Other Semi-Volatile Organic Compounds

- Benzo(a)pyrene

- Pentachlorophenol
- o,o,o-Triethylphosphorothioate

Metals

- Arsenic
- Cobalt
- Lead
- Manganese
- Mercury
- Nickel

These prevalent constituents are discussed for each media (soil and groundwater) to provide the background information necessary to evaluate the potential migration of these constituents across media. The following provides a discussion on the extent of each of the prevalent constituents in soil.

4.3.2.1 PCBs

As shown on Figure 4-1, the highest PCB concentration was reported in soil sample SSR-18 (16,620 mg/kg, estimated) collected immediately downgradient from the Former PCB Production Area and within SWMU 44. This sample was collected from the surface soil covered by approximately three inches of gravel. This area has been subsequently partially excavated and covered with concrete. Other areas exhibiting higher PCB detections in surface soils include SSR-7 (229 mg/kg) at the former location of the Phosphate Landfill (SWMU 6) and SSR-9 (282 mg/kg) in the Old Santotar® Pit (SWMU 7). These areas are currently covered by a gravel layer to prevent direct contact and minimize or reduce erosion from surface water.

Surface soil sample SSR-5, which is located downgradient from the Phosphoric Acid Basins (SWMU 12), had a PCB concentration of 106 mg/kg. Sample SWMU-12-24C and SWMU-12-24E also located at the Phosphoric Acid Basins had PCB concentrations of 84 and 169 mg/kg, respectively. PCBs were also detected in two subsurface soil samples collected from

this SWMU, SSR-4 (104 mg/kg) and SSR-15 (65 mg/kg). A surface sample (SSRI-11-06) collected as part of the RI Program from a grassed area located to the north of the Phosphoric Acid Basins had a PCB concentration of 930 mg/kg, estimated.

Two samples collected in the open areas of the Facility as part of the RI Program showed elevated concentrations of PCBs. These samples were SSRI-07 (250 mg/kg, estimated, at the surface and 56 mg/kg, estimated, at depth) and SSRI-05 (38 mg/kg at the surface and 85 mg/kg at depth) located adjacent to the Former PCB Production Area and northeast of the Old Boiler Scrap Yard, respectively. The remaining soil samples had PCB detections ranging from less than 1 mg/kg to about 40 mg/kg.

4.3.2.2 Parathion

Only one soil sample collected had a detection for parathion. Sample SSR-21, collected at the Old Boiler Scrap Yard, had a measured parathion concentration of 0.056 mg/kg, estimated.

4.3.2.3 4-Nitrophenol

All samples collected and analyzed for 4-nitrophenol were non detect.

4.3.2.4 Volatile Organic Compounds

Of the three volatile organic compounds identified as prevalent constituents, only chlorobenzene was detected in soil samples collected at the Site. Two samples, SSR-12 and SSR-15, had detections for chlorobenzene. The concentration measured was 17 µg/kg at each location. These samples were collected from the former PCB Production Area (SSR-12) and the Phosphoric Acid Basins (SSR-15). All samples collected and analyzed for 1,2-dichlorobenzene and 1,4-dichlorobenzene were non detect.

4.3.2.5 Other Semi-Volatile Organic Compounds

Of the semi-volatile organic compounds identified as prevalent constituents, only benzo(a)pyrene was detected in soil samples collected at the Site. Three samples, SSRI-04-06, SSRI-07-06, and SSRI-11-06, had detections for benzo(a)pyrene. The concentrations measured were 24 µg/kg (estimated), 180 µg/kg (estimated), and 1,900 µg/kg, respectively. The concentrations measured

at SSRI-04-06 and SSRI-07-06 were estimated values since the detections were measured below the laboratory reporting limits. The sample with the highest measured concentration of benzo(a)pyrene, SSRI-11-06, was collected from a grassed area located north of the Phosphoric Acid Basins. All samples collected and analyzed for pentachlorophenol, and o,o,o-triethylphosphorothioate were non detect.

4.3.2.6 Metals

In the following discussions, the metals results have been compared to background metals data compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama. This study was performed to provide a basis for environmental assessments conducted as part of the Fort McClellan closure. The overall objective for the study was to establish robust background concentrations for Target Analyte List metals in environmental media including soil (SAIC, 1998). Fort McClellan is located very near the Solutia Facility in the same geologic province. In fact, data for the study were collected at both the Main Post and Pelham Range on Fort McClellan. The Main Post is located less than two miles to the east of the Facility, and the Pelham Range is located less than two miles northwest of the Facility. Due to the relevant purpose of the study and the study location, this information provides a reasonable estimate for background metals data for the Facility. For the RI, two times the mean value of both the surface and subsurface results was used as the estimated background concentration for the Facility. This approach is described in the EPA's HHRA Bulletin – Supplement to RAGS (EPA, 2000).

As shown on Figure 4-2, arsenic concentrations in the soil generally ranged between 1 mg/kg and 14 mg/kg, with the exception of sample SSR-18 (33 mg/kg, estimated) collected immediately downgradient from the Former PCB Production Area and within SWMU 44, and SSRI-11-06 (390 mg/kg) collected from a grassed area located to the north of the Phosphoric Acid Basins. SSR-18 was collected from the surface soil covered by approximately three inches of gravel. This area has been subsequently partially excavated and covered with concrete. Data developed for the Army Corps of Engineers indicate that a reasonable estimate of a background soil concentration (i.e., 2 times the mean value of both surface and subsurface concentrations) of arsenic in the area near Fort McClellan, located in Anniston, is approximately 16 mg/kg (SAIC, 1998). Therefore, the majority of the detected concentrations are below the estimated background concentration.

Cobalt was detected in soil samples at concentrations ranging from 2 mg/kg to 74 mg/kg. The highest cobalt concentrations were detected in samples SSR-10 (45 mg/kg, estimated), SSR-19 (47 mg/kg), and SSR-17 (74 mg/kg). These samples were collected from the northeast end of the Facility near WMA II and the Old Limestone Bed. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for cobalt in the area is approximately 16 mg/kg (SAIC, 1998). The majority of detected concentrations are below the background soil concentration and typically below 10 mg/kg. However, some elevated detections were noted, the highest of which are described above.

Lead was detected in all soil samples at concentrations ranging from 8.7 mg/kg to 4,700 mg/kg. The highest lead concentrations were detected in samples SSR-7 (220 mg/kg), SSR-14 (250 mg/kg), and SSRI-11-06 (4,700 mg/kg). These samples were collected from the Phosphate Landfill (SWMU 6), the Underground Product Storage Tanks (AOC-C), and a grassed area located to the north of the Phosphoric Acid Basins, respectively. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for lead in the area is approximately 39 mg/kg (SAIC, 1998). The majority of detected concentrations are within the same range as the background soil concentration and typically below 60 mg/kg. However, some elevated detections were noted, the highest of which are described above.

Manganese was detected in soil samples at concentrations ranging from 68 mg/kg to 12,000 mg/kg. The highest manganese concentrations were detected in samples SSR-19 (2,600 mg/kg), SSR-17 (5,500 mg/kg), and SSR-09 (12,000 mg/kg). These samples were collected from the Former Phosphorus Pentasulfide Production Area, former holding tanks and aeration basin area, and the Old Santotar® Pit area (SWMU 7), respectively. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for manganese in the area is approximately 1,500 mg/kg (SAIC, 1998). The majority of detected concentrations are below the background soil concentration and typically below 1,000 mg/kg. Elevated detections are described above.

The highest concentration of mercury was found in surface soil sample SSR-15 (3.3 mg/kg, estimated) collected from the Phosphoric Acid Basin. The next highest mercury concentration was detected in sample SSRI-07-06 (2.6 mg/kg) collected from the former PCB Production Area.

Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for mercury in the area is approximately 0.07 mg/kg (SAIC, 1998). The majority of detected concentrations are above the background soil concentration of 0.07 mg/kg.

The highest concentration of nickel was found in soil sample SSR-7 (2,400 mg/kg) collected from the Phosphate Landfill (SWMU 6). The next highest nickel concentration was detected in sample SSR-9 (120 mg/kg) collected from the Old Santotar® Pit area (SWMU 7). These areas are covered by gravel. The remaining soil samples reported nickel at concentrations below 100 mg/kg. Based on the Army Corps of Engineers study at Fort McClellan, a reasonable estimate of a background soil concentration for nickel in the area is approximately 12 mg/kg (SAIC, 1998).

4.3.3 Soil Borings

Soil samples were collected from the planned screened section of each new observation well and piezometer installed during the RFI/CS Program. These samples were analyzed for the following biological and inorganic indicator parameters: cation exchange capacity, total organic carbon, fraction organic carbon using the Walkley/Black method, and acid volatile sulfide. The results are summarized below and included in Table 4-1.

- No acid volatile sulfide results were reported above the detection limit for the residual soils at the Facility;
- Cation exchange capacity (CEC) values ranged from 0.0045 milli-equivalents per 100 grams (meq/100g) to 16 meq/100g. No trends or similarities with respect to depth or spatial location were observed in the CEC values;
- Total organic carbon (TOC) results ranged from 180 mg/kg to 15,000 mg/kg. No apparent relationship exists between TOC results and depth or spatial location of the samples; and
- Fraction organic carbon (FOC) results ranged from 290 mg/kg to 9,200 mg/kg. No apparent relationship exists between the results and depth or spatial location of the samples.

4.4 Groundwater

The nature and extent of constituents in groundwater at the Facility was determined based on groundwater quality data collected during various investigations, including the RFI/CS Program, the Supplemental RFI/CS Program, the RI Program including the bedrock investigation (Preliminary SCSR Addendum), and the semi-annual RCRA groundwater monitoring events. A discussion of the samples collected is presented in Section 2.0, and a summary of the results is presented in Tables 4-4, 4-5, 4-6, and 4-7. Data from multiple sampling events for many of the wells have been reported as part of the semi-annual reports that are submitted to the EPA and the ADEM in accordance with provisions of the Facility's RCRA Permit. Table 4-8 presents a detailed well and piezometer construction log.

4.4.1 Facility Areas and Zones

The nature and extent of COIs in groundwater were compared to published MCLs, as available. However, some constituents do not have published MCLs. For these constituents, the EPA Region IX Preliminary Remediation Goals (PRGs) were used for comparison. Since 4-nitrophenol and o,o,o-triethylphosphorothioate do not have Federal MCLs or Region IX PRGs, site-specific limits were developed for these two constituents using procedures established for calculating the Region IX PRGs (Region IX PRGs User's Guide). The term CCL used throughout the RI Report is a term used to collectively define the values (MCLs, Region IX PRGs, or calculated site-specific limit) used to compare against measured site groundwater concentrations. Appendix F provides a description of how these CCLs were determined. The list of CCLs for groundwater is included in Table 4-9 (either MCLs or PRGs, as described above).

For the purpose of reviewing groundwater data, the Facility has been divided into five areas: WMA I and SWMU 1 (closed South Landfill), WMA II and OLBSI, OW-21A Area, closed West End Landfill, and Interior Facility/Northeast Perimeter. The groundwater constituents found at each of these areas are described in the next sections. In addition, a general discussion for groundwater results from wells monitoring the deep residuum and shallow bedrock is provided. Finally, a section is provided that examines groundwater data for the presence of colloidal-size particles. A summary of the more recent data for each area and zone is presented on Figures 4-3 through 4-8. These figures include all detections for these monitoring wells from the most recent sampling events conducted.

4.4.1.1 WMA I / SWMU 1

4.4.1.1.1 Closed South Landfill

Various constituents have been reported in observation wells located around the closed South Landfill. The most recent detections are shown on Figure 4-3. During the RFI/CS Program, well OWR-05D was sampled and exceedances above the CCLs were reported for lead, manganese, PCBs, PNP, and pentachlorophenol. During the semi-annual sampling events, sporadic detections of PCBs have been reported in samples from OW-02 and OW-04 at concentrations less than 1 µg/l. These wells are located upgradient of the recovery system on the closed South Landfill (Figure 4-3), and impacts are controlled by the recovery system. There have been no recent exceedances detected in monitoring wells MW-11A, MW-12A, and MW-13A located downgradient of WMA I.

4.4.1.2 WMA II and OLBSI

4.4.1.2.1 MW-15, 16 and 20A

During semi-annual sampling of monitoring wells MW-15, MW-16, and MW-20A, various constituents have been reported, including mercury (MW-15 and MW-16), dichloromethane, 1,2-dichlorobenzene, 2,4,6-triclorophenol, pentachlorophenol, PNP, sulfotepp, and other constituents in MW-20A. Of these, only 2,4,6-trichlorophenol and pentachlorophenol exceeded the CCLs for MW-20A and only mercury exceeded the CCL at MW-15 within the last two years. As shown on Figure 2-2, these monitoring wells are located upgradient of or within the capture zone of the WMA II Corrective Action System. Results from the most recent sampling events are included on Figure 4-4.

4.4.1.2.2 MW-09 and MW-14

Historically, detections above the CCLs have not been reported in samples from monitoring well MW-09, which is located downgradient of the OLBSI. In February 2003, well MW-09 was abandoned and replaced with monitoring well MW-09A as part of the Supplemental RFI/CS investigation. During the semi-annual sampling event in April 2003, PCBs were reported at 1.3 µg/l in the analytical results from a groundwater sample collected from well MW-09A. The detection was flagged as tentatively identified due to possible column overload from analysis of an undiluted sample from well OW-21A. The well was sampled again during the April 2004

semi-annual sampling event. The results from this re-sampling event were non detect for all the parameters analyzed, including PCBs, indicating that the April 2003 result was likely spurious. Well MW-14 is also located downgradient of the OLBSI. MW-14 was sampled during the RI Program for the constituents listed in Table 2-4. There were no detections of any parameters above applicable CCLs.

4.4.1.3 OW-21A Area

Observation well OW-21A was installed north of the Facility (on the Northside property owned by Solutia) in February 2003 during the Supplemental RFI/CS Program to replace well OW-21. At this location, groundwater impacts (PCBs, SVOCs, and OPs) have been detected in recent sampling events. During the RI Program, conducted in 2005, well T-04 was installed in an upgradient location in an attempt to determine the source for the impacts in OW-21A. In addition, well MW-07, located downgradient from OW-21A, was sampled to delineate the extent of the contamination. The COIs detected above applicable CCLs for the samples collected in June 2005 are summarized as follows:

- OW-21A: Total PCBs (7,400 µg/l), filtered PCBs (not detected), PNP (16,000 µg/l), parathion (11,000 µg/l), and sulfotepp (59 µg/l);
- T-04: Total PCBs (120 µg/l, estimated), and filtered PCBs (not detected); and
- MW-07: No constituent detections.

As part of groundwater investigations undertaken for the non-residential portion of OU-1/OU-2, two wells, T-09 and T-10 were installed immediately downgradient of OW-21A. Sample results from these two wells indicated 1.04 µg/l (estimated) PCBs by the homolog method and non detect for the Aroclor method for well T-09 and non detect for both the homolog method and the Aroclor method for well T-10. These data were reported in the 2008 Groundwater Investigation for Non-Residential Properties in Operable Unit 1/Operable Unit 2 (Golder, 2008).

The above results indicate that the downgradient boundary for OW-21A was established with the non-detect values reported in well MW-07 and T-10, and the results from well T-09 (1.04 µg/l estimated, PCBs by the homolog method and non detect for the Aroclor method). The concentration gradients from OW-21A to T-09 and T-10 for PCBs, parathion, and 4-nitrophenol,

demonstrate that constituent impacts associated with OW-21A remain within the general area of OW-21A. These data indicate a localized area of PCB groundwater impacts, separate from WMA II. The attempt to locate an upgradient source was not successful as moving further upgradient from T-04 would have run into successive obstructions of the railroad and then the WMA II Groundwater Corrective Action System. If the source was south of the OLBSI, the expansion of the WMA II Corrective Action System completed as part of the Supplemental RFI/CS Program has effectively cut it off. The data indicate that the source impacts in the vicinity of OW-21A are localized. The April 2007 data indicate a decreasing trend for the constituents in OW-21A exceeding the CCLs. The results were as follows:

- OW-21A: Total PCBs (96.3 µg/l), filtered PCBs (not detected), PNP (9,500 µg/l), and parathion (7,600 µg/l).

The data for these wells are presented on Table 4-4 and Figure 4-4.

4.4.1.4 Closed West End Landfill

Monitoring in the vicinity of the closed West End Landfill was not a requirement of the RCRA Permit. However, as part of the RFI/CS Program, P/S agreed to conduct semi-annual groundwater monitoring for a two-year period. The two-year monitoring was completed in 2004; however, at the request of the EPA, P/S agreed to conduct one additional round of sampling as part of the RI Program. PCBs were the only constituent detected above the CCLs for all sampling conducted at the closed West End Landfill over the last eight years. The concentrations of PCBs in the wells have consistently remained low with values from non detect to just above the CCL.

Table 4-4 summarizes the data for these wells. Figure 4-5 presents the results from the most recent sampling event. The results for well WEL-01 from the four events included initial low-level detections of PCBs above the CCL that decreased to non detect and fluctuated to 0.66 µg/l in the most recent event. Well WEL-02 had no detections during the sampling program. Well WEL-03 had an initial detection for PCBs, but had no detections above the CCL in the last two sampling events. Observation well OWR-10 had very low concentrations of PCBs initially (1.8 µg/l), and the samples were non detect for the last three events. The results for OWR-07D (a deep residuum well in the vicinity of the closed West End Landfill) indicated a decreasing

trend in PCB concentrations to below the detection limit, but had fluctuated back to 0.72 µg/l in the most recent event. In all cases, the filtered sample results were reported as non detect.

4.4.1.5 Facility Interior and Northeast Perimeter

Impacts have been detected in groundwater samples from observation wells OW-08/8A, OW-15, OW-16/16A, OWR-11, OWR-12, and OWR-13. These wells are located within the plant site area and are considered interior wells. Monitoring well OW-07 is sampled as a part of the semi-annual monitoring, and T-01, T-03, OWR-01S, OW-09 and OW-10 were sampled as a part of the RI Program. These wells form a downgradient boundary from the plant interior and serve as monitoring points for perimeter control. Table 4-4 presents the most recent data for these 12 wells. Figure 4-6 presents the most recent detections in each of these wells. A summary of the most recent results is provided below.

For the interior wells, the following constituents were measured above the CCLs:

- OWR-11 (February 2003): Mercury (3.3 µg/l), beryllium (6.8 µg/l, estimated), total PCBs (170 µg/l), and filtered PCBs (20 µg/l);
- OWR-12 (February 2003): PNP (8,000 µg/l), manganese (12,000 µg/l), total PCBs (4.4 µg/l); and filtered PCBs (not detected);
- OWR-13 (February 2003): Mercury (2.3 µg/l), total PCBs (250 µg/l), and filtered PCBs (68 µg/l);
- OW-08A (June 2005, except where indicated): No metals detected above applicable limits, 1,1,2,2-Tetrachloroethane (0.67 µg/l, estimated), total PCBs (28.6 µg/l, [April 2007]) and filtered PCBs (not detected [April 2007]); and
- OW-16A (April 2007): No metals detected above applicable limits, total PCBs (190 µg/l, estimated), and filtered PCBs (not detected, estimated).

For the perimeter wells:

- T-01: No parameters reported above applicable limits;
- T-03: No parameters reported above applicable limits;
- OW-07: No parameters reported above applicable limits;

- OW-09: No parameters reported above applicable limits;
- OW-10: Mercury (16 µg/l), beryllium (5 µg/l), manganese (1,500 µg/l), total PCBs (6.2 µg/l, estimated), and filtered PCBs (not detected); and
- OWR-01S: No parameters reported above applicable limits.

These results generally indicate that no constituents are above applicable limits in the northeast portion of the Facility with the exception of the area near OW-10 and OWR-11. Results from downgradient wells include the total PCB concentration for the sample collected from OW-09 in 1998 that was less than the MCL. Additionally, the three wells that monitor the CSSMA are downgradient of OW-10. The CSSMA wells were sampled in August 2004 and had no detections of COIs (Golder, 2004). In addition, many of the detections present in OW-10 are parameters (volatile organic compounds) reported at the Facility for the first time and aerial photography indicates no Facility-related industrial activity near this location. Another potential contribution is from an auto repair facility located across Clydesdale Avenue. Although the downgradient extents are limited as further downgradient wells have no constituent concentrations, an evaluation of options for addressing further migration from this area will be performed as part of the FS.

Samples collected from ten monitoring wells as part of the RI Program were also analyzed for an expanded list of parameters as included in Table 2-4. These samples were analyzed for organophosphorous and chlorinated pesticides, the TCL/TAL group of compounds, dioxins, furans, PCB Aroclors, PCB homologs, and PCB congeners. The groundwater samples chosen for analysis represented wells that have historically indicated the presence of high, medium, and low level PCBs along a flow path (OW-16A, OW-8A and OW-09) as well as those locations along the perimeter of the Facility (OW-10, OWR-01S, T-01, T-02, T-03, T-04, and MW-14). The results of the analyses are included in Tables 4-4 and 4-7.

A review of the analytical data indicates that the correlation of the Aroclor results and the congener/homolog results was good for relatively lower PCB Aroclor concentration levels. However, concentrations of total Aroclors greater than 150 µg/l (aqueous) did not yield comparable results to the results generated by the congener/homolog method. The table below presents the total PCB data from each method and RPD calculations.

Sample	Units	Total PCBs by Aroclor Method	Total PCBs by Homolog Method	RPD**
OW-10	µg /l	6.2	6.6*	6.3%
OWR-01S	µg /l	ND	0.1*	----
T-01	µg /l	ND	0.012*	----
T-02	µg /l	ND	0.033*	----
T-03	µg /l	ND	0.081*	----
T-04	µg /l	120*	117*	2.5%
MW-14	µg /l	ND	0.0009*	----
OW-09	µg /l	ND	0.22*	----
OW-08A	µg /l	30*	29*	3.4%
OW-16A	µg /l	170	473*	94%

Note "*" indicates that the data were qualified as estimated values during data validation. Also note that Aroclor values are from samples collected at the same time as the congener samples. "**"RPD equals the positive difference of two concentrations divided by the average concentration multiplied by 100.

The Aroclor analyses were performed in accordance with the prescribed method, and some samples required dilution due to the elevated concentrations of target compounds. However, the calibration range of the 8082 Method is sufficiently high (ppb to ppm levels) such that the dilutions yielded concentration results that were within the calibration range of the instruments. The congener analyses experienced significant problems with the results, which were qualified as estimated by the data validation process. The problems encountered were likely due to the analytical method for the congener analyses being more appropriate for low level concentrations (in the ppt and ppq range), not the ranges encountered for these samples.

4.4.1.6 Deep Residuum

Seven deep residuum wells (wells OWR-01D through OWR-07D) were installed as part of the RFI/CS Program, and two deep residuum wells (OWR-14D and OWR-15D) were installed as part of the RI Program to investigate the potential presence of contaminants in the deep residuum.

Table 4-4 summarizes the data for these wells. Figure 4-7 presents the most recent detections in each of these wells. The most recent results from these nine wells are summarized below. Only constituents that exceed the CCLs are included.

- OWR-01D: Manganese (2,300 µg/l);
- OWR-02D: No parameters reported above applicable limits;
- OWR-03D: Dry well (no sample collected);
- OWR-04D: No parameters reported above applicable limits;
- OWR-05D: Pentachlorophenol (1.2 µg/l), filtered lead (21 µg/l), PNP (2,300 µg/l), manganese (1,300 µg/l), and total PCBs (210 µg/l) with filtered results below the detection limit;
- OWR-06D: No parameters reported above applicable limits;
- OWR-07D: Total PCBs (0.72 µg/l) with filtered results below the detection limit;
- OWR-14D: Total PCBs (5.0 µg/l) with filtered results below the detection limit, and pentachlorophenol (1.4 µg/l); and
- OWR-15D: Total PCBs (8.4 µg/l, estimated) with filtered below the detection limit.

The constituent concentrations from deep residuum monitoring wells were generally lower than those concentrations reported for impacted shallow residuum wells. Along the northern boundary of the Facility, as monitored by wells OWR-01D, OWR-02D, and OWR-04D, concentrations were below CCLs, except for manganese in OWR-1D. OWR-05D is located inside the capture zone of the SWMU 1 Corrective Action System, and detections at this location can be expected as impacted groundwater is drawn to and captured within the system. OWR-07D is located at the closed West End Landfill and the results had indicated a decreasing trend in PCB concentrations to below the detection limit. The most recent result reflects a modest fluctuation to 0.72 µg/l. However, given the very low levels measured at OWR-07D, off-site migration is not expected. OWR-14D was installed in close proximity to OWR-13 (a shallow residuum well), and the low level detections at this location indicate a progressive decreasing vertical trend from the shallow residuum to the deep residuum. OWR-15D was installed in close proximity to OW-16/16A (a shallow residuum well) and downgradient of OWR-05D. Results from the OWR-15D sample

collected in June 2005 indicated a total estimated PCB concentration of 128 µg/l (Table 4-4). An additional sample was collected in April 2006 with a total estimated PCB concentration of 8.4 µg/l. Impacts are present at this location; however, the downgradient locations of OWR-06D, OWR-01D, and OWR-04D did not indicate a site-wide plume was present.

4.4.1.7 Bedrock

Based on the detections in OWR-14D and OWR-15D, the EPA questioned the depth extent of PCB impacted groundwater and whether the potential presence of a DNAPL may serve as a source of elevated PCB detections in groundwater. To address these questions, P/S sampled SBP-03 during the April 2006 RCRA groundwater monitoring event to determine if any impacts were observed in the bedrock system at this downgradient, off-site location. The results for SBP-03 were non detect for PCBs, indicating PCBs are not migrating off site through deep flow paths in this area of the Site. The laboratory results are presented in Appendix G. In addition, in October 2006, P/S installed two additional bedrock wells (T-05 and T-06) in a line between OWR-14D and OWR-15D. The wells were sampled and analyzed for PCBs by Aroclors (EPA Method 8082) and PCBs by homolog group (EPA Method 680) to evaluate potential groundwater impacts in the shallow bedrock at this location and to provide verification that the Aroclor analysis was detecting all PCB constituents. The Aroclor analytical results indicated a total PCB concentration of 2.9 µg/l in the sample collected from well T-05, while the associated filtered concentration was below the CCL of 0.50 µg/l. Total PCBs were also detected at a concentration of 3.2 µg/l in the sample collected from well T-06, with the associated filtered sample concentration at 1.3 µg/l. The homolog results indicated a total PCB concentration of 2.2 µg/l in the sample collected from T-05 (1.4 µg/l filtered) and 3.0 µg/l in the sample collected from T-06 (1.2 µg/l filtered). The results of the shallow bedrock investigation are summarized as follow:

- The total Aroclor results were very similar to (and in some cases slightly higher than) the homolog results at low concentrations;
- There was no visual evidence to support the presence of DNAPL at depth, although the presence of localized DNAPL ganglia as a source of low concentration groundwater impacts could not be ruled out;
- Significant "dry" zones throughout the weathered bedrock in both borings were observed. Furthermore, there were no observed fractured flow zones present in the weathered bedrock that could provide a mechanism for groundwater transport;

- The low level concentrations detected in the bedrock wells and "dry" conditions in the weathered bedrock zone indicate that the concentrations detected in the OWR-14D/OWR-13 area and the OWR-15D/OW-16A area are likely from different sources; and

- The low level concentrations detected in the shallow bedrock wells represent a progressive vertical concentration decline from shallow groundwater to deeper groundwater. The semi-confining unit observed in the deep residuum during previous investigations extends through the weathered bedrock zone, to the top of bedrock.

A summary of the analytical results is presented on Table 4-6. Figure 4-8 presents the most recent detections in each of the bedrock wells at the Facility. Details of the investigation are included in the Preliminary SCSR Addendum (Golder, 2007a).

4.4.1.8 Colloidal-Size Particles

Samples from observation wells with historic detections of unfiltered PCBs (OW-08A, OW-16A, OW-21A, and OWR-15D) were collected for unfiltered PCB and filtered PCB analyses. This sampling was conducted as part of the RCRA groundwater monitoring event in April 2006. Results from these analyses are presented in Table 4-5. In all cases, detected concentrations in the unfiltered "total" PCB samples were matched with non detect sample results for filtered samples. Colloidal-size particles were not identified in these samples to the detection limits provided.

During a later investigation of site bedrock, filtered groundwater samples were collected from wells T-05 and T-06. These samples were analyzed for total PCBs using the Aroclor method as well as the homolog method. The results of this analysis are presented in Table 4-6. As shown in Table 4-6, PCBs were present in unfiltered samples using both methods for each of the sample results. For T-05 (Aroclor method), the corresponding filtered sample was non detect. For T-05 (homolog method) and for T-06 (both methods), the corresponding filtered sample result was roughly one half to one third of the unfiltered "total" PCB result. In general, there was very close agreement between the Aroclor results and the homolog results. A conclusion drawn from this analysis was that either colloidal particles were present with PCBs adsorbed to the particles, or that PCBs were present in a dissolved phase (PCBs have solubilities ranging from 52 µg/l to 590 µg/l at 24°C).

The OU-1/OU-2 non-residential groundwater data have been reported in the June 2008 Groundwater Report for Non-Residential Properties in Operable Unit 1/Operable Unit 2 (Golder, 2008) and the Supplemental Groundwater Report (Golder 2009). While this RI Report is focused on OU-3, these data are discussed herein as they relate to the potential transport of PCBs via colloidal particles. The data are reproduced in the summary below.

Sample Name (date)	Unfiltered Aroclor sum/ (homolog sum) µg/l	2.0-micron filtered Aroclor sum/ (homolog sum) µg/l	0.1-micron filtered Aroclor sum/ (homolog sum) µg/l
T-08 (4/14/2008)	< 0.47 (0.050 J)	< 0.47 (< 0.094)	< 0.50 (< 0.10)
T-09 (4/13/2008)	< 0.47 (1.04 J)	< 0.47 (0.26)	< 0.47 (0.46 J)
T-09 (4/13/2008) dup	< 0.47 (1.03)	< 0.47 (0.23)	< 0.47 (< 0.097)
T-10 (4/13/2008)	< 0.49 (< 0.097)	< 0.49 (< 0.097)	< 0.49 (< 0.097)
T-11 (4/14/2008)	3.3 (17.3)	< 0.47 (3.4)	< 0.49 (0.072 J)
T-11 (10/14/2008)	< 0.47 (10.4 J)	< 0.47 (0.99)	< 0.47 (< 0.097)
T-12 (4/14/2008)	< 0.49 (< 0.094)	< 0.49 (< 0.094)	< 0.50 (< 0.10)

J = Estimated Value

Results from T-08, T-10, and T-12 reported non detect for PCBs in unfiltered and filtered sample aliquots; therefore, no conclusions can be drawn from these results. For T-09, Aroclor results were non detect, while the homolog results indicated detectable concentrations of PCBs. For the original sample, the total concentration was 1.04 µg/l (estimated) with the filtered results being 0.26 µg/l and 0.46 µg/l (estimated) for the 2.0-micron and the 0.1-micron filtered samples, respectively. Based on this analysis, approximately 44% of the PCBs are dissolved (less than 0.1-micron filter) and 31% of the PCBs are likely adhered to particles greater than 2.0 micron. For the duplicate sample collected at T-09, approximately 22% of the PCBs are adhered to particles less than 2.0 microns. For the T-11 sample (April result), the homolog results indicate approximately 20% of the PCBs are adhered to particles less than 2.0 microns and only a very small fraction being present in the dissolved phase. For the October 2008 results from T-11, the

Aroclor data were all below the detection limit. The homolog data indicated approximately 10% of the PCBs are adhered to particles less than 2.0 microns.

In general, these results indicate that colloidal-size particles were detected with this sampling. Consequently, colloidal transport is possible at OU-3, although based on existing data a large site-wide plume does not appear to have coalesced together.

4.4.2 Prevalent Constituents

The nature and extent of constituents in groundwater have been thoroughly evaluated as described in Section 4.4.1. A frequency of detections summary was developed for groundwater data collected within OU-3. The summary is included as Table 4-10 and includes the minimum and maximum detections, mean concentrations measured, detection frequency, and percentage of detections. Based on a qualitative evaluation of the results presented on this table, the more prevalent constituents detected in groundwater at the Facility consist of PCBs, parathion, 4-nitrophenol, 1,2-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, o,o,o-triethylphosphorothioate, pentachloro-phenol, cobalt, manganese, and mercury.

To provide a better understanding of contaminant extent and migration, a detailed evaluation of each of the prevalent constituents found in both soil and groundwater was performed. An understanding of the extent of migration of these surrogate constituents in groundwater will provide the necessary information to evaluate their fate and transport.

4.4.2.1 PCBs

Recent PCB concentrations measured across the Facility are included on Figure 4-9. PCBs have been detected in the vicinity of the WMA II Corrective Action System. Unfiltered samples from observation wells OW-21/21A, OW-22 and OW-24 have reported detections of PCBs. The detections at OW-22 and OW-24 have generally been sporadic and low over the last eight years with a maximum concentration of 4.3 µg/l. The concentrations from unfiltered samples reported at OW-21/21A have been more consistent and higher. A maximum concentration of 7,400 µg/l was detected for the OW-21A samples collected in April 2004 and April 2005. However, more recent concentrations of 96.3 µg/l and 58 µg/l have been detected for April 2007 and April 2008, respectively. Temporary well, T-04, was installed as part of the RI Program to investigate

potential upgradient source areas for the detections at OW-21A. PCBs were detected in an unfiltered sample from T-04 consistent with concentrations measured at OW-21A in the April 2007 event. However, no source areas were identified. MW-07, a well located immediately downgradient of OW-21A, was sampled and PCBs were not detected. The results from well T-09 (1.04 µg/l, estimated PCBs by the homolog method and non detect for the Aroclor method) and well T-10 (non detect for both the homolog method and the Aroclor method) provide a limit for the extent of PCB impacts in this area of the Facility.

Another area of unfiltered PCB detections is along the east side of the Facility. During semi-annual groundwater monitoring, PCBs have been detected in samples from observation wells OW-08/08A, OW-15, and OW-16/16A. For OW-08/08A, detections have been fairly consistent at concentrations generally ranging from about 8 µg/l to 29 µg/l. Outlier concentrations were reported as 600 µg/l in 2003 and 130 µg/l in 2005. The 2003 concentration represented an increase from 11.5 µg/l in the previous sample, reducing to 11 µg/l in the subsequent sample, suggesting that the 600 µg/l result was spurious. For OW-15, the concentrations have been low and sporadic with six detected concentrations (maximum of 14.5 µg/l in 1999) for the last 18 samples analyzed. For OW-16/16A, detections have been fairly consistent at concentrations generally ranging from about 100 to 300 µg/l. The sample from RFI well OWR-05D, located within the capture zone of the SWMU 1 Corrective Action System, also had reported PCBs (210 µg/l) in the unfiltered sample, but not in the filtered sample.

In the interior portion of the Facility, PCBs were reported in observation wells OWR-11, OWR-12, and OWR-13. Observation well OWR-11 was installed to evaluate the groundwater quality in the vicinity of the Phosphoric Acid Basins (SWMU 12) where PCBs were detected in the soil. PCBs were detected in the unfiltered sample at a concentration of 170 µg/l and in the filtered sample at 20 µg/l. Downgradient well OW-09 did not show an elevated concentration of PCBs indicative of impacts from SWMU 12. OW-10, also downgradient of OWR-11, had a concentration of 6.2 µg/l (estimated) of PCBs reported in the unfiltered sample. OW-10 is located at the perimeter of the manufacturing area; however, Solutia has also monitored groundwater downgradient from this location at the CSSMA. The total PCB concentration for each of the CSSMA wells was non detect for samples collected in August 2004 (Golder, 2004). Observation well OWR-12 was installed to evaluate the groundwater quality in the vicinity of the

Underground Product Storage Tanks where PCBs were detected in the soil. PCBs were detected at a concentration of 4.4 µg/l in the unfiltered sample, but were not detected in the filtered sample. PCB concentrations for samples collected from downgradient wells CB-85, T-02, and OWR-01S were non detect. Observation well OWR-13 was installed to evaluate the groundwater quality in the vicinity of the former PCB Production Area (SWMU 42) and the Waste Drum Satellite Accumulation Area (SWMU 44) where PCBs were detected. PCBs were detected in the unfiltered sample at a concentration of 250 µg/l and in the filtered sample at 68 µg/l.

In 2005, OWR-14D was installed in the deep residuum in close proximity to OWR-13 (a shallow residuum well). The total PCB concentration for the sample collected in 2005 was 5 µg/l, which while still above the CCL indicates that concentrations of PCBs in the deeper residuum are substantially attenuated as compared to the shallow residuum well OWR-13 (250 µg/l) in this area of the Facility. OWR-15D was installed in close proximity to OW-16A (a shallow residuum well) and downgradient of OWR-05D. Impacts were present at this location; however, the initial concentration of 128 µg/l in 2005 substantially decreased in the subsequent sampling event in 2006 to 8.4 µg/l, but remains above the CCL. Additionally, downgradient locations of OWR-06D, OWR-01D, and OWR-04D all reported non detect for PCBs when they were last sampled in 1998.

The October 2006 results for the two shallow bedrock wells (T-05 and T-06) installed between OWR-14D and OWR-15D, indicated total PCB concentrations of 2.9 µg/l and 3.2 µg/l, respectively. Filtered concentrations were below the CCL of 0.50 µg/l for T-05 and 1.3 µg/l for T-06. These analytical results verify the conclusion that although some vertical migration of PCBs is occurring, the residuum is acting as a semi-confining unit. The shallow bedrock investigation is discussed in detail in the Preliminary SCSR Addendum (Golder, 2007a).

At the closed West End Landfill, WEL-01 had detections of PCBs for two of the eight samples that have been collected; however, results for both events (0.69 µg/l for October 2002 and 0.66 µg/l for June 2005) only slightly exceeded the CCL, but had no detections in the last four sampling events. The results for OWR-07D (a deep residuum well near the closed West End Landfill) indicated generally low PCB concentrations with results generally below the CCL of 0.5 µg/l, but increased to slightly above the CCL in the most recent event.

To address the potential for colloidal transport as a mechanism for PCB migration in the residuum, P/S collected filtered samples as part of the RCRA groundwater monitoring in April 2006. Samples from observation wells with historic detections of unfiltered PCBs (OW-08A, OW-16A, OW-21A, and OWR-15D) were collected for total PCB and filtered PCB analysis. The results are included in Table 4-5. The laboratory results from the total PCB analyses were presented to the ADEM and the EPA as part of the RCRA semi-annual monitoring program. Appendix G includes the filtered results.

During a later investigation of site bedrock, filtered groundwater samples were collected from wells T-05 and T-06. These results indicated that either colloidal particles were present with PCBs adsorbed to the particles, or that PCBs were present in a dissolved phase. Colloidal-size particles were also examined during the OU-1/OU-2 groundwater investigations. In general, these results indicate that colloidal-size particles were detected with this sampling. Consequently, colloidal transport is possible, although based on current data a large site-wide plume does not appear to have coalesced together.

There are five main areas with PCB detections; north of the closed South Landfill, the Old Limestone Bed, the vicinity of OW-21A, the vicinity of OWR-13/OWR-14D, and the vicinity of OW-10/OWR-11. Elevated PCB concentrations found in groundwater in the areas of the closed South Landfill and the Old Limestone Bed likely originated from these units. The Former PCB Production Area was located in the south central portion of the Facility and is likely responsible for the detections observed in the OWR-13/OWR-14D area, which is located downgradient of the former production area. Observation well OWR-11 was installed to evaluate the groundwater quality in the vicinity of the former north and south Phosphoric Acid Basins. The detections at observation wells OWR-11 and OW-10 are likely a remnant impact associated with the Phosphoric Acid Basins. An isolated PCB detection in OWR-12 is likely associated with the former Waste Drum Satellite Accumulation Area. Soil sample SSR-18 was collected in this area and indicated an elevated concentration of PCBs. The low level detections in WEL-01 and OWR-07D are likely associated with the disposal of wastes from the former PCB Production Area in the closed West End Landfill prior to 1960.

4.4.2.2 Parathion

Parathion has been detected in the vicinity of both corrective action systems (SWMU 1 Corrective Action System and the WMA II Corrective Action System). Operation of the corrective action systems have resulted in a downward trend in concentrations of parathion in these areas. Figures 4-10 and 4-11 show the decrease in concentration and mass from 1989 to 1996. Post-1996 data (2003 Supplemental RFI, 2005 SCSR Report or April 2007 RCRA Program) have also been included. The areas impacted and the concentration ranges detected in 1996 are less compared to the 1989 data, as depicted in the figures.

Near the SWMU 1 Corrective Action system, only OW-08A, OWR-15D, and OW-16A continue to have parathion detections. For OW-08A and OWR-15D, the most recent concentrations have decreased to below 0.001 milligrams per liter (mg/l). For OW-16A, the concentrations have decreased from above 0.1 mg/l in samples collected from 1998 to 2002 to below 0.1 mg/l from 2002 to 2007. Concentrations have been relatively stable between October 2002 and April 2007. In each of these cases, parathion concentrations are below the CCL of 0.22 mg/l. Parathion concentrations have been sporadic in the vicinity of the WMA II Corrective Action System. Wells MW-20A and OW-19 have had two and three detections of parathion, respectively, in the last eight years, with no detections exceeding the CCL. Well OW-24 has had detections generally ranging from 0.083 mg/l to 0.36 mg/l; however, parathion has not been detected during the last three years in this well. OW-21/OW-21A has had a sporadic reporting of parathion with increasing concentrations. OW-21 had low concentrations of parathion in 1999 and 2000 with measurements of 0.0055 mg/l and 0.0035 mg/l, respectively. No parathion was detected in OW-21 during the next two years. Since 2003, with the replacement of OW-21 with OW-21A, the measured concentrations have been sporadic but generally much higher at 4.5 mg/l, below detection limits, and 11.0 mg/l. Following the peak concentration measured at 11.0 mg/l in 2005, concentrations have declined to 7.6 mg/l in April 2007. Well MW-07, located downgradient of OW-21A, was non detect for parathion in 2005. Steep concentration gradients are typically associated with very limited groundwater flow. With OW-21A potentially located very close to a localized source, its distribution to downgradient monitoring well MW-07 would be based on advective flow and diffusion. As reported in Freeze and Cherry, 1979, one-dimensional diffusion would result in very limited contaminant movement (a C/Co = 0.01 front movement of approximately one meter (~3.3 feet) in one hundred years).

Advective flow based on hydraulic conductivity, gradient and effective porosity is also very limited unless secondary porosity features provide an interconnected flow path. As the data would suggest, very little interconnection is evident. Variations in parathion concentration over time are provided on Table 4-11.

Sampling conducted during the RFI/CS Program indicated a parathion detection at OWR-05D (at the closed South Landfill). During the RI Program, parathion was detected at OWR-15D, also at the closed South Landfill. Both of these detections were below the CCL. During the RFI/CS Program, parathion was detected above the CCL at OWR-08S. Well OWR-08S is located just upgradient of the WMA II Corrective Action System and as such any groundwater constituents detected at this location are captured by the recovery well system. During the RI Program, parathion was also detected at temporary well T-04, and in the vicinity of OW-21A. During the Supplemental RFI/CS Program, parathion was detected in OWR-12 (in the central plant area). The results from T-04 and OWR-12 were well below the CCL. The distribution of parathion detections (generally from the spring of 2005) in observation wells across the Facility is presented on Figures 4-10 and 4-11.

There are three main areas of parathion detections; north of the closed South Landfill, the Old Limestone Bed, and the vicinity of OW-21A. The detections in the interceptor wells (IW-5 to IW-15), and observation wells OW-16/16A, OWR-15D, and OW-08/08A, located north of the closed South Landfill, are likely the result of a historic release from the closed South Landfill, prior to the construction of the groundwater recovery system. The parathion detections associated with the Old Limestone Bed area are the result of acidic wastewater neutralization from the parathion intermediates operation. The parathion detections in the vicinity of OW-21A are the highest historically detected parathion concentrations at the Facility. Given the effectiveness of the WMA II Corrective Action System, the lack of historical structures/potential release areas upgradient of OW-21A on the Facility property, and the non-detect results for downgradient well MW-07, the source of parathion impacts associated with the area of OW-21A is considered local. An additional isolated detection of parathion was reported for OWR-12. The Underground Product Storage Tanks were formerly located upgradient of well OWR-12. According to Facility personnel, the USTs stored products related to the parathion manufacturing process. There were

no detections of parathion in soil samples collected at the noted locations with elevated groundwater concentrations.

There is no indication of parathion being present in other areas of the Facility or in any of the off-site perimeter control wells around the Facility. With the exception of OW-21/21A, there is no indication of potential off-site migration, and the absence of parathion in the sample collected from MW-07 indicates little or no migration associated with OW-21/21A. An evaluation of the natural attenuation of this constituent in groundwater at the Facility is presented in Section 5.0.

4.4.2.3 4-Nitrophenol

Based on historical groundwater monitoring data, PNP is present in groundwater at the closed South Landfill and in the vicinity of the OLBSI. Operation of the groundwater corrective action systems has resulted in a declining trend in concentrations of PNP in these areas. Figures 4-12 and 4-13 show the decrease in concentration and mass from 1989 to 1996. Comparison of these figures indicates a decrease in the area impacted as well as a reduction in detected concentration ranges from 1989 to 1996. This trend of improving groundwater quality with respect to PNP has continued since 1996. At the closed South Landfill, PNP was detected in 1998 above the CCL of 1.095 mg/l in observation well OWR-05D (2.3 mg/l), and below the CCL in observation wells OW-16A (generally less than 0.1 mg/l) and OWR-15D (reported as 0.12 mg/l, estimated). At the OLBSI area, PNP was detected once in MW-20A and OW-22 in the last eight years and four times in OW-19 (with four non detects). For each of these wells at the OLBSI, the detected concentrations have been below the CCL for all historical data, with the exception of OW-19 in 1999. Well OW-19 is located within the capture zone of the WMA II Corrective Action System. Downgradient of the OLBSI, PNP has been detected in OW-21A at concentrations above the CCL in the last four reported sampling events (2004 to 2007 data). The maximum concentration of PNP detected was 31.0 mg/l in a sample collected from OW-21A in 2006. The most recent PNP concentration measured for OW-21A was 9.5 mg/l in 2007. The PNP concentration for downgradient well MW-07 was non detect for the sample collected in June 2005. During the Supplemental RFI/CS Program, PNP was detected above the CCL in OWR-12 (in the central plant area). A number of downgradient wells demonstrate that migration beyond the property boundary is not occurring from this location.

PNP detections show a similar distribution as parathion. The data indicate that PNP has been detected in three main areas: north of the closed South Landfill, the Old Limestone Bed, and the vicinity of OW-21/21A. These areas coincide with the noted detections for parathion. The detections in each of these areas are likely associated with the closed South Landfill, acidic wastewater neutralization, and a localized source near OW-21A, respectively. An isolated detection of PNP was also measured in the area of OWR-12. The Underground Product Storage Tanks are likely responsible for this detection. There were no detections of PNP in soil samples collected at the noted locations with elevated groundwater concentrations. The potential migration patterns for constituents from these specific source areas are the same as described above for parathion. There were no PNP detections above the CCL in the perimeter control wells around the Facility. An evaluation of the natural attenuation of PNP in groundwater at the Facility is presented in Section 5.0.

4.4.2.4 Volatile Organic Compounds

4.4.2.4.1 1,2-Dichlorobenzene

Historical data indicate that 1,2-dichlorobenzene is present in groundwater in the vicinity of OW-16A and OWR-15D, the WMA II Corrective Action System (OW-19, MW-20A, and OW-24) and in the vicinity of the OW-21/21A area (including T-04). The maximum concentration detected was 39 µg/l (estimated) for the sample collected from OW-21A in 2007. Sporadic low level concentrations have also been detected in OWR-14D. Detected concentrations have not exceeded the CCL of 600 µg/l. The data indicate that 1,2-dichlorobenzene has been detected 30 times in a total of 205 samples collected. The distribution of 1,2-dichlorobenzene concentrations in groundwater samples is presented in Figure 4-14.

4.4.2.4.2 1,4-Diclorobenzene

Historical data indicate that 1,4-dichlorobenzene is present in groundwater in the vicinity of OWR-15D and OW-16A, the WMA II Corrective Action System (OW-19 and MW-20A), in the vicinity of the OW-21/21A area, and near the eastern perimeter of the Facility (OWR-11). The maximum concentration detected was 21 µg/l for the sample collected from OWR-11 in 2003. Detected concentrations have not exceeded the CCL of 75 µg/l. The data indicate that 1,4-dichlorobenzene has been detected 13 times in a total of 205 samples collected. The

distribution of 1,4-dichlorobenzene concentrations in groundwater samples is presented in Figure 4-14.

4.4.2.4.3 Chlorobenzene

Chlorobenzene has been detected in the vicinity of OW-15, OW-16A, and OWR-15D, the closed South Landfill (OW-02, OW-04, and OWR-05D), the WMA II Corrective Action system (MW-20A), and in the vicinity of the OW-21/21A area. Sporadic low level concentrations have also been detected in OWR-11 and OWR-12. The maximum concentration detected was 46 µg/l for the sample collected from OWR-05D during the RFI/CS Program. Detected concentrations have not exceeded the CCL of 100 µg/l. The highest concentration detected in the most recent sampling event (2007) was 3.3 µg/l in MW-20A. The historical data indicate that chlorobenzene has been detected 42 times in a total of 306 samples collected. The distribution of chlorobenzene concentrations in groundwater samples is presented in Figure 4-14.

4.4.2.5 Other Semi-Volatile Organic Compounds

4.4.2.5.1 o,o,o-Triethylphosphorothioate

o,o,o-Triethylphosphorothioate has been detected 81 times in a total of 363 samples collected, with a maximum detected concentration of 530 µg/l for the sample collected from OW-21A in 2007. o,o,o-triethylphosphorothioate has been detected in the vicinity of OW-15 and OW-16A, at the closed South Landfill (OW-02, OW-04, MW-11A, MW-12A, and MW-13A), the WMA II Corrective Action System (MW-16, OW-19, OW-24, and SBP-05), and the vicinity of OW-21/21A. However, all concentrations have been below the CCL of 730 µg/l. The distribution of o,o,o-triethylphosphorothioate concentrations in groundwater samples is presented in Figure 4-15.

4.4.2.5.2 Pentachlorophenol

Historical data indicate that pentachlorophenol is present in groundwater in the vicinity of OWR-14D, the WMA II Corrective Action System (MW-20A) and closed South Landfill (OWR-05D). During the RFI/CS Program, the sample collected from well OWR-05D (1.2 µg/l) and OWR-14D (1.4 µg/l) exceeded the CCL of 1 µg/l. The maximum concentration of 95.4 µg/l was detected in MW-20A in 1998 as part of the RCRA groundwater monitoring program.

Operation of the groundwater corrective action system has resulted in a declining trend with a measured concentration of 8.8 µg/l in 2007. Pentachlorophenol has been detected 20 times in a total of 290 samples collected. However, with the exception of the OWR-05D detection and detections in MW-20A, pentachlorophenol has not been detected in groundwater since 1998. As a result, the analysis for pentachlorophenol was removed from the RCRA program except for well MW-20A. The distribution of pentachlorophenol concentrations in groundwater samples is presented in Figure 4-15.

4.4.2.5.3 Benzo(a)pyrene

There has been only one detection of benzo(a)pyrene at the Facility. Benzo(a)pyrene was detected in well OW-08A at 2.5 µg/l, which was an estimated value below the method reporting limit.

4.4.2.6 Metals

4.4.2.6.1 Arsenic

Arsenic is not prevalent in groundwater at the Facility, as it has only been detected twice and each detection has been below the CCL. The distribution of arsenic concentrations in groundwater is presented in Figure 4-16.

4.4.2.6.2 Cobalt

Historical data indicate that cobalt is present in groundwater throughout the Facility with 119 detections in a total of 313 samples collected. However, no concentrations have exceeded the CCL of 730 µg/l. A peak concentration of 300 µg/l was detected in OWR-11 in 2003. The distribution of cobalt concentrations in groundwater is presented in Figure 4-16.

4.4.2.6.3 Lead

Lead is not prevalent across the Facility. Since 1998, six wells have shown reported concentrations of lead in groundwater above the CCL of 15 µg/l. These wells include OW-09, OWR-5D, OWR-8S, WEL-01, WEL-02, and WEL-04. Although CCL exceedances were noted in OW-09, WEL-01, and WEL-02 in 1998, more recent data collected from these wells were non detect for lead. Data collected for OWR-05D in 1998 show a slight exceedance above the CCL

for the filtered sample and non detect for the unfiltered sample. No further sampling for lead has been completed at this location.

Two samples were collected from WEL-04 in 1998, and both samples were analyzed for lead (filtered and unfiltered). The unfiltered analysis for the original sample exceeded the CCL of 15 µg/l with a result of 16 µg/l, while the filtered original and the duplicate samples (both filtered and unfiltered) were non detect for lead. The results confirm that lead concentrations in groundwater are not a significant issue at this location. Lead concentrations measured at OWR-08S in 1998 for both the original (filtered) and duplicate (filtered) samples exceeded the CCL with a maximum detected value of 45 µg/l. Both of the unfiltered results were below the CCL. No further testing for lead has been completed at this location. Since OWR-08S is located within the influence zone of the WMA II Corrective Action System, lead concentrations measured downgradient of this well at MW-14 were evaluated. Both filtered and unfiltered samples collected at this location in 2005 (latest sampling event for lead) were non detect for lead. The distribution of lead concentrations in groundwater is presented in Figure 4-16.

4.4.2.6.4 Mercury

Mercury is present in the groundwater in several areas across the Facility. In the vicinity of the OLBSI and WMA II, total mercury has been detected in samples from wells MW-15, MW-16, MW-20A, OW-21/21A, and OW-22. However, mercury has typically been found at concentrations above the CCL of 2 µg/l in only one of these locations (MW-15). Mercury has also been detected in the plant site area. The sample collected from OWR-13 in 2003 had a mercury detection above the CCL (2.3 µg/l). Well OWR-03S and OWR-12 have had mercury detections, but below the CCL.

Total mercury was detected above the CCL in samples from wells OW-10, OWR-11, and OWR-06D, located downgradient from the Phosphoric Acid Basins (SWMU 12). However, only the filtered sample from OW-10 reported a mercury detection. The mercury detections in this area are consistent with results from the soil sampling investigations, where the highest mercury concentrations (up to 2.2 mg/kg, estimated) were reported in samples collected from SWMU 12. Further downgradient of this area, temporary wells T-02 and T-03, observation wells OWR-01S

and OWR-09S, and CSSMA wells CMW-01, CMW-02, and CMW-03 had mercury concentrations below the CCL.

In the vicinity of SWMU 1, total mercury has been detected in samples from wells OWR-05D, OW-06A, and OW-07. However, in this area mercury has typically been found at concentrations below the CCL of 2 µg/l.

Based on these data, mercury is most frequently detected around the OLBSI, the former PCB Production Area, downgradient of the Phosphoric Acid Basins, and to a lesser extent the SWMU 1 area. The distribution of mercury concentrations in groundwater is presented in Figure 4-16.

4.4.2.6.5 Manganese

Manganese is present in the groundwater in several areas across the Facility. The CCL for manganese is 880 µg/l. Detections above this level were found in a number of locations spread out across the Facility. However, the distribution does not seem to have a common source as concentrations well below the CCL were located among the locations where exceedances were noted. This was true for depth zones as well. For example, shallow residuum well OW-10 had an exceedance, while the corresponding deep well OWR-6D did not have an exceedance. The deep residuum well OWR-1D had an exceedance; however, the corresponding shallow well OWR-1S did not. Manganese was present in the interior of the plant site at concentrations above the CCL in the shallow residuum wells WEL-04, OWR-11, and OWR-12; but not in shallow residuum well OWR-13, nor deep residuum well OWR-14D. Exceedances were noted in the vicinity of WMA II at OWR-02S and OWR-08S, but not in the deep zone at OWR-02D nor downgradient of the WMA II Corrective Action System in wells MW-14, T04, and deep residuum well OWR-04D. In the vicinity of SWMU 1, manganese was detected above the CCL in the sample from well OWR-05D; but not in samples downgradient of the extraction well system at OW-16A and OWR-15D.

In general, there was not much variation in the total manganese sample results (unfiltered) and the dissolved manganese results (filtered). There were a few exceptions to this generalization (such as at WEL-04 with 1,100 µg/l total and 58 µg/l filtered and OWR-01D with 2,300 µg/l total and 830 µg/l filtered).

Based on these data, the distribution of manganese does not seem to follow a recognizable pattern. Concentrations above the CCL were detected at eight locations distributed throughout the site. However, the magnitude and distribution are consistent with background levels and do not seem to have a common source as concentrations well below the CCL were detected among the locations where exceedances were noted. The distribution of manganese concentrations in groundwater is presented in Figure 4-16.

4.4.2.6.6 Nickel

Nickel is not prevalent in groundwater at the Facility, and there have been no exceedances of the CCL for nickel (730 µg/l) in any groundwater sample collected at the site. The maximum concentration measured was 82 µg/l. The distribution of nickel concentrations in groundwater is presented in Figure 4-16.

4.5 Surface Water/Stormwater

The majority of the stormwater that falls within the Facility is directed into the upgraded storm drainage system that routes the flow to outfall DSN 012. This includes run-off from the closed South Landfill, which is directed into a storm drainage system which discharges through the retention basin to DSN 012. Similarly, areas immediately east of the Facility drain into a storm sewer that also discharges to DSN 012. Figure 2-3 shows the current layout of the stormwater management system. Some areas of the Facility, however, do not drain to the upgraded system. These areas are primarily in the northwest corner of the Facility and the area around the closed West End Landfill. Run-off from the northwest corner of the Facility is routed through outfalls DSN 003, DSN 004 and DSN 005. Run-off from the closed West End Landfill is routed off the Facility through outfall DSN 006. However, as described in Section 2.7, although these outfalls continue to discharge stormwater, monitoring of these outfalls is no longer required by ADEM due to the absence of detection of COIs.

The potential off-site migration of constituents in surface water/stormwater has been evaluated by monitoring stormwater outfalls at the downgradient perimeter of the Facility. Although the current NPDES Permit for the Facility only requires sampling at DSN 012, previous sampling has been conducted at the other outfall locations. The analytical data collected for these outfalls varied due to changes in how the Facility addressed stormwater and modifications to the

Facility's NPDES Permit. A summary of the analytical results for surface water outfalls located at the downgradient perimeter of the Facility (DSN 003,-004, -005, -006, and -012) is included below, and the data are presented in Table 2-7.

- DSN 003: No sampling has been conducted at DSN 003 since February 1994. At that time, no analytes were detected in the surface water sample collected at the outfall. More recent samples collected and analyzed from DSN 004 were representative of the outflow from this sample location. Based on these results sampling of DSN 003 was discontinued under the NPDES Permit although the outfall continues to discharge stormwater.

- DSN 004: Since June 1998, PCB concentrations have been analyzed on four occasions at DSN 004; two events in 1998 for the RFI/CS Program and two events in 2001 under the NPDES Program. All results have been non detect with the exception of one sample collected in June 1998 that had a total PCB detection of 1.1 µg/l. The June 1998 sample collected at DSN 004 was also analyzed for the full list of COIs. The only other constituents detected in this sample were arsenic at a concentration of 0.011 mg/l and barium at a concentration of 0.036 mg/l. BTEX, PNP, and oil and grease were measured semi-annually at this outfall until October 2006 in accordance with the former NPDES Permit. None of these constituents were detected during these monitoring events. Although the outfall continues to discharge stormwater, sampling of this discharge point was discontinued following the shutdown of the PNP plant when the new NPDES Permit was issued in January 2007.

- DSN 005: A surface water sample was collected at DSN 005 in June 1998 during the RFI/CS Program and was analyzed for the full list of COIs. The only constituent detected in this sample was barium at a concentration of 0.013 mg/l. Based on these results, sampling of DSN 005 was discontinued under the NPDES Permit although the outfall continues to discharge stormwater.

- DSN 006: Prior to 2002, surface water samples were collected at DSN 006 on a quarterly basis in accordance with the Facility's NPDES Permit and analyzed for PCBs. Analytical results for samples collected from December 1997 to May 2001 (representative of 14 samples) showed no detections for PCBs. Based on these results and the completion of remedial work at the closed West End Landfill, sampling of DSN 006 was discontinued under the NPDES Permit although the outfall continues to discharge stormwater.

- DSN 012: Surface water samples are collected at DSN 012 on a quarterly basis and analyzed for PCBs in accordance with the current NPDES Permit for the Facility. The PCB results for DSN 012 show that PCBs have only been detected 3 times over the past four years. A total of 11 sampling events were conducted during this period. The detections were 1.6 µg/l (estimated), 1.9 µg/l, and 16.0 µg/l. Oil and grease are also measured quarterly at this

outfall in accordance with the NPDES Permit. There have been no detections for these constituents over the past four years. In conjunction with the NPDES Permit renewal process, in May 2006, an expanded list of parameters was analyzed for the sample collected from DSN 012. During this sampling event, benzene was the only COI detected in this sample at a concentration of 6.2 µg/l. An investigation and interim measures were completed under the Facility's NPDES Permit, and subsequent sampling confirmed the absence of benzene in this discharge. The internal plant storm sewer system was investigated to locate the potential source of benzene-containing non-stormwater entering the drainage system. A previously abandoned section of the storm sewer piping was identified as the source, and the discharge from the abandoned line was redirected to DSN 002 in accordance with provisions of the Facility's SID Permit.

4.6 Air

The Phase I CSM Report (BBL, 2003) summarized the results of air samples collected at or near the Facility between 2000 and 2002 by both P/S and the EPA. The locations of the stations are defined in Table 2-8 and presented in Figure 2-6. P/S sample stations 1 through 5 reported a general decline in PCB concentrations. The only location with a 2002 mean concentration higher than the previous 2 years was station 5. However, this higher mean was attributed to one single unusually high concentration of 89.7 nanograms per cubic meter (ng/m^3) (BBL, 2003). The air data collected by the EPA at sample stations located away from the Facility (A through H) indicated PCB concentrations consistent with the values reported in the scientific literature for general background levels in urban environments. The mean concentrations from the EPA's air sampling stations located 0.25 to 1.0 miles from the Facility were generally less than 10 ng/m^3. The sampling station locations and results are shown in Figure 2-6 and Table 4-12, respectively.

The RFI/CS Air Monitoring Work Plan (ENSR, 2002) was submitted to ADEM in October 2002 to confirm the original findings. Additional program clarifications were submitted on March 28, 2003 to address post-approval comments. The air-sampling program was implemented by P/S from April 2003 to March 2004 and reported in the RFI/CS Air Monitoring Report (ENSR, 2004). The overall objectives of this air monitoring program were to: (a) evaluate the air pathway surrounding the Facility; and (b) assist in identifying PCB source areas not yet characterized near the Facility, if any, using an air pathway analysis approach (ENSR, 2004). Two types of data, field data and laboratory analytical data, were collected. Field data included collecting the information necessary to calculate sampler air volumes, which are used to calculate ambient concentrations from the analytical results supplied from the laboratory. For each sample, the

ambient PCB concentrations were calculated by dividing the weight of the desired compound per sample by the sample volume, giving the mass per unit volume in ambient air (ng/m^3). The calculations were made for each PCB homolog class (mono through deca), and total PCBs were reported on a per sample basis by summing the values given for each of the ten homolog classes. A value of zero was used to calculate the total PCBs for the homolog classes reported as non detect. Also, total ambient PCB levels were assessed in conjunction with the meteorological monitoring data. Wind direction data facilitated evaluation of potential PCB source locations by comparing results from monitors mainly located upwind and downwind of the Facility during a given sampling session. In order to support the upwind/downwind evaluation, only data from sampling periods with consistent wind directions (16 of 24 sessions showed consistent wind directions) were used.

Ambient air PCB results from 2003 to 2004 are provided in Table 4-12 (with the sampling locations shown on Figure 2-6). Average ambient PCB concentration levels at the eight sites monitored varied from 2.3 to 27.1 ng/m^3, with a maximum total PCB concentration for a single sampling date of 145.4 ng/m^3 measured at the Northwest sampler location.

Volatilization and airborne suspension of PCB containing particles are mechanisms that transfer PCBs from existing source areas to the air pathway. These processes contribute to the vapor phase and particulate-associated partitions of total ambient PCB levels. In order to measure the vapor and particle partitioning of PCBs, 16 samples were collected at the Near East sampler location and subjected to separate analysis of the filter and PUF/XAD[9] media. PCBs were not detected on the filter (particulate) in any of the samples taken during different months and temperature ranges. The only PCBs found were measured in the PUF/XAD (vapor phase) media. This indicates that the ambient PCBs appear almost exclusively in the vapor phase in the area surrounding the Facility. Therefore, the transport mechanism is volatilization and not the suspension of fugitive dust.

Homolog profile analysis can provide information on potential sources of PCBs. The mono through deca PCB profile for this study showed that ambient PCB concentrations for the tri-substituted homolog class and above increased with temperature. The mono and di-substituted

[9] PUF/XAD is a sorbent collection/analysis media.

PCBs did not seem to vary with temperature. These lighter homologs are in the air year round, and may come from sources that are not local to the Facility or monitoring area.

Ambient air monitoring was conducted at both the closed South Landfill and closed West End Landfill. The results of the monitoring support the evaluation that the closed South and West End Landfills are not current sources of PCBs in air. There were low overall PCB concentrations measured at the 2-South and 3-West monitoring locations. These monitoring locations were located predominantly downwind of the landfills, indicating that neither airborne particulate suspension nor evaporation are active mechanisms for transport of PCBs from source areas to the air pathway at the two landfills.

The data also indicated that potential PCB source areas exist both at the Facility and off site. During many sampling sessions, monitors upwind from the Facility measured the maximum PCB concentration suggesting off-site PCB source areas. However, during other sampling sessions, monitors downwind of the Facility showed higher PCB concentrations indicating on-Facility PCB sources. The RFI/CS Air Monitoring Report (ENSR, 2004) concluded that the lack of correlation between temperature and levels of lighter, more volatile homologs indicated that the lighter PCBs are from outside the Facility.

4.7 Summary

Soil samples were collected within the area of the plant, the closed South and West End Landfills during the RFI/CS and RI Programs. The more prevalent constituents detected in soils at the Facility consist of PCBs, benzo(a)pyrene, arsenic, cobalt, lead, manganese, mercury, and nickel. Within the plant area, the majority of soil samples were taken within areas covered with gravel, asphalt pavement, or concrete pavement. These covers prevent direct contact and minimize or reduce the potential for erosion of underlying soils. These areas are maintained and inspected as part of the plant's ongoing operation and maintenance programs. One exception is the grassy area north of the Former Phosphoric Acid Basin where one sample (SSRI-11) indicated elevated levels of PCBs, arsenic and lead relative to the rest of the Facility. Although this area is generally unoccupied and unused, there is the potential for direct contact with these surface soils.

At the closed South and West End Landfills, surface soil samples were collected from the top cover material after implementing the cover system upgrades and analyzed for PCBs. The concentrations in samples from the closed South Landfill ranged from non detect to 10 mg/kg and from the closed West End Landfill ranged from non detect to 21 mg/kg. Actions taken for areas adjacent to the West End Landfill included installing a minimum 18-inch thick soil cover. Alabama Power maintains a substantial gravel cover at the Switchyard, with a chain link fence enclosure limiting access. Sampling data for the West End Landfill are described in Section 4.3.1.2.2 and Appendix A-1.

Sampling data for the "walking trail area" located in the southeast corner of the plant site are included in Appendix A-2. Following sampling activities, this area was covered with a geotextile marker layer and soil cover.

The hydrogeology at the Facility has been well studied and extensive investigations have been performed. Local areas of groundwater impacts exist within the Facility. However, downgradient wells generally exist that demonstrate that contaminants are not migrating from the Facility. With the exception of the areas of OW-21A and OW-10, where contaminants have been confirmed at the downgradient boundary, groundwater capture systems have been installed to prevent migration from the Facility. The following key points summarize groundwater characteristics at the Facility:

- Transport of groundwater and any dissolved constituents is governed by the groundwater flow paths. Some of the infiltrating water moves laterally within the residuum, while another component of this groundwater movement is controlled by the downward gradient present within the residuum. Because the horizontal hydraulic conductivity is generally much greater than the vertical hydraulic conductivity, the majority of the groundwater flux is in the horizontal direction.

- The groundwater flow rate in the shallow residuum is low, calculated to range from 0.53 feet/year to 5.3 feet/year based on Darcy's equation and porous media flow. Higher velocities can be present with preferential flow through secondary porosity features. However, the lateral extent of interconnectivity appears low as widespread groundwater impacts were not noted. In addition, transport by colloidal-size particles is possible, but again, the lack of widespread contamination suggest that this is not a significant mechanism across the Facility.

- An evaluation of existing data at the Facility indicates that the most prevalent constituents detected in groundwater are PCBs, parathion, PNP, 1,2-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, pentachlorophenol, o,o,o-triethylphosphorothioate, cobalt, mercury, and manganese. Other COIs have been detected, but the detections have been sporadic and the areal extent localized.

- There are five main areas with PCB detections; north of the closed South Landfill, the Old Limestone Bed, the vicinity of OW-21A, the vicinity of OWR-13/OWR-14D, and the vicinity of OW-10/OWR-11. Elevated PCB concentrations found in groundwater in the areas of the closed South Landfill and the Old Limestone Bed likely originated from these units. The Former PCB Production Area was located in the south central portion of the Facility and is likely responsible for the detections observed in the OWR-13/OWR-14D area, which is located downgradient of the former production area. Observation well OWR-11 was installed to evaluate the groundwater quality in the vicinity of the former north and south Phosphoric Acid Basins. The detections at observation wells OWR-11 and OW-10 are likely a remnant impact associated with the Phosphoric Acid Basins.

- Low level concentrations of PCBs detected in the deep residuum and shallow bedrock wells represent a progressive vertical concentration decline from shallow groundwater to deeper groundwater. The semi-confining unit observed in the deep residuum during previous investigations extends through the weathered bedrock zone, to the top of bedrock. As a result, more significant impacts are generally restricted to groundwater in the shallow residuum.

- The potential for colloidal transport as a mechanism for PCB migration at monitoring wells OW-08A, OW-16A, OW-21A, and OWR-15D was investigated by collecting filtered samples and analyzing the samples for PCBs. The sample results were non detect for all the filtered samples.

- During a later investigation of site bedrock, filtered groundwater samples were collected from wells T-05 and T-06. These results indicated that either colloidal particles were present with PCBs adsorbed to the particles, or that PCBs were present in the dissolved phase. Colloidal-size particles were also examined during the OU-1/OU-2 groundwater investigations. In general, these results indicate that colloidal-size particles were detected with this sampling. Consequently, colloidal transport is possible, although a large site-side plume does not appear to have coalesced together.

- Parathion and PNP have been detected in groundwater in three main areas: north of the closed South Landfill, the Old Limestone Bed, and the vicinity of OW-21A. The detections in each of these areas are likely associated with the closed South Landfill, acidic wastewater neutralization, and a localized source near OW-21A, respectively. There were no detections of PNP or parathion in soil samples collected at these locations.

- Volatile organic compounds are present in groundwater in the vicinity of OW-16A and OWR-15D, the WMA II Corrective Action System, and in the vicinity of the OW-21/21A area. However, all detected concentrations were less than the CCL for each constituent.

- o,o,o-triethylphosphorothioate and pentachlorophenol are both present in groundwater at the closed South Landfill and the WMA II Corrective Action System. Only pentachlorophenol exceeded the CCL. However, with the exception of the OWR-05D detection and detections in MW-20A, pentachlorophenol has not been detected in groundwater since 1998. As a result, the analysis for pentachlorophenol was removed from the RCRA monitoring program except for well MW-20A.

- Historical data indicate that cobalt is present in groundwater throughout the Facility. However, no concentrations have exceeded the CCL of 730 µg/l.

- Manganese concentrations in groundwater were detected above the CCL in a number of locations spread out across the Facility. However, the magnitude and distribution are consistent with background levels and do not seem to have a common source as concentrations well below the CCL were detected among the locations where exceedances were noted.

- Mercury in groundwater is most frequently detected around the OLBSI, the former PCB Production Area, downgradient of the Phosphoric Acid Basins, and to a lesser extent the SWMU 1 area.

- There was no visual evidence to support the presence of DNAPL at depth, although the presence of localized DNAPL ganglia as a source of groundwater impacts could not be ruled out.

A number of actions have been taken to reduce the transport of COIs off of the Facility. These actions include closure of the former South and West End Landfills, the lining and re-routing of storm drains, and numerous corrective actions in former production areas of the plant. The effectiveness of these actions has been demonstrated through quarterly surface water sampling conducted in accordance with the Facility's NPDES Permit. However, since there were no detections of PCBs measured from December 1997 through May 2001, monitoring of DSN 006 (outfall for the West End Landfill) was discontinued. The monitoring of DSN 004 (which represents DSN 003, DSN 004, and DSN 005) for the northern plant area was also discontinued under the current NPDES permit following the shutdown of the PNP plant.

Although historical emissions of PCBs from the Facility and South and West End Landfills may have occurred, an extensive air pathway monitoring study was conducted documenting that air

impacts are currently low, consistent with ambient conditions in other areas of the United States, and concluding that the closed South and West End Landfills, and Facility are not now considered a unique source for PCBs in air.

5.0 CONTAMINANT FATE AND TRANSPORT

This section evaluates the fate and transport of soil and groundwater COIs at the Facility. The site-specific physical characteristics, interim remedial actions, COI concentrations in the affected media and their trends, and horizontal and vertical extent of impacts have been used as the basis for the analysis. Where appropriate, published data (such as COI solubility and biodegradation) have been included where transport and ultimate COI fate is discussed. The contaminant fate and transport section is presented in four subsections: potential routes of migration, contaminant persistence and behavior, contaminant migration in groundwater, and natural attenuation. The objective of this fate and transport section is to identify the primary mechanisms affecting the distribution and migration of COIs and the ultimate fate of the COIs. As this section demonstrates, groundwater is the most relevant potential migration pathway from the Facility.

5.1 Potential Routes of Migration

Facility media consist of soil, groundwater, surface water, and air. As summarized in Section 4.6, air is not a media of concern due to low frequency, and magnitude, of detections. Therefore, the media of potential concern include soil, surface water, and groundwater. The potential migration pathways associated with these media include:

- Soil to surface water/groundwater;
- Surface water to soil/groundwater; and
- Groundwater to surface water/soil.

5.1.1 Soil to Surface Water/Groundwater

5.1.1.1 Soil to Surface Water

Contaminants in soil have the potential to migrate to surface water through the release of contaminants bound to soil particles via surface water flow. There are many natural and man-made hydrologic features at the Facility which govern this transport mechanism. The most influential natural features are the steep side slopes of Coldwater Mountain near the closed South Landfill and the mild slopes which trend southeast to northeast across the production area of the Facility. Several interim measures were completed at the Facility including the closed South and West End Landfill cap upgrades, plant site engineering controls (pavement, placement of gravel,

etc), and the surface water management system upgrades. Most of the Facility's SWMUs are covered by gravel, concrete or asphalt to minimize or reduce erosion from surface water run-off and the potential for direct exposure to on-site soils. The covers were inspected during the RFI/CS to verify their integrity, as discussed in Section 2.0. These interim measures have minimized or reduced the migration of contaminants in soil via surface water run-off. This is demonstrated through surface water monitoring results collected as part of the NPDES Program. The DSN 006 stormwater outfall conveys drainage from the closed West End Landfill. The monitoring requirement for this outfall was removed from the NPDES Permit after no detections of PCBs were measured from December 1997 through May 2001, and no monitoring has occurred since May 2001. Some areas of the Facility do not drain to the upgraded stormwater collection system. These areas are primarily in the northwest corner of the Facility and include the closed West End Landfill and adjacent areas, which continue to drain to the DSN 006 outfall. As discussed in Section 4.5, only sporadic detections of PCBs have been recorded as part of the DSN 012 stormwater outfall NPDES Permit monitoring program. Over the past three years, PCBs were only detected in 3 of the 11 samples collected at concentrations ranging from 1.6 µg/l (estimated) to 16.0 µg/l. These results confirm that the numerous controls put in place effectively minimized or reduced the potential transport of impacted soil to surface water.

5.1.1.2 Soil to Groundwater

The data and lines of evidence presented in previous sections indicate that leaching to groundwater has or could be occurring at the Facility. As a consequence, this evaluation is conducted to determine if the leaching contributes significantly to the groundwater risk from the Facility. Numerous investigations have been conducted at the Facility to identify significant areas of residual wastes. These investigations have included the RFI, the Supplemental RFI, and the RI. Prior to these investigations, groundwater at the Facility had been studied for more than ten years. No areas of significant residual or principal threat wastes were identified in any of the investigations; however, because the plant is an operating facility with a number of containment systems present, potential groundwater sources exist. Although leaching to groundwater may be occurring in isolated areas around the Facility, the existing groundwater extraction systems and perimeter monitoring systems are currently used to reduce these impacts.

The evaluation is presented in two steps. The first step consists of a preliminary screening of Facility soil data to determine the appropriate chemicals to retain for further analysis. The criteria used for the preliminary screening are described below. The second step consists of a more detailed screening of the retained chemicals that includes evaluating the specific chemical characteristics and concentrations found in the Facility soil and surrounding groundwater. Following the preliminary and detailed screening, a list of COCs is identified for this migration pathway. The following provides the details for each step in the evaluation.

5.1.1.2.1 Preliminary Screening

To determine those chemicals found in soil that have the potential to impact groundwater, a preliminary screening was completed. Table 5-1 provides a list of the compounds detected in soil at the Facility along with the maximum detected concentration, frequency of detection, and Generic Soil Screening Levels (SSLs). Chemicals were eliminated following the preliminary screening if any of the following conditions were met:

1. The maximum detected concentration was below the Generic SSL (or equivalent).

   The Generic SSLs are MCL-based soil screening levels presented as the EPA agreed upon Regional Screening Levels used by EPA Regions 3, 6 and 9, herein referred to as the Generic SSLs (EPA, 2008). These Generic SSLs, using a dilution attenuation factor (DAF) of 1, are considered appropriate screening values for the Facility. The tap water, risk-based values from the Regional Screening tables are only used for constituents where an MCL-based SSL is not available.

   The Generic SSLs provide conservative concentration limits due to a number of assumptions (except when facilitated transport is present). Some sources on site may be consistent with these assumptions and some may not. The assumptions for which there may be a departure are as follow:

   - the source is infinite;
   - contaminants are uniformly distributed throughout the zone of contamination;
   - soil contamination extends to the water table; and
   - the receptor well is at the edge of the source (i.e., there is no dilution from recharge downgradient of the site), and is screened within the plume.

2. There were no groundwater detections above the MCLs (or the tap water concentration for those constituents without MCLs) for that chemical.

   If a chemical was leaching from soil to groundwater at unacceptable concentrations, the groundwater concentrations at the Facility would exceed the MCLs. If there were no exceedances of the MCLs (or the tap water concentration for those constituents without MCLs) in groundwater, the chemical was not considered to be leaching from soil.

3. The chemical was detected in soil at a frequency of detection of less than 5%.

   Chemicals that were detected at a frequency of less than 5% are not considered to be prevalent across the Facility and therefore do not pose significant potential for leaching to groundwater.

4. The chemical is considered an essential nutrient and is not considered toxic.

   The EPA considers the following inorganic chemicals to be essential nutrients: calcium, chloride, iodine, magnesium, phosphorus, potassium, and sodium (EPA, 2000). [Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins.] Therefore, these inorganic chemicals have not been retained for further evaluation.

As shown on Table 5-1 six chemicals were retained for the more detailed screening evaluation. These chemicals include: cobalt, lead, manganese, mercury, total PCBs, and polycyclic aromatic hydrocarbons (PAHs).

5.1.1.2.2 Detailed Screening

In the detailed screening, each retained chemical was evaluated further as described in this section. First, a literature review of available soil screening criteria was completed for each chemical. This information was used in conjunction with the chemical characteristics, frequency and location of soil and groundwater detections to determine if the chemical is present at concentrations in soil that have the potential to impact groundwater. Each of the retained chemicals is discussed below.

Cobalt

The SSL for Cobalt is 490 µg/kg, which is a risk-based SSL. There were 23 detections of cobalt in oil above the screening level. In the April 2007 groundwater sampling event, Cobalt was detected above the tap water number of 11 µg/l in OW-02 (18 µg /l in 4/07), OW-04 (240 µg

/l in 4/07), OW-07 (16 µg /l in 4/07), OW-16A (29 µg /l in 4/07), MW-11A (34 µg /l in 4/07), OW-19 (25 µg /l in 4/07), and OW-21A (38 µg /l in 4/07). As a result of the number of cobalt detections above the tap water concentration, soil could be present that is leaching to groundwater. Figure 4-2 provides the distribution of cobalt in soil. Comparison of soil detections to groundwater detections shows no clear correlation. Locations with the highest cobalt concentrations in soil (SSR-17 at 74 mg/kg, SSR-19 at 47 mg/kg, SSR-10 at 22 mg/kg, and SSR-7 at 17 mg/kg) exhibited the following downgradient groundwater concentrations (monitoring wells located within approximately 200 feet downgradient): for samples SSR-17 and SSR-10 the associated groundwater results were non detect for MW-15, non detect for SBP-05, 1.1 µg/L for MW-16, 6.8 µg/L for MW-20A, and 29 µg/L for OWR-08S; for SSR-19 the associated groundwater results were 2.3 µg/L for OW-24 and 25 µg/L for OW-19; and for SSR-7 the associated groundwater results were 12 µg/L for WEL-04. In contrast, the highest groundwater results were 300 µg/L for OWR-11 and 260 µg/L for OWR-12. These monitoring wells are located immediately downgradient of soil sample locations SSR-05 (6.1 mg/kg) and SSR-14 (6 mg/kg). Cobalt was not identified as a COC in soil or groundwater based on the HHRA. Therefore, cobalt is not retained for further consideration.

Lead

Lead concentrations in soil at the Facility have been found to exceed the generic SSL of 14 mg/kg, which is based on protection of the MCL. Monitoring wells OW-09, OWR-05D, OWR-08S, WEL-01, WEL-02, and WEL-04 had exceedances of lead above the MCL in groundwater. None of these wells are located in the vicinity of the highest soil sample result measured at SSRI-11, the only sample to exceed the residential exposure criteria of 400 mg/kg. The monitoring wells closest (OW-10 and OWR-06D) to soil sample location SSRI-11 showed no detections for lead. Based on the detection of lead in soil and the number of MCL exceedances in groundwater, lead should be considered further.

Manganese

The generic SSL for manganese is 57 mg/kg, which is calculated based on protection of a tap water groundwater concentration of 880 µg /l. From 1998 to 2005, manganese in groundwater occurred 29% of the time at concentrations above 880 µg /l. However, the distribution of

groundwater detections is highly variable, and a site-wide groundwater plume is not present. The maximum concentration of manganese recorded at the site was found in well OWR-12 at 12,000 µg/l in February 2003. Because of its wide-spread occurrence in groundwater, manganese has been retained for additional consideration.

Mercury

The generic SSL, protective of the MCL of 2 µg /l for mercury, is 100 µg/kg. Thirteen soil samples exceed 100 µg/kg and range in concentration from 170 µg/kg to 3,300 µg/kg. Additionally, mercury has been detected at five locations in groundwater above the MCL of 2 µg/l. Mercury tends to sorb to humic materials in soil at pH 4 or greater. Soil adsorption of mercury is decreased with increasing pH or chloride ion concentrations under laboratory conditions. Elevated chloride ion concentrations reduce methylation of mercury in soil. Inorganic mercury tends to remain bound to particulate matter, and therefore leaching appears to be a relatively insignificant transport process for inorganic mercury in soil on site at this Facility. However, because of its occurrence in soil and groundwater, mercury has been retained for additional consideration.

PCBs

PCBs have been present at the Site from the late 1920s. During this period, releases to soil and groundwater have occurred. The establishment of the caps, covers, and closings in the 1980s and 1990s were performed to reduce or prevent further impacts from occurring. However, these caps, covers, and closings were not able to prevent impacts that had already occurred prior to their placement. Groundwater concentration data indicate that PCBs are present in groundwater above the MCL at the Facility. The low solubility and extremely high retardation factor (50 to as high as thousands) for PCBs would indicate that impacts prior to the 1980s could still be present today beneath the caps, covers, and closings.

At the site, 79% of the soil sampling data exhibit concentrations above the Generic SSLs. The SSLs are provided for each Aroclor and for total PCBs as follow:

Generic SSLs		
	Subsurface Soil	Units
Aroclor 1016	52	µg/kg
Aroclor 1221	0.14	µg/kg
Aroclor 1232	0.14	µg/kg
Aroclor 1242	3	µg/kg
Aroclor 1248	3	µg/kg
Aroclor 1254	5.1	µg/kg
Aroclor 1260	14	µg/kg
Total PCBs	45	µg/kg

PCB–impacted groundwater persists at several locations around the Facility including OW-08A, OW-16A, and OW-21A. As a result, PCBs have been retained for additional consideration.

Polycyclic Aromatic Hydrocarbons (PAHs)

Several PAHs were retained based on exceedances of the Generic SSL. These exceedances were typically limited to one or two locations. The MCL for benzo(a)pyrene (0.2 µg /l) was used as a surrogate for comparison of the maximum detected concentrations in groundwater for all PAHs, since MCLs were not available for the other compounds. Other than one exceedance at MW-14 for indeno(1,2,3-cd)pyrene, all exceedances above the MCL were detected at one location (OW-08A). These PAH compounds are commonly encountered on industrial facilities and are not considered to be prevalent across the Facility. Further consideration of these constituents is not warranted.

5.1.1.2.3 Summary

Based on the above analysis, four constituents (lead, manganese, mercury, and PCBs) have been retained for further consideration in the FS for potential leaching to groundwater. As shown on Table 5-2, each soil sample collected at the Facility has been screened against the background

concentrations and SSLs for these constituents to identify areas on the Facility where soil is located that has the potential to leach to groundwater.

5.1.2 Surface Water to Soil/Groundwater

Contaminants in surface water have the potential to migrate to soil or groundwater through infiltration into soil and subsequent sorption of constituents. However, actions taken to control surface water drainage from the Facility are effectively controlling the transport of COIs in surface water. As of 1996, all process related water was hard-piped to discharge to the Facility's former WWTF prior to being discharged to the Anniston POTW. Appendix I includes a listing of the constituents analyzed and the frequency of analysis in accordance with the Facility's SID Permit (IU 35-08-00048). These measures have eliminated any plant process related sources of COIs to the surface water system. Additionally, an extensive series of interim measures has been constructed to separate run-off from areas with affected soils and to minimize or reduce the downstream migration of affected soils into surface water. The effectiveness of these actions has been documented through quarterly surface water sampling conducted in accordance with the Facility's NPDES Permit. Since only low level sporadic detections of COIs have been encountered in surface water over the last ten years (since completion of the closed South Landfill remedial measures), surface water is not a likely transport pathway to either soil or groundwater.

5.1.3 Groundwater to Surface Water/Soil

5.1.3.1 Groundwater to Surface Water

Contaminants in groundwater have the potential to migrate to surface water through direct discharge of groundwater to a surface water body, such as a channel, stream, or wetland. However, observations of surface water flow in the Facility's surface water drainage ways confirm flow generally occurs immediately after rainfall events, indicating that groundwater does not recharge on-site surface water with the exception of flows into the stormwater sewer system, which are monitored through the Facility's NPDES Permit. In addition, impacted groundwater is controlled downgradient at the Facility's northern boundary by the WMA II corrective action system. Consequently, there is no expectation that COIs would migrate and discharge into streams or ditches downgradient of the Facility.

As described in Section 4.4, there is no corrective action system located in the northeast portion of the Facility. While discharge of impacted groundwater from this area is not anticipated, it is hypothetically possible that groundwater from this portion of the Facility could migrate toward and discharge into Snow Creek. Currently, the CSSMA wells serve as boundary wells confirming the absence of migration to the creek. However, to evaluate such a hypothetical discharge requires consideration of the potential mixing that would occur as groundwater enters into the creek. As calculated in the RFI/CS Report, the effect of mixing groundwater into Snow Creek results in a dilution of solute concentration by a factor of 18,000 times (Golder, 2002). Therefore, concentrations in Snow Creek would be 18,000 times less than the initial concentrations in groundwater. The primary COIs detected above the CCLs in the northeast perimeter monitoring wells include Mercury (16 µg/l) and total PCBs (6.2 µg/l). Each of these constituents would be well below the applicable limits at a concentration 18,000 times less than the measured concentrations in groundwater.

5.1.3.2 Groundwater to Soil

Contaminants in groundwater have the potential to migrate to soil through sorption, which is defined as a transport process that includes both adsorption and absorption. Adsorption is the movement of a substance from the dissolved aqueous phase onto the surface soil particles, while absorption involves movement into and uniform distribution within the new phase. Adsorption refers to the attraction between a chemical and soil particles. Compounds that are strongly adsorbed onto soil have the potential to migrate from groundwater to soil. As described in Section 5.1.1.2, PCBs, manganese and mercury have been detected in multiple soil samples at the Facility. Both PCBs and mercury have a high partitioning coefficient suggesting an affinity towards the solid phase indicating the potential for these constituents to migrate to soil. However, the concentrations detected in groundwater are typically several orders of magnitude lower than the concentrations detected in soils. Therefore, the potential contaminant mass that may migrate in this manner is likely negligible. In addition, since groundwater contamination is controlled at the Facility perimeter, the migration of constituents through this pathway is also controlled.

5.2 Contaminant Persistence and Behavior

As described throughout this report, the source areas of the Facility have generally been addressed with various interim measures prior to the RI Program. Most of the Facility is covered with gravel, or impermeable or engineered cover systems. Significant improvements were made to the Facility's stormwater management system. Only groundwater continues to have the ability to transport COIs off of the Facility, and therefore, the remainder of this section will focus on the behavior of the primary COIs in groundwater. However, as described in Section 3.1.5, the groundwater flow velocity is extremely low (e.g. 0.53 feet/year to 5.3 feet/year), and so the rate of migration of COIs in groundwater is also extremely low.

The following discussions were taken from the Agency for Toxic Substances and Disease Registry (ATSDR) Toxicological Profiles, unless otherwise referenced.

5.2.1 PCBs

PCBs are highly stable under most environmental conditions. However, chlorine substitutions (congeners) result in physical and chemical property differences. Table 5-3 indicates the Aroclor types as they correspond to various homolog groups. Table 5-4 indicates the physical properties by Aroclor. As evidenced in the tables, although PCBs are relatively insoluble, solubility does increase with decreased chlorination. In addition, mobility also increases with decreased chlorination (lower octanol-water partition coefficients with decreased chlorination).

The adsorption of dissolved PCBs onto sediments and suspended particulate is greatest for organic matter and clay. The higher-chlorinated PCBs (having lower solubility and higher octanol-water partition coefficients) have a greater tendency to bind to solids, while lower molecular weight PCBs (with higher solubility and lower K_{ow}) have a reduced tendency to bind to solids. Volatilization is greater for lower chlorinated PCBs. Due to the strong affinity of PCBs for soil particles, leaching from soils is not extensive.

Colloids are generally considered to be particles with diameters less than 1 to 10 microns. PCBs typically sorb to biotic material, particles, sediments, and other solids, which could be colloidal in nature. PCB behavior in the presence of colloids varies by degree of chlorination (Steuer et al., 1999). Highly chlorinated/lower soluble congeners have a greater affinity to sorb to particulate

matter than less chlorinated/more soluble congeners (Burgess et al, 1996). The presence of organic acids induces greater mobilization for clay colloids, while the addition of acidic solutions with anionic surfactants appears to reduce or inhibit mobilization (Swartz et al., 1998). Changes in the concentrations of solutes that affect colloid surface charge, such as pH or organic anions, can change the stability of colloids. McCarthy and Zachara (1989) provide a review of the mechanisms of colloidal release, transport, and stability. Field observations also point to the potential transience of colloid mobilization in the subsurface (e.g., Nightingale and Bianchi, 1977; Miekeley et al., 1992; Baumann et al., 2006). Nightingale and Bianchi (1977) observed that groundwater turbidity may increase for periods of time due to mobilization of colloidal solids coincident with time-varying recharge events. These observed turbidity increases were abated with time as the aquifer returned to steady-state conditions. In addition, Baumann et al. (2006) observed high colloid concentrations in leachate from landfills, but colloid concentrations decreased rapidly in groundwater down gradient from the landfill. These observations suggested that the change of hydrochemical conditions at the interface, from a reducing, high ionic strength environment inside of the disposal sites to an oxidizing, low ionic strength environment in the ground water (together with physical filtration effects for the larger particles) was an effective chemical barrier for colloid migration. Therefore, while colloid mobilization (along with associated contaminants) may occur, there are several physicochemical mechanisms that may limit colloid migration significant distances beyond the point of generation.

The ability of PCBs to degrade is dependent on the degree of chlorination as well as the isomeric substitution pattern. In water, hydrolysis does not significantly degrade PCBs. Photolysis of PCBs (cleaving of carbon-chlorine bond by the adsorption of light) appears to be a significant physical or chemical degradation process. Oxidation in the presence of nano-scale bimetallic or zero valent iron has been shown to be effective at degrading PCBs in laboratory studies. The rate of PCB biodegradation in water is dependent on the congener structure and the environmental conditions. The less chlorinated mono- and dichlorobiphenyl congeners have been shown to biodegrade under aerobic conditions. Researchers have determined that higher chlorinated PCB congeners will biodegrade anaerobically in the presence of *Dehalococcoides ssp.*bacteria (Bedard, et. al., 2007).

5.2.2 Parathion

Parathion is strongly adsorbed to soil. Factors affecting adsorption include organic matter content and cation exchange capacity. Parathion is not very soluble in water. Studies have shown that leaching to groundwater does not appear to be a significant fate process (ATSDR, 2001). However, when soil concentrations are very high, leaching to groundwater can be significant. Research indicates that soil adsorption isotherms are linear at low concentrations and nonlinear at high concentrations, suggesting that parathion is generally immobile in soil when used for agricultural use, but more mobile at higher concentrations, such as in areas where spills have occurred (ATSDR, 2001).

Degradation rates of parathion in water increase with pH and temperature. Elevated salinity and/or dissolved solids may slow degradation. Degradation and transformation of parathion in water appears to be primarily microbial. Degradation in water alone was found to be significantly less than water plus sediment. Parathion degrades more rapidly in anaerobic soil with high moisture content. PNP is an intermediate degradation product, which is further transformed to carbon dioxide in an aerobic environment. Low parathion concentrations degrade rapidly; however, degradation is significantly slower for higher concentrations.

5.2.3 4-Nitrophenol

The solubility of PNP is high with a strong tendency to partition in water with only minor partitioning onto soil. Also due to high water solubility, partitioning from air to water is expected. The low Henry's Law Constant for PNP (3.5×10^{-9} atm m^3/mol) indicates a strong preference for the aqueous phase (ATSDR, 1992). Research supports the detection of nitrophenols in rainwater. The partitioning of nitrophenols between water and sediment is dependent on the pH of the water. PNP photoreacts rapidly in near-surface water in the presence of nitrate or nitrite. A half-life of approximately 27.5 hours was estimated in one study, under mid-day sunlight conditions and pH 5.5 (ATSDR, 1992). Sorption of PNP has been correlated to iron oxide, clay, and the silt content of the soil. Due to low soil-water partitioning coefficients (K_p), PNP is not expected to strongly adsorb to soil.

The aerobic biodegradation of PNP in water has been found to be rapid, after an initial period of adaptation. The rate and extent of degradation depends on the initial substrate concentration, the

nature and concentration of nutrients, the activities of the organisms, and the presence or absence of predators or inhibitors of degrader organisms. Anaerobic biodegradation studies have yielded mixed results. The rate of biodegradation is concentration-dependent (ATSDR, 1992).

5.2.4 Volatile Organic Compounds

5.2.4.1 1,2-Dichlorobenzene and 1,4-Dichlorobenzene

1-2 dichlorobenzene and 1-4 dichlorobenzene do not occur naturally. 1-2 dichlorobenzene is a colorless pale liquid used to make herbicides. 1-4 dichlorobenzene is a colorless to white solid that changes from a solid to vapor when exposed to air. 1-4 dichlorobenzene enters the environment when it is used in mothballs and in toilet-deodorizer blocks. Very little enters the atmosphere from hazardous waste sites. 1-2 dichlorobenzene is released into the environment when used to make herbicides. Dichlorobenzenes do not dissolve easily in water; the small amounts that enter water quickly evaporate into the air. Occasionally, dichlorobenzenes bind to soil and sediment, and are not easily broken down by soil organisms (ATSDR, 2006).

5.2.4.2 Chlorobenzene

Chlorobenzene is used as a solvent in pesticide formulations, as a degreaser, and other industrial applications. Sources include crude petroleum and natural gas production, plastic and synthetic manufacturing, and petroleum refineries. Chlorobenzene has historically been used to make phenols and DDT. Released to air, it is slowly broken down by reactions with other chemicals and sunlight or can be removed by rain. In water, chlorobenzene will rapidly evaporate to the air and/or be broken down by bacteria. When released to soil, it is broken down rapidly by bacteria, but some will evaporate to the air and some may filter into the groundwater (ATSDR, 1990). Chlorobenzene exists almost entirely in the vapor phase in the atmosphere based upon its vapor pressure. The dominant removal mechanism is the reaction with hydroxyl (OH) radicals. The calculated half-life and lifetime of chlorobenzene due to reaction with the OH radical are 13 days and 19 days, respectively. The formation of chlorophenols may be expected by reaction with the hydroxyl radical (ATSDR, 1990).

5.2.5 Other Semi-Volatile Organic Compounds

5.2.5.1 o,o,o-Triethylphosphorothioate

Triethyphosphorothioate does not occur naturally. It is a degradation product of malathion, which is a pesticide that is widely used in agriculture, residential landscaping, public recreation areas, and in public pest control programs such as mosquito eradication. Once malathion is introduced into the environment, droplets of malathion in the air fall on soil, plants, water, or man-made surfaces. While most of the malathion will stay in the areas where it is applied, some can move to areas away from where it was applied by rain, fog, and wind. Malathion stays in the environment from a few days to several months, but is usually broken down within a few weeks. It is broken down to o,o,o-triethylphosphorothioate and other chemical compounds by water, sunlight, and bacteria found in soil and water. Malathion does not tend to adsorb to soil and is rapidly broken down by bacteria; thus, it is unlikely that malathion or its degradation products will reach groundwater. Malathion breaks down quickly in water by the action of the water and the bacteria in the water. Malathion is broken down in air by reacting with other chemicals formed naturally in the air by sunlight, to form a more toxic product called malaoxon. If malathion is present on dry soil or on man-made surfaces such as sidewalks or pavements it does not break down as fast as it would on moist materials (ATSDR, 2003).

5.2.5.2 Benzo(a)pyrene

Benzo(*a*)pyrene is a PAH that can be derived from coal tar. It occurs in products of incomplete combustion of fossil fuels and has been identified in ambient air, surface water, drinking water, waste water, and char-broiled foods. It has been identified in surface water, tap water, rain water, groundwater, waste water, and sewage sludge. No current commercial production or use of benzo(*a*)pyrene is known. Benzo(*a*)pyrene is primarily released to the air and removed from the atmosphere by photochemical oxidation and dry deposition to land or water. Biodegradation is the most important transformation process in soil or sediments. The estimated half-lives for benzo(*a*)pyrene are less than 1-6 days in the atmosphere, less than 1-8 hours in water, 5-10 years in sediment, and greater than 16 months in soil (for complete degradation). Benzo(*a*)pyrene is practically insoluble in water but is soluble in benzene, toluene, xylene, and sparingly soluble in alcohol and methanol (Faust, 1994).

5.2.5.3 Pentachlorophenol

Pentachlorophenol is a manufactured chemical used industrially as a wood preservative for utility poles, railroad ties, and wharf pilings and as a pesticide. Impure pentachlorophenol (the form usually found at hazardous waste sites) is dark gray to brown and exists as dust, beads, or flakes. Pentachlorophenol can be found in the air, water, and soil. It enters the environment through evaporation from treated wood surfaces, industrial spills, and disposal at uncontrolled hazardous waste sites. It can be broken down by sunlight, other chemicals, and microorganisms into other chemicals within a couple of days to months. As Pentachlorophenol is released into the atmosphere, it is transformed via photolysis. The main biodegradation pathway for pentachlorophenol is reductive dehalogenation. In this process, the compound is broken down to tetra-, tri-, and dichlorophenols. Another pathway is methylation to pentachloroanisole. These two methods eventually lead to ring cleavage and complete degradation. When released to soil or water, pentachlorophenol will be slowly broken down by microbes and may gradually leach into ground water. If released in water, it will adsorb to sediment, or be degraded by sunlight. In reductive soil and sediments, pentachlorophenol can be degraded within 14 days to 5 years, depending on the anaerobic soil bacteria that are present. However, adsorption of pentachlorophenol in soils is pH dependent because it increases under acidic conditions and it decreases in neutral and basic conditions (ATSDR 2001).

5.2.6 Metals

5.2.6.1 Arsenic

Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic combines with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds. Inorganic arsenic compounds are mainly used to preserve wood. Copper chromated arsenate (CCA) is used to make "pressure-treated" lumber. CCA protects wood from rotting due to insects and microbial agents. CCA has been used to pressure treat lumber used for decks, playgrounds and other outdoor uses since the 1930s. Since the 1970s, the majority of the wood used in residential settings was CCA-treated wood. CCA is no longer used in the U.S. for residential use; however, it is still used in industrial applications. Organic arsenic compounds are used on cotton fields and orchards as pesticides. Arsenic in soil may enter the air, water, and land from wind-blown dust and may enter water from runoff and leaching. Arsenic cannot be

destroyed in the environment. It can, however, change its form. Rain and snow remove arsenic dust particles from the air. Many common arsenic compounds can dissolve in water. Most of the arsenic in water will ultimately end up in soil or sediment (ATSDR, 2007a).

5.2.6.2 Cobalt

Cobalt is a naturally-occurring element that has properties similar to those of iron and nickel, but is usually found in the environment combined with other elements such as oxygen, sulfur, and arsenic. Cobalt may enter air and water, and settle on land from windblown dust, seawater spray, volcanic eruptions, and forest fires and may additionally get into surface water from runoff and leaching when rainwater washes through soil and rock containing cobalt. Soils near ore deposits, phosphate rocks, or ore smelting facilities, and soils contaminated by airport traffic, highway traffic, or other industrial pollution may contain high concentrations of cobalt. Cobalt cannot be destroyed in the environment, it can only change form or become attached to or separated from particles. Cobalt released from power plants and other combustion processes is usually attached to very small particles, and may stay in the air for many days in this form. Cobalt released into water may adhere to particles in the water column or to the sediment at the bottom of the water body into which it was released, or remain in the water column in ionic form. The specific fate of cobalt will depend on many factors such as the chemistry of the water and sediment at a site as well as the cobalt concentration and water flow. Cobalt deposited on soil is strongly attached to soil particles and therefore would not travel very far into the ground. However, the form of the cobalt and the nature of the soil at a particular site will affect how far cobalt will penetrate into the soil. The mobility of cobalt in soil is inversely related to how strongly it is absorbed by soil constituents. Cobalt may be retained by mineral oxides such as iron and manganese oxide, crystalline materials such as aluminosilicate and goethite, and natural organic substances in soil. In soil and sediment, the amount of cobalt that is mobile will increase under more acidic conditions (ATSDR, 2004).

5.2.6.3 Lead

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health

concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States. Lead itself does not break down, but lead compounds are changed by sunlight, air, and water. When lead is released to the air, it may travel long distances before settling to the ground. Once lead falls onto soil, it usually adheres to soil particles. Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil (ATSDR, 2007b).

5.2.6.4 Manganese

Manganese is found naturally in soil and water, but often comes from anthropogenic processes such as fossil fuel combustion, waste incineration and cement production. As a result, manganese has been found in several environmental media including air, surface water, groundwater, soil and sediment. Though elemental and inorganic manganese compounds will not volatilize, they exist in the atmosphere as suspended particulate matter. Dry deposition, like gravitational settling, is the primary method of atmospheric removal, resulting in an airborne particle half-life of days, depending on size and atmospheric conditions. Because manganese is naturally found in soils and sediments, low levels of manganese compounds are normally present in surface water and groundwater.

5.2.6.5 Mercury

Metallic mercury released in vapor form to the atmosphere can be transported long distances before converted to other mercury forms, and wet and dry deposition returns it to land and water surfaces. Wet deposition is the primary method of atmospheric mercury removal. Most inert mercury in precipitation is bound to aerosol particulates which are relatively immobile when deposited on soil or water. The transport and partitioning of mercury in surface water and soils is influenced by the form of the mercury compound. Volatile forms, such as metallic mercury and dimethylmercury, evaporate to the atmosphere, whereas stable forms such as mercuric sulfides partition to particulates in the soil or water column and are transported within the water column to the sediments. Vaporization is controlled by temperature. Therefore, mercury emission from soil is greater in warmer weather when soil microbial reduction of the mercuric (Hg^{+2}) form to the more volatile forms is greatest. The dominant process controlling mercury distribution in the environment is the sorption of nonvolatile forms to soil and sediment (ATSDR, 1999).

Mercury is transformed in the environment by living and non-living factors, oxidation and reduction, bioconversion of inorganic and organic forms, and photolysis of organomercury compounds. Inorganic mercury can be methylated by microorganisms. Most of the mercury deposited on soil is adsorbed to the soil and does not leach into the groundwater. Sorption is related to the organic matter content of a soil. Mercury is strongly sorbed to humic materials in soils and the surface layers of peat at pH 4 or greater. Soil adsorption of mercury is decreased with increasing pH or chloride ion concentrations. Elevated chloride ion concentrations reduce methylation of mercury in soil and river sediments, while increased organic carbon and sulfate ions increase methylation in sediments. Inorganic mercury remains tightly bound to particulate matter, and therefore leaching is a relatively insignificant transport process for inorganic mercury in soil. Surface run-off, however, moves mercury from soil to water where the humic content is high (ATSDR, 1999). Organic and/or inorganic colloidal transport may provide a role in mercury mobility based on mercury's affinity for humic material and inorganic mercury's affinity to soil (Huling, 1989).

5.2.6.6 Nickel

Nickel is a very abundant natural element found in all soils. Pure nickel is a hard, silvery-white metal. Nickel can be combined with other metals, such as iron, copper, chromium, and zinc, to form alloys. These alloys are used to make coins, jewelry, and items such as valves and heat exchangers. Most nickel that is mined is used to make stainless steel. Nickel can combine with other elements such as chlorine, sulfur, and oxygen to form nickel compounds. Many nickel compounds dissolve fairly easy in water and have a green color. Nickel compounds are used for nickel plating, to color ceramics, to make some batteries, and as catalysts that increase the rate of chemical reactions. Nickel and its compounds have no characteristic odor or taste. Nickel is released into the atmosphere from volcanoes and by industries that make or use nickel, nickel alloys, or nickel compounds. It is also released into the atmosphere by oil-burning power plants, coal-burning power plants, and trash incinerators. In the air, it attaches to small particles of dust that settle to the ground or are taken out of the air in rain or snow; generally taking many days. Nickel released in industrial waste-water ends up in soil or sediment where it strongly adheres to particles containing iron or manganese (ATSDR, 2005).

5.3 Contaminant Migration in Groundwater

The assessment of contaminant fate and transport in groundwater focuses on the physical characteristics of the Facility, subsurface migration and distribution of COIs, and historical trends. This section provides a general discussion of groundwater flow characteristics and provides a summary of potential contaminant migration for the primary COIs encountered at the Facility. Historical trends for constituent detections are also discussed.

5.3.1 Groundwater Flow Characteristics

The transport of groundwater and any dissolved constituents is governed by the groundwater flow paths, which are generally defined by the hydraulic gradients and hydraulic conductivities. Infiltrating water moves laterally within the shallow residuum, with a smaller component of this groundwater movement controlled by the downward gradient present within the residuum. Because the horizontal hydraulic conductivity is generally much greater than the vertical hydraulic conductivity, the majority of the groundwater flow is in the horizontal direction. This has been confirmed through the identification of dry zones deep within the residuum. Locally, the deep residuum acts as a semi-confining unit to the underlying bedrock aquifer. The weathered bedrock zone represents a gradual transition from the deep residuum to the more competent (or less weathered) dolostone bedrock.

Impacted groundwater flow is generally restricted to the shallow residuum, with contaminant transport a function of the horizontal velocity of groundwater flow, direction of flow, and the properties of each COI.

As described in Section 3.1.5, the horizontal velocity of groundwater flow (v) is dependent on hydraulic conductivity (k), the local hydraulic gradient (i), and the effective porosity (n). The formula used to calculate this velocity based on Darcy's Law is as follows:

$$v = ki/n$$

Based on the variable head aquifer testing results discussed in Section 3.0, the geometric mean hydraulic conductivity of the shallow residuum is 1.5×10^{-2} feet/day (See Table 3-2). The hydraulic gradient across the Facility in the shallow residuum is approximately 1.9×10^{-2}

feet/foot. The effective porosity of the residuum is assumed to vary between 2% to 20%. Using these values and Darcy's Law, the horizontal rate of groundwater flow in the shallow residuum is calculated to be range from 0.53 feet/year to 5.3 feet/year.

Groundwater flow in the shallow residuum is generally to the north. However, the shallow residuum potentiometric map (Figure 3-5) shows flow with a northwest component in the vicinity of the WMA II Corrective Action System and a northeast component of flow towards the CSSMA in the northeast portion of the Facility.

5.3.2 Dissolved Phase Migration

Chemical migration rates are often slowed relative to groundwater flow rates due to attenuation reactions that occur in the subsurface. As discussed earlier in this section, two common attenuation mechanisms are adsorption and degradation reactions, both of which are highly dependent on subsurface conditions. The effect of adsorption reactions on chemical migration rates is typically quantified through the use of retardation factors. The retardation factors coupled with the slow rate of groundwater movement at the Facility dictate the ultimate fate and transport of constituents in groundwater. Using the horizontal groundwater flow rate of 0.53 feet/year to 5.3 feet/year, it is expected that groundwater movement will be limited to less than 16 feet to 159 feet laterally over the 30 year post-closure care period at the Facility. This estimate neglects the constituent specific retardation factors which further limit the rate of migration and any preferential flow paths that may exist due to fractures, which could increase the rate of migration.

5.3.2.1 PCBs

The solubility of PCBs is generally low, however the solubility of individual Aroclor compounds is above the CCL. Given the low solubility and the tendency to adsorb to soil/sediment, dissolution into groundwater is considered to be a relatively minor transport mechanism, except when transport is facilitated by colloidal material, solvents, and NAPL. In addition, if present in groundwater, rates of movement of dissolved PCBs should be very low due to high retardation factors (1 plus bulk density divided by porosity times the partitioning coefficient). With high octanol/water partitioning coefficient (log k_{ow} ranges from 4.7 to 6.8) as discussed in Section 5.2, retardation factors on the order of as low as 50 up to hundreds or thousands are likely (i.e.

dissolved PCBs in groundwater would be expected to move 50 to hundreds or thousands times slower than natural groundwater flow).

Perimeter monitoring wells located around the boundary of the Facility show that PCBs in groundwater are contained on the Facility and are not migrating to off-site receptors with the following exceptions. Concentrations of PCBs have been detected above the CCL for OW-21A, located north of the Facility boundary near the WMA II Corrective Action System. The extent of PCBs in the vicinity of OW-21A has been delineated. The downgradient boundary was established with non-detect values reported in well MW-07. MW-07 is located approximately 120 feet north of OW-21A. Additional data from the recent Northside Property investigation (Golder 2008) supports these observations. Monitoring wells installed north and northeast of OW-21A indicated total PCB groundwater concentrations of approximately 1 µg/l and non detect, respectively. These wells are located less than 180 feet downgradient of OW-21A. Similarly, the results from OW-10 indicate that PCBs were above the CCL in the RI sampling event. However, the associated CSSMA wells located downgradient have no constituent detections. Given the rate of groundwater flow and the large retardation factors for PCBs discussed above, PCB migration downgradient of OW-10 is considered to be insignificant. Total PCBs were detected in OW-16A at 190 µg/l in April 2007. For the same sampling event, PCBs were not detected in OW-15, located 250 feet downgradient of OW-16A. These data verify the CSM, confirming that detections of PCBs in groundwater at the Facility are indicative of localized sources and that dissolved phase migration is not a significant transport mechanism.

The presence of PCBs in unfiltered samples was often attributed to suspended particles in the well bore, as these contaminants were not considered mobile in porous media. Concern that the filtering process was removing the colloidal particles that may have been mobile in porous media was addressed by increasing filter openings. The filtered samples collected in April 2006 for wells OWR-15D, OW-08A, OW-16A, and OW-21A were non detect for PCBs. Colloidal-size particles were not identified in these samples to the detection limits provided. However, in general, the results presented in the RI suggest that colloidal transport is possible at OU-3, although based on existing data a large site-wide plume does not appear to have coalesced together.

5.3.2.2 Parathion and 4-Nitrophenol

Parathion and PNP are more soluble in water with aqueous solubilities of 50 mg/l and 16,000 mg/l, respectively. With octanol/water partitioning coefficients of 2.86 and 1.91, respectively, the retardation factor for these constituents would be expected to be on the order of 20 for parathion and 3 for PNP (i.e. dissolved parathion and PNP in groundwater would be expected to move 20 and 3 times slower, respectively, than natural groundwater flow). In addition, both parathion and PNP are subject to biodegradation. However, as indicated in Section 5.2, the rate and extent of degradation depends on the concentration of nutrients, the activities of the organisms, and the presence or absence of predators or inhibitors of degrador organisms. Site-specific data confirm the degradation of parathion and PNP in groundwater as presented in Section 5.4.

The distribution of parathion and PNP in groundwater is presented in Figures 4-10 through 4-13. Although concentrations of parathion and PNP have been detected relatively consistently in the vicinity of the SWMU 1 and the WMA II Corrective Action Systems, the concentrations are typically below the CCLs. An exception is for OW-21A, where the concentrations have been above the CCLs. The extent of migration of parathion and PNP in the vicinity of OW-21A has been delineated. The downgradient boundary was established with non-detect values reported in well MW-07. MW-07 is located approximately 120 feet north of OW-21A.

Elevated parathion and PNP concentrations detected in OW-16A were not detected in OW-15 in October 2007. OW-15 is located 250 feet downgradient of OW-16A. Parathion and PNP have not been detected in the Facility perimeter wells above the CCLs in the most recent sampling events. These data confirm that contaminant migration for parathion and PNP is controlled, and due to the slow rate of groundwater flow and specific retardation factors for these constituents, is not expected to migrate appreciably beyond the limits established.

There is significant evidence of reduced concentrations of parathion and PNP over time. The corrective action systems are helping to reduce the mass of these constituents in groundwater and reduce or eliminate the potential transport of these constituents away from the Facility. As documented in Figures 4-10, 4-11, 4-12, and 4-13, the areal extent of groundwater impacted by

parathion and PNP and the concentrations of parathion and PNP have decreased. More recently, and on an individual well basis, these reductions include:

- OW-16A: North of the closed South Landfill samples collected from OW-16A have indicated a decrease in PNP from 140 µg/l in 2003 to 25 µg/l in April 2007, which is below the CCL of 1,095 µg/l. Concentrations of parathion have decreased from 281 µg/l in 2000 to 57 µg/l in April 2007, which is below the CCL of 220 µg/l.

- OW-19 & OW-24: In the vicinity of the WMA II Corrective Action System, at the northern Facility perimeter, parathion concentrations decreased from 216 µg/l in 2001 and 360 µg/l in 2002 for OW-19 and OW-24, respectively, to non detect for both in April 2007. The concentration of PNP in samples collected from OW-19 has decreased from 120 µg/l in 2002 to non detect in April 2007.

- OW-21A: North of the WMA II Corrective Action System, the concentration of PNP decreased from 30,000 µg/l in 2004 to 9,500 µg/l in April 2007. Parathion decreased from 11,000 µg/l in 2005 to 7,600 in April 2007.

5.3.2.3 Volatile Organic Compounds

Dichlorobenzenes do not dissolve easily in water. Chlorobenzene will rapidly evaporate from water to the air and/or be broken down by bacteria. When released to soil, it is broken down rapidly by bacteria, but some may filter into the groundwater. Lower chlorinated chlorobenzenes (such as chlorobenzene) have a higher potential for groundwater migration than higher chlorinated chlorobenzenes (Delleur, 2007). The dichlorobenzenes and chlorobenzene are most frequently detected at monitoring wells OWR-05D, OWR-11, OWR-15D, MW-20A, OW-16A, and OW-21A, with a peak concentration of 46 µg/l in OWR-05D. However, all concentrations are below the CCLs. With the exception of OW-21A, all perimeter wells are generally non detect for dichlorobenzene and chlorobenzene. The distribution of dichlorobenzene and chlorobenzene in groundwater is presented in Figure 4-14.

5.3.2.4 Other Semi-Volatile Organic Compounds

5.3.2.4.1 Pentachlorophenol

When released to soil or water, pentachlorophenol will be slowly broken down by microbes and may gradually leach into ground water. If released in water, it will adsorb to sediment, or be degraded by sunlight. However, adsorption of pentachlorophenol in soils is pH dependent

because it increases under acidic conditions and it decreases in neutral and basic conditions (ATSDR 2001). Pentachlorophenol is present in groundwater in the vicinity of OWR-14D, the WMA II Corrective Action System (MW-20A) and closed South Landfill (OWR-05D). Operation of the groundwater corrective action system has resulted in a declining trend in MW-20A from 95.4 µg/l in 1998 to 8.8 µg/l in 2007. With the exception of OW-21A, perimeter wells are generally non detect for pentachlorophenol. The distribution of pentachlorophenol in groundwater is presented in Figure 4-15.

5.3.2.4.2 o,o,o-Triethylphosphorothioate

o,o,o-Triethylphosphorothioate is a degradation product of malathion and does not tend to adsorb to soil. Malathion and o,o,o-triethylphosphorothioate are rapidly broken down by bacteria, and therefore it is unlikely for either to reach the groundwater. Malathion breaks down quickly in water by the action of the water and the bacteria in the water. o,o,o-triethylphosphorothioate has been detected in the vicinity of OW-15 and OW-16A, at the closed South Landfill (OW-02, OW-04, MW-11A, MW-12A, and MW-13A), the WMA II Corrective Action System (MW-16, OW-19, OW-24, and SBP-05) , and the vicinity of OW-20/21A. However, all concentrations have been below the CCL and perimeter wells are generally non detect for o,o,o-triethylphosphorothioate. The distribution o,o,o-triethylphosphorothioate in groundwater is presented in Figure 4-15.

5.3.2.4.3 Benzo(a)pyrene

The estimated half-life for benzo(*a*)pyrene in water is less than one to eight hours. Benzo(*a*)pyrene is practically insoluble in water (Faust, 1994). Benzo(a)pyrene was only detected in OW-08A in 2005. All other sample results were non detect, including T-03 and OW-09, located downgradient of OW-08A. The distribution of benzo(a)pyrene in groundwater is presented in Figure 4-15.

5.3.2.5 Metals

5.3.2.5.1 Arsenic

Many common arsenic compounds can dissolve in water. Most of the arsenic in water will ultimately end up in soil or sediment (ATSDR, 2007a). Arsenic mobility in aquifers is controlled

by: (1) adsorption and desorption reactions, and (2) solid-phase precipitation and dissolution reactions. Arsenic adsorption and desorption reactions are influenced by changes in pH, occurrence of redox (reduction/oxidation) reactions, presence of competing anions, and solid-phase structural changes at the atomic level. Solid-phase precipitation and dissolution reactions are controlled by solution chemistry, including pH, redox state, and chemical composition (Hinkel and Polette, 1999). Arsenic mobility will be significantly reduced if the adsorption capacity to metal oxyhydroxides is not exceeded, while mobility will increase under reducing conditions (Deutsch, 1997). Low levels of arsenic have been detected in OWR-14D, T-4, and OW-08A. With the exception of T-4, perimeter well concentrations were non detect. The distribution of arsenic in groundwater is presented in Figure 4-16.

5.3.2.5.2 Cobalt

Cobalt in soil is strongly attached to soil particles and therefore the potential for leaching into groundwater is reduced. Cobalt released into water may adhere to particles in the water column or to the sediment at the bottom of the water body into which it was released, or remain in the water column in ionic form. The fate of cobalt will depend on many factors such as the chemistry of the water and sediment at a site as well as the cobalt concentration and water flow. Cobalt is most frequently detected in monitoring wells OW-04, OWR-05D, OWR-11, OWR-12, OW-19, and OW-21A. The WMA II Corrective Action System may be helping to reduce the mass of cobalt as observed in OW-19. Concentrations of cobalt have declined from 182 µg/l in 1999 to 25 µg/l in 2007. A peak concentration of 300 µg/l was detected in OWR-11. However, downgradient wells OW-09 (7.2 µg/l), OW-10 (56 µg/l), and OWR-6D (non detect), have shown significant reductions and all concentrations are below the CCL. The distribution of cobalt in groundwater is presented in Figure 4-16.

5.3.2.5.3 Lead

Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil (ATSDR, 2007b). Lead mobility will not be affected by redox. The presence of iron and manganese will effect lead movement. Lead is strongly affected by adsorption to organic matter and hydrous metal oxides, but is one of the least mobile in groundwater of the common metal contaminants (Deutsch, 1997). With the exception of well OWR-09S, the perimeter monitoring wells were non detect. The corrective actions systems

address the detections in OWR-05D and OWR-08S. The monitoring wells closest (OW-10 and OWR-06D) to highest soil sample result (SSRI-11) showed no detections for lead. The distribution of lead in groundwater is presented in Figure 4-16.

5.3.2.5.4 Mercury

The mobility of dissolved mercury is generally limited by the extent of organic matter and groundwater pH. Clay minerals adsorb mercury maximally at neutral pH. Iron oxides also adsorb mercury in neutral soils. In acidic soils, most mercury is absorbed by organic matter. Microbial activity may then metabolize some part of the mercury, releasing it into groundwater. When organic matter is not present, mercury becomes more mobile in acid soils, and evaporation to the atmosphere or leaching of mercury to groundwater occurs. If anthropogenic releases dramatically alter the groundwater pH, a short-lived mobilization of naturally occurring mercury (and other metals) may be produced. Given the relatively neutral pH across most of the Facility, with isolated areas of low pH, it is likely that localized areas exist where mercury can be mobilized into the dissolved phase.

Mercury is present in the groundwater in several areas across the Facility. In the vicinity of the OLBSI and WMA II, total mercury has been detected in samples from wells MW-15, MW-16, MW-20A, OW-21/21A, and OW-22. However, mercury has typically been found at concentrations above the CCL of 2 µg/l in only one of these locations (MW-15). Mercury has also been detected in the plant site area. The sample collected from OWR-13 in 2003 had a mercury detection above the CCL (2.3 µg/l). Well OWR-03S and OWR-12 have had mercury detections, but below the CCL.

Total mercury was detected above the CCL in samples from wells OW-10, OWR-11, and OWR-06D, located downgradient from the Phosphoric Acid Basins (SWMU 12). In the vicinity of SWMU 1, total mercury has been detected in samples from wells OWR-05D, OW-06A, and OW-07, but below the CCL.

Mercury is most frequently detected around the OLBSI, the former PCB Production Area, downgradient of the Phosphoric Acid Basins, and to a lesser extent the SWMU 1 area. The distribution of mercury in groundwater is presented in Figure 4-16.

5.3.2.5.5 Manganese

Manganese is mobile in its water soluble (chlorinated and oxidized) forms. The solubility of manganese (II) is controlled by manganese oxide equilibria in relatively oxidized water. In extremely reduced water, poorly soluble sulfide formation controls manganese solubility. In most waters (pH 4-7), Mn (II) predominates, often combining with carbonate (CO_3^{-2}). The low solubility of $MnCO_3$ limits the manganese concentration present. In groundwater with a low dissolved oxygen concentration, Mn (IV) is chemically and bacterially reduced to Mn (II). Groundwater pH is influential in manganese mobility. At high pH and Eh, inorganic manganese may oxidize and is subject to microbial activity. Low groundwater pH can cause manganese to solubilize and enter the water column. Soil's ability to absorb manganese increases as a function of organic matter content and ion exchange potential. Clay soils have a greater affinity for manganese when low concentrations are present, while high concentrations increase manganese solubility. Manganese is present in the groundwater in several areas across the Facility. The CCL for manganese is 880 µg/l. Detections above this level were found in a number of locations. However, the distribution of manganese does not seem to follow a recognizable pattern. Concentrations above the CCL were detected at eight locations distributed throughout the site. At many more locations, however, also spaced throughout the site manganese concentrations were below the CCL. The distribution of manganese in groundwater is presented in Figure 4-16.

5.3.2.5.6 Nickel

Many nickel compounds dissolve fairly easy in water. Once nickel is in groundwater, physical and chemical interactions (complexation, precipitation/dissolution, adsorption/desorption, and oxidation/reduction) will determine its fate. Under normal conditions, nickel is associated with iron and manganese particles which precipitate and absorb free nickel ions. Much of the nickel in the environment is therefore found in soils and sediments. Organic material in impacted environments will keep nickel soluble. Nickel is not prevalent in groundwater at the Facility, and there have been no exceedances of the CCL for nickel (730 µg/l) in any groundwater sample collected at the site. The maximum concentration measured was 82 µg/l. The distribution of nickel in groundwater is presented in Figure 4-16.

5.4 Natural Attenuation

Natural attenuation involves the combined effects of dispersion, dilution, adsorption, abiotic transformation (e.g., hydrolysis), volatilization and biological degradation. These mechanisms can effectively reduce contaminant toxicity to levels that are protective of human health and the environment. Abiotic transformation and biodegradation are important "destructive" attenuation mechanisms as they typically transform the constituent to less toxic compounds, and can ultimately result in the complete degradation of a compound to benign end products such as ethene or carbon dioxide.

As mentioned in Section 5.3, many of the prevalent constituents have theoretical capacities to attenuate naturally. However, data has generally not been collected to support the case for monitored natural attenuation for many of these constituents except for parathion and PNP. Monitored natural attenuation of these two compounds was investigated in detail during the RFI/CS work performed by Solutia pursuant to the RFI/CS Work Plan (Golder, 1997) and reported in the RFI/CS Report (Golder, 2002). The reference used for the natural attenuation demonstration for the RFI/CS evaluation was a draft EPA Region 4 document "Suggested Practices for Evaluation of a Site for Natural Attenuation (Biological Degradation) of Chlorinated Solvents." In this RI Report, the data that demonstrates monitored natural attenuation has been recast using the EPA's 1999 directive "Use of Monitored Natural Attenuation at Superfund, RCRA, Corrective Action, and Underground Storage Tank Sites," (EPA, 1997) (referred to herein as EPA Directive).

The natural attenuation analysis from the RFI/CS report has been reproduced in its entirety in Appendix J. In addition, certain new analyses are included in Appendix J, in order to portray the data in a manner more consistent with the newer EPA Directive. The balance of this section is a summary of the information provided in this appendix.

During the RFI/CS Program, monitored natural attenuation was investigated to determine its potential viability as a remediation technology for parathion and PNP in the vicinity of the closed South Landfill. Since there is a significant amount of historical parathion data for the site, parathion was used as a surrogate to understand if natural attenuation may be occurring at the Facility. As PNP is a degradation product of parathion, the demonstration that parathion naturally

attenuates can also be used to demonstrate that PNP would naturally degrade. A literature review was performed to determine the possible breakdown pathways of parathion. Parathion is the common term for organophosphate o,o-diethyl-o-4-nitrophenyl phosphorothioate. This compound contains carbon, oxygen, hydrogen, sulfur, and phosphorus. Review of chemical and microbiological processes suggests that microorganisms incorporate carbon and phosphorus from the parathion into their cell structure. The parathion is biodegraded to PNP that biodegrades to carboxylic acid by mineralization of nitrogen and breaking of the six member carbon ring. The sulfur is released from the organic molecule as a reactive species, which is immediately scavenged by the cations in the soil.

As discussed in the EPA Directive, under the subheading of "Demonstrating the Efficacy of Natural Attenuation through Site Characterization", data are collected and analyzed to estimate that rate of natural attenuation processes, and the anticipated time to achieve the remediation objective. A three-tiered approach is used in the evaluation whereby, evidence collected for the first tier is evaluated initially. If the first tier data is insufficient to support the natural attenuation decision, the second tier data is evaluated. If the first and second tiers are insufficient, the third tier is evaluated.

The three tiers or "lines of evidence" that can be used to support the natural attenuation of parathion and PNP are:

- An observed reduction of chemical concentrations within specific wells downgradient from source areas;
- Hydrogeologic and geochemical data that indirectly demonstrates natural attenuation processes are active at the site; and
- Microbiological laboratory or field data that support the occurrence and rate of biodegradation.

The observed reduction of chemical concentrations within specific wells was discussed in Section 5.3.2.2. From 1989 data, parathion concentrations in the hundreds of µg/l were measured in recovery wells at the closed South Landfill (IW-10 at 487 µg/l, IW-07 at 238 µg/l, IW- 09 at 168 µg/l, and IW-08 at 145 µg/l). In 1996, concentrations in these wells had decreased substantially (highest concentration at IW-07 at 37.3 µg/l). The only downgradient detection was

at OW-16 at 7.6 µg/l. More recently, data indicate further reduction at the closed South Landfill to below detection limits for monitoring wells in the area (the interceptor wells are no longer sampled). Therefore, ample evidence is available showing an observed reduction of chemical concentrations within specific wells downgradient from source areas.

For parathion, the loss of mass can be calculated by examining the concentration reductions shown on Figure 4-10. In 1989, the contour interval represented by 0.1 mg/l, was approximately 24,400 square feet (sq ft). The area bounded by the 0.001 mg/l contour was approximately 253,100 sq ft. In 1996, the area bounded by the 0.001 mg/l contour had contracted to approximately 126,200 sq ft. Mass can be calculated by multiplying a representative concentration (mass per unit volume - µg/l) times the volume. The volume of water represented by the contours can be calculated as the area times depth times porosity. For this calculation, the depth was estimated at 35 feet and the porosity at 30%. The relative parameters used in the calculation and the resulting mass reduction are provided in the table below.

Year	Area Name	Representative Concentration (µg/l)	Area (sq ft)	Mass (kg)
1989	0.1	250	24,400	1.81
	0.001	10	253,100	0.75
total	-	-	277,500	2.57
1996	0.001	10	126,200	0.38

Consequently, from 1989 to 1996, the mass of parathion in the vicinity of the SWMU 1 Corrective Action System decreased by 85%. For more recent data, the number of wells where parathion has been detected has decreased providing further evidence of a decrease in parathion mass.

Predictions of the rate of natural attenuation and the length of time to achieve groundwater cleanup can be estimated from these data points. Based on a first order decay of mass reduction, the estimated decay rate is approximately 12% per year in terms of decreasing mass of parathion. The results above show an order of magnitude decrease in approximately

seven years, which is generally in agreement with guidance provided by the EPA that successful MNA sites typically show a 10 fold decrease in 10 years (EPA, 2008). Extrapolated to 10 years, the predicted mass for parathion in the SWMU 1 area would be approximately 0.165 kg, or a 15.6 times reduction. Semi-logarithmic plots of this mass reduction are provided in Appendix J.

A similar analysis was conducted for PNP. The observed reduction of PNP concentrations can be seen within specific wells at the closed South Landfill. The concentration changes for some of these wells from 1989 to 1996 are as follows:

Date	1989 Concentration (µg/l)	1996 Concentration (µg/l)
OW-06	570	177
OW-08	112,505	805
OW-09	88.8	19.5
OW-10	30,000	773

The loss of mass can be calculated by examining the concentration reductions shown on Figure 4-11. In 1989, the contour interval represented by 0.1 mg/l, was approximately 24,400 sq ft. The area bounded by the 0.001 mg/l contour was approximately 253,100 sq ft. In 1996, the area bounded by the 0.001 mg/l contour had contracted to approximately 126,200 sq ft. Mass can be calculated by multiplying a representative concentration (mass per unit volume - µg/l) times the volume. The volume of water represented by the contours can be calculated as the area times depth times porosity. For this calculation, the depth was estimated at 35 feet and the porosity at 30%. The relative parameters used in the calculation and the resulting mass reduction are provided in the table below.

Year	Area Name	Representative Concentration (µg/l)	Area (sq ft)	Mass (kg)
1989	1.0	48,100	14,758	211.06
	0.1	329	18,183	1.78
	0.001	7.8	307,026	0.71
total	-	-	-	213.55
1996	1.0	3,000	5,980	5.33
	0.1	525	30,486	4.76
	0.001	13.5	228,218	0.92
total				11.01

Consequently, from 1989 to 1996, the mass of PNP in the vicinity of the SWMU 1 Corrective Action System decreased by 95%.

Predictions of the rate of natural attenuation and the length of time to achieve groundwater cleanup can be estimated from these data points. Based on a first order decay of mass reduction, the estimated decay rate is approximately 35% per year in terms of the decreasing mass of PNP. The results above show a 19.4 times reduction in seven years, which exceeds the EPA's requirements for successful MNA sites (a 10 fold decrease in 10 years, EPA, 2008). Semi-logarithmic plots of this mass reduction are provided in Appendix J.

While P/S believe that the first line of evidence strongly supports monitored natural attenuation for Parathion and PNP, the second line of evidence is the geochemical environment. Parathion and PNP degrade anaerobically. This is the same geochemical environment that promotes reductive dechlorination of chlorinated solvents and as such, much of the same analysis can be used to determine if strong reducing conditions exist that could be causing the natural attenuation of parathion by reduction.

In general, strong evidence of a reducing environment is indicated by:

- Dissolved oxygen less than 0.9 mg/l;
- Redox (eH) measurements less than 0 mv;

- Nitrate less than 1 mg/l;
- Iron II greater than 1 mg/l;
- Sulfate less than 20 mg/l;
- Sulfide greater than 1 mg/l; and
- Alkalinity greater than two times background.

During the RFI, each of these indicator parameters were collected at nine wells across the Facility. The wells included: CB-85, MW-01B, OW-6A, OW-10, OWR-01D, OWR-01S, OWR-02D, OWR-02S, and OWR-05D. Additional indicator parameters were collected at various wells as part of measuring field parameters prior to sampling. The results of the analyses are presented in the table below by showing those wells that meet the criteria identified by the EPA. The results are also included on figures provided in Appendix J. Based on the results, the following wells indicate strong reducing conditions:

	Strong Evidence of Reducing Conditions	
Parameter	Concentration	Wells
Dissolved Oxygen	<0.9 mg/l	OWR-01S, OWR-01D, OWR-02S, OWR-02D, OWR-03S, OWR-04D, OWR-05D, OWR-06D, CB-85,
Nitrate	<1 mg/l	MW-01B, OWR-01D, OWR-05D, OW-06A
Iron II	>0.1 mg/l	OWR-05D
Sulfate	<20 mg/l	CB-85, MW-01B, OW-06A, OW-10, OWR-01D, OWR-02D, OWR-02S, OWR-05D
Alkalinity	>2x background	OWR-01D, OWR-02D, OWR-02S, OW-10, OW-06A, OWR-05D, OWR-01S
Redox	<0 mv	OWR-02D, OW-09, OWR-06D, CB-85

Generally, the nine wells spread out across the Facility sampled for the parameters listed above indicate an appropriate environment for the reduction of parathion and PNP.

To address the third line of evidence, biological plate counts were performed on water from the same well set, and the following wells reported bacterial culture populations greater than background: OW-06A, OWR-01D, OWR-01S, OWR-05D, OWR-02S, OWR-02D, and OW-10.

The tracking of the breakdown of parathion by a review of daughter products is not possible with the data collected to date, since PNP, the main anticipated degradation product, was produced at the Facility. However, the environmental conditions at the site are conducive to natural attenuation and therefore these breakdown products are likely present.

5.5 Summary

In this section, the fate and transport characteristics for the prevalent constituents were reviewed and the potential migration routes were considered. Most areas of impacted soil are under cover systems making the release from soil to surface water unlikely. Releases from impacted areas to groundwater are possible with infiltration though permeable cover systems into impacted soil. Surface water is controlled on site via a system of sewers and ditches. All process related water is piped to the Facility's former WWTF and then discharged to the Anniston POTW. Precipitation falling at the Facility is collected in ditches and discharged via an NPDES regulated outfall. Consequently, constituent concentrations in surface water have been sporadic and low. Thus, surface water is not considered a significant migration pathway from the Facility. Groundwater migration is controlled by natural and man-made means. Migration is limited because the rate of groundwater flow is very low and there are natural attenuation processes for parathion and PNP and natural adsorption for PCBs and metals. These natural processes combined with the existing interceptor well systems control the migration of constituents from the Facility. In addition, perimeter monitoring has indicated that with only two potential exceptions (OW-21A and OW-10 areas), impacted groundwater is contained within the Facility boundary.

The contaminant migration behavior for the prevalent constituents of interest (PCBs, parathion, PNP, 1,2-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, benzo(a)pyrene, pentachlorophenol, o,o,o-triethylthiophosphorothioate, arsenic, cobalt, lead, mercury, manganese, and nickel) was reviewed. Although some research has provided positive indications for the degradation of PCBs in the natural environment, adsorption primarily controls PCB distribution.

With a low solubility and a high partitioning coefficient, PCBs are not very mobile in groundwater. As a result, areas with PCBs detected in groundwater are generally localized and represent a number of discrete releases, instead of wide-spread occurrences. PNP and parathion are more mobile in groundwater, however, both degrade biologically. Volatile organic compounds and semi-volatile organic compounds (with the exception of PNP as described above) are not prevalent across the Facility and only isolated detections have been reported above the appropriate CCLs.

The prevalent metals at the Facility have varying degrees of mobility. For instance, mercury has a high partitioning coefficient limiting its mobility, while manganese's mobility varies widely depending on the cation exchange capacity. However, as indicated in this section, the clay soils and the relatively low concentrations measured for many of the metals act to limit mobility at the Facility. Groundwater migration from the closed South Landfill and the SWMUs in the vicinity of WMA II, which are initial source areas, are currently being addressed by two groundwater corrective action systems.

6.0 BASELINE RISK ASSESSMENT

6.1 Ecological Risk Assessment

A biological survey and habitat assessment were performed to evaluate habitat characteristics in OU-3 as described in Section 3.3. The findings of this quantitative assessment were used to support a more detailed analysis of the relationship between ecological receptors and exposures at the Facility. Habitats were assessed based on a general description of primary habitat, approximate percent cover of habitat types, dominant vegetation, vegetation density, vegetation height, bordering land use, and evidence of natural or anthropogenic disturbance. In general, the habitat of the areas evaluated was poor, reflecting maintenance activities (cutting and mowing), low plant diversity, and poor soil conditions. Since the Facility is expected to continue operations for the foreseeable future, a risk-management decision was made that no further assessment of ecological risk is necessary. Any actions taken to protect human health risk at the Facility will reduce risk to ecological receptors. If all operations at the Facility cease, ecological risks should be re-evaluated. Therefore, ecological risks are not a concern for OU-3 and no further evaluation is required.

6.2 Human Health Risk Assessment

The HHRA completed by CDM under the direction of the EPA, was finalized on February 1, 2008 (CDM, 2008). The complete HHRA is included as Appendix K. The purpose of the HHRA was to characterize the potential risks to human health associated with exposure to COIs identified at the Facility. The COPCs for the Facility were identified in the HHRA, and, as described in Section 6.4, the final list of COCs to be used throughout the FS were developed based upon these COPCs.

The OU-3 area covers approximately 138 acres and includes the active plant area, buildings, access roads, smaller grassed areas, and the closed South and West End Landfills. Many interim measures have been implemented at the Facility resulting in approximately 72% of the area being covered with asphalt pavement, concrete pavement, buildings, soil or gravel covers reducing the potential for direct contact with contaminated soil. Throughout OU-3, approximately 27% of the area is covered with impervious covers such as buildings, asphalt and concrete pavement, and HDPE liner systems. An additional 19% is covered with relatively impervious grass and soil covers. The soil covers placed to isolate PCBs

from direct contact typically have a low permeability (the permeability of in-place residual soils are on the order of 1.0 x 10^{-5} to 1.0 x 10^{-7} cm/sec) and are thus relatively impervious. Approximately 26% of the OU-3 area is covered with gravel covers to prevent direct contact and reduce the mobilization of PCB-containing soil. In the HHRA, OU-3 was separated into four areas - the Facility area; the closed South Landfill, the closed West End Landfill; and off-site areas. A description of each is provided as follows:

- Facility Area – The Facility area covers approximately 68 acres and includes the active plant area and administration building. Currently, the Facility is used for industrial purposes only and is under 24-hour security controls restricting access to authorized personnel only. In addition, the use of groundwater for any purpose, as well as non-industrial land use, is strictly prohibited by deed restrictions. The plant mandates health and safety procedures in accordance with OSHA for its workers;

- Closed South Landfill – this landfill covers approximately 53 acres where significant interim measures have been completed as described in Section 2.0. These measures effectively prevent exposures to landfill contents. The landfill has been closed with engineered caps with vegetative covers and is enclosed with fencing and other access controls (warning signs and locked gates). These controls are effective at reducing the potential for trespassing. Operation and maintenance of the landfill interim corrective measures are on-going and include mowing, general maintenance and routine inspections of the landfill caps, fencing, access controls, surface water management structures, and access roads;

- Closed West End Landfill – this landfill covers approximately 17 acres. Similar to the closed South Landfill, significant interim measures have been completed at the closed West End Landfill, as described in more detail in Section 2.2.3. These measures effectively prevent exposures to landfill contents. The landfill has been closed with engineered caps with vegetative covers and is enclosed with fencing and other access controls (warning signs and locked gates). These controls are effective at reducing the potential for trespassing. Operation and maintenance of the landfill interim corrective measures are on-going and include mowing, general maintenance and routine inspections of the landfill caps, fencing, access controls, surface water management structures, and access roads; and

- Off-site Areas – the areas immediately surrounding the Facility include commercial properties, vacant property owned by Solutia, and some residential properties. As discussed in Section 3.2, only four active wells were identified within a one-mile radius of the Facility, none of which are

used for drinking water since all residents in the area obtain water from the local water utility[10].

The media evaluated in the HHRA included surface soil, subsurface soil, ambient air, and groundwater. Surface water is not a medium of concern at the Site as there are no permanent surface water bodies within OU-3. In addition, a number of actions have been taken to reduce the transport of COPCs off of the Facility. The effectiveness of these actions has been documented through surface water sampling conducted in accordance with the Facility's NPDES Permit. As a consequence, surface water was not evaluated in the HHRA.

The potentially exposed receptors identified in the HHRA include the operations area worker, O&M worker, construction worker, trespasser, and off-site resident. Different receptors were evaluated for different areas within OU-3. For example, in the facility area the receptors include the operations area worker, O&M worker, construction worker, and trespasser while the landfills only include the O&M worker and trespasser. Off-site receptors include residents. Each receptor is exposed to media differently as described below.

The HHRA calculated risks for each receptor based on two conditions: current conditions and future conditions. The current conditions are the more relevant when assessing risk since it is meant to assess existing conditions within OU-3. The future conditions assume that no further remedial actions are implemented at the site and that some of the interim measures already completed, such as covered surfaces within the plant area and deed restrictions for groundwater use, are no longer maintained. Risks calculated for future conditions are hypothetical and should only be used to guide risk management decisions.

In the HHRA, for all receptors except the current operations area worker, three sets of risk calculations are presented based on Reasonable Maximum Exposures (RME), Central Tendency Exposures (CTE), and Modified Exposures. The RME represents the precautionary "high end" exposures as defined by the EPA, which represents "the exposure above the 90th percentile of the population distribution" (EPA, 2000). The RME is further defined as the highest possible exposure that is reasonably expected to occur and, as such, incorporates several very conservative

10 Note that these areas are actually part of OU-2; however, they include monitoring wells that monitor OU-3.

default exposure assumptions intended to overstate risks (EPA, 2000). The CTE risk calculations generally reflect the central estimates of exposure or dose, and may be based on either the arithmetic mean exposure or the median exposure. In general, under the RME and CTE scenarios, the HHRA uses default exposure parameters as defined by the EPA guidance documents. The Modified Exposure represents more site-specific exposures for OU-3. Under the Modified Exposure scenario, the HHRA used site-specific and chemical-specific exposure parameters[11]. In calculating the Modified Exposure risks, RME default parameters were used when site-specific parameters were unavailable. For the current operations area worker only RME and CTE calculations were completed. To represent the activities and potential exposures of the current operations area worker at the Solutia Facility, Modified RME and CTE scenarios were evaluated for this receptor. These calculations applied site-specific exposures, chemical-specific exposure parameters, and exposure point concentrations. For all of the risk calculations, the HHRA calculated carcinogenic risks and non-carcinogenic risks expressed by the hazard indices for each receptor. The EPA's acceptable risk range is 1E-04 to 1E-06 (1 in 10,000 to 1 in 1,000,000)[12] for carcinogenic risks and a hazard index equal to or less than one for non-carcinogenic risks.

Also included in the HHRA was the development of the Exposure Point Concentrations (EPCs), which are estimates of the concentration of the contaminants at points of exposure. The EPCs are based on a calculation of either the lower of the maximum detected concentration or the 95% upper confidence limit (UCL) of the arithmetic mean (EPA, 1989b). For sample sizes less than ten, a 95% UCL cannot be calculated and the maximum detected value is used as the EPC. Use of the 95% UCL or maximum detected value as the EPC is conservative and may actually overestimate the potential risk. In the HHRA, the maximum values between primary and

11 The Modified Exposure parameters are based on site-specific and chemical specific information as previously presented in the RFI/CS Report for the Anniston Alabama Facility (Golder, 2002). The modified parameters include more realistic assumptions for ingestion rate of soils, skin surface area, and dermal adherence factors. Additionally, an intestinal absorption factor is applied for exposures to PCBs and arsenic.

12 In the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300), EPA states that, "for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual between 1E-04 to 1E-06 using information on the relationship between dose and response."

duplicate sample results were used when calculating the EPCs[13]. This practice could have overestimated the EPC for some datasets, particularly in soil where the primary and duplicate results for some sample points were significantly different, thus impacting the calculated result.

The following sections summarize the results of the HHRA and are separated by receptors. A summary of the risk results is provided in Table 6-1.

6.2.1 Facility Area

6.2.1.1 Operations Area Worker

The current operations area worker could be exposed to constituents in soil, via incidental ingestion, dermal contact, and inhalation of ambient air. Unlike other receptors, the HHRA did not calculate a separate Modified Exposure risk for the operations area workers; instead, the HHRA calculated risks under each of the RME and the CTE scenarios using modified exposures parameters (i.e., site-specific and chemical specific parameters). Under the current condition, the total cancer risk for this receptor is 2E-04 for the RME scenario and 4E-05 for the CTE scenario. The non-carcinogenic hazard index is 8 for the RME scenario and 3 for the CTE scenario. The risks for this receptor are primarily driven by exposure to surface soils containing PCBs and to a much lesser extent arsenic, dioxin TEQ, and benzo(a)pyrene. Exposure to ambient air does not contribute significantly to risk to the operations area worker.

The calculated risks for this receptor slightly exceed the EPA's acceptable risk range. These risk estimates were calculated from data that included elevated concentrations of PCBs and arsenic from one soil sampling location in a remote, unoccupied portion of the Facility Area as shown on Figure 4-1 (PCBs) and Figure 4-2 (arsenic). Operations area workers are rarely exposed to this area of the Facility. As indicated in the HHRA, "if data from SSRI-11 were excluded, risk estimates for current operations workers would decrease by a factor of about 5 and would fall within the EPA's acceptable risk range. The resulting EPC would be about 73 mg/kg compared to the value of 374 mg/kg used in the risk assessment. To assess current operations workers, a risk based on RME of about 4E-05 may be most appropriate."

[13] Note that under the CTE scenario for the current operations area work only, the EPC calculation used the average of the primary and duplicate sample results from SSRI-11.

Two sets of risk calculations were completed in the HHRA for the hypothetical future operations area worker. The first set includes exposure to chemicals in soil, via incidental ingestion and dermal contact, and inhalation of ambient air, and the second set adds exposure to groundwater, via ingestion. These risk calculations assume that all surface covers within the facility area are removed and that groundwater use restrictions are no longer maintained. As a result of these assumptions, the risk results for this receptor, for both sets of calculations, exceed the EPA's acceptable risk range. The primary risk drivers are PCBs in soil and groundwater. Other constituents that contribute to the risk in soil include arsenic, dioxin TEQ, benzo(a)pyrene, dibenzo(a,h)anthracene, and heptachlor epoxide. In soil, the samples with the highest concentrations of COPCs are SSRI-11 (discussed above) and SSR-18 (sample location currently under concrete cover). Other compounds that contribute to the risk in groundwater include 2,4,6-trichlorophenol, methyl parathion, and parathion.

6.2.1.2 O&M Worker

The current O&M worker could be exposed to chemicals in soil via incidental ingestion, dermal contact, and inhalation of ambient air. The total cancer risks for this receptor are 1E-04, 8E-06, and 2E-05 for the RME, CTE, and Modified Exposure scenarios, respectively. The non-carcinogenic hazard index ranged between 1 and 5 for the three exposure scenarios. The risks for this receptor are primarily driven by exposure to surface soils containing PCBs and to a much lesser extent arsenic, dioxin TEQ, and benzo(a)pyrene. Exposure to ambient air does not contribute significantly to risk to the O&M worker. The cancer risks for this receptor met but did not exceed the upper limit of the EPA's acceptable risk range and were only slightly higher than the EPA's acceptable risk limit for non-carcinogenic risks for all scenarios. As discussed above, the risks would be further reduced if soil sample point SSRI-11 was excluded and would likely fall below the EPA's acceptable risk range for non-carcinogenic risks.

Similar to the future risks discussed previously for the operations area worker, two sets of risk calculations were completed in the HHRA for the hypothetical future O&M worker. The first set includes exposure to contaminants in soil, via incidental ingestion, dermal contact, and inhalation of ambient air, and the second set adds exposure to groundwater[14], via ingestion. These risk

[14] Note that the risks based on the Modified Exposure scenario were not calculated for the groundwater ingestion since exposure to groundwater is not considered a site specific possibility.

calculations assume that all surface covers within the facility area are removed and that groundwater use restrictions are no longer in place. As a result of these assumptions, the risk results for this receptor exceeded the EPA's acceptable range under the RME scenario for both cancer and non-carcinogenic risks. While the cancer risks for this receptor were within the EPA's acceptable risk range under the CTE scenario, the non-carcinogenic risks exceeded the EPA's acceptable risk limit for this scenario. The primary risk drivers are PCBs in soil and groundwater. Other contaminants that contribute to the risk in soil include arsenic, dioxin TEQ, and benzo(a)pyrene. In soil, the samples with the highest level of contaminants are SSRI-11 (discussed above) and SSR-18 (sample location currently under concrete cover). Other contaminants that contribute to the risk in groundwater include 2,4,6-trichlorophenol, methyl parathion, and parathion.

6.2.1.3 Construction Worker

In the HHRA, no differences in potential exposures between current and future conditions were identified for the facility area construction worker. Therefore, the construction worker was evaluated for the current and future conditions in the same scenario. The construction worker could be potentially exposed to contaminants in surface and subsurface soil, via incidental ingestion, dermal contact, and inhalation of ambient air. The cancer risks for the construction worker are 1E-04, 3E-05, and 8E-05 for the RME, CTE, and Modified Exposure scenarios, respectively. The non-carcinogenic hazard index ranged from 90 to 250 for the three exposure scenarios. The risks for this receptor are primarily driven by exposure to surface soils containing PCBs and to a much lesser extent arsenic and dioxin TEQ. Exposure to ambient air does not contribute significantly to risk to the construction worker. The cancer risks for this receptor met but did not exceed the upper limit of the EPA's acceptable risk range and were higher than the EPA's acceptable risk limit for non-carcinogenic risks for all scenarios. Currently, administrative controls are in place to protect construction workers during activities where potential exposure to contaminated soil exists.

6.2.1.4 Trespasser

The current trespasser could be exposed to contaminants in soil, via incidental ingestion, dermal contact, and inhalation of ambient air. The total cancer risks for this receptor are 8E-05, 1E-05, and 4E-05, for the RME, CTE, and Modified Exposure scenarios, respectively. The non-

carcinogenic hazard index ranged from 1 to 8 for the three exposure scenarios. The risks for this receptor are primarily driven by exposure to surface soils containing PCBs and to a much lesser extent arsenic and dioxin TEQ. Exposure to ambient air does not contribute significantly to risk to the trespasser. The cancer risks for this receptor are within the EPA's acceptable risk range and only slightly higher than the EPA's acceptable range for the non-carcinogenic risks. As discussed above, the risks would be further reduced if soil sample point SSRI-11 was excluded and would likely fall within the EPA's acceptable risk range for non-carcinogenic risks. The hypothetical future trespasser could also be exposed to contaminants in soil, via incidental ingestion and dermal contact, and inhalation of ambient air. Risk calculations for this receptor assume that all surface covers within the facility area are removed. As a result of these assumptions, the risk results exceed the EPA's acceptable risk range for non-carcinogenic risk and cancer risk under the RME and Modified Exposure scenarios. The cancer risk under the CTE scenario was within the EPA's acceptable risk range. The non-carcinogenic risks, under the CTE scenario, exceed the EPA's acceptable risk limit.

6.2.2 Closed South Landfill

The highest reported PCB concentration in surface soil for the South Landfill was 10 mg/kg. However, on May 23, 2006, P/S provided the EPA PCB data for the South Landfill in their response to comments to the Preliminary SCSR. The highest reported PCB concentration of 27 mg/kg was from soil sample LFSL 103. However, this reported result is incorrect, as the actual total PCB concentration for this sample is non detect. The incorrectly reported result from this sample was used in the risk assessment, thus the following results should be qualified as conservative.

6.2.2.1 O&M Worker

In the HHRA, no differences in potential exposures between current and future conditions were identified for the landfill O&M worker. Therefore, the landfill O&M worker was evaluated for the current and future conditions in the same scenario. The worker has the potential to be exposed to soil, via incidental ingestion, dermal contact, and inhalation of ambient air. The total cancer risks for this receptor at the closed South Landfill were 3E-06, 1E-07, and 4E-07, for the RME, CTE, and Modified Exposure scenarios, respectively. The non-carcinogenic hazard index for the closed South Landfill exposures ranged from 0.02 to 0.2 for the three exposure scenarios.

The risks for this receptor are primarily driven by exposure to surface soils containing PCBs. Exposure to ambient air does not contribute significantly to risk to the O&M worker. The risks for this receptor are within the EPA's acceptable risk range for both cancer and non-carcinogenic risks. As a result, the closed South Landfill does not contribute significantly to risk to the O&M worker.

6.2.2.2 Trespasser

Similar to the O&M worker discussed above, no differences in potential exposures between current and future conditions were identified in the HHRA for the potential landfill trespasser. Therefore, the landfill trespasser was evaluated for the current and future conditions in the same scenario. The trespasser has the potential to be exposed to soil, via incidental ingestion, dermal contact, and inhalation of ambient air. The total cancer risks for this receptor at the closed South Landfill were 2E-06, 1E-07, and 6E-07 for the RME, CTE, and Modified Exposure scenarios, respectively. The non-carcinogenic hazard index for the closed South Landfill exposures ranged from 0.04 to 0.3 for the for the three exposure scenarios. The risks for this receptor are primarily driven by exposure to surface soils containing PCBs. Exposure to ambient air does not contribute significantly to risk to the landfill trespasser. The risks for this receptor at the closed South Landfill are within the EPA's acceptable risk range for cancer risks and within the risk limit for non-carcinogenic risks for all scenarios. As a result, the closed South Landfill does not contribute significantly to risk to the landfill trespasser.

6.2.3 Closed West End Landfill

The highest reported PCB concentration in surface soil for the Closed West End Landfill was 21 mg/kg. However, in the HHRA, only the more recent samples collected specifically from the cover soils over the HDPE cover were used in the evaluation (all values were non detect). Given that the remedial goal for PCBs in surface soil is anticipated to be 25 mg/kg (to be determined in the FS Report), the highest concentration measured in surface soil at the West End Landfill is below this anticipated goal.

6.2.3.1 O&M Worker

As discussed, in the HHRA, no differences in potential exposures between current and future conditions were identified for the landfill O&M worker. Therefore, the landfill O&M worker was

evaluated for the current and future conditions in the same scenario. The worker has the potential to be exposed to soil, via incidental ingestion, dermal contact, and inhalation of ambient air. The total cancer risks for this receptor at the closed West End Landfill were 1E-08, 3E-09, and 3E-08, for the RME, CTE, and Modified Exposure scenarios, respectively. Non-carcinogenic risks were not calculated for the closed West End Landfill since the samples collected at the landfill were only analyzed for PCBs (i.e. no non-carcinogenic constituents were evaluated). The risks for this receptor are primarily driven by exposure to surface soils containing PCBs. Exposure to ambient air does not contribute significantly to risk to the O&M worker. The risks for this receptor are within the EPA's acceptable risk range for cancer risks for all scenarios. As a result, the closed West End Landfill does not contribute significantly to risk to the O&M worker.

6.2.3.2 Trespasser

Similar to the O&M worker discussed above, no differences in potential exposures between current and future conditions were identified in the HHRA for the potential landfill trespasser. Therefore, the landfill trespasser was evaluated for the current and future conditions in the same scenario. The trespasser has the potential to be exposed to soil, via incidental ingestion, dermal contact, and inhalation of ambient air. The total cancer risks for this receptor at the closed West End Landfill were 7E-09, 7E-10, and 8E-09 for the RME, CTE, and Modified Exposure scenarios, respectively. Non-carcinogenic risks were not calculated for the closed West End Landfill since the samples collected at the landfill were only analyzed for PCBs (i.e. no non-carcinogenic constituents were evaluated). The risks for this receptor are primarily driven by exposure to surface soils containing PCBs. Exposure to ambient air does not contribute significantly to risk to the landfill trespasser. The risks for this receptor at the closed West End Landfill are within the EPA's acceptable risk range for cancer risks for all scenarios. As a result, the closed West End Landfill does not contribute significantly to risk to the landfill trespasser.

6.2.4 Off-Site Resident

The current off-site resident could potentially be exposed to on-site contaminants via inhalation of ambient air. An adult receptor and child were evaluated in the HHRA under the RME scenario only. The cancer risk was 2E-06 and 1E-06 for the off-site resident adult and child, respectively. Non-carcinogenic risks were not calculated due to the lack of toxicity information. Risks to these

receptors are within the EPA's acceptable risk range; therefore, ambient air does not contribute significantly to risk to off-site residents.

The future off-site resident was evaluated for the hypothetical exposure to groundwater via incidental ingestion, dermal contact, and inhalation of vapors in the bath/shower as well as via inhalation of ambient air. An adult receptor and child were evaluated in the HHRA under the RME scenario only using maximum groundwater concentration data and assuming full access to and use of impacted groundwater at the Site. The results exceed the EPA's acceptable risk range; however, the calculated risks are estimated risks based on reasonably anticipated future land use.

6.3 Summary of Potential Risks

No risks were identified as part of the ecological assessment. The HHRA considered several current and future use scenarios and receptors. The following is a summary of the conclusions of the HHRA:

- Risks for the current facility operations area worker slightly exceed the EPA's acceptable risk range. These risk estimates were calculated from data that included concentrations from one soil sampling location in a remote, unoccupied portion of the Facility Area. If data from SSRI-11 were excluded, risk estimates would fall within the EPA's acceptable risk range;
- Risks for the current facility O&M worker and trespasser are within or only slightly exceed the EPA's acceptable risk limit;
- Risk for the facility construction worker exceed the EPA's acceptable risk range for non-carcinogenic exposure;
- Exposure to ambient air alone does not pose unacceptable risks to any of the receptors evaluated including the off-site resident;
- No unacceptable risks were associated with the closed West End Landfill, and risks at the closed South Landfill were below or only slightly within the EPA risk range; and
- Risks associated with future, hypothetical groundwater exposures exceed the EPA's acceptable risk range.

6.4 Media and Chemicals of Concern

The media of concern based on the results of the RI program and the HHRA include surface and subsurface soils and groundwater. Surface water is not a media of concern at the site as there are no permanent surface water bodies within OU-3. In addition, actions taken to control surface water drainage from the Facility are effectively controlling the transport of constituents off of the Facility. The HHRA determined that evaluation of surface water was not warranted. As a consequence, surface water will not be included as a medium of concern in the FS. An extensive air pathway monitoring study was conducted. Based on the results of this and previous studies, the air pathway is not considered to be significant to the total PCB risk. No unacceptable risks to any receptors were identified for ambient air; therefore, ambient air is not included as a medium of concern.

In the HHRA, the maximum detected concentrations of chemicals were compared, by medium, to risk-based screening levels to identify COPCs for each medium. Screening levels were taken from the EPA's Region 9 PRGs for residential soil and tap water, using a target cancer risk of 10-6 (one in one million) and a target hazard quotient of 0.1. Chemicals were considered COPCs if their maximum detected concentration exceeded their respective screening levels. The 30 constituents identified as COPCs presented in the HHRA are included on Table 6-2.

COCs were determined for the Facility based on the results of the RI, HHRA and an evaluation of applicable, relevant and appropriate requirements (ARARs). Since there are no promulgated soil standards, the soil COCs include those constituents that were identified as risk drivers[15] in the HHRA. In groundwater, the COCs include constituents that exceed a numerical standard (ARAR) or were risk drivers in the HHRA for exposure to groundwater. The following provides a list of the COCs by media:

Surface Soil COCs

- PCBs
- arsenic

[15] Risk driving chemicals are those chemicals that (1) have individual excess lifetime cancer risk levels of 1E-10^{-06} (or greater) or an HQ of 0.1 (or greater) in an exposure scenario that exceeds an excess cancer risk level of 1E-10^{-04} or an HQ of 1; and/or (2) exceed a state or federal ARAR.

- benzo(a)pyrene
- dibenzo(a,h)anthracene
- dioxin TEQ

Subsurface Soil COCs

- PCBs
- arsenic
- dioxin TEQ

Groundwater COCs

1,1,2,2-Tetrachloroethane	Lead
1,2,4-Trichlorobenzene	Manganese
1,4-Dichlorobenzene	Mercury
2,4,6-Trichlorophenol	Methyl Parathion
4-Nitrophenol (PNP)	Methylene Chloride
Arsenic	Parathion
Beryllium	PCBs
Dioxin TEQ	Pentachlorophenol
Gamma-BHC	Tetraethyldithiopyrophosphate (Sulfotepp)
Indeno(1,2,3-cd)pyrene	Trichloroethylene

Remedial Goal Options (RGOs) were developed to provide long-term targets to use during analysis and selection of remedial alternatives. Such goals, if achieved, should both comply with ARARs and result in residual risks that fully satisfy the NCP requirements for the protection of human health and the environment. Final remediation goals will be determined when a remedy is selected by the EPA in a signed Record of Decision (ROD). The remediation goals will establish

acceptable contaminant concentrations and exposure levels that are protective of human health and the environment.

The RGOs for the Facility are included as Appendix L. The RGOs are presented by medium for the different risk scenarios evaluated. RGOs can be interpreted as exposure point concentrations that would be protective for a given exposure scenario (e.g. future operations area worker). RGOs are appropriately used in conjunction with considerations of current and / or future land use and receptor behavior. RGOs, calculated separately for cancer and non-cancer effects, correspond to incremental cancer risk levels of 1×10^{-4}, 1×10^{-5}, and 1×10^{-6} and HQs of 0.1, 1, and 3.

7.0 SUMMARY AND CONCLUSIONS

Extensive investigations of soil, surface water/sediment, ambient air, and groundwater have been conducted at the Facility dating back over 30 years. One of the major conclusions that has been drawn from these investigations is that the site should be considered as a single source rather than evaluated on a SWMU basis.

Numerous interim measures have been completed at individual SWMU units and throughout the Facility. These interim measures have included among other things, landfill capping, contaminated soil excavation, in-plant surface improvements (pavements), decommissioning of units and tank removals, and installation of groundwater corrective action systems.

Detections of soil impacts in SWMU-specific areas have been documented in this RI Report. SWMU-specific treatment for remedial purposes would not address the on-site groundwater impacts that can no longer be exclusively linked to various SWMU sources. Treating the site as a single source for the purposes of groundwater remediation is the most appropriate method for addressing the remaining groundwater impacts.

Within the Facility area, the majority of soil samples were taken within areas covered with gravel, asphalt pavement, or concrete pavement. As a result of these interim measures, the majority of the plant surface area is covered with gravel, asphalt, or concrete pavement, which minimizes or reduces access to underlying soils. These areas are maintained and inspected as part of the plant's ongoing operation and maintenance program. One exception is the grassy area north of the Former Phosphoric Acid Basin where one sample (SSRI-11) indicated high detections of PCBs, arsenic and lead. Data from that one sample resulted in risks being calculated for the current facility operations area worker as slightly exceeding the EPA's acceptable risk range. Risks calculated for the facility construction worker exceeded the EPA's acceptable risk limit for non-carcinogenic exposure. Additionally, risk for the current facility O&M worker and trespasser are within or only slightly exceed the EPA's acceptable risk range. The primary risk driver for these receptors is PCB concentrations in soil.

In the closed South and West End Landfills, samples were collected and analyzed for PCBs. The concentrations from the closed South Landfill ranged from non detect to 10 mg/kg, while the

samples collected from the closed West End Landfill were non detect to 21 mg/kg for PCBs. These detections represent soil concentrations following the completion of interim measures. No unacceptable risks were associated with the closed West End Landfill, and risks at the South Landfill were below or only slightly within the EPA risk range.

The hydrogeology at the Facility has been well studied and extensive investigations have been performed. Local areas of groundwater exist with elevated COCs within the Facility. However, at most of these locations, downgradient wells exist that demonstrate that contaminants are not migrating from the Facility. Groundwater migration is controlled via natural and man-made means. Migration is limited as the rate of groundwater flow is very low. Additionally, natural attenuation processes for parathion and PNP and adsorption for PCBs and metals combined with the existing interceptor well systems further limit the migration of these constituents from the Facility. Perimeter monitoring has indicated that with only two potential exceptions (OW-21A and OW-10 areas), elevated groundwater concentrations are contained within the Facility boundary. Risks associated with groundwater exposures exceeded the EPA's acceptable risk range supporting the need for further evaluation.

A number of actions have been taken to reduce the transport of COCs off of the Facility. These actions include closure of the two landfills, the lining and re-routing of storm drains, and numerous corrective actions in former production areas of the plant. The effectiveness of these actions has been documented through quarterly surface water sampling conducted in accordance with the Facility's NPDES Permit. Currently, only outfall DSN 012 is required to be monitored as part of the NPDES Permit. Constituent concentrations in surface water have been sporadic and low. Thus, surface water is not currently considered a significant migration pathway from the Facility.

Although historical emission of PCBs from the Facility and South and West End Landfills may have occurred, an extensive air pathway monitoring study was conducted documenting that air impacts are currently low, consistent with ambient conditions in other areas of the United States, and concluding that the closed South and West End Landfills, and Facility are not now considered a unique source for PCBs in air. Additionally, exposure to ambient air does not pose unacceptable risks to any of the receptors evaluated in the HHRA including the off-site resident.

As part of the FS process, RAOs should be developed for the Facility consisting of media-specific goals for protecting human health and the environment. The specific media to address for OU-3 include soil and groundwater. For soil, RAOs should be developed to address direct contact, inhalation, or ingestion of soil by potential receptors on the plant site area. Additional RAOs for soil should address the migration of COCs in soil to surface water and groundwater. For groundwater, RAOs should be developed to address the potential migration of contaminated groundwater from the Facility as well as the potential for receptors to come in contact with or ingest groundwater. The RAOs for both soil and groundwater should also be developed to address future releases at the Facility.

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TABLES

TABLE 2-1
Therminol© ends Waste Analysis

TEST	TEST METHOD	CONCENTRATION	UNITS	PQL
Antimony	6010	BQL	ppm	2.8
Arsenic	7060	BQL	ppm	0.50
Barium	6010	BQL	ppm	4.6
Beryllium	6010	BQL	ppm	0.50
Cadmium	6010	BQL	ppm	0.50
Chromium	6010	BQL	ppm	0.95
Lead	6010	BQL	ppm	2.3
Mercury	7471	BQL	ppm	0.020
Silver	6010	BQL	ppm	0.95
Thallium	6010	BQL	ppm	4.3
Chromium VI	7196	BQL	ppm	1.0
Benzene	8240	1.0	ppm	0.5
Ash	D-482	0.015	wt %	---
Viscosity	D-445	40	SSU	---
Heat of Combustion	D-240	18,242	BTU/lb	---

BQL = below quantitation limit

PQL = practical quantitation limit

ppm = parts per million; wt % = weight as a percent.

SSU = Saybolt Seconds Universal; BTU/lb = British Thermal Units per pound.

Note: Table taken from RCRA Facility Investigation, August 1991

TABLE 2-2
Semi-Annual Detection / Corrective Action Monitoring
Constituent Sampling Frequency

Constituent	Detection Monitoring Program (Well Group 1)	Corrective Action Program (Well Group 2)	Corrective Action Program (Well Group 3)
Chlorobenzene	—	Semi-annual	Annual
Cobalt	—	Semi-annual	Annual
1,2-Dichlorobenzene	—	Annual	Annual
1,4-Dichlorobenzene	—	Annual	Annual
Parathion	Semi-annual	Semi-annual	Annual
Mercury	—	Annual	Annual
4-Nitrophenol	Semi-annual	Semi-annual	Annual
Pentachlorophenol	—	Annual*	—
PCBs (Polychlorinated biphenyls)	Semi-annual	Semi-annual	Annual
Tetraethyldithiopyrophosphate (Sulfotepp)	—	Semi-annual	Annual
o,o,o-Triethylphosphorothioate	Semi-annual	Semi-annual	Annual
2,4,6-Trichlorophenol	—	Annual*	—

NOTES:

1) Well Group 1: MW-01B, -11A, -12A, -13A
2) Well Group 2: MW-01B, -15, -16, -20A, OW-06A, -08A, -15, -16A
3) Well Group 3: MW-08, -09A, -14, OW-21A, -22

* Pentachlorophenol and 2,4,6-Trichlorophenol will be analyzed for MW-20A only.

Well MW-01B is the background well for the Detection and Corrective Action Monitoring programs. As such, it is sampled only once each sampling event for the longest parameter list.

Annual is the spring sampling event.
Semi-annual is the fall sampling event.

For each sampling event, include the following:

Trip blank is included for VOC analysis
One duplicate for each of the Detection Monitoring and Corrective Action Programs.
Field blank, matrix spike, and matrix spike duplicate
Field parameters include pH, conductivity, oxidation-reduction potential, turbidity, dissolved oxygen, temperature, color, odor, and general sample appearance.
Collect unfiltered samples for VOCs, SVOCs, PCBs, and metals.
Filtered samples are collected for some PCBs and metals. Verify with Site Remediation Coordinator, Environmental Specialist or their designee before sampling.

TABLE 2-3
Soil Sample Analytical Constituents

Sample Name	Program	COPC list [1]	TPH	Mercury	PCBs	Furans	Dioxins	PCB congeners	TCL/TAL [2]	Organophosphorous Pesticides	Chlorinated Pesticides
LFSL-89	Pre-RFI/CS				X						
LFSL-93	Pre-RFI/CS				X						
LFSL-94	Pre-RFI/CS				X						
LFSL-99	Pre-RFI/CS				X						
LFSL-103	Pre-RFI/CS				X						
SSR-01	RFI/CS	X									
SSR-02	RFI/CS	X									
SSR-03	RFI/CS	X									
SSR-04	RFI/CS	X									
SSR-05	RFI/CS	X									
SSR-06	RFI/CS	X									
SSR-07	RFI/CS	X									
SSR-08	RFI/CS	X									
SSR-09	RFI/CS	X									
SSR-10	RFI/CS	X									
SSR-11	RFI/CS	X									
SSR-12	RFI/CS	X									
SSR-13	RFI/CS	X									
SSR-14	RFI/CS	X									
SSR-15	RFI/CS	X									
SSR-16	RFI/CS	X									
SSR-17	RFI/CS	X									
SSR-18	RFI/CS	X									
SSR-19	RFI/CS	X									
SSR-20	RFI/CS	X									
SSR-21	RFI/CS		X								
SSR-22	RFI/CS		X								
SSRI-01-06	RI				X						
SSRI-01-36	RI				X						
SSRI-02-06	RI				X						
SSRI-02-36	RI				X						
SSRI-03-06	RI				X						
SSRI-03-36	RI				X						
SSRI-04-06	RI				X	X	X	X	X	X	X
SSRI-04-36	RI				X						
SSRI-05-06	RI				X						
SSRI-05-36	RI				X						
SSRI-06-06	RI				X						
SSRI-06-36	RI				X						
SSRI-07-06	RI				X	X	X	X	X	X	X
SSRI-07-42	RI				X						
SSRI-08-06	RI				X						
SSRI-08-36	RI				X						
SSRI-09-06	RI				X						
SSRI-09-36	RI				X						
SSRI-10-06	RI				X						
SSRI-10-36	RI				X						
SSRI-11-06	RI				X	X	X	X	X	X	X
SSRI-11-36	RI				X						
SSRI-12-06	RI				X						
SSRI-12-36	RI				X						
SSRI-13-06	RI				X						
SSRI-13-36	RI				X						

TABLE 2-3
Soil Sample Analytical Constituents

Sample Name	Program	COPC list [1]	TPH	Mercury	PCBs	Furans	Dioxins	PCB congeners	TCL/TAL [2]	Organophosphorous Pesticides	Chlorinated Pesticides
SSRI-14-06	RI				X						
SSRI-14-36	RI				X						
SSRI-15-06	RI				X						
SSRI-16-06	RI				X						
SWMU-12-24A	Supp. RFI/CS				X						
SWMU-12-24B	Supp. RFI/CS			X	X						
SWMU-12-24C	Supp. RFI/CS				X						
SWMU-12-24D	Supp. RFI/CS				X						
SWMU-12-24E	Supp. RFI/CS				X						
SWMU-12-24F	Supp. RFI/CS				X						
SWMU-12-24G	Supp. RFI/CS			X	X						
SWMU-12-24H	Supp. RFI/CS				X						
SWMU-12-24I	Supp. RFI/CS				X						
SLGM-3A	Supp. RFI/CS				X						
SLGM-3B	Supp. RFI/CS				X						
SLGM-3C	Supp. RFI/CS				X						
SLGM-3D	Supp. RFI/CS				X						
SL-3A	Supp. RFI/CS				X						
SL-3B	Supp. RFI/CS				X						
SL-3C	Supp. RFI/CS				X						
SL-3D	Supp. RFI/CS				X						
SWMU-42-6A	Supp. RFI/CS					X					
AOC-A-6A	Supp. RFI/CS				X						
SWMU-17-6A	Supp. RFI/CS				X						
SWMU-25-6A	Supp. RFI/CS				X						
SWMU-31-6A	Supp. RFI/CS				X						

Notes:
[1] COPC List includes: Metals - Arsenic,Barium,Beryllium,Cadmium,Chromium,Cobalt,Lead,Manganese,Mercury,Nickel,Vanadium; Organophosphorous pesticides -Methyl parathion,Parathion,Tetraethyldithiopyrophosphate; PCBs; SVOCs - 1,2-Dichlorobenzene, 1,4-Dichlorobenzene,2,4,5-Trichlorophenol,2,4,6-Trichlorophenol,2,4-Dichlorophenol,4-Nitrophenol,o,o,o-Triethylphosphorothioate,Pentachlorophenol,Phenol; and VOCs - 1,1,2,2-Tetrachloroethane,Chlorobenzene,Isopropylbenzene, and Methylene chloride.
[2] TAL/TCL includes : TCL Volatile Organics, TCL Semi-Volatile Organics, TCL Pesticides, TAL Metals, and TAL Cyanide.

TABLE 2-4
Groundwater Sample Analytical Constituents

Sample Name	Program	COPC list[1]	Parathion	4-Nitrophenol	Cobalt	PCBs	Furans	Dioxins	PCB congeners	TCL/TAL[2]	Organophosphorous Pesticides	Chlorinated Pesticides	SVOCs[3]	Inorganic Indicators
CB-85	RFI/CS	X												
MW-01B	RFI/CS	X												
OW-06A	RFI/CS													X
OW-09	RFI/CS	X												
OW-10	RFI/CS	X												
OWR-01D	RFI/CS	X												
OWR-01S	RFI/CS	X												
OWR-02D	RFI/CS	X												
OWR-02S	RFI/CS	X												
OWR-03S	RFI/CS	X												
OWR-04D	RFI/CS	X												
OWR-05D	RFI/CS	X												
OWR-06D	RFI/CS	X												
OWR-07D	RFI/CS	X												
OWR-08S	RFI/CS	X												
OWR-09S	RFI/CS	X												
WEL-01	RFI/CS	X												
WEL-02	RFI/CS	X												
WEL-03	RFI/CS	X												
WEL-04	RFI/CS	X												
OWR-10	Sup RFI/CS	X												
OWR-11	Sup RFI/CS	X												
OWR-12	Sup RFI/CS	X												
OWR-13	Sup RFI/CS	X												
OW-21A	Sup RFI/CS	X												
WEL-01	RI	X												
WEL-02	RI	X												
WEL-03	RI	X												
OWR-07D	RI	X												
OWR-14D	RI	X												
OWR-15D	RI	X												
OWR-10	RI					X					X		X	
T-01	RI					X	X	X	X	X	X	X		
T-02	RI					X	X	X	X	X	X	X		
T-03	RI					X	X	X	X	X	X	X		
T-04	RI					X	X	X	X	X	X	X		
OWR-01S	RI					X	X	X	X	X	X	X		
OW-08A	RI					X	X	X	X	X	X	X		
OW-09	RI					X	X	X	X	X	X	X		
OW-10	RI					X	X	X	X	X	X	X		
OW-16A	RI					X	X	X	X	X	X	X		
MW-14	RI					X	X	X	X	X	X	X		
MW-07	RI		X	X	X	X								

Notes:

Filtered Samples were also submitted when sampling for PCB and metals analyses.

[1] COPC List includes: Metals - Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Lead, Manganese, Mercury, Nickel, Vanadium; Organophosphorous pesticides - Methyl parathion, Parathion, Tetraethyldithiopyrophosphate; PCBs; SVOCs - 1,2-Dichlorobenzene,1,4-Dichlorobenzene,2,4,5-Trichlorophenol,2,4,6-Trichlorophenol,2,4-Dichlorophenol,4-Nitrophenol,o,o,o-Triethylphosphorothioate,Pentachlorophenol,Phenol; and VOCs - 1,1,2,2-Tetrachloroethane,Chlorobenzene,Isopropylbenzene, and Methylene chloride.

[2] TAL/TCL includes : TCL Volatile Organics, TCL Semi-Volatile Organics, TCL Pesticides, TAL Metals, and TAL Cyanide.

[3] SVOC List includes: 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlororphonel, 4-Nitrophenol, o,o,o-Triethylphosphorothioate, Pentachlorophenol, Phenol

TABLE 2-5
Bedrock Well Groundwater Sample Analytical Constituents

EPA Method	Parameter Monitoring	T-05	T-05F	T-06	T-06F
EPA Method 8081A 8082	PCB-1016	X	X	X	X
	PCB-1221	X	X	X	X
	PCB-1232	X	X	X	X
	PCB-1242	X	X	X	X
	PCB-1248	X	X	X	X
	PCB-1254	X	X	X	X
	PCB-1260	X	X	X	X
	PCB-1268	X	X	X	X
	Total PCBs by EPA 8081A 8082	X	X	X	X
EPA Method 680	Monchlorobiphenyl	X	X	X	X
	Dichlorobiphenyl	X	X	X	X
	Trichlorobiphenyl	X	X	X	X
	Tetrachlorobiphenyl	X	X	X	X
	Pentachlorobiphenyl	X	X	X	X
	Hexachlorobiphenyl	X	X	X	X
	Heptachlorobiphenyl	X	X	X	X
	Octacholobiphenyl	X	X	X	X
	Nonachlorobiphenyl	X	X	X	X
	DCB Decachlorobiphenyl	X	X	X	X
	Total PCBs by EPA 680	X	X	X	X

Notes:
Data from November 2006.
F = Sample filtered with 1.0 micron filter as per EPA requirements.

TABLE 2-6
Outfall Discharge Descriptions

Outfall Designation	Outfall Description	Monitoring Status
DSN 001	Manages storm water from the Facility.	Monitoring no longer required
DSN 002	Non-storm-water discharge point from former plant WWTF to City of Anniston POTW.	Active for Indirect Discharge Permit
DSN 003	Manages storm water from production area.	Monitoring no longer required
DSN 004	Manages storm water from PNP Process Area. Includes flow from DSN 003 and DSN 005.	Monitoring no longer required
DSN 005	Manages storm water from production area.	Monitoring no longer required
DSN 006	Manages storm water from the West End Landfill.	Monitoring no longer required
DSN 007	Manages storm water from the South Landfill. Routed through the detention basin.	Monitoring no longer required
DSN 008	Manages storm water from the South Landfill. Routed through the detention basin.	Monitoring no longer required
DSN 009	Manages storm water from the South Landfill. Routed through the detention basin.	Monitoring no longer required
DSN 010	Manages storm water from the South Landfill. Routed through the detention basin.	Monitoring no longer required
DSN 011	Manages storm water from the South Landfill. Routed through the detention basin.	Monitoring no longer required
DSN 012	Manages storm water from the Facility (DSN 001), the South Landfill and the East Side Drainage Control Project.	Active for NPDES Permit
DSN 013	Storm water runoff from closed South Landfill.	DSN 013 no longer exists

Note: Table modified from Table C-1 of the Phase I Conceptual Site Model Report (BBL, 2003).

TABLE 2-7
Outfall Sampling Results

		DSN 003	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 004	DSN 005	DSN 005	DSN 006
		Feb-94	Jun-98	Jul-98	May-01	Jun-01	Nov-03	Jun-04	Nov-04	Jun-05	Nov-05	Mar-06	Oct-06	Jun-98	Jul-98	Feb-94
Metals																
Arsenic	mg/L	N/A	0.011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.01
Barium	mg/L	N/A	0.036	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.013	N/A	< 0.2
Beryllium	mg/L	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	< 0.005
Cadmium	mg/L	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	< 0.005
Chromium	mg/L	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.01
Cobalt	mg/L	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.05
Lead	mg/L	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	0.0049
Manganese	mg/L	N/A	< 0.01	N/A	0.013	0.012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	0.039
Mercury	mg/L	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.00002	N/A	< 0.0002
Nickel	mg/L	N/A	< 0.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.04	N/A	< 0.04
Vanadium	mg/L	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.05
Inorganic Indicators																
Oil and Grease	mg/L	N/A	N/A	N/A	N/A	N/A	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A
Organophosphorus Pesticides																
Methyl parathion	µg/L	N/A	< 0.5	N/A	< 0.5	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
Parathion	µg/L	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
PCBs																
Aroclor 1016	µg/L	N/A	U	U	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	< 1
Aroclor 1221	µg/L	N/A	U	U	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	< 2
Aroclor 1232	µg/L	N/A	U	U	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	< 1
Aroclor 1242	µg/L	N/A	U	U	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	< 1
Aroclor 1248	µg/L	N/A	U	U	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	< 1
Aroclor 1254	µg/L	N/A	0.57	U	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	1.3
Aroclor 1260	µg/L	N/A	0.52	U	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	< 1
Total PCBs	µg/L	N/A	1.1	U	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	U	N/A	1.3
SVOCs																
1,2-Dichlorobenzene	µg/L	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
1,4-Dichlorobenzene	µg/L	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
2,4,5-Trichlorophenol	µg/L	< 50	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 50
2,4,6-Trichlorophenol	µg/L	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10
2,4-Dichlorophenol	µg/L	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10
4-Nitrophenol	µg/L	< 50	< 50	N/A	< 50	< 50	< 50	< 50	< 50	< 47	< 47	< 47	BDL	< 50	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 50
Pentachlorophenol	µg/L	< 50	< 50	N/A	< 50	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 50	N/A	N/A
Phenol	µg/L	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10
VOCs																
1,1,2,2-Tetrachloroethane	µg/L	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Chlorobenzene	µg/L	N/A	< 5	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Isopropylbenzene	µg/L	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Methylene chloride	µg/L	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Benzene	µg/L	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	<1.0	<1.0	<1.0	< 5	< 5	N/A

Notes:
Table modified from Table C-2 of the Phase I Conceptual Site Model (BBL, 2003).
The December 2006 sample for DSN-012 was collected as a verification sample for benzene and PCBs only.

TABLE 2-7
Outfall Sampling Results

		DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006	DSN 006
		Mar-97	Jun-97	Sep-97	Dec-97	Jan-98	Jun-98	Jul-98	Dec-98	Feb-99	Jun-99	Oct-99	Apr-00	Jun-00	Oct-00	Jan-01
Metals																
Arsenic	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inorganic Indicators																
Oil and Grease	mg/L	N/A	N/A	N/A	N/A	< 5.0	< 5.0	< 5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organophosphorus Pesticides																
Methyl parathion	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs																
Aroclor 1016	µg/L	U	U	U	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aroclor 1221	µg/L	U	U	U	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aroclor 1232	µg/L	U	U	U	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aroclor 1242	µg/L	U	U	U	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aroclor 1248	µg/L	U	U	U	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aroclor 1254	µg/L	U	0.29	0.46	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Aroclor 1260	µg/L	U	U	U	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total PCBs	µg/L	U	0.29	0.46	U	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
SVOCs																
1,2-Dichlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4-Nitrophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs																
1,1,2,2-Tetrachloroethane	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isopropylbenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene chloride	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
Table modified from Table C-2 of the Phase I Conceptual Site Model (BBL, 2003).
The December 2006 sample for DSN-012 was collected as a verification sample for benzene and PCBs only.

TABLE 2-7
Outfall Sampling Results

		DSN 006	DSN 006	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012
		May-01	Nov-01	Mar-97	Jun-97	Jun-97	Sep-97	Dec-97	Jan-98	Jun-98	Jul-98	Dec-98	Feb-99	Jun-99	Oct-99	Apr-00
Metals																
Arsenic	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inorganic Indicators																
Oil and Grease	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organophosphorus Pesticides																
Methyl parathion	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs																
Aroclor 1016	µg/L	< 1	< 1	< 1	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	µg/L	< 1	< 1	< 2	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	µg/L	< 1	< 1	< 1	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242	µg/L	< 1	< 1	< 1	U	1.4	U	2.6	1.5	U	U	1.6	U	U	U	U
Aroclor 1248	µg/L	< 1	< 1	2.4	U	U	7	U	U	0.9	U	U	U	1.70	U	U
Aroclor 1254	µg/L	< 1	< 1	< 1	U	1.1	9.1	0.83	0.62	0.64	U	0.54	U	1.2	U	U
Aroclor 1260	µg/L	< 1	< 1	< 1	U	0.66	5.8	U	U	U	U	0.25	U	U	U	U
Total PCBs	µg/L	< 1	< 1	2.4	U	3.16	21.9	3.43	2.12	1.54	U	2.39	U	2.9	U	U
SVOCs																
1,2-Dichlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4-Nitrophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs																
1,1,2,2-Tetrachloroethane	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isopropylbenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene chloride	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
Table modified from Table C-2 of the Phase I Conceptual Site Model (BBL, 2003).
The December 2006 sample for DSN-012 was collected as a verification sample for benzene and PCBs only.

TABLE 2-7
Outfall Sampling Results

		DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN012
		Jun-00	Oct-00	Mar-01	May-01	Jun-01	Sep-01	Nov-01	Mar-02	Jun-02	Sep-02	Dec-02	Feb-03	Sep-03	Nov-03	Mar-04
Metals																
Arsenic	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	mg/L	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	mg/L	N/A	N/A	N/A	0.073	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inorganic Indicators																
Oil and Grease	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5.0	< 5.0
Organophosphorus Pesticides																
Methyl parathion	µg/L	N/A	N/A	N/A	< 0.5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	µg/L	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs																
Aroclor 1016	µg/L	< 1	U	U	< 1	< 1	U	< 2	U	U	U	< 1	< 1	U	0	0
Aroclor 1221	µg/L	< 2	U	U	< 2	< 2	U	< 4	U	U	U	< 2	< 2	U	0	0
Aroclor 1232	µg/L	< 1	U	U	< 1	< 1	U	< 2	U	U	U	2.7	1.7	U	11	0
Aroclor 1242	µg/L	< 1	1.9	U	< 1	< 1	U	< 2	1.4	2.7	U	< 1	< 1	3.8	0	0
Aroclor 1248	µg/L	1.9	U	U	2	< 1	U	< 2	U	U	U	2	< 1	U	10	0
Aroclor 1254	µg/L	< 1	U	U	< 1	< 1	U	< 2	U	U	U	< 1	< 1	U	1.5	0
Aroclor 1260	µg/L	< 1	U	U	< 1	< 1	U	< 2	U	U	U	< 1	< 1	U	0	0
Total PCBs	µg/L	1.9	1.9	U	2	< 2	U	< 4	1.4	2.7	U	4.7	1.7	3.8	22	0
SVOCs																
1,2-Dichlorobenzene	µg/L	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/L	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4-Nitrophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	N/A	N/A	N/A	< 50	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs																
1,1,2,2-Tetrachloroethane	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	µg/L	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isopropylbenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene chloride	µg/L	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	µg/L	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
Table modified from Table C-2 of the Phase I Conceptual Site Model (BBL, 2003).
The December 2006 sample for DSN-012 was collected as a verification sample for benzene and PCBs only.

TABLE 2-7
Outfall Sampling Results

		DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012	DSN 012
		Jun-04	Sep-04	Dec-04	Mar-05	Jun-05	Oct-05	Nov-05	May-06	Oct-06	Dec-06	Feb-07	Dec-07
Metals													
Arsenic	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inorganic Indicators													
Oil and Grease	mg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	N/A	< 5.0	N/A
Organophosphorus Pesticides													
Methyl parathion	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Parathion	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetraethyldithiopyrophosphate (Sulfotepp)	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs													
Aroclor 1016	µg/L	0	0	0	0	0	0	0	0	0	0	0	0
Aroclor 1221	µg/L	0	0	0	0	0	0	0	0	0	0	0	0
Aroclor 1232	µg/L	0	0	0	0	0	0	0	0	0	0	0	0
Aroclor 1242	µg/L	0	0	0	0	0	0	0	0	0	0	13	1.6
Aroclor 1248	µg/L	0	1.6 J	0	0	0	0	1.9	0	0	0	0	0
Aroclor 1254	µg/L	0	0	0	0	0	0	0	0	0	0	0	0
Aroclor 1260	µg/L	0	0	0	0	0	0	0	0	0	0	2.9	0
Total PCBs	µg/L	0	1.6 J	0	0	0	0	1.9	0	0	0	16	1.6
SVOCs													
1,2-Dichlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4-Nitrophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
o,o,o-Triethylphosphorothioate	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs													
1,1,2,2-Tetrachloroethane	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isopropylbenzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene chloride	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	µg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.2	1.7	3.7	13	< 1

Notes:
Table modified from Table C-2 of the Phase I Conceptual Site Model (BBL, 2003).
The December 2006 sample for DSN-012 was collected as a verification sample for benzene and PCBs only.

TABLE 2-8
Description of Air Sample Station Locations

Solutia Inc. Air Sample Station Locations			
Sample Location	Station ID	Distance *	Location Description
East	1	n/a	Adjacent to the Retention Pond, situated just north of Highway 202 and just East of the Solutia Inc. facility.
South	2	n/a	Near the point of lowest elevation of the South Landfill, approximately 50 feet from eastbound Highway 202.
West	3	n/a	Atop the West End Landfill, approximately 100 feet from westbound Highway 202.
North	4	<0.25	Less than 0.25 mile north of the Solutia Inc. facility.
Northeast	5	0.5	Miller property, located approximately 0.5 miles northeast of the Solutia Inc. facility.
Near East	6	n/a	Near SMWU 12.
Northwest	7	<0.25	Less than 0.25 mile northwest of the Solutia Inc. facility.
Far West	8	0.35	West of the Solutia Inc. facility, near railroad tracks (North Hunter St. & Caldwell Ave).
* Estimated distance (miles) from Solutia Inc. facility boundary. n/a = within the Solutia Inc. facility boundary			
EPA Region IV Sample Station Locations			
Sample Location	Station ID	Distance *	Location Description
West	A	1	Wellborn High School (background site).
Southwest	B	0.25	South Hunter Street.
West	C	0.25	Vacant lot between Hunter and 3rd Streets.
Northwest	D	0.25	Intersection of Ware Street and 9th Street.
North	E	0.25	Intersection of Clydesdale Avenue and 12th Street.
Northeast	F	0.50	Head Start School, 1000 West 12th Street.
Northeast	G	0.25	Intersection of Lincoln and Zinn Parkways.
Northeast	H	1.0	Intersection of Nobel and 13th Streets (Downtown Anniston).
* Estimated distance (miles) from Solutia Inc. facility boundary.			
Note: Taken from Phase I Conceptual Site Model Report, BBL (May 2003) and Preliminary Site Characterization Summary Report, Golder (2005).			

TABLE 3-1
Groundwater Elevations - October 2007

Date Measured:	October-07				
Well No.	**TOC Elevation (ft. MSL)**	**Depth to Water (ft. BTOC)**	**Approximate Stick-up (ft.)**	**Water-Level Elevation (ft. MSL)**	**Well Depth (ft. BGS)**
Observation Wells					
OW-01	812.71	20.49	1.25	792.22	26
OW-02	807.69	Dry	1.33	Dry	24
OW-03	805.25	22.88	2.88	782.37	24
OW-04	798.57	Dry	1.67	Dry	27
OW-05	773.02	20.69	2.25	752.33	65
OW-06A	791.62	Dry	2.75	Dry	43
OW-07	785.82	Dry	4.50	Dry	43
OW-08A	749.16	18.33	2.90	730.83	22
OW-09	738.36	30.25	2.00	708.11	40
OW-10	736.87	26.66	2.10	710.21	40
OW-12	835.34	Blocked	3.33	Blocked	35
OW-13	805.16	Dry	1.58	Dry	43
OW-14	806.98	Dry	3.54	Dry	46
OW-15	766.90	18.66	2.67	748.24	40
OW-16A	779.74	23.46	2.00	756.28	30
OW-17	812.29	Dry	2.08	Dry	47
OW-18	750.47	14.84	2.83	735.63	28
OW-19	748.72	12.38	2.50	736.34	33
OW-20	747.62	8.81	2.50	738.81	23
OW-21A	744.46	14.84	2.42	729.62	35
OW-22	745.57	15.44	2.25	730.13	35
OW-23	747.53	8.44	2.75	739.09	23
OW-24	746.15	8.56	2.42	737.59	29
OW-25	800.21	22.41	1.83	777.80	37
Bedrock Wells					
BR-01	897.46	287.12	5.00	610.34	311
BR-02	865.22	Dry	2.92	Dry	181
BR-03	827.58	176.99	2.54	650.59	258
BR-04	790.74	133.54	1.83	657.20	220
BR-05	764.10	101.08	0.83	663.02	149
Site Assessment Wells					
SA-06	815.56	44.42	3.13	771.14	50
SA-22	792.84	Dry	3.63	Dry	24
SA-64	748.65	Dry	2.00	Dry	24
SA-85 (CB-85)	736.37	16.16	2.75	720.21	30
Shallow Bedrock Wells					
SBP-01	758.17	99.69	2.50	658.48	157
SBP-02	749.40	91.77	2.33	657.63	140
SBP-03	744.41	86.63	2.25	657.78	102
SBP-04	761.3	98.21	2.33	663.09	148
SBP-05	755.88	98.30	3.00	657.58	140
West End Landfill Wells					
WEL-01	778.8	26.55	1.42	752.25	33
WEL-02	775.35	Dry	1.54	Dry	35
WEL-03	771.73	30.71	2.36	741.02	35
WEL-04	765.94	32.62	2.92	733.32	51

Notes:
1) TOC Elevations taken from well survey conducted in April 1997.
2) BGS = Below ground surface
3) NM = Not measured

Checked By: RWP

TABLE 3-1
Groundwater Elevations - October 2007

Date Measured:	October-07				
Well No.	**TOC Elevation (ft. MSL)**	**Depth to Water (ft. BTOC)**	**Approximate Stick-up (ft.)**	**Water-Level Elevation (ft. MSL)**	**Well Depth (ft. BGS)**
Monitoring Wells					
MW-01B	881.59	47.53	1.71	834.06	63
MW-07	744.18	14.91	2.08	729.27	24
MW-08	746.80	18.39	2.29	728.41	27
MW-09A	751.02	30.04	2.63	720.98	33
MW-11A	784.13	Dry	0.79	Dry	114
MW-12A	785.69	110.46	1.75	675.23	112
MW-13A	782.01	108.46	2.54	673.55	110
MW-14	751.30	Dry	1.88	Dry	28
MW-15	756.19	15.58	2.67	740.61	25
MW-16	755.70	33.69	3.08	722.01	68
MW-20A	752.90	12.26	1.50	740.64	24
Piezometers					
PZ-08	750.51	30.41	2.58	720.10	50
PZ-09	749.71	10.45	2.17	739.26	40
PZ-10	756.06	26.22	2.25	729.84	50
PZ-11	750.71	31.89	1.54	718.82	45
RFI Piezometers					
PZR-01	806.91	61.45	2.04	745.46	60
PZR-02	805.86	Dry	2.00	Dry	60
PZR-03	805.05	61.03	2.00	744.02	60
PZR-04	803.94	Dry	2.00	Dry	60
PZR-05	755.73	18.14	1.92	737.59	45
PZR-06	757.09	13.68	1.92	743.41	45
Other Wells					
DOP-1	747.49	83.18	2.40	664.31	270
DW-1	753.88	NM	NM	NM	93
RFI Observation Wells					
OWR-01D	739.59	52.66	2.00	686.93	65
OWR-01S	738.89	18.61	2.00	720.28	35
OWR-02D	756.99	99.41	2.33	657.58	108
OWR-02S	757.46	14.65	2.58	742.81	35
OWR-03D	759.76	Dry	2.08	Dry	65
OWR-03S	760.48	12.33	2.17	748.15	35
OWR-04D	746.03	Dry	2.10	Dry	80
OWR-05D	804.93	60.26	2.00	744.67	65
OWR-06D	736.79	63.82	2.13	672.97	65
OWR-07D	774.49	Dry	2.00	Dry	65
OWR-08S	755.17	17.59	2.25	737.58	35
OWR-09S	753.09	49.62	1.90	703.47	50
OWR-10	769.95	29.94	2.58	740.01	49
OWR-11	745.16	20.29	2.50	724.87	38
OWR-12	763.20	17.20	2.58	746.00	40
OWR-13	769.45	23.57	2.75	745.88	39
OWR-14D	779.61	Dry	2.50	Dry	81
OWR-15D	778.94	24.44	2.17	754.50	67

Notes:
1) TOC Elevations taken from well survey conducted in April 1997.
2) BGS = Below ground surface
3) NM = Not measured

Checked By: RWP

TABLE 3-2
Variable Head Hydraulic Conductivity Test Results

Well I.D.	Screened Interval (ft bgs)	Test Type	Hydraulic Conductivity (cm/s)	Hydraulic Conductivity (feet/day)	Unit(s) Screened	Well Location	Comments
Shallow Residuum Wells							
MW-1B	58 - 63	F	3.5 E-07	9.8 E-04	shallow residuum	South Landfill	
OW-1	20 - 25	NA	---	---	shallow residuum	South Landfill	Could not remove pump
OW-2	19 - 24	NA	---	---	shallow residuum	South Landfill	Could not remove pump
OW-3	19 - 24	NA	---	---	shallow residuum	South Landfill	Dry
OW-4	22 - 27	NA	---	---	shallow residuum	South Landfill	Dry
OW-7	38 - 43	F	7.1 E-05	2.0 E-01	shallow residuum	East of Facility	
OW-8A	15 - 25	R	1.8 E-04	5.2 E-01	shallow residuum	Facility	Water level below top of filter pack
OW-10	33 - 38	F	2.0 E-07	5.7 E-04	shallow residuum	Facility	
OW-11	9 - 14	F	---	---	shallow residuum	South Landfill	No response after slug
OW-12	30 - 35	NA	---	---	shallow residuum	South Landfill	Could not remove pump
OW-13	38 - 43	NA	---	---	shallow residuum	South Landfill	Dry
OW-14	41 - 46	NA	---	---	shallow residuum	South Landfill	Dry
OW-15	35 - 40	F	2.1 E-07	5.9 E-04	shallow residuum	Facility	
OW-17	35 - 40	NA	---	---	shallow residuum	South Landfill	Dry
OWR-1S	25 - 35	F	3.4 E-04	9.6 E-01	shallow residuum	Facility	
OWR-2S	25 - 35	F	4.0 E-04	1.1 E+00	shallow residuum	Facility	
OWR-3S	25 - 35	F	2.9 E-06	8.2 E-03	shallow residuum	Facility	
OWR-8S	25 - 35	F	3.4 E-06	9.6 E-03	shallow residuum	Facility	
CB-85	23 - 32	F	5.7 E-07	1.6 E-03	shallow residuum	Facility	
PZR-5	26 - 46	F	2.7 E-06	7.5 E-03	shallow/deep residuum	Facility	
PZR-6	26 - 46	F	1.6 E-06	4.6 E-03	shallow/deep residuum	Facility	
Shallow Residuum Geometric Mean			5.4E-06	1.5E-02			

Notes:
Hydraulic conductivity values were determined by slug test calculations using the Bouwer and Rice slug test equation.
F = falling head slug test. R = rising head slug test. NA = not applicable.
(cm/s) = centimeters per second. (ft bgs) = feet below ground surface.

TABLE 3-2
Variable Head Hydraulic Conductivity Test Results

Well I.D.	Screened Interval (ft bgs)	Test Type	Hydraulic Conductivity (cm/s)	Hydraulic Conductivity (feet/day)	Unit(s) Screened	Well Location	Comments
Deep Residuum Facility or Near Facility Wells							
OWR-1D	55 - 65	F	4.3 E-08	1.2 E-04	deep residuum	Facility	
OWR-2D	98 - 108	F	5.0 E-04	1.4 E+00	deep residuum	Facility	
OWR-3D	55 - 65	NA	---	---	deep residuum	Facility	Dry
OWR-4D	70 - 80	R	1.3 E-06	3.8 E-03	deep residuum	North of Facility	Water level below top of filter pack
OWR-6D	55 - 65	R	3.4 E-06	9.5 E-03	deep residuum	East of Facility	Water level below top of filter pack
OWR-7D	55 - 65	R	2.9 E-06	8.3 E-03	deep residuum	Facility	Water level below top of filter pack
OWR-9S	40 - 50	F	5.5 E-07	1.6 E-03	deep residuum	East of Facility	
Deep Residuum Facility Geometric Mean			2.3E-06	6.5E-03			
Deep Residuum South Landfill Wells							
PZR-1	40 - 60	R	2.0 E-05	5.5 E-02	deep residuum	South Landfill	Water level below top of filter pack
PZR-2	40 - 60	R	1.3 E-04	3.8 E-01	deep residuum	South Landfill	Water level below top of filter pack
PZR-3	41 - 61	R	3.0 E-05	8.6 E-02	deep residuum	South Landfill	Water level below top of filter pack
PZR-4	40 - 60	R	4.4 E-05	1.3 E-01	deep residuum	South Landfill	Water level below top of filter pack
OWR-5D	58 - 68	F	1.5 E-04	4.2 E-01	deep residuum	South Landfill	
Deep Residuum South LF Geometric Mean			5.5E-05	1.6E-01			
Total Residuum Geometric Mean			7.2E-06	2.0E-02			

Notes:
Hydraulic conductivity values were determined by slug test calculations using the Bouwer and Rice slug test equation.
F = falling head slug test. R = rising head slug test. NA = not applicable.
(cm/s) = centimeters per second. (ft bgs) = feet below ground surface.

TABLE 3-3
Pumping Test Hydraulic Conductivity Results

Pumping Test I.D.	Well I.D.	Well Type	Approximate Bottom of Screen (ft bgs)	Analysis Method	Hydraulic Conductivity (ft./day)	Hydraulic Conductivity (cm/second)
IW-6 Pumping Test						
	IW-6	Pumping	68	Theis/Jacob Recovery	1.86E-02	6.57E-06
	IW-6	Pumping	68	Neuman	2.44E-02	8.61E-06
	PZR-2	Observation	60	Theis/Jacob Recovery	2.09E-02	7.38E-06
	PZR-2	Observation	60	Neuman	2.27E-02	8.01E-06
	PZR-3	Observation	61	Theis (corrected)	5.39E-01	1.90E-04
	OWR-5D	Observation	68	Neuman	2.70E-02	9.53E-06
	OWR-5D	Observation	68	Theis/Jacob Recovery	2.50E-02	8.83E-06
	OWR-5D	Observation	68	Moench	1.62E-01	5.72E-05
	OWR-5D	Observation	68	Theis (corrected)	1.58E-01	5.58E-05
	Geometric mean				5.01E-02	1.77E-05
IW-10 Pumping Test						
	IW-10	Pumping	68	Theis (corrected)	2.14E-01	7.55E-05
	IW-10	Pumping	68	Neuman	6.58E-02	2.32E-05
	IW-10	Pumping	68	Theis/Jacob Recovery	4.57E-02	1.61E-05
	PZR-4	Observation	60	Moench	5.12E-01	1.81E-04
	Geometric mean				1.35E-01	4.76E-05
IW-11 Pumping Test						
	PZR-1	Pumping	60	Neuman	2.27E-01	8.01E-05
	IW-11	Pumping	68	Theis/Jacob Recovery	2.82E-02	9.95E-06
	PZR-1	Observation	60	Moench	2.75E-01	9.71E-05
	PZR-1	Observation	60	Theis (corrected)	2.84E-01	1.00E-04
	Geometric mean				1.50E-01	5.28E-05
	SWMU I Total Geometric Mean				**8.18E-02**	**2.89E-05**
IW-14 Pumping Test						
	IW-14	Pumping	46	Theis	3.99E-02	1.41E-05
	PZR-5	Observation	46	Theis	2.14E-02	7.55E-06
	Geometric mean				2.92E-02	1.03E-05
	Total Site Geometric Mean				**7.34E-02**	**2.59E-05**

TABLE 3-4
Summary of Permeability Data from Previous Investigations

Source	Range of Permeabilities (cm/sec) and [ft/day]	Comments
Soil Surveys of Calhoun County, Alabama, U.S. Department of Agriculture, 1958 and 1961	5.6×10^{-4} to 7.1×10^{-3} [1.6×10^{0} to 2.0×10^{1}]	Regional surficial soil data
Geraghty & Miller, Assessment of Hydrogeologic Conditions North of the Solid-Waste Landfill Area, Monsanto Company, Anniston, Alabama, March 10, 1982	1.2×10^{-8} to 1.2×10^{-7} [3.4×10^{-5} to 3.4×10^{-4}]	Clays (residuum) beneath plant area 5 to 20 feet in thickness
Geraghty & Miller, Assessment of Hydrogeologic Conditions at the Solid-Waste Landfill Area, Monsanto Company, Anniston, Alabama, December 3, 1980	1.3×10^{-9} to 1.0×10^{-7} [3.7×10^{-6} to 2.8×10^{-4}]	Clays beneath landfill area 10 to 20 feet in thickness
Law Engineering Testing Company, Report of Subsurface Investigation Proposed Waste Disposal Area, July 30, 1973	1.062×10^{-6} [3.010 to 10^{-3}] (laboratory permeability test)	Upper surficial layer of natural soils (residuum) in area of WMA-I
Law Engineering Testing Company, Report of Subsurface Investigation Proposed Waste Disposal Area, July 30, 1973	7.428×10^{-6} [2.106×10^{-2}] (laboratory permeability test)	Lower residual (residuum) soil zone derived from weathering of underlying formation in area of WMA-I

TABLE 3-5
Summary of Door to Door Well Survey

Property Location	Corresponding Parcel ID's	Well Status	Well Construction/Use
1229 W 11th St.	1719	Closed- Construction Debris	Unknown
Hwy 202 (Cowboy's)	2502	Active	Drilled/Monitor
500 Palmetto Ave	3199/ 3140	Closed- Concrete	Unknown
2100 W 14th St	923/ 924/ 926	Closed- Concrete	Unknown
1317 Crane Ave	966/ 990	Closed- Construction Debris	Unknown
Clydesdale Ave (Union Foundry)	210839/ 210840/ 26	Active	Unknown/ Process Water
1107 Crawford Ave	1622	Closed- Construction Debris	Unknown
1410 Washington Heights	211176	Closed- Concrete	Unknown/Laundry
2815 W 12th St	211477/ 211559/ 211560/ 211561	Closed per owner	Unknown
216 Corning St	3998	Covered and Locked / Not in use	Unknown
Eulaton Rd (Huron Valley Steel Corp)	2509/ 2361/ 3024	Active (to be Abandoned)	Unknown/Monitor-Geo Survey
505 Lagrande St	3268	Closed- Construction Debris	Unknown
2412 Jefferson	3396	Closed- Construction Debris	Unknown
108 Monsanto Rd	3864	Closed- Concrete	Unknown
Hwy 202 (Sears Texaco)	3964/ 3979/ 3970/ 3985	Active	Drilled/Observation
513 Mountain View Rd	4945	Closed per owner	Unknown
2400 Bibb St	5194	Locked / Unable to access	Unknown

TABLE 3-6
Summary of Historical Well Records Search

Well Number	Well Owner	Well Type	Well Use
W-1	Alabama Pipe Co. Union Foundry Division	Drilled	Industrial
W-2	Kirby Steel	Drilled	Not Used
V-1	Virgil Coker Tire Service	Drilled	Industrial
V-2	Anniston Ice and Coal Co.	Drilled	Industrial
V-3	Alabama United Ice	Drilled	Not Used
V-4	Home Ice Co.	Drilled	Industrial
V-5	The Model Laundry	Drilled	Industrial

Reference for historical well records search:
Warman, J., Causey, L., Burks, J., Ziemund, H., Geology and Ground-Water Resources of Calhoun County Alabama, Geological Survey of Alabama, 1960, p.60-63

TABLE 4-1
Soil Sample Results

Parameter	AOC-A 0-0.5	LFSL89	LFSL93	LFSL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics										
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	AOC-A 0-0.5	LFSL89	LFSL93	LFSL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25
PCBs, Aroclor Specific										
Aroclor 1016	U	NA	NA	NA	NA	NA	U	U	U	U
Aroclor 1221	U	NA	NA	NA	NA	NA	U	U	U	U
Aroclor 1232	U	NA	NA	NA	NA	NA	U	U	U	U
Aroclor 1242	U	NA	NA	NA	NA	NA	U	U	U	U
Aroclor 1248	420	NA	NA	NA	NA	NA	U	U	U	U
Aroclor 1254	1400 J	NA	NA	NA	NA	NA	U	U	4500	U
Aroclor 1260	2200 J	NA	NA	NA	NA	NA	80	U	1300	U
Aroclor 1268	1700 J	NA	NA	NA	NA	NA	88	70	490	U
PCBs, Totals	5720 J	10000	4100	1300	6700	U	168	70	6290	U
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parathion	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfotepp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	AOC-A 0-0.5	LFSL89	LFSL93	LFSL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	AOC-A 0-0.5	LFSL89	LFSL93	LFSL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	AOC-A 0-0.5	LFSL89	LFSL93	LFSL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	AOC-A 0-0.5	LFSL89	LFSL93	LFSL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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2) Depth listed for samples in sample name are in feet.
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TABLE 4-1
Soil Sample Results

Parameter	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics										
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	3900	7600	3100	4200	11000	7900
Barium	NA	NA	NA	NA	18000	150000	22000	43000	51000	38000
Beryllium	NA	NA	NA	NA	U	1000	U	U	U	U
Cadmium	NA	NA	NA	NA	U	U	U	U	U	U
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	18000	20000	7400	19000	38000	23000
Cobalt	NA	NA	NA	NA	2000	9100	2200	5000	6100	8900
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	8700	88000	25000	41000	52000	48000
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	70000	590000	220000	120000	610000	690000
Mercury	NA	NA	NA	NA	U	210	52	1100	1800	330
Nickel	NA	NA	NA	NA	U	18000	5700	7500	15000	39000
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	31000	39000	10000	33000	42000	50000
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	9.4	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	1600000	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	4500000	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2
PCBs, Aroclor Specific										
Aroclor 1016	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U	U	70000	U	U
Aroclor 1242	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	U	U	U	U	35000	U
Aroclor 1254	U	U	61 J	U	23	4000	770	24000	44000	5200
Aroclor 1260	U	U	66 J	U	U	7200	1400	10000	27000	4100
Aroclor 1268	U	71 J	100 J	73 J	NA	NA	NA	NA	NA	NA
PCBs, Totals	U	71 J	227 J	73 J	23	11200	2170	104000	106000	9300
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	U	U	U	U	U	U
Parathion	NA	NA	NA	NA	U	U	U	U	U	U
Sulfotepp	NA	NA	NA	NA	U	U	U	U	U	U
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	U	U	U	U	U	U
2,4,6-Trichlorophenol	NA	NA	NA	NA	U	U	U	U	U	U
2,4-Dichlorophenol	NA	NA	NA	NA	U	U	U	U	U	U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	U	U	U	U	U	U
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	U	U	U	U	U	U
Pentachlorophenol	NA	NA	NA	NA	U	U	U	U	U	U
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	U	U	U	U	U	U
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	U	U	U	U	U	U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	U	U	U	U	U	U
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	U	U	U	U	U	UJ
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	U	U	U	U	U	U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	U	U	U	U	U	U

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TABLE 4-1
Soil Sample Results

Parameter	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	U	U	U	U	U	U
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics										
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	U	U	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	12000	10000	14000	6800 J	9000 J	13000	6900	5200	4700	7200
Barium	62000	52000	780000	25000	21000	23000	85000	110000	48000	36000 J
Beryllium	U	U	780	1500 J	1900 J	690	750	1000	U	620
Cadmium	U	U	920	U	U	U	U	730	U	U
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	48000	18000	14000	17000 J	21000 J	16000	23000	110000	16000	40000
Cobalt	17000	9800	12000	22000 J	45000 J	6900	3200	7500	6000	4300
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	220000	41000	150000	39000 J	20000 J	18000	23000	36000	250000	42000
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	620000	520000	12000000	680000 J	1100000 J	250000	100000	360000	68000	100000
Mercury	1400	93	460	76 J	11 J	32	50	46	79	3300 J
Nickel	2400000	12000	120000	17000 J	26000 J	11000	9000	33000	8400	8600 J
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	51000	45000	26000	55000	67000	25000	41000	36000	30000	52000
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	15	17	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	130000	140000	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	U	200000	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10
PCBs, Aroclor Specific										
Aroclor 1016	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	67000	U	U	U	U	U	U	UJ
Aroclor 1242	U	U	U	59 J	45 J	U	U	U	U	46000 J
Aroclor 1248	U	U	U	U	U	150	200	6000	2900	U
Aroclor 1254	170000	U	120000	28 J	20 J	54	320	10000	2400	12000 J
Aroclor 1260	59000	34	95000	U	U	U	150	U	1100	7000 J
Aroclor 1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Totals	229000	34	282000	87 J	65 J	204	670	16000	6400	65000 J
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	U	U	U	U	U	U	U	U	U	U
Parathion	U	U	U	U	U	U	U	U	U	U
Sulfotepp	U	U	U	U	U	U	U	U	U	U
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	U	U
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	U	U
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	U	U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	U	U	U	U	U	U	U	U	U	U
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
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TABLE 4-1
Soil Sample Results

Parameter	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	U	U	U	U	U	U	U	U	U	U
Pentachlorophenol	U	U	U	U	U	U	U	U	U	U
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	U	U	U	U	U	U	U	U	U	U
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	U	U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	U	U
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	U	U	U	U	U	U	17	U	U	8.8
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	U	U	U	U	U	U	U	U	U	U

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TABLE 4-1
Soil Sample Results

Parameter	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	U	U	U	U	U	33	U	U	U	U
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-15-Q 6-10	SSR-16 0.83-3	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	U	NA	U	12000
Inorganics										
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	8200	13000	12000	33000 J	19000 J	U	NA	5700	NA	NA
Barium	28000 J	38000	350000	55000 J	30000 J	65000	NA	49000	NA	NA
Beryllium	U	830	U	U	U	U	NA	U	NA	NA
Cadmium	U	U	U	U	U	U	NA	U	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	37000	25000	12000	10000 J	19000 J	U	NA	16000	NA	NA
Cobalt	4000	7400	74000	4300 J	3300 J	47000	NA	9100	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	40000	15000	35000	110000 J	85000 J	52000	NA	28000	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	120000	310000	5500000	370000 J	270000 J	2600000	NA	670000	NA	NA
Mercury	1100 J	56	49	420 J	280 J	55	NA	300	NA	NA
Nickel	6700 J	18000	98000	11000	13000	69000	NA	8600	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	47000	41000	67000	15000 J	9700 J	93000	NA	40000	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-15-Q 6-10	SSR-16 0.83-3	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5
PCBs, Aroclor Specific										
Aroclor 1016	U	U	U	U	U	U	NA	U	NA	NA
Aroclor 1221	U	U	U	U	U	U	NA	U	NA	NA
Aroclor 1232	720000	U	U	U	U	U	NA	U	NA	NA
Aroclor 1242	U	U	U	U	U	U	NA	U	NA	NA
Aroclor 1248	U	U	U	16000000 J	9800000 J	480 J	NA	59 J	NA	NA
Aroclor 1254	97000	U	140	U	U	U	NA	120	NA	NA
Aroclor 1260	44000	U	65	620000 J	UJ	27	NA	380	NA	NA
Aroclor 1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Totals	861000	U	205	16620000 J	9800000 J	507 J	NA	559 J	NA	NA
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	U	U	U	100 J	100 J	U	NA	49 J	NA	NA
Parathion	U	U	U	U	U	U	NA	56 J	NA	NA
Sulfotepp	U	U	U	U	U	U	NA	U	NA	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-15-Q 6-10	SSR-16 0.83-3	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	U	U	U	U	U	U	NA	U	NA	NA
2,4,6-Trichlorophenol	U	U	U	U	U	U	NA	U	NA	NA
2,4-Dichlorophenol	U	U	U	U	U	U	NA	U	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	U	U	U	U	U	U	NA	U	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-15-Q 6-10	SSR-16 0.83-3	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	U	U	U	U	U	U	NA	U	NA	NA
Pentachlorophenol	U	U	U	U	U	U	NA	U	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	U	U	U	U	U	U	NA	U	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSR-15-Q 6-10	SSR-16 0.83-3	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	NA	U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	U	U	U	U	U	U	NA	U	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	U	U	U	U	U	U	NA	U	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	17	U	U	U	U	U	NA	U	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	U	U	U	U	U	U	NA	U	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSR-15-Q 6-10	SSR-16 0.83-3	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	U	U	U	U	U	U	NA	U	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5	SSRI-04 3-4	SSRI-05 0-0.5
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics										
Cyanide	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	NA	NA	11000000	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	3800	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	41000	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	470 J	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	520 J	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	59000000	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	14000	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	2500	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	13000	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	19000000	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	11000	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	34000000	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	160000	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	170	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	33000	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	1800000	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	150000	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	25000	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	25000	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5	SSRI-04 3-4	SSRI-05 0-0.5
PCBs, Aroclor Specific										
Aroclor 1016	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	27000	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U	340	U	570	U
Aroclor 1248	U	150 J	U	U	U	U	520 J	1700 J	1000 J	U
Aroclor 1254	U	3300 J	96 J	10000	400 J	210 J	5200 J	4700	2400 J	24000
Aroclor 1260	U	2500 J	79	2400	470 J	190 J	3200 J	4000	1800 J	8800
Aroclor 1268	U	910 J	U	1000	300 J	190 J	1600 J	1800	830 J	4800
PCBs, Totals	U	6860 J	175 J	40400	1170 J	590 J	10860 J	12200 J	6600 J	37600
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Parathion	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Sulfotepp	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5	SSRI-04 3-4	SSRI-05 0-0.5
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	140 J	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	46 J	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	24 J	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	50 J	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	40 J	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5	SSRI-04 3-4	SSRI-05 0-0.5
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	110 J	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	1900 J	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	42 J	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	74 J	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	UJ	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	820 J	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5	SSRI-04 3-4	SSRI-05 0-0.5
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	2.3 J	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5	SSRI-04 3-4	SSRI-05 0-0.5
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	U	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	U	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics										
Cyanide	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	13000000	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	7000	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	170000	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	820	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	640	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	24000000	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	13000	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	11000	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	19000	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	21000000	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	41000	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	12000000	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	830000	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	2600	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	15000	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	1000000	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	360000	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	23000	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	62000	NA	NA	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5
PCBs, Aroclor Specific										
Aroclor 1016	U	U	UJ	U	U	U	U	U	U	U
Aroclor 1221	U	U	UJ	U	U	U	U	U	U	U
Aroclor 1232	U	U	UJ	U	U	U	U	U	U	U
Aroclor 1242	U	U	UJ	U	U	U	10000 J	U	U	U
Aroclor 1248	U	U	UJ	U	38000 J	15000	U	U	U	U
Aroclor 1254	56000	4800	95 J	U	140000	48000	U	U	U	3400 J
Aroclor 1260	29000	5200	180 J	94 J	53000	45000	35000	U	U	15000 J
Aroclor 1268	U	21000	590 J	650 J	19000	18000	11000	U	U	20000 J
PCBs, Totals	85000	31000	865 J	744 J	250000 J	126000	56000 J	U	U	38400 J
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	UJ	NA	NA	NA	NA
Parathion	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Sulfotepp	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Toxaphene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA

Notes:
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3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	45 J	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	UJ	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	41 J	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	UJ	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	180 J	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	180 J	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	210 J	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	130 J	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	88 J	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	200 J	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	290 J	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	41 J	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	49 J	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	410	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	28 J	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	59 J	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	UJ	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	230 J	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	340 J	NA	NA	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	UR	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	25 J	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	UJ	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	NA	UJ	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	U	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	U	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5
Hydrocarbons										
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics										
Cyanide	NA	NA	NA	NA	650	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	19000000	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	8700	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	390000	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	230000	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	800	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	4700	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	24000000	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	23000	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	5000	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	280000	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	26000000	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	4700000	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	850000	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	670000	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	1100	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	26000	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	1500000	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	4500	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	12000	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	400000	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	31000	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	610000	NA	NA	NA	NA	NA
Other										
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5
PCBs, Aroclor Specific										
Aroclor 1016	U	U	U	0	U	U	U	U	U	U
Aroclor 1221	U	U	U	0	U	U	U	U	U	U
Aroclor 1232	U	U	U	0	U	U	U	U	U	U
Aroclor 1242	U	U	U	0	U	U	U	U	U	U
Aroclor 1248	U	U	U	0	U	U	U	U	U	63 J
Aroclor 1254	2200 J	800 J	U	440000 J	52000	840 J	U	U	U	U
Aroclor 1260	5300 J	1100 J	U	390000 J	66000	780 J	U	U	U	850 J
Aroclor 1268	5600 J	9900 J	220 J	100000 J	36000	270 J	U	U	U	1100 J
PCBs, Totals	13100 J	11800 J	220 J	930000 J	154000	1890 J	U	U	U	2013 J
Pesticides										
4,4'-DDD	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	380	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	UJ	NA	NA	NA	NA	NA
Parathion	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Sulfotepp	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Toxaphene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	61 J	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	32 J	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	UJ	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	120 J	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	UJ	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	830	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	1900	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	2100	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	2100	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	1500	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5
SVOCs (continued)										
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	57 JN	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	62 J	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	1400	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	620	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	31 J	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	940	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	1300	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	37 J	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	UJ	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	470	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	1200	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	UR	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	35 J	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	UJ	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5
VOCs (continued)										
Methyl acetate	NA	NA	NA	NA	UJ	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2
Hydrocarbons								
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics								
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA
Metals								
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA
Other								
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2
PCBs, Aroclor Specific								
Aroclor 1016	U	U	UJ	U	U	U	U	U
Aroclor 1221	U	U	UJ	U	U	U	U	U
Aroclor 1232	U	U	UJ	U	U	U	U	U
Aroclor 1242	U	U	UJ	U	U	U	U	U
Aroclor 1248	U	U	U	U	U	U	U	U
Aroclor 1254	U	140 J	U	U	U	U	11000	11000
Aroclor 1260	U	230 J	U	U	U	U	10000	9800
Aroclor 1268	U	260 J	U	U	U	U	5200	5500
PCBs, Totals	U	630 J	UJ	U	U	U	26200	26300
Pesticides								
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	NA	NA	NA
Parathion	NA	NA	NA	NA	NA	NA	NA	NA
Sulfotepp	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2
SVOCs								
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2
SVOCs (continued)								
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2
VOCs								
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2
VOCs (continued)								
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24B 0-2	SWMU-12-24C 0-2	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2
Hydrocarbons							
Petroleum hydrocarbons	NA	NA	NA	NA	NA	NA	NA
Inorganics							
Cyanide	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA
Metals							
Aluminum	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA
Barium	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA
Mercury	91	NA	NA	NA	NA	940	NA
Nickel	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA
Other							
Cation Exchange Capacity	NA	NA	NA	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24B 0-2	SWMU-12-24C 0-2	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2
PCBs, Aroclor Specific							
Aroclor 1016	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U	U
Aroclor 1248	U	13000	910	34000	U	5700	540
Aroclor 1254	100 J	30000	2100 J	56000	6600	17000	1100 J
Aroclor 1260	300 J	30000	3900 J	59000	7500	14000	1500 J
Aroclor 1268	140 J	11000	2200 J	20000	14000	4500	1300 J
PCBs, Totals	540 J	84000	9110 J	169000	28100	41200	4440 J
Pesticides							
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	NA	NA
Parathion	NA	NA	NA	NA	NA	NA	NA
Sulfotepp	NA	NA	NA	NA	NA	NA	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24B 0-2	SWMU-12-24C 0-2	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2
SVOCs							
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24B 0-2	SWMU-12-24C 0-2	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2
SVOCs (continued)							
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24B 0-2	SWMU-12-24C 0-2	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2
VOCs							
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24B 0-2	SWMU-12-24C 0-2	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2
VOCs (continued)							
Methyl acetate	NA	NA	NA	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5
Hydrocarbons				
Petroleum hydrocarbons	NA	NA	NA	NA
Inorganics				
Cyanide	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA
Metals				
Aluminum	NA	NA	NA	NA
Antimony	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA
Barium	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA
Calcium	NA	NA	NA	NA
Chromium	NA	NA	NA	NA
Cobalt	NA	NA	NA	NA
Copper	NA	NA	NA	NA
Iron	NA	NA	NA	NA
Lead	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA
Manganese	NA	NA	NA	NA
Mercury	NA	NA	NA	NA
Nickel	NA	NA	NA	NA
Potassium	NA	NA	NA	NA
Selenium	NA	NA	NA	NA
Silver	NA	NA	NA	NA
Sodium	NA	NA	NA	NA
Thallium	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
Zinc	NA	NA	NA	NA
Other				
Cation Exchange Capacity	NA	NA	NA	NA
Organic Carbon (Walkley-Black)	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA

Notes:
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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5
PCBs, Aroclor Specific				
Aroclor 1016	U	U	U	U
Aroclor 1221	U	U	U	U
Aroclor 1232	U	U	U	U
Aroclor 1242	U	U	U	U
Aroclor 1248	1200	U	U	670
Aroclor 1254	4800	780 J	6600	4200
Aroclor 1260	9000	2400 J	14000	5700
Aroclor 1268	3000	940 J	18000	3100
PCBs, Totals	18000	4120 J	38600	13670
Pesticides				
4,4'-DDD	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA
Endrin	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA
Methoxychlor	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA
Parathion	NA	NA	NA	NA
Sulfotepp	NA	NA	NA	NA
Toxaphene	NA	NA	NA	NA

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TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5
SVOCs				
1,1'-Biphenyl	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA
2,4-Dichlorophenol	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-C	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA
4-Nitrophenol	NA	NA	NA	NA
Acenaphthene	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA
Benzo(a)pyrene	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5
SVOCs (continued)				
bis(2-Chloroethoxy) methane	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	NA
Pentachlorophenol	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA
Phenol	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5
VOCs				
1,1,1-Trichloroethane	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromid	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA
Acetone	NA	NA	NA	NA
Benzene	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-1
Soil Sample Results

Parameter	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5
VOCs (continued)				
Methyl acetate	NA	NA	NA	NA
Methyl bromide	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA
Styrene	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA
Toluene	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA

Notes:
1) Values are reported in ppb.
2) Depth listed for samples in sample name are in feet.
3) NA = Not Analyzed; U = Non-detect; J = Estimated; Q = Duplicate

TABLE 4-2
PCB Congener, Dioxin, and Furan Soil Sampling Results

Analyte	SSRI-11-06 ug/Kg		SSRI-07-06 ug/Kg		SSRI-04-06 ug/Kg		SWMU-42-6A 0 - 6" bgs pg/g		SWMU-42-6B 0 - 6" bgs pg/g
WHO Congeners									
PCB-77	649	J	16700	J	39.1	J	NS		NS
PCB-81	26.9	J	562	J	1.56	J	NS		NS
PCB-105	12300	J	135000	J	238	J	NS		NS
PCB-114	758	J	5730	J	10.5	J	NS		NS
PCB-118	32400	J	286000	J	403	J	NS		NS
PCB-123	647	J	5380	J	9.88	J	NS		NS
PCB-126	98.1	J	567	J	1.65	J	NS		NS
PCB-156/157	11900	J	58400	J	192	J	NS		NS
PCB-167	4590	J	16400	J	45.7	J	NS		NS
PCB-169	3.14	UJ	28.6	UJ	0.0628	UJ	NS		NS
PCB-189	1570	J	4900	J	25.1	J	NS		NS
PCB-209	80000	J	371000	J	456	J	NS		NS
TEQ Congeners	21.0	J	134.0	J	0.3	J	NS		NS
Total Homolog Groups									
Total Mono-CBs	265	J	26,700	J	15	J	NS		NS
Total Di-CBs	1,420	J	52,600	J	152	J	NS		NS
Total Tri-CBs	5,590	J	138,000	J	545	J	NS		NS
Total Tetra-CBs	47,800	J	1,090,000	J	1,610	J	NS		NS
Total Penta-CBs	202,000	J	1,990,000	J	2,970	J	NS		NS
Total Hexa-CBs	385,000	J	1,730,000	J	2,670	J	NS		NS
Total Hepta-CBs	236,000	J	1,020,000	J	1,730	J	NS		NS
Total Octa-CBs	133,000	J	734,000	J	1,190	J	NS		NS
Total Nona-CBs	102,000	J	532,000	J	825	J	NS		NS
PCB-209 (Deca-CB)	80,000	J	371,000	J	456	J	NS		NS
Total PCB Homologs	1,193,075	J	7,684,300	J	12,163	J	NS		NS
PCB-153	78,900	J	350,000	J	421	J	NS		NS

Analyte	SSRI-11-06 ug/Kg		SSRI-07-06 ug/Kg		SSRI-04-06 ug/Kg		SWMU-42-6A 0 - 6" bgs pg/g		SWMU-42-6B 0 - 6" bgs pg/g
2,3,7,8-TCDD	0.000764		0.000688		0.000526		NS		NS
1,2,3,7,8-PeCDD	0.00197	UJ	0.00337	UJ	0.00248	UJ	NS		NS
1,2,3,4,7,8-HxCDD	0.00327		0.00639	UJ	0.00236	UJ	NS		NS
1,2,3,6,7,8-HxCDD	0.00417		0.0194	UJ	0.00682	UJ	NS		NS
1,2,3,7,8,9-HxCDD	0.00328		0.0125		0.00367		NS		NS
1,2,3,4,6,7,8-HpCDD	0.0859		0.311		0.0728		NS		NS
OCDD	1.46		3.86		2.92		NS		NS
2,3,7,8-TCDF	0.272		0.154		0.0747		181		157
1,2,3,7,8-PeCDF	0.209		0.251		0.057		167		149
2,3,4,7,8-PeCDF	0.234		0.82		0.197		210		182
1,2,3,4,7,8-HxCDF	1.07		1.46		0.327		381		336
1,2,3,6,7,8-HxCDF	0.395		0.395		0.123		337		298
2,3,4,6,7,8-HxCDF	0.238		0.335		0.12		174		154
1,2,3,7,8,9-HxCDF	0.292		0.509		0.106		81		72.1
1,2,3,4,6,7,8-HpCDF	2.8		2.14		0.414		2450		2130
1,2,3,4,7,8,9-HpCDF	1.45		0.726		0.293		278		247
OCDF	10.1		6.15		0.992		3810		3200
ITEF TEQ	0.412		0.756		0.191				

Notes:
NS = Not Sampled. J = Estimated. µg = Micrograms (1 µg = 10-6 grams). pg = Picograms (1 pg = 10-12 grams).
TEQ = Toxicity Equivalent. TEQ calculated with ND=1/2DL and EMPC=EMPC.

TABLE 4-2
PCB Congener, Dioxin, and Furan Soil Sampling Results

Analyte	SSRI-11-06 ug/Kg		SSRI-07-06 ug/Kg		SSRI-04-06 ug/Kg		SWMU-42-6A 0 - 6" bgs pg/g		SWMU-42-6B 0 - 6" bgs pg/g
Other TCDD	0.013		0.0175		0.0166		NS		NS
Other PeCDD	0.0141		0.0573		0.0259	J	NS		NS
Other HxCDD	0.0311		0.132		0.0357		NS		NS
Other HpCDD	0.0813		0.323		0.135		NS		NS
Other TCDF	1.28		2.55		1.83		NS		NS
Other PeCDF	1.52		2.74		0.766	J	NS		NS
Other HxCDF	1.68		1.64		0.539		NS		NS
Other HpCDF	1.78		1.16		0.365		NS		NS

Analyte	SSRI-11-06 ug/Kg		SSRI-07-06 ug/Kg		SSRI-04-06 ug/Kg		SWMU-42-6A 0 - 6" bgs pg/g		SWMU-42-6B 0 - 6" bgs pg/g
TCDDs	0.0137		0.0181		0.0171		NS		NS
PeCDDs	0.0161		0.0573		0.0259	J	NS		NS
HxCDDs	0.0418		0.145		0.0394		NS		NS
HpCDDs	0.167		0.634		0.208		NS		NS
OCDD	1.46		3.86		2.92		NS		NS
TCDFs	1.55		2.71		1.9		NS		NS
PeCDFs	1.8		3.81		1.02	J	NS		NS
HxCDFs	3.68		4.34		1.21		NS		NS
HpCDFs	6.03		4.03		1.07		NS		NS
OCDF	10.1	J	6.15		0.992		NS		NS

Notes:
NS = Not Sampled. J = Estimated. µg = Micrograms (1 µg = 10-6 grams). pg = Picograms (1 pg = 10-12 grams).
TEQ = Toxicity Equivalent. TEQ calculated with ND=1/2DL and EMPC=EMPC.

TABLE 4-3
Occurrence and Distribution of Facility Constituents in Soil
Anniston PCB Site, Operable Unit 3

Parameter Group	Constituent	CAS-ID	Unit	Minimum Concentration [2]	Maximum Concentration [6]	Mean Concentration	Location of Maximum Concentration	Most Recent Measurements	Detection Frequency	Percentage of Detections	Range of Reporting Limits	Prevalent Constituents Based on Detections
PCBs, Pesticides and Dioxin	PCBs, Total [1]	1336-36-3	µg/kg	23	16,620,000	266,473	SSR-18	ND - 930,000	63 / 76	83%	39 - 930,000	Yes
	Heptachlor epoxide	1024-57-3	µg/kg	380	380	126.6	SSRI-11	ND - 380	1 / 3	33%	31 - 380	
	Methyl parathion	298-00-0	µg/kg	49 J	100 J	6.5	SSR-18	ND	2 / 23	9%	18 - 22	
	Parathion	56-38-2	µg/kg	56 J	56 J	2.4	SSR-21	ND	1 / 23	4%	37 - 42	
	Dioxin, TEQ[4]	NA	µg/kg	0.191	0.756	0.453	SSRI-07	.191-.756	3/3	100%	0.00197-0.0194	
VOCs	Acetone	67-64-1	µg/kg	25 J	35 J	20	SSRI-11	ND - 35	2 / 3	67%	49 - 83	
	Carbon disulfide	75-15-0	µg/kg	2.3 J	2.3 J	0.77	SSRI-04	ND - 2.3 J	1 / 3	33%	4.9 - 8.3	
	Chlorobenzene	108-90-7	µg/kg	17	17	1.48	SSR-12, SSR-15	ND	2 / 23	9%	4.2 - 8.3	
	Methylene chloride	75-09-2	µg/kg	33	33	1.43	SSR-11	ND	1 / 23	4%	4.2 - 8.3	
SVOCs	1,1'-Biphenyl	92-52-4	µg/kg	45 J	140 J	82	SSRI-04	45 J - 140 J	3 / 3	100%	390 -420	
	2-Methylnaphthalene	91-57-6	µg/kg	32 J	32 J	10.7	SSRI-11	ND - 32 J	1 / 3	33%	390 -420	
	Anthracene	120-12-7	µg/kg	41 J	120 J	53.7	SSRI-11	ND - 120 J	2 / 3	67%	390 -420	
	Benzo(a)anthracene	56-55-3	µg/kg	46 J	830	352	SSRI-11	46 J - 830	3 / 3	100%	390 -420	
	Benzo(a)pyrene	50-32-8	µg/kg	24 J	1,900	701.3	SSRI-11	24 J - 1,900	3 / 3	100%	390 -420	Yes
	Benzo(b)fluoranthene	205-99-2	µg/kg	50 J	2,100	786.7	SSRI-11	50 J - 2,100	3 / 3	100%	390 -420	
	Benzo(g,h,i)perylene	191-24-2	µg/kg	40 J	2,100	756.7	SSRI-11	40 J - 2,100	3 / 3	100%	390 -420	
	Benzo(k)fluoranthene	207-08-9	µg/kg	88 J	1,500	529.3	SSRI-11	ND - 1,500 J	2 / 3	67%	390 -420	
	bis(2-Ethylhexyl)phthalate	117-81-7	µg/kg	57 JN	200 J	122.3	SSRI-07	57 JN - 200 J	3 / 3	100%	390 -420	
	Carbazole	86-74-8	µg/kg	62 J	62 J	20.7	SSRI-11	ND - 62 J	1 / 3	33%	390 -420	
	Chrysene	218-01-9	µg/kg	290 J	1900 J	1,196.7	SSRI-04	290 J - 1,900 J	3 / 3	100%	390 -420	
	Dibenz(a,h)anthracene	53-70-3	µg/kg	41 J	620	220.3	SSRI-11	ND - 620	2 / 3	67%	390 -420	
	Dibenzofuran	132-64-9	µg/kg	31 J	31 J	10.3	SSRI-11	ND - 31 J	1 / 3	33%	390 -420	
	Di-n-butylphthalate	84-74-2	µg/kg	49 J	49 J	16.3	SSRI-07	ND - 49 J	1 / 3	33%	390 -420	
	Fluoranthene	206-44-0	µg/kg	42 J	940	464	SSRI-11	42 J - 940	3 / 3	100%	390 -420	
	Fluorene	86-73-7	µg/kg	28 J	28 J	9.3	SSRI-07	ND - 28 J	1 / 3	33%	390 -420	
	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	59 J	1,300	453	SSRI-11	ND - 1,300	2 / 3	67%	390 -420	
	Naphthalene	91-20-3	µg/kg	37 J	37 J	12.3	SSRI-11	ND - 37 J	1 / 3	33%	390 -420	
	Phenanthrene	85-01-8	µg/kg	74 J	470	258	SSRI-11	74 J - 470	3 / 3	100%	390 -420	
	Pyrene	129-00-0	µg/kg	340 J	1,200	786.7	SSRI-11	340 J - 1,200	3 / 3	100%	390 -420	
Metals	Aluminum	7429-90-5	mg/kg	11,000	19,000	14,333	SSRI-11	11,000 - 19,000	3 / 3	100%	23 - 25	
	Antimony	7440-36-0	mg/kg	8.7	8.7	2.9	SSRI-11	ND - 8.7	1 / 3	33%	2.3 - 2.5	
	Arsenic	7440-38-2	mg/kg	3.1	390	25.44	SSRI-11	3.8 - 390	22 / 23	96%	1.1 - 12	Yes
	Barium	7440-39-3	mg/kg	18	780	110.48	SSR-09	41 - 230	23 /23	100%	1.1 - 13	
	Beryllium	7440-41-7	mg/kg	0.47	1.9	0.42	SSR-10	0.47 - 0.8	11 / 23	48%	0.45 - 6	
	Cadmium	7440-43-9	mg/kg	0.52	4.7	0.3265	SSRI-11	0.52 - 4.7	5 / 23	22%	0.49 - 6	
	Calcium	7440-70-2	mg/kg	24,000	59,000	35,667	SSRI-04	24,000 - 59,000	3 / 3	100%	56 - 62	
	Chromium	7440-47-3	mg/kg	7.4	110	24.06	SSR-13	13 - 23	22 / 23	96%	1.1 - 12	

TABLE 4-3
Occurrence and Distribution of Facility Constituents in Soil
Anniston PCB Site, Operable Unit 3

Parameter Group	Constituent	CAS-ID	Unit	Minimum Concentration [2]	Maximum Concentration [6]	Mean Concentration	Location of Maximum Concentration	Most Recent Measurements	Detection Frequency	Percentage of Detections	Range of Reporting Limits	Prevalent Constituents Based on Detections
	Cobalt	7440-48-4	mg/kg	2	74	13.27	SSR-17	2.5 - 11	23 / 23	100%	1.1 - 13	Yes
	Copper	7440-50-8	mg/kg	13	280	104	SSRI-11	13 - 280	3 / 3	100%	2.3 - 2.5	
	Iron	7439-89-6	mg/kg	19,000	26,000	22,000	SSRI-11	19,000 - 26,000	3 / 3	100%	5.6 - 6.2	
	Lead	7439-92-1	mg/kg	8.7	4,700	264.07	SSRI-11	11 - 4,700	23/23	100%	0.56 - 29	Yes
	Magnesium	7439-95-4	mg/kg	850	34,000	15,616	SSRI-04	850- 34,000	3 / 3	100%	56 - 62	
	Manganese	7439-96-5	mg/kg	68	12,000	1,241	SSR-09	160 - 830	23/23	100%	1.1 - 13	Yes
	Mercury	7439-97-6	mg/kg	0.032	3.3	0.592	SSR-15	0.17 - 2.6	24 / 25	96%	0.024 - 0.71	Yes
	Nickel	7440-02-0	mg/kg	5.7	2,400	130.17	SSR-07	15 - 33	22 / 23	96%	4.4 - 53	Yes
	Potassium	7440-09-7	mg/kg	1,000	1,800	1,433	SSRI-04	1,000 - 1,800	3 / 3	100%	110 - 120	
	Selenium	7782-49-2	mg/kg	4.5	4.5	2	SSRI-11	ND - 4.5	1 / 3	33%	2.8 -3.1	
	Silver	7440-22-4	mg/kg	12	12	4	SSRI-11	ND - 12	1 / 3	33%	1.1 -1.2	
	Sodium	7440-23-5	mg/kg	150	400	303	SSRI-11	150 - 400	3 / 3	100%	110 - 120	
	Vanadium	7440-62-2	mg/kg	10	93	39.69	SSR-19	23 - 31	23/23	100%	1.1 - 13	
	Zinc	7440-66-6	mg/kg	25	610	232.3	SSRI-11	25 - 610	3 / 3	100%	2.3 - 2.5	

Notes:
(1) Total PCBs were calculated based on using ND = 0 for individual Aroclors with no detections.
(2) Note that some analytes were detected below the laboratory reporting limits but above the method detection limits and have been qualified as estimated values.
(3) The table includes all parameters that had detections reported in the RI Report, dated July 2008.
(4) Dioxin TEQ: ITEF TEQ calculated with ND=0 and EMPC=EMPC.
(5) ND = Non-detect, J = Estimated Value.
(6) The maximum result from the original / duplicate pair was used in the analysis.

TABLE 4-4
Groundwater Sample Results

Parameter	CB-85 1998-Jul	CB-85-F 1998-Jul	MW-01B 1998-Jul	MW-01B-F 1998-Jul	MW-01B 2007-Apr	MW-07 2005-Jun	MW-07-F 2005-Jun	MW-08 2007-Apr	MW-09A 2007-Apr	MW-11A 2007-Apr	MW-12A 2007-Apr	MW-12A-Q 2007-Apr
Field Parameters												
Field turbidity (NTU)	5.4	N/A	15.79	N/A	5	7.85	N/A	2.24	12.6	> 1000	3	N/A
Inorganics												
Alkalinity	U	NA	4200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	1200 J	NA	150 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	360	NA	660	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	U	NA	5900	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Barium	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	U	U	U	U	U	U	U	U	U	34	U	U
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	U	11 J	U	UJ	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	25	17 J	U	25 J	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	U	U	U	U	U	NA	NA	U	U	NA	NA	NA
Nickel	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	U	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CB-85 1998-Jul	CB-85-F 1998-Jul	MW-01B 1998-Jul	MW-01B-F 1998-Jul	MW-01B 2007-Apr	MW-07 2005-Jun	MW-07-F 2005-Jun	MW-08 2007-Apr	MW-09A 2007-Apr	MW-11A 2007-Apr	MW-12A 2007-Apr	MW-12A-Q 2007-Apr
Other												
Phenolics	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	33 J	NA	440 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	33000 J	NA	16000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	UJ	NA	20000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	U	UJ	U	U	U	U	U	U
Aroclor 1254	U	U	U	U	U	UJ	U	U	U	U	U	U
Aroclor 1260	U	U	U	U	U	UJ	U	U	U	U	U	U
Aroclor 1268	NA	NA	NA	NA	NA	UJ	U	NA	NA	NA	NA	NA
PCBs, Totals	U	U	U	U	U	UJ	U	U	U	U	U	U
Pesticides												
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CB-85 1998-Jul	CB-85-F 1998-Jul	MW-01B 1998-Jul	MW-01B-F 1998-Jul	MW-01B 2007-Apr	MW-07 2005-Jun	MW-07-F 2005-Jun	MW-08 2007-Apr	MW-09A 2007-Apr	MW-11A 2007-Apr	MW-12A 2007-Apr	MW-12A-Q 2007-Apr
Pesticides (continued)												
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parathion	U	NA	U	NA	U	U	NA	1.9	U	U	U	U
Sulfotepp	U	NA	U	NA	U	NA	NA	U	U	NA	NA	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	U	NA	U	NA	U	NA	NA	U	U	U	U	U
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CB-85 1998-Jul	CB-85-F 1998-Jul	MW-01B 1998-Jul	MW-01B-F 1998-Jul	MW-01B 2007-Apr	MW-07 2005-Jun	MW-07-F 2005-Jun	MW-08 2007-Apr	MW-09A 2007-Apr	MW-11A 2007-Apr	MW-12A 2007-Apr	MW-12A-Q 2007-Apr
SVOCs (continued)												
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	U	NA	U	NA	U	NA	NA	U	U	1.6 J	9.7 J	9.2 J
Pentachlorophenol	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CB-85 1998-Jul	CB-85-F 1998-Jul	MW-01B 1998-Jul	MW-01B-F 1998-Jul	MW-01B 2007-Apr	MW-07 2005-Jun	MW-07-F 2005-Jun	MW-08 2007-Apr	MW-09A 2007-Apr	MW-11A 2007-Apr	MW-12A 2007-Apr	MW-12A-Q 2007-Apr
VOCs												
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	U	NA	U	NA	U	NA	NA	U	U	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	U	NA	U	NA	U	NA	NA	U	U	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	U	NA	U	NA	U	NA	NA	U	U	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CB-85 1998-Jul	CB-85-F 1998-Jul	MW-01B 1998-Jul	MW-01B-F 1998-Jul	MW-01B 2007-Apr	MW-07 2005-Jun	MW-07-F 2005-Jun	MW-08 2007-Apr	MW-09A 2007-Apr	MW-11A 2007-Apr	MW-12A 2007-Apr	MW-12A-Q 2007-Apr
VOCs (continued)												
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	MW-13A 2007-Apr	MW-14 2005-Jun	MW-14-F 2005-Jun	MW-15 2007-Apr	MW-15-F 2007-Apr	MW-16 2007-Apr	MW-20A 2007-Apr	MW-20A-Q 2007-Apr	OW-02 2007-Apr	OW-02-F 2007-Apr	OW-04 2007-Apr	OW-04-F 2007-Apr
Field Parameters												
Field turbidity (NTU)	11	6.3	N/A	0.89	N/A	0.12	2.19	N/A	13.4	N/A	0.55	N/A
Inorganics												
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum	NA	210	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NA	51	52	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	NA	0.13 J	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	5900	6000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	U	U	U	U	NA	1.1 J	6.8 J	7.2 J	18	21	240	250
Copper	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	78	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	1300	1400	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	36	32	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	NA	U	U	3.3	U	0.75	U	U	U	U	U	U
Nickel	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	1500	1400	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	6500	6800	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	MW-13A 2007-Apr	MW-14 2005-Jun	MW-14-F 2005-Jun	MW-15 2007-Apr	MW-15-F 2007-Apr	MW-16 2007-Apr	MW-20A 2007-Apr	MW-20A-Q 2007-Apr	OW-02 2007-Apr	OW-02-F 2007-Apr	OW-04 2007-Apr	OW-04-F 2007-Apr
Other												
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	NA	U	UJ	UJ	U	UJ	U	UJ
Aroclor 1254	U	U	U	U	NA	U	UJ	UJ	U	UJ	U	UJ
Aroclor 1260	U	U	U	U	NA	U	UJ	UJ	U	UJ	U	UJ
Aroclor 1268	NA	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Totals	U	U	U	U	NA	U	UJ	UJ	U	UJ	U	UJ
Pesticides												
4,4'-DDD	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	MW-13A 2007-Apr	MW-14 2005-Jun	MW-14-F 2005-Jun	MW-15 2007-Apr	MW-15-F 2007-Apr	MW-16 2007-Apr	MW-20A 2007-Apr	MW-20A-Q 2007-Apr	OW-02 2007-Apr	OW-02-F 2007-Apr	OW-04 2007-Apr	OW-04-F 2007-Apr
Pesticides (continued)												
Methoxychlor	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parathion	U	UJ	NA	U	NA	0.19 J	U	U	U	NA	U	NA
Sulfotepp	NA	UJ	NA	U	NA	U	U	U	U	NA	U	NA
Toxaphene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
1,1'-Biphenyl	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NA	U	NA	NA	NA	NA	6.7 J	5 J	NA	NA	NA	NA
2,4-Dichlorophenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	U	U	NA	U	NA	U	U	U	U	NA	U	NA
Acenaphthene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	MW-13A 2007-Apr	MW-14 2005-Jun	MW-14-F 2005-Jun	MW-15 2007-Apr	MW-15-F 2007-Apr	MW-16 2007-Apr	MW-20A 2007-Apr	MW-20A-Q 2007-Apr	OW-02 2007-Apr	OW-02-F 2007-Apr	OW-04 2007-Apr	OW-04-F 2007-Apr
SVOCs (continued)												
Benzo(a)pyrene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	0.73 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	3.5 J	U	NA	U	NA	U	33	31	8.6 J	NA	3.7 J	NA
Pentachlorophenol	NA	U	NA	NA	NA	NA	8.8	6.7 J	NA	NA	NA	NA
Phenanthrene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	MW-13A 2007-Apr	MW-14 2005-Jun	MW-14-F 2005-Jun	MW-15 2007-Apr	MW-15-F 2007-Apr	MW-16 2007-Apr	MW-20A 2007-Apr	MW-20A-Q 2007-Apr	OW-02 2007-Apr	OW-02-F 2007-Apr	OW-04 2007-Apr	OW-04-F 2007-Apr
VOCs												
1,1,1-Trichloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	U	NA	U	NA	U	5.2 J	4.9 J	U	NA	U	NA
1,2-Dichloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	U	NA	U	NA	U	2.1 J	2.1 J	U	NA	U	NA
2-Butanone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	U	NA	U	NA	U	3.3	3.4	U	NA	U	NA
Chloroethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl acetate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	MW-13A 2007-Apr	MW-14 2005-Jun	MW-14-F 2005-Jun	MW-15 2007-Apr	MW-15-F 2007-Apr	MW-16 2007-Apr	MW-20A 2007-Apr	MW-20A-Q 2007-Apr	OW-02 2007-Apr	OW-02-F 2007-Apr	OW-04 2007-Apr	OW-04-F 2007-Apr
VOCs (continued)												
Methyl bromide	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-04-F-Q 2007-Apr	OW-06A 1998-Oct	OW-06A 2007-Apr	OW-06A-Q 1998-Oct	OW-07 2007-Apr	OW-07-F 2007-Apr	OW-08A 2005-Jun	OW-08A-F 2005-Jun	OW-08A 2007-Apr	OW-08A-F 2007-Apr	OW-09 1998-Jul	OW-09-F 1998-Jul
Field Parameters												
Field turbidity (NTU)	N/A	1000	27	N/A	18.8	N/A	0.64	N/A	2.19	N/A	0.61	N/A
Inorganics												
Alkalinity	NA	14000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Nitrate-N	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	U	6.9 J	NA	NA	U	U
Barium	NA	NA	NA	NA	NA	NA	28	28	NA	NA	190	190
Beryllium	NA	NA	NA	NA	NA	NA	U	U	NA	NA	U	U
Cadmium	NA	NA	NA	NA	NA	NA	U	U	NA	NA	U	U
Calcium	NA	NA	NA	NA	NA	NA	30000	29000	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	U	U	NA	NA	U	U
Cobalt	240	NA	0.8 J	NA	16	16	U	U	U	NA	U	10
Copper	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Ferrous Iron	NA	U	NA	U	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	U	U	NA	NA	U	18
Magnesium	NA	NA	NA	NA	NA	NA	9800	9600	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	20	21	NA	NA	310	330 J
Mercury	U	NA	U	NA	0.82	U	U	U	U	NA	0.68	0.93
Nickel	NA	NA	NA	NA	NA	NA	2.5 J	U	NA	NA	8.7	9.2
Phosphorus	NA	6800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	2600	2500	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	7700	8100	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	U	U	NA	NA	U	U
Zinc	NA	NA	NA	NA	NA	NA	U	U	NA	NA	NA	NA

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TABLE 4-4
Groundwater Sample Results

Parameter	OW-04-F-Q 2007-Apr	OW-06A 1998-Oct	OW-06A 2007-Apr	OW-06A-Q 1998-Oct	OW-07 2007-Apr	OW-07-F 2007-Apr	OW-08A 2005-Jun	OW-08A-F 2005-Jun	OW-08A 2007-Apr	OW-08A-F 2007-Apr	OW-09 1998-Jul	OW-09-F 1998-Jul
Other												
Phenolics	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	10000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	45000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	12000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	140000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	NA	U	NA	U	U	U	U	U	U	U	U
Aroclor 1221	U	NA	U	NA	U	U	30	2.1 J	25	U	U	U
Aroclor 1232	U	NA	U	NA	U	U	U	U	U	U	U	U
Aroclor 1242	U	NA	U	NA	U	U	U	U	U	U	U	U
Aroclor 1248	U	NA	U	NA	U	UJ	UJ	UJ	U	UJ	U	U
Aroclor 1254	U	NA	U	NA	U	UJ	UJ	UJ	3.6	UJ	U	U
Aroclor 1260	U	NA	U	NA	U	UJ	UJ	UJ	U	UJ	U	U
Aroclor 1268	NA	NA	NA	NA	NA	NA	UJ	UJ	NA	NA	NA	NA
PCBs, Totals	U	NA	U	NA	U	UJ	30 J	2.1 J	28.6	UJ	U	U
Pesticides												
4,4'-DDD	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	0.14 JN	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	0.075 JN	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	0.56 JN	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-04-F-Q 2007-Apr	OW-06A 1998-Oct	OW-06A 2007-Apr	OW-06A-Q 1998-Oct	OW-07 2007-Apr	OW-07-F 2007-Apr	OW-08A 2005-Jun	OW-08A-F 2005-Jun	OW-08A 2007-Apr	OW-08A-F 2007-Apr	OW-09 1998-Jul	OW-09-F 1998-Jul
Pesticides (continued)												
Methoxychlor	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	NA	UJ	NA	NA	NA	U	NA
Parathion	NA	NA	U	NA	U	NA	0.25 J	NA	0.5 J	NA	U	NA
Sulfotepp	NA	NA	U	NA	U	NA	UJ	NA	U	NA	U	NA
Toxaphene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
SVOCs												
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	U	NA	U	NA	U	NA	U	NA	U	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-04-F-Q 2007-Apr	OW-06A 1998-Oct	OW-06A 2007-Apr	OW-06A-Q 1998-Oct	OW-07 2007-Apr	OW-07-F 2007-Apr	OW-08A 2005-Jun	OW-08A-F 2005-Jun	OW-08A 2007-Apr	OW-08A-F 2007-Apr	OW-09 1998-Jul	OW-09-F 1998-Jul
SVOCs (continued)												
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	2.5 J	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	2.1 J	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	2.1 J	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	2.6 J	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	2.4 J	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	1.9 J	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	U	NA	U	NA	U	NA	U	NA	U	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
Pyrene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-04-F-Q 2007-Apr	OW-06A 1998-Oct	OW-06A 2007-Apr	OW-06A-Q 1998-Oct	OW-07 2007-Apr	OW-07-F 2007-Apr	OW-08A 2005-Jun	OW-08A-F 2005-Jun	OW-08A 2007-Apr	OW-08A-F 2007-Apr	OW-09 1998-Jul	OW-09-F 1998-Jul
VOCs												
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	0.67 J	NA	NA	NA	U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	U	NA	U	NA	U	NA	U	NA	U	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	U	NA	U	NA	U	NA	U	NA	U	NA
2-Butanone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	U	NA	U	NA	U	NA	U	NA	U	NA
Chloroethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-04-F-Q 2007-Apr	OW-06A 1998-Oct	OW-06A 2007-Apr	OW-06A-Q 1998-Oct	OW-07 2007-Apr	OW-07-F 2007-Apr	OW-08A 2005-Jun	OW-08A-F 2005-Jun	OW-08A 2007-Apr	OW-08A-F 2007-Apr	OW-09 1998-Jul	OW-09-F 1998-Jul
VOCs (continued)												
Methyl bromide	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	U	NA
Styrene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-09 2005-Jun	OW-09-F 2005-Jun	OW-10 1998-Jul	OW-10-F 1998-Jul	OW-10 1998-Aug	OW-10 2005-Jul	OW-10-F 2005-Jul	OW-15 2007-Apr	OW-15-F 2007-Apr	OW-16A 2005-Jun	OW-16A-F 2005-Jun	OW-16A 2007-Apr
Field Parameters												
Field turbidity (NTU)	1.41	N/A	3.35	N/A	6.69	7.4	N/A	1.43	N/A	3.51	N/A	1.43
Inorganics												
Alkalinity	NA	NA	20000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Nitrate-N	NA	NA	1400 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	3100000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum	230	170 J	NA	NA	NA	1500	480	NA	NA	80 J	36 JN	NA
Antimony	U	U	NA	NA	NA	U	U	NA	NA	U	U	NA
Arsenic	U	U	U	U	NA	U	U	NA	NA	U	U	NA
Barium	200	160	1000	1000	NA	920	930	NA	NA	92 J	90	NA
Beryllium	0.52 J	0.64 J	6.8	4.3	NA	5	4.9	NA	NA	0.27 J	0.27 J	NA
Cadmium	U	U	U	U	NA	1.6 J	1.7 J	NA	NA	U	U	NA
Calcium	28000	15000	NA	NA	NA	91000	77000	NA	NA	3000	2800	NA
Chromium	U	U	U	U	NA	2 J	0.87 J	NA	NA	U	U	NA
Cobalt	7.2 J	8 J	52	49	NA	56	38	7.2 J	NA	25	27	29
Copper	U	1.7 J	NA	NA	NA	14 J	5 J	NA	NA	2.1 J	2.6 J	NA
Ferrous Iron	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	U	U	NA	NA	NA	230	U	NA	NA	96	120	NA
Lead	U	U	U	14 J	NA	U	U	NA	NA	U	U	NA
Magnesium	5500	6100	NA	NA	NA	34000	36000	NA	NA	1600	1700	NA
Manganese	180	270	1500	1400 J	NA	1500	1200	NA	NA	580 J	610	NA
Mercury	0.086 J	0.27	50	U	NA	16	23	U	NA	U	U	U
Nickel	4.7 J	5.1 J	63	61	NA	69	63	NA	NA	11 J	9.1 J	NA
Phosphorus	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	4000	4200	NA	NA	NA	5500	5900	NA	NA	7300	7000	NA
Selenium	U	U	NA	NA	NA	U	U	NA	NA	U	U	NA
Silver	U	U	NA	NA	NA	U	U	NA	NA	U	U	NA
Sodium	6900	7700	NA	NA	NA	58000	59000	NA	NA	25000	24000	NA
Thallium	U	U	NA	NA	NA	U	U	NA	NA	U	U	NA
Vanadium	U	U	U	U	NA	U	U	NA	NA	U	U	NA
Zinc	9.9 J	9.5 J	NA	NA	NA	600	2200	NA	NA	16 J	16 J	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-09 2005-Jun	OW-09-F 2005-Jun	OW-10 1998-Jul	OW-10-F 1998-Jul	OW-10 1998-Aug	OW-10 2005-Jul	OW-10-F 2005-Jul	OW-15 2007-Apr	OW-15-F 2007-Apr	OW-16A 2005-Jun	OW-16A-F 2005-Jun	OW-16A 2007-Apr
Other												
Phenolics	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	730 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	1300000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	10000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	NA	U	U	U	U	170	16 JN	100 J
Aroclor 1232	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	NA	6.2 J	U	U	UJ	U	U	90
Aroclor 1254	U	U	U	U	NA	UJ	U	U	UJ	U	U	U
Aroclor 1260	U	U	U	U	NA	UJ	U	U	UJ	U	U	U
Aroclor 1268	U	U	NA	NA	NA	UJ	U	NA	NA	U	U	NA
PCBs, Totals	U	U	U	U	NA	6.2 J	U	U	UJ	170	16 JN	190 J
Pesticides												
4,4'-DDD	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4,4'-DDE	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4,4'-DDT	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Aldrin	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
alpha-BHC	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
alpha-Chlordane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
beta-BHC	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
delta-BHC	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Dieldrin	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Endosulfan I	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Endosulfan II	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Endosulfan sulfate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Endrin	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Endrin aldehyde	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Endrin ketone	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
gamma-BHC	U	NA	NA	NA	NA	0.1 J	NA	NA	NA	U	NA	NA
gamma-Chlordane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Heptachlor	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Heptachlor epoxide	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-09 2005-Jun	OW-09-F 2005-Jun	OW-10 1998-Jul	OW-10-F 1998-Jul	OW-10 1998-Aug	OW-10 2005-Jul	OW-10-F 2005-Jul	OW-15 2007-Apr	OW-15-F 2007-Apr	OW-16A 2005-Jun	OW-16A-F 2005-Jun	OW-16A 2007-Apr
Pesticides (continued)												
Methoxychlor	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Methyl parathion	UJ	NA	U	NA	NA	UJ	NA	NA	NA	1.4 J	NA	NA
Parathion	UJ	NA	U	NA	NA	UJ	NA	U	NA	28 J	NA	57
Sulfotepp	UJ	NA	U	NA	NA	U	NA	U	NA	UJ	NA	U
Toxaphene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
SVOCs												
1,1'-Biphenyl	U	NA	NA	NA	NA	U	NA	NA	NA	170	NA	NA
2,4,5-Trichlorophenol	U	NA	U	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2,4,6-Trichlorophenol	U	NA	U	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2,4-Dichlorophenol	U	NA	U	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2,4-Dimethylphenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2,4-Dinitrophenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2,4-Dinitrotoluene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
2,6-Dinitrotoluene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
2-Chloronaphthalene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
2-Chlorophenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2-Methylnaphthalene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
2-Methylphenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
2-Nitroaniline	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
2-Nitrophenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
3,3'-Dichlorobenzidine	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
3-Nitroaniline	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4,6-Dinitro-2-methylphenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
4-Bromophenylphenyl ether	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4-Chloro-3-methylphenol	U	NA	NA	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
4-Chloroaniline	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4-Chlorophenylphenyl ether	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4-Nitroaniline	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4-Nitrophenol	U	NA	U	NA	NA	UJ	NA	U	NA	24 J	NA	25
Acenaphthene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Acenaphthylene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Acetophenone	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Anthracene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Atrazine	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Benzaldehyde	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Benzo(a)anthracene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-09 2005-Jun	OW-09-F 2005-Jun	OW-10 1998-Jul	OW-10-F 1998-Jul	OW-10 1998-Aug	OW-10 2005-Jul	OW-10-F 2005-Jul	OW-15 2007-Apr	OW-15-F 2007-Apr	OW-16A 2005-Jun	OW-16A-F 2005-Jun	OW-16A 2007-Apr
SVOCs (continued)												
Benzo(a)pyrene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Benzo(b)fluoranthene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Benzo(g,h,i)perylene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Benzo(k)fluoranthene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
bis(2-Chloroethoxy) methane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
bis(2-Chloroethyl) ether	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
bis(2-Chloroisopropyl) ether	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
bis(2-Ethylhexyl)phthalate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Butyl benzyl phthalate	U	NA	NA	NA	NA	U	NA	NA	NA	1.2	NA	NA
Caprolactam	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Carbazole	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Chrysene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Dibenz(a,h)anthracene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Dibenzofuran	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Diethyl phthalate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Dimethyl phthalate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Di-n-butylphthalate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Di-n-octylphthalate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Fluoranthene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Fluorene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Hexachlorobenzene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Hexachlorobutadiene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Hexachlorocyclopentadiene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Hexachloroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Indeno(1,2,3-cd)pyrene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Isophorone	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Naphthalene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Nitrobenzene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
N-Nitroso-di-n-propylamine	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
N-Nitrosodiphenylamine	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
O,O,O-Triethylphosphorothioate	U	NA	U	NA	NA	U	NA	U	NA	U	NA	2 J
Pentachlorophenol	U	NA	U	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
Phenanthrene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Phenol	U	NA	U	NA	NA	UJ	NA	NA	NA	UJ	NA	NA
Pyrene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-09 2005-Jun	OW-09-F 2005-Jun	OW-10 1998-Jul	OW-10-F 1998-Jul	OW-10 1998-Aug	OW-10 2005-Jul	OW-10-F 2005-Jul	OW-15 2007-Apr	OW-15-F 2007-Apr	OW-16A 2005-Jun	OW-16A-F 2005-Jun	OW-16A 2007-Apr
VOCs												
1,1,1-Trichloroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,1,2,2-Tetrachloroethane	U	NA	U	NA	NA	U	NA	NA	NA	U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,1,2-Trichloroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,1-Dichloroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,1-Dichloroethene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,2,4-Trichlorobenzene	U	NA	NA	NA	NA	0.8 J	NA	NA	NA	1200	NA	NA
1,2-Dibromo-3-chloropropane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,2-Dibromoethane (Ethylene dibromi	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,2-Dichlorobenzene	U	NA	U	NA	NA	U	NA	U	NA	12	NA	5 J
1,2-Dichloroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,2-Dichloropropane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,3-Dichlorobenzene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
1,4-Dichlorobenzene	U	NA	U	NA	NA	U	NA	U	NA	5	NA	2 J
2-Butanone	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
2-Hexanone	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
4-Methyl-2-pentanone	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Acetone	U	NA	NA	NA	NA	U	NA	NA	NA	UJ	NA	NA
Benzene	U	NA	NA	NA	NA	U	NA	NA	NA	0.77 J	NA	NA
Bromochloromethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Bromodichloromethane	U	NA	NA	NA	NA	2	NA	NA	NA	U	NA	NA
Bromoform	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Carbon disulfide	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Carbon tetrachloride	U	NA	NA	NA	NA	2.5	NA	NA	NA	U	NA	NA
Chlorobenzene	U	NA	U	NA	NA	U	NA	U	NA	U	NA	1.3
Chloroethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Chloroform	U	NA	NA	NA	NA	27	NA	NA	NA	U	NA	NA
cis-1,2-Dichloroethene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
cis-1,3-Dichloropropene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Cyclohexane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Dibromochloromethane	U	NA	NA	NA	NA	0.77 J	NA	NA	NA	U	NA	NA
Dichlorodifluoromethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Ethylbenzene	U	NA	NA	NA	NA	U	NA	NA	NA	2.1	NA	NA
Fluorotrichloromethane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Isopropylbenzene	U	NA	U	NA	NA	U	NA	NA	NA	U	NA	NA
Methyl acetate	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-09 2005-Jun	OW-09-F 2005-Jun	OW-10 1998-Jul	OW-10-F 1998-Jul	OW-10 1998-Aug	OW-10 2005-Jul	OW-10-F 2005-Jul	OW-15 2007-Apr	OW-15-F 2007-Apr	OW-16A 2005-Jun	OW-16A-F 2005-Jun	OW-16A 2007-Apr
VOCs (continued)												
Methyl bromide	U	NA	NA	NA	NA	U	NA	NA	NA	UJ	NA	NA
Methyl chloride	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Methyl tert-butyl ether	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Methylcyclohexane	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Methylene chloride (Dichloromethane)	U	NA	U	NA	NA	U	NA	NA	NA	U	NA	NA
Styrene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Tetrachloroethylene	U	NA	NA	NA	NA	3.1	NA	NA	NA	U	NA	NA
Toluene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
trans-1,2-Dichloroethene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
trans-1,3-Dichloropropene	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Trichloroethylene	U	NA	NA	NA	NA	10	NA	NA	NA	U	NA	NA
Vinyl chloride	U	NA	NA	NA	NA	U	NA	NA	NA	U	NA	NA
Xylenes (total)	U	NA	NA	NA	NA	U	NA	NA	NA	6	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-16A-F 2007-Apr	OW-19 2007-Apr	OW-21A 2007-Apr	OW-21A-F 2007-Apr	OW-22 2007-Apr	OW-22-F 2007-Apr	OW-24 2007-Apr	OW-24-F 2007-Apr	OWR-01D 1998-Aug	OWR-01D-F 1998-Aug	OWR-01S 1998-Aug	OWR-01S-F 1998-Aug
Field Parameters												
Field turbidity (NTU)	N/A	0.89	34.3	N/A	5.91	N/A	6.28	N/A	14.1	8.27	0.85	N/A
Inorganics												
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	210000	NA	9800	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	1600 J	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA	U	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	35000	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Metals												
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	U	U	U	U
Barium	NA	NA	NA	NA	NA	NA	NA	NA	210	130	40	41
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	U	U	U	U
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	U	U	U	U
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	U	U	U	U
Cobalt	NA	25	38	NA	2.6 J	NA	2.3 J	NA	U	U	U	U
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	U	6.8	U	UJ
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	2300	830	250	250 J
Mercury	NA	U	U	U	0.11 J	U	U	U	U	U	U	U
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	U	U	U	U
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA	U	U	U	U
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 4-4
Groundwater Sample Results

Parameter	OW-16A-F 2007-Apr	OW-19 2007-Apr	OW-21A 2007-Apr	OW-21A-F 2007-Apr	OW-22 2007-Apr	OW-22-F 2007-Apr	OW-24 2007-Apr	OW-24-F 2007-Apr	OWR-01D 1998-Aug	OWR-01D-F 1998-Aug	OWR-01S 1998-Aug	OWR-01S-F 1998-Aug
Other												
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	5000 J	NA	1000 J	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	300000 J	NA	100000 J	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	8200	NA	U	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	110000	NA	U	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	7000 J	NA	UJ	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	UJ	U	88	U	0.83	UJ	4.3	U	U	U	U	U
Aroclor 1254	UJ	U	U	U	U	UJ	U	U	U	U	U	U
Aroclor 1260	UJ	U	8.3	U	U	UJ	U	U	U	U	U	U
Aroclor 1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Totals	UJ	U	96.3	U	0.83	UJ	4.3	U	U	U	U	U
Pesticides												
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-16A-F 2007-Apr	OW-19 2007-Apr	OW-21A 2007-Apr	OW-21A-F 2007-Apr	OW-22 2007-Apr	OW-22-F 2007-Apr	OW-24 2007-Apr	OW-24-F 2007-Apr	OWR-01D 1998-Aug	OWR-01D-F 1998-Aug	OWR-01S 1998-Aug	OWR-01S-F 1998-Aug
Pesticides (continued)												
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Parathion	NA	U	7600	NA	U	NA	U	NA	U	NA	U	NA
Sulfotepp	NA	U	12	NA	U	NA	U	NA	U	NA	U	NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	U	9500	NA	U	NA	U	NA	U	NA	U	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-16A-F 2007-Apr	OW-19 2007-Apr	OW-21A 2007-Apr	OW-21A-F 2007-Apr	OW-22 2007-Apr	OW-22-F 2007-Apr	OW-24 2007-Apr	OW-24-F 2007-Apr	OWR-01D 1998-Aug	OWR-01D-F 1998-Aug	OWR-01S 1998-Aug	OWR-01S-F 1998-Aug
SVOCs (continued)												
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	1.4 J	530	NA	U	NA	1.3 J	NA	U	NA	U	NA
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-16A-F 2007-Apr	OW-19 2007-Apr	OW-21A 2007-Apr	OW-21A-F 2007-Apr	OW-22 2007-Apr	OW-22-F 2007-Apr	OW-24 2007-Apr	OW-24-F 2007-Apr	OWR-01D 1998-Aug	OWR-01D-F 1998-Aug	OWR-01S 1998-Aug	OWR-01S-F 1998-Aug
VOCs												
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	U	39 J	NA	U	NA	1.2 J	NA	U	NA	U	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	U	7.5 J	NA	U	NA	U	NA	U	NA	U	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	U	U	NA	U	NA	U	NA	U	NA	U	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OW-16A-F 2007-Apr	OW-19 2007-Apr	OW-21A 2007-Apr	OW-21A-F 2007-Apr	OW-22 2007-Apr	OW-22-F 2007-Apr	OW-24 2007-Apr	OW-24-F 2007-Apr	OWR-01D 1998-Aug	OWR-01D-F 1998-Aug	OWR-01S 1998-Aug	OWR-01S-F 1998-Aug
VOCs (continued)												
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-01S 2005-Jul	OWR-01S-F 2005-Jul	OWR-02D 1998-Jul	OWR-02D-Q 1998-Jul	OWR-02D-F 1998-Jul	OWR-02D-F-Q 1998-Jul	OWR-02S 1998-Aug	OWR-02S-F 1998-Aug	OWR-03S 1998-Jul	OWR-03S-F 1998-Jul	OWR-04D 1998-Jul
Field Parameters											
Field turbidity (NTU)	0.84	N/A	1.58	N/A	N/A	N/A	2.2	N/A	0.59	N/A	1.6
Inorganics											
Alkalinity	NA	NA	120000	120000	NA	NA	23000	NA	NA	NA	NA
Cyanide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	1700 J	1800 J	NA	NA	2200 J	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	710 J	540 J	NA	NA	U	NA	NA	NA	NA
Sulfate	NA	NA	U	U	NA	NA	U	NA	NA	NA	NA
Sulfide	NA	NA	U	U	NA	NA	U	NA	NA	NA	NA
Metals											
Aluminum	150 J	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	U	U	U	U	U	U	U	U	U	U	U
Barium	43	40	29	34	17	16	93	92	38	43	22
Beryllium	0.19 J	0.18 J	U	U	U	U	U	U	U	U	U
Cadmium	U	U	U	U	U	U	U	U	U	U	U
Calcium	13000	12000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	U	U	U	U	U	U	U	U	U	U	U
Cobalt	U	U	U	U	U	U	29	33	U	U	U
Copper	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	U	U	NA	NA	U	NA	NA	NA	NA
Iron	160	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	U	U	U	U	U	U	U	UJ	U	15 J	U
Magnesium	3000	2800	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	28	23	130	140	13	12 J	4500	4500 J	270	270 J	U
Mercury	U	0.08 J	U	U	U	U	U	U	0.25	0.23	U
Nickel	2.3 J	2.7 J	U	U	U	U	U	U	U	4.6	U
Phosphorus	NA	NA	U	U	NA	NA	U	NA	NA	NA	NA
Potassium	3100	3200	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	8500	8300	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	U	U	U	U	U	U	U	U	U	U	U
Zinc	660	810	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-01S 2005-Jul	OWR-01S-F 2005-Jul	OWR-02D 1998-Jul	OWR-02D-Q 1998-Jul	OWR-02D-F 1998-Jul	OWR-02D-F-Q 1998-Jul	OWR-02S 1998-Aug	OWR-02S-F 1998-Aug	OWR-03S 1998-Jul	OWR-03S-F 1998-Jul	OWR-04D 1998-Jul
Other											
Phenolics	NA	NA	U	U	NA	NA	U	NA	NA	NA	NA
Standard Plate Count	NA	NA	720 J	520 J	NA	NA	740 J	NA	NA	NA	NA
Total dissolved solids	NA	NA	180000 J	170000 J	NA	NA	240000 J	NA	NA	NA	NA
Total organic carbon	NA	NA	U	U	NA	NA	3000	NA	NA	NA	NA
Total organic halides	NA	NA	32	28 J	NA	NA	40	NA	NA	NA	NA
Total suspended solids	NA	NA	6000 J	9000 J	NA	NA	UJ	NA	NA	NA	NA
PCBs, Aroclor Specific											
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	U	UJ	U	U	U	U	U	U	U	U	U
Aroclor 1254	U	UJ	U	U	U	U	U	U	U	U	U
Aroclor 1260	U	UJ	U	U	U	U	U	U	U	U	U
Aroclor 1268	U	UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Totals	U	UJ	U	U	U	U	U	U	U	U	U
Pesticides											
4,4'-DDD	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-01S 2005-Jul	OWR-01S-F 2005-Jul	OWR-02D 1998-Jul	OWR-02D-Q 1998-Jul	OWR-02D-F 1998-Jul	OWR-02D-F-Q 1998-Jul	OWR-02S 1998-Aug	OWR-02S-F 1998-Aug	OWR-03S 1998-Jul	OWR-03S-F 1998-Jul	OWR-04D 1998-Jul
Pesticides (continued)											
Methoxychlor	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	UJ	NA	U	U	NA	NA	U	NA	U	NA	U
Parathion	UJ	NA	U	U	NA	NA	U	NA	U	NA	U
Sulfotepp	U	NA	U	U	NA	NA	U	NA	U	NA	U
Toxaphene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
1,1'-Biphenyl	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	U	NA	U	U	NA	NA	U	NA	U	NA	U
2,4,6-Trichlorophenol	U	NA	U	U	NA	NA	U	NA	U	NA	U
2,4-Dichlorophenol	U	NA	U	U	NA	NA	U	NA	U	NA	U
2,4-Dimethylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	U	NA	U	U	NA	NA	U	NA	U	NA	U
Acenaphthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-01S 2005-Jul	OWR-01S-F 2005-Jul	OWR-02D 1998-Jul	OWR-02D-Q 1998-Jul	OWR-02D-F 1998-Jul	OWR-02D-F-Q 1998-Jul	OWR-02S 1998-Aug	OWR-02S-F 1998-Aug	OWR-03S 1998-Jul	OWR-03S-F 1998-Jul	OWR-04D 1998-Jul
SVOCs (continued)											
Benzo(a)pyrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	U	NA	U	U	NA	NA	U	NA	U	NA	U
Pentachlorophenol	U	NA	U	U	NA	NA	1.2	NA	U	NA	U
Phenanthrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	U	NA	U	U	NA	NA	U	NA	U	NA	U
Pyrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-01S 2005-Jul	OWR-01S-F 2005-Jul	OWR-02D 1998-Jul	OWR-02D-Q 1998-Jul	OWR-02D-F 1998-Jul	OWR-02D-F-Q 1998-Jul	OWR-02S 1998-Aug	OWR-02S-F 1998-Aug	OWR-03S 1998-Jul	OWR-03S-F 1998-Jul	OWR-04D 1998-Jul
VOCs											
1,1,1-Trichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	U	NA	U	U	NA	NA	U	NA	U	NA	U
1,1,2-Trichloro-1,2,2-trifluoroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	U	NA	U	U	NA	NA	U	NA	U	NA	U
1,2-Dichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	U	NA	U	U	NA	NA	U	NA	U	NA	U
2-Butanone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	U	NA	U	U	NA	NA	U	NA	U	NA	U
Chloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	U	NA	U	U	NA	NA	U	NA	U	NA	U
Methyl acetate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-01S 2005-Jul	OWR-01S-F 2005-Jul	OWR-02D 1998-Jul	OWR-02D-Q 1998-Jul	OWR-02D-F 1998-Jul	OWR-02D-F-Q 1998-Jul	OWR-02S 1998-Aug	OWR-02S-F 1998-Aug	OWR-03S 1998-Jul	OWR-03S-F 1998-Jul	OWR-04D 1998-Jul
VOCs (continued)											
Methyl bromide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	U	NA	U	U	NA	NA	U	NA	U	NA	U
Styrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-04D-F 1998-Jul	OWR-05D 1998-Aug	OWR-05D-F 1998-Aug	OWR-05D 1998-Oct	OWR-06D 1998-Jul	OWR-06D-F 1998-Jul	OWR-07D 1998-Aug	OWR-07D-F 1998-Aug	OWR-07D 2005-Jun	OWR-07D-F 2005-Jun	OWR-08S 1998-Aug
Field Parameters											
Field turbidity (NTU)	N/A	0.86	N/A	400	2.2	N/A	1.65	N/A	4.72	N/A	1.8
Inorganics											
Alkalinity	NA	NA	NA	11000	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	2300	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	5000	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA
Metals											
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	U	U	U	NA	U	U	U	U	U	U	U
Barium	25	1200	1300	NA	150	180	U	17	120	130	240
Beryllium	U	U	U	NA	U	U	U	U	U	U	U
Cadmium	U	U	U	NA	U	U	U	U	U	U	U
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	U	U	U	NA	U	U	31	39	U	U	U
Cobalt	U	79	81	NA	U	U	U	U	U	U	29
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	UJ	U	21	NA	U	U	U	13	U	U	U
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	U	1300	1300	NA	470	660	U	U	33	10	1400
Mercury	U	0.57	U	NA	1.3	0.27	U	UJ	U	U	U
Nickel	U	55	56	NA	9.5	11	U	U	U	U	10
Phosphorus	NA	NA	NA	39	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	U	U	U	NA	U	U	10	U	4 J	2.9 J	U
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-04D-F 1998-Jul	OWR-05D 1998-Aug	OWR-05D-F 1998-Aug	OWR-05D 1998-Oct	OWR-06D 1998-Jul	OWR-06D-F 1998-Jul	OWR-07D 1998-Aug	OWR-07D-F 1998-Aug	OWR-07D 2005-Jun	OWR-07D-F 2005-Jun	OWR-08S 1998-Aug
Other											
Phenolics	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	960	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	970000	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	23000	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	1600	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	5400000	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific											
Aroclor 1016	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1221	U	210	U	NA	U	U	U	U	U	U	U
Aroclor 1232	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	NA	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	NA	U	U	2.2	U	U	UJ	U
Aroclor 1254	U	U	U	NA	U	U	U	U	0.72	UJ	U
Aroclor 1260	U	U	U	NA	U	U	U	U	U	UJ	U
Aroclor 1268	NA	NA	NA	NA	NA	NA	NA	NA	U	UJ	NA
PCBs, Totals	U	210	U	NA	U	U	2.2	U	0.72	UJ	U
Pesticides											
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-04D-F 1998-Jul	OWR-05D 1998-Aug	OWR-05D-F 1998-Aug	OWR-05D 1998-Oct	OWR-06D 1998-Jul	OWR-06D-F 1998-Jul	OWR-07D 1998-Aug	OWR-07D-F 1998-Aug	OWR-07D 2005-Jun	OWR-07D-F 2005-Jun	OWR-08S 1998-Aug
Pesticides (continued)											
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	5.5	NA	NA	U	NA	U	NA	UJ	NA	9.6
Parathion	NA	28	NA	NA	U	NA	U	NA	UJ	NA	560
Sulfotepp	NA	U	NA	NA	U	NA	U	NA	UJ	NA	1.8
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	U	NA	NA	U	NA	U	NA	U	NA	U
2,4,6-Trichlorophenol	NA	U	NA	NA	U	NA	U	NA	U	NA	U
2,4-Dichlorophenol	NA	U	NA	NA	U	NA	U	NA	U	NA	U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	2300	NA	NA	U	NA	U	NA	U	NA	390
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-04D-F 1998-Jul	OWR-05D 1998-Aug	OWR-05D-F 1998-Aug	OWR-05D 1998-Oct	OWR-06D 1998-Jul	OWR-06D-F 1998-Jul	OWR-07D 1998-Aug	OWR-07D-F 1998-Aug	OWR-07D 2005-Jun	OWR-07D-F 2005-Jun	OWR-08S 1998-Aug
SVOCs (continued)											
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	U	NA	NA	U	NA	U	NA	U	NA	330
Pentachlorophenol	NA	1.2	NA	NA	U	NA	U	NA	U	NA	1.2
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	U	NA	NA	U	NA	U	NA	U	NA	U
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-04D-F 1998-Jul	OWR-05D 1998-Aug	OWR-05D-F 1998-Aug	OWR-05D 1998-Oct	OWR-06D 1998-Jul	OWR-06D-F 1998-Jul	OWR-07D 1998-Aug	OWR-07D-F 1998-Aug	OWR-07D 2005-Jun	OWR-07D-F 2005-Jun	OWR-08S 1998-Aug
VOCs											
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	U	NA	NA	U	NA	U	NA	U	NA	U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	U	NA	NA	U	NA	U	NA	U	NA	U
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	U	NA	NA	U	NA	U	NA	U	NA	U
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	46	NA	NA	U	NA	U	NA	U	NA	U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	U	NA	NA	U	NA	U	NA	U	NA	U
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-04D-F 1998-Jul	OWR-05D 1998-Aug	OWR-05D-F 1998-Aug	OWR-05D 1998-Oct	OWR-06D 1998-Jul	OWR-06D-F 1998-Jul	OWR-07D 1998-Aug	OWR-07D-F 1998-Aug	OWR-07D 2005-Jun	OWR-07D-F 2005-Jun	OWR-08S 1998-Aug
VOCs (continued)											
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	U	NA	NA	U	NA	U	NA	U	NA	36
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-08S-Q 1998-Aug	OWR-08S-F 1998-Aug	OWR-08S-F-Q 1998-Aug	OWR-09S 1998-Aug	OWR-09S-F 1998-Aug	OWR-10 2005-Jun	OWR-10-Q 2005-Jun	OWR-10-F 2005-Jun	OWR-10-F-Q 2005-Jun	OWR-10 2005-Jul	OWR-10-Q 2005-Jul
Field Parameters											
Field turbidity (NTU)	N/A	2.2	N/A	10.12	N/A	0.17	N/A	N/A	N/A	351	N/A
Inorganics											
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals											
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	U	U	U	U	U	U	U	U	U	NA	NA
Barium	240	190	230	44	15	35	35	35	34	NA	NA
Beryllium	U	U	U	U	U	1.2 J	1.2 J	1 J	1.1 J	NA	NA
Cadmium	U	U	U	U	U	U	U	U	U	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	U	U	U	U	U	U	U	U	U	NA	NA
Cobalt	30	24	28	U	U	1.1 J	U	U	U	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	6	27 J	45 J	9.1	UJ	U	U	U	2.6	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	1500	1100 J	1400 J	510	82 J	120	130	120 J	120 J	NA	NA
Mercury	0.33 J	U	U	U	U	U	U	U	U	NA	NA
Nickel	11	9.1	10	16	U	7.4 J	6.1 J	5.9 J	5.9 J	NA	NA
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	U	U	U	18	U	U	U	U	U	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-08S-Q 1998-Aug	OWR-08S-F 1998-Aug	OWR-08S-F-Q 1998-Aug	OWR-09S 1998-Aug	OWR-09S-F 1998-Aug	OWR-10 2005-Jun	OWR-10-Q 2005-Jun	OWR-10-F 2005-Jun	OWR-10-F-Q 2005-Jun	OWR-10 2005-Jul	OWR-10-Q 2005-Jul
Other											
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific											
Aroclor 1016	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1221	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1232	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1242	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1248	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1254	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1260	U	U	U	U	U	NA	NA	NA	NA	U	U
Aroclor 1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	U
PCBs, Totals	U	U	U	U	U	NA	NA	NA	NA	U	U
Pesticides											
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-08S-Q 1998-Aug	OWR-08S-F 1998-Aug	OWR-08S-F-Q 1998-Aug	OWR-09S 1998-Aug	OWR-09S-F 1998-Aug	OWR-10 2005-Jun	OWR-10-Q 2005-Jun	OWR-10-F 2005-Jun	OWR-10-F-Q 2005-Jun	OWR-10 2005-Jul	OWR-10-Q 2005-Jul
Pesticides (continued)											
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	9.7	NA	NA	U	NA	NA	NA	NA	NA	UJ	UJ
Parathion	730	NA	NA	U	NA	NA	NA	NA	NA	UJ	UJ
Sulfotepp	1.9	NA	NA	U	NA	NA	NA	NA	NA	UJ	U
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	U	NA	NA	U	NA	NA	NA	NA	NA	U	U
2,4,6-Trichlorophenol	U	NA	NA	U	NA	NA	NA	NA	NA	U	U
2,4-Dichlorophenol	U	NA	NA	U	NA	NA	NA	NA	NA	U	U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	340	NA	NA	U	NA	NA	NA	NA	NA	U	U
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-08S-Q 1998-Aug	OWR-08S-F 1998-Aug	OWR-08S-F-Q 1998-Aug	OWR-09S 1998-Aug	OWR-09S-F 1998-Aug	OWR-10 2005-Jun	OWR-10-Q 2005-Jun	OWR-10-F 2005-Jun	OWR-10-F-Q 2005-Jun	OWR-10 2005-Jul	OWR-10-Q 2005-Jul
SVOCs (continued)											
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	330	NA	NA	U	NA	NA	NA	NA	NA	U	U
Pentachlorophenol	U	NA	NA	U	NA	NA	NA	NA	NA	U	U
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	U	NA	NA	U	NA	NA	NA	NA	NA	U	U
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-08S-Q 1998-Aug	OWR-08S-F 1998-Aug	OWR-08S-F-Q 1998-Aug	OWR-09S 1998-Aug	OWR-09S-F 1998-Aug	OWR-10 2005-Jun	OWR-10-Q 2005-Jun	OWR-10-F 2005-Jun	OWR-10-F-Q 2005-Jun	OWR-10 2005-Jul	OWR-10-Q 2005-Jul
VOCs											
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	U	NA	NA	U	NA	U	U	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	U	NA	NA	U	NA	U	U	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	U	NA	NA	U	NA	U	U	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	U	NA	NA	U	NA	U	U	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	U	NA	NA	U	NA	U	U	NA	NA	NA	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-08S-Q 1998-Aug	OWR-08S-F 1998-Aug	OWR-08S-F-Q 1998-Aug	OWR-09S 1998-Aug	OWR-09S-F 1998-Aug	OWR-10 2005-Jun	OWR-10-Q 2005-Jun	OWR-10-F 2005-Jun	OWR-10-F-Q 2005-Jun	OWR-10 2005-Jul	OWR-10-Q 2005-Jul
VOCs (continued)											
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	36	NA	NA	U	NA	U	U	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-10-F 2005-Jul	OWR-10-F-Q 2005-Jul	OWR-11 2003-Feb	OWR-11-F 2003-Feb	OWR-12 2003-Feb	OWR-12-F 2003-Feb	OWR-13 2003-Feb	OWR-13-F 2003-Feb	OWR-13-F-Q 2003-Feb	OWR-13-Q 2003-Feb
Field Parameters										
Field turbidity (NTU)	N/A	N/A	5.1	N/A	3.8	N/A	2.6	N/A	N/A	N/A
Inorganics										
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals										
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	NA	NA	U	U	U	U	U	U	U	U
Barium	NA	NA	630	640	U	U	U	U	U	U
Beryllium	NA	NA	6.8 J	7.1 J	U	U	U	U	U	U
Cadmium	NA	NA	U	U	U	U	U	U	U	U
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	U	U	U	U	U	U	U	U
Cobalt	NA	NA	300	300	260 J	250 J	U	U	U	U
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	U	U	U	U	UJ	UJ	UJ	UJ
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	6500	6600	12000	12000	140	140	140	140
Mercury	NA	NA	3.3	0.65	0.71	0.52	2.3	2.2	2.1	2.4
Nickel	NA	NA	82 J	85 J	U	U	U	U	U	U
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	U	U	U	U	U	U	U	U
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-10-F 2005-Jul	OWR-10-F-Q 2005-Jul	OWR-11 2003-Feb	OWR-11-F 2003-Feb	OWR-12 2003-Feb	OWR-12-F 2003-Feb	OWR-13 2003-Feb	OWR-13-F 2003-Feb	OWR-13-F-Q 2003-Feb	OWR-13-Q 2003-Feb
Other										
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific										
Aroclor 1016	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	170	20	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	4.4	U	250	68	72	240
Aroclor 1242	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	U	U	U	U	U	U
Aroclor 1254	U	U	U	U	U	U	U	U	U	U
Aroclor 1260	U	U	U	U	U	U	U	U	U	U
Aroclor 1268	U	U	U	U	U	U	U	U	U	U
PCBs, Totals	U	U	170	20	4.4	U	250	68	72	240
Pesticides										
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-10-F 2005-Jul	OWR-10-F-Q 2005-Jul	OWR-11 2003-Feb	OWR-11-F 2003-Feb	OWR-12 2003-Feb	OWR-12-F 2003-Feb	OWR-13 2003-Feb	OWR-13-F 2003-Feb	OWR-13-F-Q 2003-Feb	OWR-13-Q 2003-Feb
Pesticides (continued)										
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	NA	NA	U	NA	U	NA	U	NA	NA	U
Parathion	NA	NA	U	NA	10	NA	U	NA	NA	U
Sulfotepp	NA	NA	U	NA	U	NA	U	NA	NA	U
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs										
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NA	NA	U	NA	U	NA	U	NA	NA	U
2,4,6-Trichlorophenol	NA	NA	U	NA	U	NA	U	NA	NA	U
2,4-Dichlorophenol	NA	NA	U	NA	U	NA	U	NA	NA	U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NA	NA	U	NA	8000	NA	U	NA	NA	U
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-10-F 2005-Jul	OWR-10-F-Q 2005-Jul	OWR-11 2003-Feb	OWR-11-F 2003-Feb	OWR-12 2003-Feb	OWR-12-F 2003-Feb	OWR-13 2003-Feb	OWR-13-F 2003-Feb	OWR-13-F-Q 2003-Feb	OWR-13-Q 2003-Feb
SVOCs (continued)										
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	NA	NA	U	NA	U	NA	U	NA	NA	U
Pentachlorophenol	NA	NA	U	NA	U	NA	U	NA	NA	U
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	U	NA	U	NA	U	NA	NA	U
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-10-F 2005-Jul	OWR-10-F-Q 2005-Jul	OWR-11 2003-Feb	OWR-11-F 2003-Feb	OWR-12 2003-Feb	OWR-12-F 2003-Feb	OWR-13 2003-Feb	OWR-13-F 2003-Feb	OWR-13-F-Q 2003-Feb	OWR-13-Q 2003-Feb
VOCs										
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	U	NA	U	NA	U	NA	NA	U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	20	NA	U	NA	U	NA	NA	U
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	21	NA	U	NA	U	NA	NA	U
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	29	NA	5.2	NA	U	NA	NA	U
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	U	NA	U	NA	U	NA	NA	U
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-10-F 2005-Jul	OWR-10-F-Q 2005-Jul	OWR-11 2003-Feb	OWR-11-F 2003-Feb	OWR-12 2003-Feb	OWR-12-F 2003-Feb	OWR-13 2003-Feb	OWR-13-F 2003-Feb	OWR-13-F-Q 2003-Feb	OWR-13-Q 2003-Feb
VOCs (continued)										
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	NA	NA	U	NA	U	NA	U	NA	NA	U
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-14D 2005-Jul	OWR-14D-F 2005-Jul	OWR-15D 2005-Jul	OWR-15D-F 2005-Jul	SBP-05 2007-Apr	T-1 2005-Jul	T-1-F 2005-Jul	T-2 2005-Jul	T-2-F 2005-Jul	T-3 2005-Jul	T-3-F 2005-Jul	T-4 2005-Jun
Field Parameters												
Field turbidity (NTU)	57.3	N/A	7.66	N/A	0.42	9.47	N/A	9	N/A	2.3	N/A	2.95
Inorganics												
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum	NA	NA	NA	NA	NA	760	U	350	230	110 J	U	56 J
Antimony	NA	NA	NA	NA	NA	U	U	U	U	U	U	U
Arsenic	4.4 J	U	U	U	NA	U	U	U	U	U	U	6.1 J
Barium	63	25	150	130	NA	20	14	77	72	120	120	13 J
Beryllium	1.3 J	U	0.18 J	U	NA	0.61 J	0.24 J	0.51 J	0.49 J	0.4 J	0.41 J	U
Cadmium	U	U	U	U	NA	U	U	U	U	U	U	U
Calcium	NA	NA	NA	NA	NA	3100	3300	6100	5800	2500	2500	39000
Chromium	8.9 J	0.91 J	4.1 J	1.3 J	NA	2.4 J	U	1.2 J	1.4 J	U	U	U
Cobalt	12 J	U	2.1 J	1.9 J	U	U	1.1 J	13	13	5 J	6.5 J	1.9 J
Copper	NA	NA	NA	NA	NA	U	U	3.5 J	3.4 J	3.4 J	4.1 J	U
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	1700	U	210	U	30 J	U	U
Lead	9.2	U	U	U	NA	3.3 J	U	U	U	U	U	U
Magnesium	NA	NA	NA	NA	NA	1500	1500	4000	3800	3100	3100	6400
Manganese	530	9 J	96	74 J	NA	510	370	390	360	140	150	540 J
Mercury	0.43	0.15 J	U	U	U	U	U	0.1 J	U	0.1 J	0.14 J	UJ
Nickel	15 J	U	22 J	16 J	NA	8.2 J	U	11 J	11 J	14 J	13 J	U
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	1200	920 J	3400	3100	10000	10000	5100
Selenium	NA	NA	NA	NA	NA	U	U	U	U	U	U	U
Silver	NA	NA	NA	NA	NA	U	U	U	U	U	U	U
Sodium	NA	NA	NA	NA	NA	6900	5700	38000	36000	8400	8800	28000
Thallium	NA	NA	NA	NA	NA	U	U	U	U	U	U	U
Vanadium	18	1.8 J	1.9 J	2 J	NA	2.5 J	U	U	U	U	U	U
Zinc	NA	NA	NA	NA	NA	370	310	1700	1100	610	410	200

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-14D 2005-Jul	OWR-14D-F 2005-Jul	OWR-15D 2005-Jul	OWR-15D-F 2005-Jul	SBP-05 2007-Apr	T-1 2005-Jul	T-1-F 2005-Jul	T-2 2005-Jul	T-2-F 2005-Jul	T-3 2005-Jul	T-3-F 2005-Jul	T-4 2005-Jun
Other												
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	110	U	U	U	U	U	U	U	U	U
Aroclor 1232	U	U	18 J	U	U	U	U	U	U	U	U	120 J
Aroclor 1242	5	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	U	U	UJ	UJ	U	U	U	U	UJ	U	UJ	U
Aroclor 1254	U	U	UJ	UJ	U	U	U	U	UJ	U	UJ	U
Aroclor 1260	U	U	UJ	UJ	U	U	U	U	UJ	U	UJ	U
Aroclor 1268	U	U	UJ	UJ	NA	U	U	U	UJ	U	UJ	U
PCBs, Totals	5	U	128 J	UJ	U	U	U	U	UJ	U	UJ	120 J
Pesticides												
4,4'-DDD	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
4,4'-DDE	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
4,4'-DDT	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Aldrin	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
alpha-BHC	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
alpha-Chlordane	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
beta-BHC	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
delta-BHC	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Dieldrin	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Endosulfan I	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Endosulfan II	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Endosulfan sulfate	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Endrin	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Endrin aldehyde	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Endrin ketone	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
gamma-BHC	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
gamma-Chlordane	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Heptachlor	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Heptachlor epoxide	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-14D 2005-Jul	OWR-14D-F 2005-Jul	OWR-15D 2005-Jul	OWR-15D-F 2005-Jul	SBP-05 2007-Apr	T-1 2005-Jul	T-1-F 2005-Jul	T-2 2005-Jul	T-2-F 2005-Jul	T-3 2005-Jul	T-3-F 2005-Jul	T-4 2005-Jun
Pesticides (continued)												
Methoxychlor	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Methyl parathion	U	NA	UJ	NA	NA	U	NA	UJ	NA	UJ	NA	UJ
Parathion	U	NA	0.32 J	NA	U	U	NA	UJ	NA	UJ	NA	33 J
Sulfotepp	U	NA	UJ	NA	U	U	NA	U	NA	U	NA	UJ
Toxaphene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
SVOCs												
1,1'-Biphenyl	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2,4,5-Trichlorophenol	U	NA	UJ	NA	NA	U	NA	U	NA	U	NA	U
2,4,6-Trichlorophenol	U	NA	UJ	NA	NA	U	NA	U	NA	U	NA	U
2,4-Dichlorophenol	U	NA	U	NA	NA	U	NA	U	NA	U	NA	U
2,4-Dimethylphenol	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2,4-Dinitrophenol	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2-Chloronaphthalene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2-Chlorophenol	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2-Methylnaphthalene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2-Methylphenol	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
2-Nitroaniline	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
2-Nitrophenol	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	UR	NA	U	NA	U	NA	U
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
3-Nitroaniline	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
4-Chloroaniline	NA	NA	NA	NA	NA	UR	NA	U	NA	U	NA	U
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
4-Nitroaniline	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
4-Nitrophenol	U	NA	120 J	NA	U	UJ	NA	U	NA	U	NA	U
Acenaphthene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	2 J
Acenaphthylene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Acetophenone	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Anthracene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Atrazine	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Benzaldehyde	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	UJ
Benzo(a)anthracene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-14D 2005-Jul	OWR-14D-F 2005-Jul	OWR-15D 2005-Jul	OWR-15D-F 2005-Jul	SBP-05 2007-Apr	T-1 2005-Jul	T-1-F 2005-Jul	T-2 2005-Jul	T-2-F 2005-Jul	T-3 2005-Jul	T-3-F 2005-Jul	T-4 2005-Jun
SVOCs (continued)												
Benzo(a)pyrene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Butyl benzyl phthalate	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Caprolactam	NA	NA	NA	NA	NA	U	NA	3.1 J	NA	U	NA	U
Carbazole	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Chrysene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Dibenzofuran	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Diethyl phthalate	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Dimethyl phthalate	NA	NA	NA	NA	NA	U	NA	1.4 J	NA	U	NA	U
Di-n-butylphthalate	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Di-n-octylphthalate	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Fluoranthene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Fluorene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Hexachlorobenzene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Hexachlorobutadiene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Hexachloroethane	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Isophorone	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Naphthalene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Nitrobenzene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
O,O,O-Triethylphosphorothioate	U	NA	3.4 J	NA	3.9 J	U	NA	U	NA	U	NA	U
Pentachlorophenol	1.4	NA	U	NA	NA	U	NA	U	NA	U	NA	U
Phenanthrene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U
Phenol	U	NA	U	NA	NA	UJ	NA	U	NA	U	NA	U
Pyrene	NA	NA	NA	NA	NA	U	NA	U	NA	U	NA	U

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-14D 2005-Jul	OWR-14D-F 2005-Jul	OWR-15D 2005-Jul	OWR-15D-F 2005-Jul	SBP-05 2007-Apr	T-1 2005-Jul	T-1-F 2005-Jul	T-2 2005-Jul	T-2-F 2005-Jul	T-3 2005-Jul	T-3-F 2005-Jul	T-4 2005-Jun
VOCs												
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,1,2,2-Tetrachloroethane	UJ	NA	U	NA	NA	UJ	NA	U	NA	U	NA	U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,1-Dichloroethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,1-Dichloroethene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	11
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,2-Dichlorobenzene	1.4 J	NA	31	NA	U	UJ	NA	U	NA	U	NA	1.7
1,2-Dichloroethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,2-Dichloropropane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
1,4-Dichlorobenzene	UJ	NA	7.5	NA	U	UJ	NA	U	NA	U	NA	U
2-Butanone	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
2-Hexanone	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Acetone	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	UJ
Benzene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Bromochloromethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Bromodichloromethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Bromoform	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Carbon disulfide	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Carbon tetrachloride	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Chlorobenzene	UJ	NA	2.5	NA	U	UJ	NA	U	NA	U	NA	U
Chloroethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Chloroform	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	10
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Cyclohexane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Dibromochloromethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Dichlorodifluoromethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Ethylbenzene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Fluorotrichloromethane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Isopropylbenzene	UJ	NA	U	NA	NA	UJ	NA	U	NA	U	NA	U
Methyl acetate	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	OWR-14D 2005-Jul	OWR-14D-F 2005-Jul	OWR-15D 2005-Jul	OWR-15D-F 2005-Jul	SBP-05 2007-Apr	T-1 2005-Jul	T-1-F 2005-Jul	T-2 2005-Jul	T-2-F 2005-Jul	T-3 2005-Jul	T-3-F 2005-Jul	T-4 2005-Jun
VOCs (continued)												
Methyl bromide	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	UJ
Methyl chloride	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Methyl tert-butyl ether	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Methylcyclohexane	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Methylene chloride (Dichloromethane)	UJ	NA	U	NA	NA	UJ	NA	U	NA	U	NA	U
Styrene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Tetrachloroethylene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Toluene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	8.2
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Trichloroethylene	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	3.4
Vinyl chloride	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U
Xylenes (total)	NA	NA	NA	NA	NA	UJ	NA	U	NA	U	NA	U

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	T-4-Q 2005-Jun	T-4-F 2005-Jun	T-4-F-Q 2005-Jun	WEL-01 1998-Oct	WEL-01 2005-Jun	WEL-01-F 1998-Oct	WEL-01-F 2005-Jun	WEL-02 1998-Oct	WEL-02 2005-Jun	WEL-02-F 1998-Oct	WEL-02-F 2005-Jun	WEL-03 1998-Oct
Field Parameters												
Field turbidity (NTU)	N/A	N/A	N/A	260	2.6	N/A	N/A	856	6.7	N/A	N/A	83
Inorganics												
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	5.1 J	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	U	U	4.6 J	U	U	U	U	U	U	U	U	U
Barium	13	12	13	160 J	34	29	36	150 J	52	68	50	48 J
Beryllium	U	U	U	U	U	U	U	U	0.23 J	U	0.17 J	U
Cadmium	U	U	U	U	U	U	U	U	U	U	U	U
Calcium	41000	39000	39000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	U	U	U	57	U	U	U	14	U	U	U	U
Cobalt	1.4 J	1.7 J	1.1 J	36	U	U	U	19	U	U	U	U
Copper	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	40 J	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	2.2 J	3.3 J	U	33	U	U	U	18	U	U	U	U
Magnesium	6500	6500	6500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	550	530	520	2000	37	130	32	1700	94	190	83	250
Mercury	U	UJ	U	U	U	U	U	U	U	U	U	U
Nickel	U	U	U	63	6.8 J	U	6.7 J	35	3.5 J	5.7	3.9 J	U
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	4900	4900	5100	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	28000	26000	28000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	U	U	U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	2.3 J	1.9 J	U	81	U	U	U	33	U	U	U	U
Zinc	210	140	140	NA	NA	NA	NA	NA	NA	NA	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	T-4-Q 2005-Jun	T-4-F 2005-Jun	T-4-F-Q 2005-Jun	WEL-01 1998-Oct	WEL-01 2005-Jun	WEL-01-F 1998-Oct	WEL-01-F 2005-Jun	WEL-02 1998-Oct	WEL-02 2005-Jun	WEL-02-F 1998-Oct	WEL-02-F 2005-Jun	WEL-03 1998-Oct
Other												
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific												
Aroclor 1016	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1232	110 J	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1254	U	U	U	U	0.66	U	U	U	U	U	U	U
Aroclor 1260	U	U	U	U	U	U	U	U	U	U	U	U
Aroclor 1268	U	U	U	NA	U	NA	U	NA	U	NA	U	NA
PCBs, Totals	110 J	U	U	U	0.66	U	U	U	U	U	U	U
Pesticides												
4,4'-DDD	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin aldehyde	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin ketone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	0.55 JN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-Chlordane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	T-4-Q 2005-Jun	T-4-F 2005-Jun	T-4-F-Q 2005-Jun	WEL-01 1998-Oct	WEL-01 2005-Jun	WEL-01-F 1998-Oct	WEL-01-F 2005-Jun	WEL-02 1998-Oct	WEL-02 2005-Jun	WEL-02-F 1998-Oct	WEL-02-F 2005-Jun	WEL-03 1998-Oct
Pesticides (continued)												
Methoxychlor	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl parathion	UJ	NA	NA	U	UJ	NA	NA	U	UJ	NA	NA	U
Parathion	51 J	NA	NA	U	UJ	NA	NA	U	UJ	NA	NA	U
Sulfotepp	0.33 J	NA	NA	U	UJ	NA	NA	U	UJ	NA	NA	U
Toxaphene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs												
1,1'-Biphenyl	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
2,4,6-Trichlorophenol	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
2,4-Dichlorophenol	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
2,4-Dimethylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Acenaphthene	0.73 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	T-4-Q 2005-Jun	T-4-F 2005-Jun	T-4-F-Q 2005-Jun	WEL-01 1998-Oct	WEL-01 2005-Jun	WEL-01-F 1998-Oct	WEL-01-F 2005-Jun	WEL-02 1998-Oct	WEL-02 2005-Jun	WEL-02-F 1998-Oct	WEL-02-F 2005-Jun	WEL-03 1998-Oct
SVOCs (continued)												
Benzo(a)pyrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy) methane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl) ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl) ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octylphthalate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O,O,O-Triethylphosphorothioate	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Pentachlorophenol	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Phenanthrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Pyrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	T-4-Q 2005-Jun	T-4-F 2005-Jun	T-4-F-Q 2005-Jun	WEL-01 1998-Oct	WEL-01 2005-Jun	WEL-01-F 1998-Oct	WEL-01-F 2005-Jun	WEL-02 1998-Oct	WEL-02 2005-Jun	WEL-02-F 1998-Oct	WEL-02-F 2005-Jun	WEL-03 1998-Oct
VOCs												
1,1,1-Trichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
1,1,2-Trichloro-1,2,2-trifluoroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (Ethylene dibromi	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	UJ	NA	NA	U	U	NA	NA	U	U	NA	NA	U
1,2-Dichloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
2-Butanone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Chloroethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorotrichloromethane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Methyl acetate	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	T-4-Q 2005-Jun	T-4-F 2005-Jun	T-4-F-Q 2005-Jun	WEL-01 1998-Oct	WEL-01 2005-Jun	WEL-01-F 1998-Oct	WEL-01-F 2005-Jun	WEL-02 1998-Oct	WEL-02 2005-Jun	WEL-02-F 1998-Oct	WEL-02-F 2005-Jun	WEL-03 1998-Oct
VOCs (continued)												
Methyl bromide	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride (Dichloromethane)	U	NA	NA	U	U	NA	NA	U	U	NA	NA	U
Styrene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	7.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	WEL-03-F 1998-Oct	WEL-03 2005-Jun	WEL-03-F 2005-Jun	WEL-03 2005-Jul	WEL-03-F 2005-Jul	WEL-04 1998-Oct	WEL-04-Q 1998-Oct	WEL-04-F 1998-Oct	WEL-04-F-Q 1998-Oct	CMW-1 2004-Aug	CMW-1-F 2004-Aug
Field Parameters											
Field turbidity (NTU)	N/A	9	N/A	14.9	N/A	96	N/A	N/A	N/A	9	N/A
Inorganics											
Alkalinity	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Nitrate-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals											
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA	390	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Arsenic	U	U	U	NA	NA	U	U	U	U	U	NA
Barium	47	52	51	NA	NA	74 J	10	12	11	26	NA
Beryllium	U	0.19 J	0.17 J	NA	NA	U	U	U	U	U	NA
Cadmium	U	U	U	NA	NA	U	U	U	U	U	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	13000	NA
Chromium	U	U	U	NA	NA	12	U	U	U	1.6 J	NA
Cobalt	U	2.4 J	1.1 J	NA	NA	12	U	U	U	6.4 J	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.8 J	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	320	NA
Lead	U	U	U	NA	NA	16	U	U	U	U	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	2400	NA
Manganese	250	150	140 J	NA	NA	1100	53	58	55	350	NA
Mercury	U	0.11 J	U	NA	NA	U	U	U	U	U	NA
Nickel	U	3.7 J	2.4 J	NA	NA	25	U	U	U	4.7 J	NA
Phosphorus	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	1800	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Sodium	NA	NA	NA	NA	NA	NA	NA	NA	NA	9500	NA
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Vanadium	U	U	U	NA	NA	27	U	U	U	U	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7 J	NA

Notes:
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4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	WEL-03-F 1998-Oct	WEL-03 2005-Jun	WEL-03-F 2005-Jun	WEL-03 2005-Jul	WEL-03-F 2005-Jul	WEL-04 1998-Oct	WEL-04-Q 1998-Oct	WEL-04-F 1998-Oct	WEL-04-F-Q 1998-Oct	CMW-1 2004-Aug	CMW-1-F 2004-Aug
Other											
Phenolics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific											
Aroclor 1016	U	NA	NA	U	U	U	U	U	U	U	U
Aroclor 1221	U	NA	NA	U	U	U	U	U	U	U	U
Aroclor 1232	U	NA	NA	U	U	U	U	U	U	U	U
Aroclor 1242	U	NA	NA	U	U	U	U	U	U	U	U
Aroclor 1248	U	NA	NA	U	UJ	U	U	U	U	U	U
Aroclor 1254	U	NA	NA	0.36 J	UJ	U	U	U	U	U	U
Aroclor 1260	U	NA	NA	U	UJ	U	U	U	U	U	U
Aroclor 1268	NA	NA	NA	U	UJ	NA	NA	NA	NA	U	U
PCBs, Totals	U	NA	NA	0.36 J	UJ	U	U	U	U	U	U
Pesticides											
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
alpha-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
alpha-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
beta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Endosulfan I	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Endosulfan II	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Endosulfan sulfate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Endrin aldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Endrin ketone	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
gamma-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Heptachlor epoxide	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA

Notes:
1) Values are in ppb.
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	WEL-03-F 1998-Oct	WEL-03 2005-Jun	WEL-03-F 2005-Jun	WEL-03 2005-Jul	WEL-03-F 2005-Jul	WEL-04 1998-Oct	WEL-04-Q 1998-Oct	WEL-04-F 1998-Oct	WEL-04-F-Q 1998-Oct	CMW-1 2004-Aug	CMW-1-F 2004-Aug
Pesticides (continued)											
Methoxychlor	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Methyl parathion	NA	NA	NA	UJ	NA	U	U	NA	NA		NA
Parathion	NA	NA	NA	UJ	NA	U	U	NA	NA		NA
Sulfotepp	NA	NA	NA	U	NA	U	U	NA	NA		NA
Toxaphene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
SVOCs											
1,1'-Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2,4,5-Trichlorophenol	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
2,4,6-Trichlorophenol	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
2,4-Dichlorophenol	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2-Chloronaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2-Chlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
2-Nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
3-Methylphenol/4-Methyphenol (m&p-(	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
3-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4-Bromophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4-Chloroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4-Chlorophenylphenyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4-Nitroaniline	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
4-Nitrophenol	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Acetophenone	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Atrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	WEL-03-F 1998-Oct	WEL-03 2005-Jun	WEL-03-F 2005-Jun	WEL-03 2005-Jul	WEL-03-F 2005-Jul	WEL-04 1998-Oct	WEL-04-Q 1998-Oct	WEL-04-F 1998-Oct	WEL-04-F-Q 1998-Oct	CMW-1 2004-Aug	CMW-1-F 2004-Aug
SVOCs (continued)											
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
bis(2-Chloroethoxy) methane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
bis(2-Chloroethyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Butyl benzyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Caprolactam	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Diethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Dimethyl phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Di-n-butylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Hexachlorocyclopentadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Isophorone	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Nitrobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
N-Nitroso-di-n-propylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
N-Nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
O,O,O-Triethylphosphorothioate	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
Pentachlorophenol	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Phenol	NA	NA	NA	U	NA	U	U	NA	NA	U	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	WEL-03-F 1998-Oct	WEL-03 2005-Jun	WEL-03-F 2005-Jun	WEL-03 2005-Jul	WEL-03-F 2005-Jul	WEL-04 1998-Oct	WEL-04-Q 1998-Oct	WEL-04-F 1998-Oct	WEL-04-F-Q 1998-Oct	CMW-1 2004-Aug	CMW-1-F 2004-Aug
VOCs										NA	NA
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,1,2,2-Tetrachloroethane	NA	U	NA	NA	NA	U	U	NA	NA	U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,2-Dibromoethane (Ethylene dibromi	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,2-Dichlorobenzene	NA	U	NA	NA	NA	U	U	NA	NA	U	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
1,4-Dichlorobenzene	NA	U	NA	NA	NA	U	U	NA	NA	U	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Chlorobenzene	NA	U	NA	NA	NA	U	U	NA	NA	U	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.67 J	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Fluorotrichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Isopropylbenzene	NA	U	NA	NA	NA	U	U	NA	NA	U	NA
Methyl acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	WEL-03-F 1998-Oct	WEL-03 2005-Jun	WEL-03-F 2005-Jun	WEL-03 2005-Jul	WEL-03-F 2005-Jul	WEL-04 1998-Oct	WEL-04-Q 1998-Oct	WEL-04-F 1998-Oct	WEL-04-F-Q 1998-Oct	CMW-1 2004-Aug	CMW-1-F 2004-Aug
VOCs (continued)											
Methyl bromide	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Methylcyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
Methylene chloride (Dichloromethane)	NA	U	NA	NA	NA	U	U	NA	NA	U	NA
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Tetrachloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	UJ	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Trichloroethylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CMW-2 2004-Aug	CMW-2-F 2004-Aug	CMW-3 2004-Aug	CMW-3-Q 2004-Aug	CMW-3-F 2004-Aug	CMW-3-F-Q 2004-Aug
Field Parameters						
Field turbidity (NTU)	-10	N/A	-9	N/A	N/A	N/A
Inorganics						
Alkalinity	NA	NA	NA	NA	NA	NA
Cyanide	U	NA	U	U	NA	NA
Nitrate-N	NA	NA	NA	NA	NA	NA
Nitrogen, Kjeldahl	NA	NA	NA	NA	NA	NA
Sulfate	NA	NA	NA	NA	NA	NA
Sulfide	NA	NA	NA	NA	NA	NA
Metals						
Aluminum	65 J	NA	240	210	NA	NA
Antimony	U	NA	U	U	NA	NA
Arsenic	U	NA	U	U	NA	NA
Barium	20	NA	42	41	NA	NA
Beryllium	U	NA	U	U	NA	NA
Cadmium	U	NA	U	U	NA	NA
Calcium	24000	NA	29000	29000	NA	NA
Chromium	U	NA	U	U	NA	NA
Cobalt	5.5 J	NA	3.2 J	3.1 J	NA	NA
Copper	0.31 J	NA	2.4 J	2.5 J	NA	NA
Ferrous Iron	NA	NA	NA	NA	NA	NA
Iron	58	NA	190	150	NA	NA
Lead	U	NA	3.1 J	U	NA	NA
Magnesium	4500	NA	11000	11000	NA	NA
Manganese	250	NA	330	330	NA	NA
Mercury	U	NA	U	U	NA	NA
Nickel	2.1 J	NA	3.5 J	4.7 J	NA	NA
Phosphorus	NA	NA	NA	NA	NA	NA
Potassium	2600	NA	16000	16000	NA	NA
Selenium	U	NA	U	U	NA	NA
Silver	U	NA	U	U	NA	NA
Sodium	6800	NA	19000	19000	NA	NA
Thallium	U	NA	5 J	U	NA	NA
Vanadium	U	NA	U	U	NA	NA
Zinc	3.5 J	NA	22	23	NA	NA

Notes:
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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CMW-2 2004-Aug	CMW-2-F 2004-Aug	CMW-3 2004-Aug	CMW-3-Q 2004-Aug	CMW-3-F 2004-Aug	CMW-3-F-Q 2004-Aug
Other						
Phenolics	NA	NA	NA	NA	NA	NA
Standard Plate Count	NA	NA	NA	NA	NA	NA
Total dissolved solids	NA	NA	NA	NA	NA	NA
Total organic carbon	NA	NA	NA	NA	NA	NA
Total organic halides	NA	NA	NA	NA	NA	NA
Total suspended solids	NA	NA	NA	NA	NA	NA
PCBs, Aroclor Specific						
Aroclor 1016	U	UJ	U	U	U	U
Aroclor 1221	U	UJ	U	U	U	U
Aroclor 1232	U	UJ	U	U	U	U
Aroclor 1242	U	UJ	U	U	U	U
Aroclor 1248	U	U	U	U	U	U
Aroclor 1254	U	U	U	U	U	U
Aroclor 1260	U	U	U	U	U	U
Aroclor 1268	U	U	U	U	U	U
PCBs, Totals	U	UJ	U	U	U	U
Pesticides						
4,4'-DDD	U	NA	U	U	NA	NA
4,4'-DDE	U	NA	U	U	NA	NA
4,4'-DDT	U	NA	U	U	NA	NA
Aldrin	U	NA	U	U	NA	NA
alpha-BHC	U	NA	U	U	NA	NA
alpha-Chlordane	U	NA	U	U	NA	NA
beta-BHC	U	NA	U	U	NA	NA
delta-BHC	U	NA	U	U	NA	NA
Dieldrin	U	NA	U	U	NA	NA
Endosulfan I	U	NA	U	U	NA	NA
Endosulfan II	U	NA	U	U	NA	NA
Endosulfan sulfate	U	NA	U	U	NA	NA
Endrin	U	NA	U	U	NA	NA
Endrin aldehyde	U	NA	U	U	NA	NA
Endrin ketone	U	NA	U	U	NA	NA
gamma-BHC	U	NA	U	U	NA	NA
gamma-Chlordane	NA	NA	NA	NA	NA	NA
Heptachlor	U	NA	U	U	NA	NA
Heptachlor epoxide	U	NA	U	U	NA	NA

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3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CMW-2 2004-Aug	CMW-2-F 2004-Aug	CMW-3 2004-Aug	CMW-3-Q 2004-Aug	CMW-3-F 2004-Aug	CMW-3-F-Q 2004-Aug
Pesticides (continued)						
Methoxychlor	U	NA	U	U	NA	NA
Methyl parathion	U	NA	U	U	NA	NA
Parathion	U	NA	U	U	NA	NA
Sulfotepp	U	NA	U	U	NA	NA
Toxaphene	U	NA	U	U	NA	NA
SVOCs						
1,1'-Biphenyl	U	NA	U	U	NA	NA
2,4,5-Trichlorophenol	U	NA	U	U	NA	NA
2,4,6-Trichlorophenol	U	NA	U	U	NA	NA
2,4-Dichlorophenol	U	NA	U	U	NA	NA
2,4-Dimethylphenol	U	NA	U	U	NA	NA
2,4-Dinitrophenol	U	NA	U	U	NA	NA
2,4-Dinitrotoluene	U	NA	U	U	NA	NA
2,6-Dinitrotoluene	U	NA	U	U	NA	NA
2-Chloronaphthalene	U	NA	U	U	NA	NA
2-Chlorophenol	U	NA	U	U	NA	NA
2-Methylnaphthalene	U	NA	U	U	NA	NA
2-Methylphenol	U	NA	U	U	NA	NA
2-Nitroaniline	U	NA	U	U	NA	NA
2-Nitrophenol	U	NA	U	U	NA	NA
3,3'-Dichlorobenzidine	U	NA	UJ	U	NA	NA
3-Methylphenol/4-Methyphenol (m&p-(	U	NA	U	U	NA	NA
3-Nitroaniline	U	NA	U	U	NA	NA
4,6-Dinitro-2-methylphenol	U	NA	U	U	NA	NA
4-Bromophenylphenyl ether	U	NA	U	U	NA	NA
4-Chloro-3-methylphenol	U	NA	U	U	NA	NA
4-Chloroaniline	U	NA	U	U	NA	NA
4-Chlorophenylphenyl ether	U	NA	U	U	NA	NA
4-Nitroaniline	U	NA	U	U	NA	NA
4-Nitrophenol	U	NA	U	U	NA	NA
Acenaphthene	U	NA	U	U	NA	NA
Acenaphthylene	U	NA	U	U	NA	NA
Acetophenone	U	NA	UJ	U	NA	NA
Anthracene	U	NA	U	U	NA	NA
Atrazine	U	NA	U	U	NA	NA
Benzaldehyde	U	NA	UJ	U	NA	NA
Benzo(a)anthracene	U	NA	U	U	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CMW-2 2004-Aug	CMW-2-F 2004-Aug	CMW-3 2004-Aug	CMW-3-Q 2004-Aug	CMW-3-F 2004-Aug	CMW-3-F-Q 2004-Aug
SVOCs (continued)						
Benzo(a)pyrene	U	NA	U	U	NA	NA
Benzo(b)fluoranthene	U	NA	U	U	NA	NA
Benzo(g,h,i)perylene	U	NA	U	U	NA	NA
Benzo(k)fluoranthene	U	NA	U	U	NA	NA
bis(2-Chloroethoxy) methane	U	NA	U	U	NA	NA
bis(2-Chloroethyl) ether	U	NA	U	U	NA	NA
bis(2-Chloroisopropyl) ether	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	U	NA	U	U	NA	NA
Butyl benzyl phthalate	U	NA	U	U	NA	NA
Caprolactam	U	NA	UJ	U	NA	NA
Carbazole	U	NA	U	U	NA	NA
Chrysene	U	NA	U	U	NA	NA
Dibenz(a,h)anthracene	U	NA	U	U	NA	NA
Dibenzofuran	U	NA	U	U	NA	NA
Diethyl phthalate	U	NA	U	U	NA	NA
Dimethyl phthalate	U	NA	U	U	NA	NA
Di-n-butylphthalate	U	NA	U	U	NA	NA
Di-n-octylphthalate	U	NA	U	U	NA	NA
Fluoranthene	U	NA	U	U	NA	NA
Fluorene	U	NA	U	U	NA	NA
Hexachlorobenzene	U	NA	U	U	NA	NA
Hexachlorobutadiene	U	NA	U	U	NA	NA
Hexachlorocyclopentadiene	U	NA	U	U	NA	NA
Hexachloroethane	U	NA	U	U	NA	NA
Indeno(1,2,3-cd)pyrene	U	NA	U	U	NA	NA
Isophorone	U	NA	U	U	NA	NA
Naphthalene	U	NA	U	U	NA	NA
Nitrobenzene	U	NA	U	U	NA	NA
N-Nitroso-di-n-propylamine	U	NA	U	U	NA	NA
N-Nitrosodiphenylamine	U	NA	U	U	NA	NA
O,O,O-Triethylphosphorothioate	U	NA	U	U	NA	NA
Pentachlorophenol	U	NA	U	U	NA	NA
Phenanthrene	U	NA	U	U	NA	NA
Phenol	U	NA	U	U	NA	NA
Pyrene	U	NA	U	U	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CMW-2 2004-Aug	CMW-2-F 2004-Aug	CMW-3 2004-Aug	CMW-3-Q 2004-Aug	CMW-3-F 2004-Aug	CMW-3-F-Q 2004-Aug
VOCs	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	U	NA	U	U	NA	NA
1,1,2,2-Tetrachloroethane	U	NA	U	U	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	U	NA	U	U	NA	NA
1,1,2-Trichloroethane	U	NA	U	U	NA	NA
1,1-Dichloroethane	U	NA	U	U	NA	NA
1,1-Dichloroethene	U	NA	U	U	NA	NA
1,2,4-Trichlorobenzene	UJ	NA	UJ	UJ	NA	NA
1,2-Dibromo-3-chloropropane	U	NA	U	U	NA	NA
1,2-Dibromoethane (Ethylene dibromi	U	NA	U	U	NA	NA
1,2-Dichlorobenzene	U	NA	U	U	NA	NA
1,2-Dichloroethane	U	NA	U	U	NA	NA
1,2-Dichloropropane	U	NA	U	U	NA	NA
1,3-Dichlorobenzene	U	NA	U	U	NA	NA
1,4-Dichlorobenzene	U	NA	U	U	NA	NA
2-Butanone	U	NA	U	U	NA	NA
2-Hexanone	U	NA	U	U	NA	NA
4-Methyl-2-pentanone	U	NA	U	U	NA	NA
Acetone	U	NA	U	U	NA	NA
Benzene	U	NA	U	U	NA	NA
Bromochloromethane	U	NA	U	U	NA	NA
Bromodichloromethane	U	NA	U	U	NA	NA
Bromoform	U	NA	U	U	NA	NA
Carbon disulfide	U	NA	U	U	NA	NA
Carbon tetrachloride	U	NA	U	U	NA	NA
Chlorobenzene	U	NA	U	U	NA	NA
Chloroethane	U	NA	U	U	NA	NA
Chloroform	U	NA	U	U	NA	NA
cis-1,2-Dichloroethene	U	NA	U	U	NA	NA
cis-1,3-Dichloropropene	U	NA	U	U	NA	NA
Cyclohexane	U	NA	U	U	NA	NA
Dibromochloromethane	U	NA	U	U	NA	NA
Dichlorodifluoromethane	U	NA	U	U	NA	NA
Ethylbenzene	U	NA	U	U	NA	NA
Fluorotrichloromethane	U	NA	U	U	NA	NA
Isopropylbenzene	U	NA	U	U	NA	NA
Methyl acetate	U	NA	U	U	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-4
Groundwater Sample Results

Parameter	CMW-2 2004-Aug	CMW-2-F 2004-Aug	CMW-3 2004-Aug	CMW-3-Q 2004-Aug	CMW-3-F 2004-Aug	CMW-3-F-Q 2004-Aug
VOCs (continued)						
Methyl bromide	UJ	NA	UJ	UJ	NA	NA
Methyl chloride	U	NA	U	U	NA	NA
Methyl tert-butyl ether	U	NA	0.35 J	0.4 J	NA	NA
Methylcyclohexane	UJ	NA	UJ	UJ	NA	NA
Methylene chloride (Dichloromethane)	U	NA	U	U	NA	NA
Styrene	U	NA	U	U	NA	NA
Tetrachloroethylene	4.9 J	NA	UJ	UJ	NA	NA
Toluene	U	NA	U	U	NA	NA
trans-1,2-Dichloroethene	U	NA	U	U	NA	NA
trans-1,3-Dichloropropene	U	NA	U	U	NA	NA
Trichloroethylene	U	NA	U	U	NA	NA
Vinyl chloride	U	NA	U	U	NA	NA
Xylenes (total)	U	NA	U	U	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated; F=Filtered; Q=Duplicate; N/A=Not Applicable
4) Filtered samples collected using 0.1 micrometer filter.

Table 4-5
Summary of EPA Requested Results - April 2006

Parameter Monitoring	Unit	OWR-15D (4/12/06)	OWR-15D-F (4/12/06)	OW-16A[1] (4/12/06)	OW-16A-F (4/12/06)	SBP-03 (4/13/06)	OW-8A[1] (4/13/06)	OW-8A-F (4/13/06)	OW-21A[1] (4/13/06)	OW-21A-F (4/13/06)
PCB-1016	µg/L	<0.98 (0.11)	<0.96 (0.11)	<4.7 (0.52)	<0.95 (0.10)	<0.96 (0.11)	<0.94 (0.10)	<0.96 (0.11)	<47 (5.2)	<4.7 (0.52)
PCB-1221	µg/L	8.4 J (0.49)	<1.9 (0.48)	77 J (2.4)	<1.9 (0.48)	<1.9 (0.48)	7.3 J (0.47)	<1.9 (0.48)	<94 (24)	<9.4 (2.4)
PCB-1232	µg/L	<0.98 (0.18)	<0.96 (0.17)	<4.7 (0.85)	<0.95 (0.17)	<0.96 (0.17)	<0.94 (0.17)	<0.96 (0.17)	<47 (8.5)	<4.7 (0.85)
PCB-1242	µg/L	<0.98 (0.14)	<0.96 (0.13)	<4.7 (0.66)	<0.95 (0.13)	<0.96 (0.13)	<0.94 (0.13)	<0.96 (0.13)	<47 (6.6)	<4.7 (0.66)
PCB-1248	µg/L	<0.98 (0.11)	<0.96 (0.11)	63 (0.52)	<0.95 (0.10)	<0.96 (0.11)	3.8 (0.10)	<0.96 (0.11)	270 (5.2)	<4.7 (0.52)
PCB-1254	µg/L	<0.98 (0.20)	<0.96 (0.19)	<4.7 (0.94)	<0.95 (0.19)	<0.96 (0.19)	<0.94 (0.19)	<0.96 (0.19)	<47 (9.4)	<4.7 (0.94)
PCB-1260	µg/L	<0.98 (0.11)	<0.96 (0.11)	<4.7 (0.52)	<0.95 (0.10)	<0.96 (0.11)	0.52 J (0.10)	<0.96 (0.11)	<47 (5.2)	<4.7 (0.52)
Total PCBs	µg/L	8.4 J	< 1.9	140 J	< 1.9	< 1.9	11.6 J	< 1.9	270	< 9.4

Notes:
F = Sample filtered with 1.0 micron filter.
[1] = Samples collected as part of RCRA program.
( ) = Method Detection Limits shown in brackets
J = Estimated Value

TABLE 4-6
Bedrock Analytical Results - November 2006

EPA Method	Parameter Monitoring	Unit	T-05 (11/1/06)	T-05F (11/1/06)	T-06 (11/1/06)	DUP-01 (T-06) (11/1/06)	T-06F (11/1/06)	DUP-01F (T-06F) (11/1/06)	EB-01 (11/1/06)
Field Parameters	Oxygen, Dissolved (Field)	mg/l	0.18	0.18	0.27	0.27	0.27	0.27	NA
	Ph (Field)	S.U.	6.77	6.77	7.26	7.26	7.26	7.26	NA
	Specific Conductance (Field)	umhos/cm	1427	1427	807	807	807	807	NA
	Turbidity (Field)	NTU	6.25	6.25	8.86	8.86	8.86	8.86	NA
	Water Temperature in deg Celsius	Deg C	18.95	19.95	19.61	19.61	19.61	19.61	NA
	ORP	mV	-273.4	-273.4	-254.2	-254.2	-254.2	-254.2	NA
	Color	NA	Clear	Clear	Clear	Clear	Clear	Clear	NA
	Purge Volume	Gal	7.6	7.6	15.5	15.5	15.5	15.5	NA
EPA Method 8081A 8082	PCB-1016	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	PCB-1221	µg/L	2.9	<0.51	3.2	3.1	1.3	1.2	<0.56
	PCB-1232	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	PCB-1242	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	PCB-1248	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	PCB-1254	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	PCB-1260	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	PCB-1268	µg/L	<0.50	<0.51	<0.50	<0.50	<0.50	<0.50	<0.56
	Total PCBs by EPA 8081A 8082	µg/L	2.9	<0.51	3.2	3.1	1.3	1.2	<0.56
EPA Method 680	Monchlorobiphenyl	µg/L	1.8 J	1.2 J	2.0 J	2.3 J	0.86 J	0.76 J	<0.0096
	Dichlorobiphenyl	µg/L	0.38	0.19	0.83	0.92	0.19	0.17	<0.012
	Trichlorobiphenyl	µg/L	<0.012	<0.012	0.13	0.15	<0.012	<0.012	<0.012
	Tetrachlorobiphenyl	µg/L	<0.022	<0.023	<0.023	<0.023	<0.023	<0.023	<0.022
	Pentachlorobiphenyl	µg/L	<0.025	<0.026	<0.026	<0.027	<0.027	<0.027	<0.025
	Hexachlorobiphenyl	µg/L	<0.023	<0.024	<0.024	<0.024	<0.024	<0.024	<0.023
	Heptachlorobiphenyl	µg/L	<0.036	<0.037	<0.038	<0.038	<0.038	<0.038	<0.036
	Octacholobiphenyl	µg/L	<0.035	<0.036	<0.036	<0.037	<0.037	<0.037	<0.035
	Nonachlorobiphenyl	µg/L	<0.060	<0.062	<0.062	<0.063	<0.063	<0.063	<0.060
	DCB Decachlorobiphenyl	µg/L	<0.082	<0.084	<0.084	<0.086	<0.086	<0.086	<0.081
	Total PCBs by EPA 680	µg/L	2.2	1.4	3.0	3.4	1.2	0.9	<0.081

Notes:
NA = Not Applicable.
MDL = Method Detection Limit.
F = Sample filtered with 1.0 micron filter.
J = Estimated Value. The LCS recovery for monochlorobiphenyl was greater than the upper control limit established by the laboratory.
< = less than the concentrations indicated.
µg/L = micrograms per liter.
mg/L = milligrams per liter.
NTU = Nephelometric Turbidity Units.
µmhoes/cm = micromhoes per centimeter.
Gal = Gallons.
mV = Millivolts.
S.U. = Standard Units.

TABLE 4-7
PCB Congener, Dioxin, and Furan Groundwater Sampling Results

Analyte	OW-10 ug/L		OWR-1S ug/L		T-1 ug/L		T-2 ug/L		T-3 ug/L		T4 ug/L		MW-14 ug/L		OW-9 ug/L		OW-8A ug/L		OW-16A ug/L	
WHO Congeners																				
PCB-77	1.49E-03	J	1.47E-04	J	1.31E-05	J	5.80E-05	J	9.61E-05	J	1.32E-01	J	1.44E-05	UJ	1.98E-05	J	2.45E-03	J	2.71E-02	J
PCB-81	7.21E-05	J	5.45E-06	J	2.16E-06	UJ	4.27E-06	UJ	4.94E-06	UJ	6.24E-03	J	1.44E-05	UJ	1.11E-06	UJ	2.82E-03	J	1.29E-03	J
PCB-105	3.71E-03	J	4.67E-04	J	3.26E-05	J	1.69E-04	J	2.74E-04	J	1.78E-01	J	1.28E-05	UJ	1.28E-04	J	2.48E-02	J	2.26E-01	J
PCB-114	1.82E-04	J	2.25E-05	J	1.86E-06	UJ	1.15E-05	J	1.34E-05	UJ	1.22E-02	J	1.23E-05	UJ	5.88E-06	J	2.09E-03	J	1.20E-02	J
PCB-118	7.80E-03	J	7.14E-04	J	4.81E-05	J	2.63E-04	J	4.53E-04	J	2.53E-01	J	1.24E-05	UJ	2.91E-04	J	7.01E-02	J	5.46E-01	J
PCB-123	1.71E-04	J	3.67E-05	J	1.88E-06	UJ	2.78E-06	UJ	1.62E-05	J	7.69E-03	J	1.29E-05	UJ	1.21E-05	J	1.85E-03	J	7.18E-03	J
PCB-126	1.81E-05	J	1.75E-06	UJ	2.28E-06	UJ	3.34E-06	UJ	4.15E-06	UJ	6.64E-04	J	1.43E-05	UJ	1.79E-06	J	8.36E-05	J	2.88E-04	J
PCB-156/157	6.62E-04	J	3.63E-05	J	3.78E-06	J	1.17E-05	J	8.33E-06	J	4.70E-03	J	1.74E-05	UJ	4.15E-05	J	5.94E-03	J	3.10E-02	J
PCB-167	2.77E-04	J	2.21E-05	J	1.76E-06	UJ	3.95E-06	UJ	3.75E-06	UJ	1.31E-03	J	1.26E-05	UJ	1.81E-05	J	1.97E-03	J	8.42E-03	J
PCB-169	0.00000932	UJ	1.47E-06	UJ	2.03E-06	UJ	2.21E-06	UJ	4.62E-06	UJ	3.11E-05	J	1.48E-05	UJ	1.17E-06	UJ	0.00E+00	UJ	7.08E-05	J
PCB-189	6.42E-05	J	1.66E-06	UJ	2.20E-06	UJ	3.11E-06	UJ	4.16E-06	UJ	1.08E-04	J	1.37E-05	UJ	3.74E-06	J	2.37E-04	J	5.15E-04	J
PCB-209	9.61E-04	J	5.87E-05	J	2.84E-05	J	2.36E-04	J	3.06E-05	J	1.04E-04	J	7.21E-05	UJ	1.29E-03	J	1.92E-03	J	8.03E-04	J
TEQ Congeners	3.71E-06	J	2.62E-07	J	1.36E-07	J	2.39E-07	J	3.26E-07	J	1.33E-04	J	8.03E-07	J	2.54E-07	J	2.29E-05	J	1.16E-04	J
Total Homolog Groups																				
Total Mono-CBs	4.47E-03	J	7.29E-03	J	1.93E-03	J	6.55E-03	J	4.08E-03	J	4.17E+01	J	1.78E-04	J	3.20E-02	J	1.62E+00	J	2.90E+02	J
Total Di-CBs	1.22E+00	J	1.23E-02	J	1.62E-03	J	8.23E-03	J	6.68E-03	J	2.36E+01	J	8.54E-05	J	6.38E-02	J	1.33E+01	J	1.37E+02	J
Total Tri-CBs	3.08E+00	J	1.41E-02	J	3.01E-03	J	4.85E-03	J	1.28E-02	J	3.06E+01	J	1.36E-04	J	7.36E-02	J	6.18E+00	J	2.89E+01	J
Total Tetra-CBs	1.91E+00	J	4.26E-02	J	4.20E-03	J	8.60E-03	J	4.21E-02	J	1.73E+01	J	2.15E-04	J	3.17E-02	J	4.70E+00	J	9.48E+00	J
Total Penta-CBs	2.80E-01	J	2.53E-02	J	8.92E-04	J	3.44E-03	J	1.38E-02	J	3.06E+00	J	1.02E-04	UJ	1.08E-02	J	2.37E+00	J	6.04E+00	J
Total Hexa-CBs	4.24E-02	J	5.82E-03	J	2.15E-04	J	6.83E-04	J	1.21E-03	J	2.43E-01	J	1.35E-05	UJ	3.17E-03	J	6.44E-01	J	1.27E+00	J
Total Hepta-CBs	2.17E-02	J	1.10E-03	J	4.91E-05	J	1.31E-04	J	9.57E-05	J	3.02E-02	J	1.18E-05	UJ	1.01E-03	J	1.24E-01	J	9.59E-02	J
Total Octa-CBs	1.08E-02	J	2.76E-04	J	3.66E-05	J	1.14E-04	J	4.08E-05	J	6.80E-03	J	1.28E-05	UJ	1.22E-03	J	3.79E-02	J	1.32E-02	J
Total Nona-CBs	4.52E-03	J	1.36E-04	J	3.91E-05	J	2.54E-04	J	1.48E-05	J	1.41E-03	J	7.12E-05	UJ	2.04E-03	J	1.33E-02	J	3.82E-03	J
PCB-209 (Deca-CB)	9.61E-04	J	5.87E-05	J	2.84E-05	J	2.36E-04	J	3.06E-05	J	1.04E-04	J	7.21E-05	UJ	1.29E-03	J	1.92E-03	J	8.03E-04	J
Total PCB Congeners	6.57E+00	J	1.09E-01	J	1.20E-02	J	3.31E-02	J	8.09E-02	J	1.17E+02	J	8.98E-04	J	2.21E-01	J	2.90E+01	J	4.73E+02	J
PCB-153	7.15E-03	J	1.00E-03	J	4.77E-05	J	1.45E-04	J	1.86E-04	J	3.26E-02	J	-	UJ	6.68E-04	J	9.17E-02	J	1.81E-01	J

Analyte	OW-10 ug/L		OWR-1S ug/L		T-1 ug/L		T-2 ug/L		T-3 ug/L		T4 ug/L		MW-14 ug/L		OW-9 ug/L		OW-8A ug/L		OW-16A ug/L	
2,3,7,8-TCDD	1.64E-06	U	1.29E-06	U	3.84E-06	U	1.43E-06	U	1.77E-06	U	6.24E-07	U	6.94E-07	U	1.20E-06)	U	6.27E-07	U	8.25E-07	U
1,2,3,7,8-PeCDD	2.00E-06	U	2.99E-06	U	4.79E-06	U	2.49E-06	U	2.29E-06	U	1.12E-06	U	1.05E-06	U	9.42E-07	U	1.13E-06	U	1.44E-06	U
1,2,3,4,7,8-HxCDD	3.20E-06	U	3.19E-06	U	6.15E-06	U	3.40E-06	U	2.25E-06	U	1.63E-06	U	2.14E-06	U	2.11E-06	U	1.35E-06	U	3.62E-06	U
1,2,3,6,7,8-HxCDD	2.94E-06	U	3.06E-06	U	6.16E-06	U	3.03E-06	U	2.13E-06	U	1.56E-06	U	2.03E-06	U	1.87E-06	U	1.25E-06	U	3.55E-06	U
1,2,3,7,8,9-HxCDD	3.86E-06	U	3.77E-06	U	6.60E-06	U	3.87E-06	U	2.46E-06	U	1.83E-06	U	2.33E-06	U	2.24E-06	U	1.46E-06	U	3.97E-06	U
1,2,3,4,6,7,8-HpCDD	6.70E-06	U	5.75E-06	U	7.58E-06	U	6.01E-06	U	4.66E-06	U	3.46E-06	U	3.60E-06	U	2.06E-06	U	2.63E-06	U	2.09E-06	U
OCDD	5.60E-05		6.71E-06	U	1.19E-05	U	7.72E-06	U	8.03E-06	U	2.77E-06	U	4.23E-06	U	3.42E-06	U	2.62E-05		7.51E-06	U
2,3,7,8-TCDF	1.60E-06	U	7.22E-07	U	2.44E-06	U	1.49E-06	U	1.02E-06	U	1.80E-06		6.04E-07	U	4.56E-07	U	2.64E-06		5.30E-06	
1,2,3,7,8-PeCDF	2.00E-06	U	1.62E-06	U	3.44E-06	U	2.09E-06	U	1.92E-06	U	1.36E-06	U	8.26E-07	U	9.41E-07	U	2.50E-06	U	2.50E-06	U
2,3,4,7,8-PeCDF	1.87E-06	U	1.67E-06	U	3.36E-06	U	2.13E-06	U	1.85E-06	U	4.76E-06		9.10E-07	U	9.67E-07	U	2.81E-06		4.97E-06	
1,2,3,4,7,8-HxCDF	1.44E-06	U	9.53E-07	U	1.34E-06	U	1.03E-06	U	6.63E-07	U	6.85E-07	U	9.01E-07	U	5.23E-07	U	2.50E-06	U	2.50E-06	U

Notes:
U = Below Detection Limit.
UJ = Quantitation Limit Estimated.
J = Estimated.
TEQ = Toxicity Equivalent.
TEQ calculated with ND=1/2DL and EMPC=EMPC.

TABLE 4-7
PCB Congener, Dioxin, and Furan Groundwater Sampling Results

Analyte	OW-10 ug/L		OWR-1S ug/L		T-1 ug/L		T-2 ug/L		T-3 ug/L		T4 ug/L		MW-14 ug/L		OW-9 ug/L		OW-8A ug/L		OW-16A ug/L	
1,2,3,6,7,8-HxCDF	1.32E-06	U	8.68E-07	U	1.22E-06	U	9.55E-07	U	6.03E-07	U	6.09E-07	U	7.99E-07	U	4.77E-07	U	6.97E-07	U	2.50E-06	U
2,3,4,6,7,8-HxCDF	1.34E-06	U	8.66E-07	U	1.34E-06	U	9.30E-07	U	6.76E-07	U	6.65E-07	U	8.43E-07	U	5.14E-07	U	7.37E-07	U	2.50E-06	U
1,2,3,7,8,9-HxCDF	1.95E-06	U	1.26E-06	U	1.87E-06	U	1.35E-06	U	8.99E-07	U	8.62E-07	U	1.14E-06	U	7.22E-07	U	1.06E-06	U	1.15E-06	U
1,2,3,4,6,7,8-HpCDF	2.78E-06	U	2.66E-06	U	2.81E-06	U	2.25E-06	U	2.18E-06	U	1.09E-06	U	8.83E-07	U	1.06E-06	U	8.98E-07	U	2.50E-06	U
1,2,3,4,7,8,9-HpCDF	4.13E-06	U	3.94E-06	U	4.42E-06	U	3.29E-06	U	3.30E-06	U	1.47E-06	U	1.15E-06	U	1.39E-06	U	1.24E-06	U	1.63E-06	U
OCDF	5.69E-06	U	6.32E-06	U	9.04E-06	U	3.79E-06	U	4.77E-06	U	6.23E-06	U	2.72E-06	U	2.42E-06	U	2.90E-06	U	1.64E-06	U
ITEF TEQ	2.85E-06	J	2.65E-06	UJ	5.48E-06	UJ	2.79E-06	UJ	2.56E-06	UJ	3.61E-06	J	1.43E-06	UJ	1.57E-06	UJ	2.83E-06	J	4.87E-06	J

Analyte	OW-10 ug/L		OWR-1S ug/L		T-1 ug/L		T-2 ug/L		T-3 ug/L		T4 ug/L		MW-14 ug/L		OW-9 ug/L		OW-8A ug/L		OW-16A ug/L	
Other TCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other PeCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other HxCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other HpCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other TCDF	0	U	0	U	0	U	0	U	0	U	6.77E-05		0	U	0	U	1.62E-05		9.33E-05	
Other PeCDF	0	U	0	U	0	U	0	U	0	U	1.54E-06		0	U	0	U	7.83E-06		1.46E-05	
Other HxCDF	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	1.35E-06		1.80E-06	
Other HpCDF	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	2.62E-06		0	U
Other TCDD	0	U	0	U	0	U	0	U	0	U	2.22E-06		0	U	0	U	0	U	0	U
Other PeCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other HxCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other HpCDD	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
Other TCDF	0	U	0	U	0	U	0	U	0	U	7.03E-05		0	U	8.63E-07		3.12E-05		1.03E-04	
Other PeCDF	0	U	0	U	0	U	0	U	0	U	7.87E-06		0	U	0	U	1.13E-05		1.75E-05	
Other HxCDF	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	2.58E-06		2.59E-06	
Other HpCDF	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	2.62E-06		0	

Analyte	OW-10 ug/L		OWR-1S ug/L		T-1 ug/L		T-2 ug/L		T-3 ug/L		T4 ug/L		MW-14 ug/L		OW-9 ug/L		OW-8A ug/L		OW-16A ug/L	
Totals																				
TCDDs	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
PeCDDs	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
HxCDDs	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
HpCDDs	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
OCDD	5.60E-05		0	U	0	U	0	U	0	U	0	U	0	U	0	U	2.62E-05		0	U
TCDFs	0	U	0	U	0	U	0	U	0	U	6.95E-05		0	U	0	U	1.88E-05		9.86E-05	
PeCDFs	0	U	0	U	0	U	0	U	0	U	6.30E-06		0	U	0	U	1.06E-05		2.09E-05	
HxCDFs	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	1.35E-06		4.81E-06	
HpCDFs	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	2.62E-06		1.42E-06	
OCDF	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U

Notes:
U = Below Detection Limit.
UJ = Quantitation Limit Estimated.
J = Estimated.
TEQ = Toxicity Equivalent.
TEQ calculated with ND=1/2DL and EMPC=EMPC.

TABLE 4-8
Construction Details for Groundwater Monitoring Wells and Piezometers

Well #	Northing	Easting	Date Installed	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Stick up (ft)	Approximate Well Depth (ft BGS)	Approximate Top of Screen (ft BGS)	Approximate Bottom of Screen (ft BGS)	Total Well Depth (to Bottom of Screen (ft BTOC)	Screened Interval Length (ft)	Top of Screen (ft MSL)	Bottom of Screen (ft MSL)	TYPE
BR-01 [2]	1144532.00	650300.00	September 1987	892.60	897.46	4.9	311	291	311	315.9	20	601.60	581.60	Bedrock
BR-02 [2]	1144543.00	649841.00	September 1987	861.60	865.22	3.6	181	161	181	184.6	20	700.60	680.60	Bedrock
BR-03 [2]	1145042.00	649834.00	September 1987	825.70	827.58	1.9	258	238	258	259.9	20	587.70	567.70	Bedrock
BR-04	1145636.18	649592.91	December 1987	788.74	790.74	2.5	220	200	220	222.5	20	588.74	568.74	Bedrock
BR-05 [1]	1146159.42	648852.23	February 1988	763.30	764.10	0.8	149	129	149	149.8	20	634.30	614.30	Bedrock
CB-08 [2]	1145411.00	650082.00	October 1980	803.80	804.77	1.0	26	17	22	23.0	5	786.80	781.80	Abandoned
CB-08-C1 [2]	1145406.00	650077.00	October 1980	803.90	805.77	1.9	41	36	41	42.9	5	767.90	762.90	Abandoned
CB-09 [2]	1144961.00	650152.00	October 1980	837.10	839.05	1.9	42	37	42	43.9	5	800.10	795.10	Abandoned
CB-10 [2]	1145336.00	650084.00	October 1980	808.00	809.85	1.9	34	16	21	22.9	5	792.00	787.00	Abandoned
CB-26 [2]	1145250.00	650128.00	October 1980	816.40	818.37	2.0	16	11	16	18.0	5	805.40	800.40	Abandoned
CB-33 [2]	1145385.00	650082.00	October 1980	805.00	807.08	2.1	45	40	45	47.1	5	765.00	760.00	Abandoned
CB-53 [2]	1145545.60	650254.24	May 1985	798.22	800.62	2.4	50	44	49	51.4	5	754.22	749.22	Abandoned
CB-54 [2]	1145558.00	650189.00	May 1985	794.70	796.89	2.2	30	24	29	31.2	5	770.70	765.70	Abandoned
CB-55 [1,2]	1145528.40	650115.21	May 1985	795.15	795.48	0.3	50	40	45	45.3	5	755.15	750.15	Abandoned
CB-55-SH [2]	1145521.00	650114.00	May 1985	794.80	796.75	2.0	24	19	24	26.0	5	775.80	770.80	Abandoned
CB-85 [2]	1147479.00	649972.00	Pre-1995 (estimated)	733.80	736.37	2.6	40	35	40	42.6	5	698.80	693.80	Residuum
DMW-PROD	11486979.07	649524.63	Pre-1995 (estimated)	NS	NS	NA	958	100	958	NA	858	NS	NS	Abandoned
DOP-01	1147424.61	648964.03	October 1992	743.80	747.49	3.7	300	265	290	293.7	25	478.80	453.80	Residuum
DW-01	1147158.05	648895.87	September 1991	751.08	753.88	2.8	96	83.25	93.25	96.1	10	667.83	657.83	Interceptor
IW-01 [2]	1145164.00	650109.00	Pre-1995 (estimated)	820.5	821.18	0.7	26	11	21	21.7	10	809.5	799.50	Interceptor
IW-02 [2]	1145271.00	650099.00	Pre-1995 (estimated)	813.5	815.27	1.8	25	10	20	21.8	10	803.5	793.50	Interceptor
IW-03 [2]	1145371.00	650104.00	Pre-1995 (estimated)	806.6	810.59	4.0	25	10	20	24.0	10	796.6	786.60	Interceptor
IW-04 [2]	1145473.00	650104.00	Pre-1995 (estimated)	798.9	799.88	1.0	25	10	20	21.0	10	788.9	778.90	Interceptor
IW-05	1145611.76	650319.73	Pre-1995 (estimated)	803.07	805.46	2.4	68	53	63	65.4	10	750.07	740.07	Interceptor
IW-06	1145677.55	650459.11	Pre-1995 (estimated)	800.07	803.84	3.8	68	25	68	71.8	43	775.07	732.07	Interceptor
IW-07	1145799.00	650734.10	Pre-1995 (estimated)	793.35	794.63	1.3	40	1	40	41.3	39	792.35	753.35	Interceptor
IW-08	1145764.36	650653.13	Pre-1995 (estimated)	796.77	798.02	1.3	39.5	1	39.5	40.8	38.5	795.77	757.27	Interceptor
IW-09	1145737.25	650589.28	Pre-1995 (estimated)	799.67	801.03	1.4	50	1	50	51.4	49	798.67	749.67	Interceptor
IW-10	1145709.99	650528.28	Pre-1995 (estimated)	800.67	801.93	1.3	68	1	68	69.3	67	799.67	732.67	Interceptor
IW-11	1145644.22	650392.38	Pre-1995 (estimated)	803.42	804.62	1.2	68	1	68	69.2	67	802.42	735.42	Interceptor
IW-12	1145566.11	650225.61	Pre-1995 (estimated)	796.49	797.86	1.4	50	1	50	51.4	49	795.49	746.49	Interceptor
IW-13	1145529.73	650083.91	Pre-1995 (estimated)	794.56	795.74	1.2	50	1	50	51.2	49	793.56	744.56	Interceptor
IW-14	1146387.68	650322.26	Pre-1995 (estimated)	753.65	754.95	1.3	46	1	46	47.3	45	752.65	707.65	Abandoned
IW-14A	1146543.05	650289.77	February 2003	748.00	746.70	-1.3	49.4	29.4	49.4	48.1	20	718.60	698.60	Interceptor
IW-15	1146349.39	650245.49	Pre-1995 (estimated)	755.45	756.73	1.3	45	1	45	46.3	44	754.45	710.45	Interceptor
IW-16	1147359.73	649187.53	Pre-1995 (estimated)	746.14	746.82	0.7	50	1	50	50.7	49	745.14	696.14	Interceptor
IW-17	1147321.33	649123.03	Pre-1995 (estimated)	745.86	746.65	0.8	50	1	50	50.8	49	744.86	695.86	Interceptor
IW-18	1147284.01	649058.39	Pre-1995 (estimated)	747.9	748.63	0.7	50	1	50	50.7	49	746.9	697.90	Interceptor
IW-19	1147246.11	648991.94	Pre-1995 (estimated)	748.63	749.31	0.7	50	1	50	50.7	49	747.63	698.63	Interceptor
IW-20	1147216.86	648942.43	Pre-1995 (estimated)	750.02	750.70	0.7	50	1	50	50.7	49	749.02	700.02	Interceptor
IW-21	1147170.58	648862.80	Pre-1995 (estimated)	751.8	752.45	0.7	50	1	50	50.7	49	750.8	701.80	Interceptor
IW-22	1147403.35	649253.88	February 2003	744.38	743.23	-1.1	39.9	14.9	39.9	38.8	25	729.48	704.48	Interceptor
IW-23	1147303.90	649089.55	January 2003	746.15	745.20	-0.9	50	25	50	49.1	25	721.15	696.15	Interceptor
IW-24	1147269.88	649031.47	January 2003	747.33	745.86	-1.5	40	15	40	38.5	25	732.33	707.33	Interceptor
IW-25	1147121.03	648792.11	February 2003	753.50	751.96	-1.5	40	15	40	38.5	25	738.50	713.50	Interceptor
MW-01	1145104.14	650901.37	Pre-1995 (estimated)	NS	868.72	NA	62	47 and 57	52 and 62	NA	5 and 5	NS	NS	Residuum
MW-01A	1145095.00	651231.00	May 1985	NS	884.49	NA	56	51	56	NA	5	NS	NS	Residuum
MW-01B	1145116.72	651277.30	October 1985	880.09	881.59	1.5	62.5	57.5	62.5	64.0	5	822.59	817.59	Residuum
MW-02 [1]	1146152.48	651509.56	Pre-1995 (estimated)	774.63	777.05	2.4	43	38	43	45.4	5	736.63	731.63	Abandoned
MW-03 [1]	1145959.19	651106.36	Pre-1995 (estimated)	789.50	791.00	1.5	73	58 and 68	63 and 73	NA	5 and 5	NS	NS	Abandoned
MW-07	1147637.00	649173.00	Pre-1995 (estimated)	741.00	744.18	3.2	24	19	24	27.2	5	722.00	717.00	Residuum
MW-08	1147444.00	649026.00	Pre-1995 (estimated)	743.20	746.80	3.6	27	22	27	30.6	5	721.20	716.20	Residuum
MW-09 [1]	1147320.00	648809.00	Pre-1995 (estimated)	748.10	750.02	1.9	28	23	28	29.9	5	725.10	720.10	Abandoned

TABLE 4-8
Construction Details for Groundwater Monitoring Wells and Piezometers

Well #	Northing	Easting	Date Installed	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Stick up (ft)	Approximate Well Depth (ft BGS)	Approximate Top of Screen (ft BGS)	Approximate Bottom of Screen (ft BGS)	Total Well Depth (to Bottom of Screen (ft BTOC)	Screened Interval Length (ft)	Top of Screen (ft MSL)	Bottom of Screen (ft MSL)	TYPE
MW-09A	1147328.70	648784.60	February 2003	748.00	751.02	3.0	33.2	23	33	36.0	10	725.00	715.00	Residuum
MW-11	1146061.00	651309.00	May 1985	NS	783.74	NA	29	24	29	NA	5	NS	NS	Residuum
MW-11A	1146090.98	651328.20	October 1985	783.13	784.13	1.0	117	109	114		5	674.13	669.13	Bedrock
MW-12	1146004.00	651179.00	May 1985	NS	785.77	NA	28	23	28	NA	5	NS	NS	Residuum
MW-12A	1146032.60	651193.11	October 1985	783.69	785.69	2.0	124.5	105	110	112.0	5	678.69	673.69	Bedrock
MW-13	1145913.00	650962.00	May 1985	NS	782.24	NA	29	24	29	NA	5	NS	NS	Residuum
MW-13A	1145950.40	651010.06	October 1985	779.34	782.01	2.7	123.5	105	110	112.7	5	674.34	669.34	Bedrock
MW-14 (1)	1147227.00	648653.00	May 1985	749.14	751.3	2.2	24	19	24	26.2	5	730.14	725.14	Residuum
MW-15	1147084.00	648755.00	October 1985	752.52	756.19	3.7	27	19	24	27.7	5	733.52	728.52	Residuum
MW-16	1147135.97	648804.30	October 1985	752.62	755.70	3.1	68.5	58	68	71.1	10	694.62	684.62	Residuum
MW-20	1147142.00	648862.00	June 1986	NS	752.43	NA	24	19	24	NA	5	NS	NS	Abandoned
MW-20A	1147151.04	648900.78	May 1988	751.65	752.90	1.3	24	19	24	25.3	5	732.65	727.65	Residuum
MW-22	NA	NA	Pre-1995 (estimated)	NS	NS	NA	24	19	24	NA	5	NS	NS	Abandoned
OW-01 (2)	1145248.00	650002.00	Pre-1995 (estimated)	811.20	812.71	1.5	26	21	26	26.5	5	791.20	786.20	Residuum
OW-02 (2)	1145348.00	650023.00	May 1985	806.10	807.69	1.6	35	19	24	25.6	5	787.10	782.10	Residuum
OW-03 (2)	1145419.00	650031.00	May 1985	802.10	805.25	3.1	25	19	24	27.2	5	783.10	778.10	Residuum
OW-04 (2)	1145494.00	650041.00	May 1985	796.70	798.57	1.9	30	22	27	28.9	5	774.70	769.70	Residuum
OW-05 (2)	1146017.00	650148.00	Pre-1995 (estimated)	770.70	773.02	2.3	65	60	65	67.3	5	710.70	705.70	Residuum
OW-06 (2)	1146226.77	650659.00	May 1985	787.00	788.71	1.7	43	38	43	44.7	5	749.00	744.00	Abandoned
OW-06A	1146210.00	650663.00	March 1998	788.87	791.62	2.8	49	39	49	51.8	10	749.87	739.87	Residuum
OW-07 (2)	1146355.13	650587.56	May 1985	781.20	785.82	4.6	43	38	43	47.6	5	743.20	738.20	Residuum
OW-08	1146604.44	650304.69	May 1985	NA	NA	NA	24	19	24	NA	5	NA	NS	Abandoned
OW-08A	1146601.00	650298.00	March 1998	746.30	749.16	2.9	23	12.5	22.5	25.4	10	733.80	723.80	Residuum
OW-09	1146931.00	650471.00	Pre-1995 (estimated)	736.30	738.36	2.1	40	33	38	40.1	5	703.30	698.30	Residuum
OW-10	1147198.92	650297.70	October 1980	734.71	736.87	2.2	40	33	38	40.2	5	701.71	696.71	Residuum
OW-11 (2)	1145210.00	650158.00	October 1980	824.70	825.36	0.7	14	9	14	14.7	5	815.70	810.70	Residuum
OW-12 (2)	1145139.00	650192.00	October 1980	831.60	835.34	3.7	34.5	29.5	34.5	38.2	5	802.10	797.10	Residuum
OW-13 (2)	1145686.00	650472.00	October 1980	802.10	805.16	3.1	43	38	43	46.1	5	764.10	759.10	Residuum
OW-14 (2)	1145608.00	650229.00	October 1980	803.30	806.98	3.7	46	41	46	49.7	5	762.30	757.30	Residuum
OW-15 (2)	1146146.00	650268.00	December 1987	764.00	766.90	2.9	40	35	40	42.9	5	729.00	724.00	Residuum
OW-16 (2)	1145916.00	650209.00	December 1987	777.50	781.51	4.0	30	25	30	34.0	5	752.50	747.50	Residuum
OW-16A	1145907.00	650202.00	March 1998	777.60	779.74	2.1	33	23	33	35.1	10	754.60	744.60	Residuum
OW-17 (2)	1145606.00	650417.00	December 1987	810.30	812.29	2.0	40	35	40	42.0	5	775.30	770.30	Residuum
OW-18	1147233.23	648906.40	October 1985	747.52	750.47	3.0	27.5	22	27	30.0	5	725.52	720.52	Residuum
OW-19	1147262.06	648966.21	October 1985	745.80	748.72	2.9	25	19	24	26.9	5	726.80	721.80	Residuum
OW-20	1147295.14	649018.61	October 1985	744.80	747.62	2.8	23	15	20	22.8	5	729.80	724.80	Residuum
OW-21	1147523.72	649204.87	June 1986	739.10	742.83	3.7	36	26	36	39.7	10	713.10	703.10	Abandoned
OW-21A	1147546.72	649174.02	January 2003	741.90	744.46	2.6	35	25	35	37.6	10	716.90	706.90	Residuum
OW-22	1147474.08	649136.92	June 1986	741.90	745.57	3.7	34	24	34	37.7	10	717.90	707.90	Residuum
OW-23	1147323.02	649067.29	June 1986	744.40	747.53	3.1	23	18	23	26.1	5	726.40	721.40	Residuum
OW-24	1147353.36	649122.38	June 1986	743.50	746.15	2.6	29	24	29	31.7	5	719.50	714.50	Residuum
OW-25	1145442.89	649908.69	Pre-1995 (estimated)	797.71	800.21	2.5	35	30	35	37.5	5	767.71	762.71	Residuum
OWR-01D	1147697.00	649884.00	June 1998	737.50	739.59	2.1	65	55	65	67.1	10	682.50	672.50	Residuum
OWR-01S	1147706.00	649892.00	June 1998	736.60	738.89	2.3	35	25	35	37.3	10	711.60	701.60	Residuum
OWR-02D	1146850.00	648703.00	June 1998	754.70	756.99	2.3	110	98	108	110.3	10	656.70	646.70	Residuum
OWR-02S	1146844.00	648706.00	June 1998	754.90	757.46	2.6	35	25	35	37.6	10	729.90	719.90	Residuum
OWR-03D	1146478.00	649093.00	June 1998	757.50	759.76	2.3	65	55	65	67.3	10	702.50	692.50	Residuum
OWR-03S	1146468.00	649095.00	June 1998	758.30	760.48	2.2	35	25	35	37.2	10	733.30	723.30	Residuum
OWR-04D	1147481.00	649130.00	May 1998	741.90	746.03	4.1	80	70	80	84.1	10	671.90	661.90	Residuum
OWR-05D	1145694.00	650482.00	June 1998	802.40	804.93	2.5	68	58	68	70.5	10	744.40	734.40	Residuum
OWR-06D	1147190.00	650283.00	June 1998	734.50	736.79	2.3	65	55	65	67.3	10	679.50	669.50	Residuum
OWR-07D	1145807.00	648474.00	May 1998	772.10	774.49	2.4	65	55	65	67.4	10	717.10	707.10	Residuum
OWR-08S	1147145.00	648846.00	June 1998	752.90	755.17	2.3	35	25	35	37.3	10	727.90	717.90	Residuum
OWR-09S	1147319.00	651456.00	June 1998	750.70	753.09	2.4	50	40	50	52.4	10	710.70	700.70	Residuum

TABLE 4-8
Construction Details for Groundwater Monitoring Wells and Piezometers

Well #	Northing	Easting	Date Installed	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Stick up (ft)	Approximate Well Depth (ft BGS)	Approximate Top of Screen (ft BGS)	Approximate Bottom of Screen (ft BGS)	Total Well Depth (to Bottom of Screen (ft BTOC)	Screened Interval Length (ft)	Top of Screen (ft MSL)	Bottom of Screen (ft MSL)	TYPE
OWR-10	1146199.67	648296.77	January 2003	767.0	769.95	3.0	49.2	39.2	49.2	52.2	10	727.80	717.80	Residuum
OWR-11	1146857.44	650249.85	January 2003	742.3	745.16	2.9	35	25	35	37.9	10	717.30	707.30	Residuum
OWR-12	1146677.47	649328.39	January 2003	760.6	763.20	2.6	37	27	37	39.6	10	733.60	723.60	Residuum
OWR-13	1146480.77	649679.04	January 2003	766.8	769.45	2.7	36	26	36	38.7	10	740.80	730.80	Residuum
OWR-14D	1146505.05	649680.62	June 2005	779.61	782.1	2.5	81	71	81	83.5	10	708.61	698.61	Residuum
OWR-15D	1145940.54	650213.52	June 2005	778.94	781.4	2.5	64	54	64	66.5	10	724.94	714.94	Residuum
P-11-C	NA	NA	October 1980	NS	854.59	NA	75	70	75	NA	5	NS	NS	Abandoned
P-12-C	NA	NA	October 1980	NS	792.93	NA	40	35	40	NA	5	NS	NS	Abandoned
P-7-C	NA	NA	October 1980	NS	874.64	NA	70	65	70	NA	5	NS	NS	Abandoned
PZ-01 [1]	1147144.16	648840.91	April 1991	753.08	754.92	1.8	52	45	50	51.8	5	708.08	703.08	Abandoned
PZ-02 [1]	1147175.00	648893.30	April 1991	751.28	753.46	2.2	51	45	50	52.2	5	706.28	701.28	Abandoned
PZ-02A [1]	1147170.46	648888.48	September 1991	751.85	753.05	1.2	35	28	33	34.2	5	723.85	718.85	Abandoned
PZ-03 [1]	1147235.16	648965.57	April 1991	748.97	750.97	2.0	50.5	43.6	48.6	50.6	5	705.37	700.37	Abandoned
PZ-03A [1]	1147235.06	648968.94	September 1991	748.69	750.69	2.0	34	28	33	35.0	5	720.69	715.69	Abandoned
PZ-04 [1]	1147266.52	649019.69	April 1991	747.80	750.47	2.7	53.5	45	50	52.7	5	702.80	697.80	Abandoned
PZ-04A [1]	1147267.65	649024.11	September 1991	747.73	749.73	2.0	31	25	30	32.0	5	722.73	717.73	Abandoned
PZ-04B [1]	1147257.90	649007.00	September 1991	748.00	750.00	2.0	34	28	33	35.0	5	720.00	715.00	Abandoned
PZ-04C [1]	1147249.04	648995.02	September 1991	748.53	750.35	1.8	34	28	33	34.8	5	720.53	715.53	Abandoned
PZ-05 [1]	1147305.47	649087.47	April 1991	746.58	749.00	2.4	50.2	45	50	52.4	5	701.58	696.58	Abandoned
PZ-05A [1]	1147306.28	649091.23	September 1991	746.22	748.22	2.0	27	21	26	28.0	5	725.22	720.22	Abandoned
PZ-06 [1]	1147350.80	649162.93	April 1991	745.85	747.52	1.7	55	45	50	51.7	5	700.85	695.85	Abandoned
PZ-06A [1]	1147348.68	649165.40	September 1991	745.53	747.20	1.7	30	24	29	30.7	5	721.53	716.53	Abandoned
PZ-07 [1]	1147387.90	649233.41	April 1991	744.85	746.85	2.0	55	45	50	52.0	5	699.85	694.85	Abandoned
PZ-08 [1]	1147442.42	649465.87	April 1991	747.84	750.51	2.7	49.9	44.9	49.9	52.6	5	702.94	697.94	Residuum
PZ-09 [1]	1147132.36	649094.63	April 1991	747.38	749.71	2.3	55	35	40	42.3	5	712.38	707.38	Residuum
PZ-10 [1]	1147012.08	648800.95	April 1991	753.98	756.06	2.1	55	45	50	52.1	5	708.98	703.98	Residuum
PZ-11 [1]	1147283.97	648581.81	April 1991	749.09	750.71	1.6	50	40	45	46.6	5	709.09	704.09	Residuum
PZ-17C	1145032.26	650121.87	October 1980	823.30	825.64	2.3	31	26	31	33.3	5	797.30	792.30	Abandoned
PZ-20B [1]	1147144.21	648896.65	Pre-1995 (estimated)	751.87	754.08	2.2	25	NA	NA	NA	NA	NS	NS	Abandoned
PZR-01	1145640.00	650398.00	June 1998	804.40	806.91	2.5	60	40	60	62.5	20	764.40	744.40	Residuum
PZR-02	1145685.00	650464.00	June 1998	803.50	805.86	2.4	60	40	60	62.4	20	763.50	743.50	Residuum
PZR-03	1145699.00	650508.00	June 1998	802.40	805.05	2.6	61	41	61	63.7	20	761.40	741.40	Residuum
PZR-04	1145717.00	650531.00	June 1998	801.50	803.94	2.4	60	40	60	62.4	20	761.50	741.50	Residuum
PZR-05	1146377.00	650315.00	June 1998	753.30	755.73	2.4	46	26	46	48.4	20	727.30	707.30	Residuum
PZR-06	1146344.00	650252.00	June 1998	754.90	757.09	2.2	46	26	46	48.2	20	728.90	708.90	Residuum
T-1	1147455.96	650133.79	June 2005	731.47	732.72	1.3	45	30	40	41.3	10	701.47	691.47	Residuum
T-2	1147466.94	649491.74	June 2005	749.13	751.13	2.0	44	34	44	46.0	10	715.13	705.13	Residuum
T-3	1146620.20	650514.02	June 2005	746.09	747.09	1.0	25	15	25	26.0	10	731.09	721.09	Residuum
T-4	1147513.54	649184.18	June 2005	742.18	743.28	1.1	25	15	25	26.1	10	727.18	717.18	Residuum
T-5	1146124.36	650076.51	October 2006	765.09	767.16	2.1	145	118	128	130.1	10	647.09	637.09	Bedrock
T-6	1146301.15	649902.83	October 2006	760.13	759.95	-0.2	150	115	125	124.8	10	645.13	635.13	Bedrock
T-8	1148356.55	650241.87	April 2008	724.65	727.59	2.9	2.9	0.0	25	15	25	27.9	10	709.65
T-9	1147714.22	649106.27	April 2008	742.47	745.46	3.0	3.0	0.0	37	27	37	40.0	10	715.47
T-10	1147711.36	649316.74	April 2008	737.20	740.20	3.0	3.0	0.0	35	25	35	38.0	10	712.20
T-11	1148974.57	652936.85	April 2008	695.32	698.23	2.9	3.0	0.1	21	8.5	13.5	16.4	5	686.82
T-12	1148436.92	650149.56	April 2008	724.88	727.88	3.0	3.0	0.0	28	18	28	31.0	10	706.88
CMW-1	1148202.46	650928.78	August 2004	717.14	720.40	3.3	28.5	18	28.5	28.5	10	699.14	688.64	Residuum
CMW-2	1148473.21	651048.47	August 2004	713.85	716.69	2.8	22.5	12	22.5	22.5	10	701.85	691.35	Residuum
CMW-3	1148770.79	651705.61	August 2004	707.09	710.22	3.1	27.0	16.5	27	27.0	10	690.59	680.09	Residuum
NW-1	1145056.92	649336.94	July 2006	825.09	827.40	2.3	54	20	40	42.3	20	805.09	785.09	Residuum
SW-1	1144141.89	649682.45	June 2006	900.55	902.95	2.4	52	32	52	54.4	20	868.55	848.55	Residuum
SA-06 [1]	1145716.25	651609.36	October 1980	813.56	815.56	2.0	50	45	50	52.0	5	768.56	763.56	Residuum
SA-22 [1]	1145948.64	651103.33	October 1980	790.00	792.84	2.8	24	18	23	25.8	5	772.00	767.00	Residuum

TABLE 4-8
Construction Details for Groundwater Monitoring Wells and Piezometers

Well #	Northing	Easting	Date Installed	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)	Stick up (ft)	Approximate Well Depth (ft BGS)	Approximate Top of Screen (ft BGS)	Approximate Bottom of Screen (ft BGS)	Total Well Depth (to Bottom of Screen (ft BTOC)	Screened Interval Length (ft)	Top of Screen (ft MSL)	Bottom of Screen (ft MSL)	TYPE
SA-64 (1)	1147406.02	648641.11	Pre-1995 (estimated)	746.23	748.65	2.4	24	19	24	26.4	5	727.23	722.23	Residuum
SBP-01	1146863.48	648695.95	August 1992	755.55	758.17	2.6	157	137	152	154.6	15	618.55	603.55	Bedrock
SBP-02	1147132.39	649190.70	July 1992	747.07	749.40	2.3	140	123	138	140.3	15	624.07	609.07	Bedrock
SBP-03	1147578.15	649183.78	August 1992	740.60	744.41	3.8	102	90	100	103.8	10	650.60	640.60	Bedrock
SBP-04	1146471.57	649111.31	September 1992	758.97	761.30	2.3	147.5	130	145	147.3	15	628.97	613.97	Bedrock
SBP-05	1147087.09	648744.38	November 1992	753.55	755.88	2.3	140	128	138	140.3	10	625.55	615.55	Bedrock
WEL-01	1145603.34	648369.53	April 1994	777.22	778.80	1.6	31.5	19	29	30.6	10	758.22	748.22	Residuum
WEL-02	1145721.67	648436.57	April 1994	773.68	775.35	1.7	31	18.5	28.5	30.2	10	755.18	745.18	Residuum
WEL-03	1145905.50	648498.69	April 1994	769.40	771.73	2.3	32	19.5	29.5	31.8	10	749.90	739.90	Residuum
WEL-04	1146164.41	648864.25	Pre-1995 (estimated)	763.14	765.94	2.8	47	34.5	44.5	47.3	10	728.64	718.64	Residuum

Notes:

- = Information does not exist.
NA = Not Available.
NS = Not Specified.
OW-22 = Detection Monitoring/Corrective Action Monitoring Well
BGS = below ground surface, BTOC = below top of casing, ft = feet, MSL = mean sea level.
1) Ground surface elevation estimated based on well stick-up.
2) Ground surface around well may have been modified after well installed. Ground surface elevation reflects new ground level.

TABLE 4-9
Constituent Concentration Limits

Constituent	Concentration Limits		
	USEPA MCLs (µg/L)	USEPA PRGs (µg/L)	Calculated PRG (µg/L)
Chlorobenzene	100	--	--
Methylene Chloride	5	--	--
Isopropyl Benzene (Cumene)	--	660	--
1,1,2,2-Tetrachloroethane	--	0.055	--
Cobalt	--	730	--
Mercury	2	--	--
1,2-Dichlorobenzene	600	--	--
1,4-Dichlorobenzene	75	--	--
2,4-Dichlorophenol	--	110	--
Phenol	--	11,000	--
Parathion	--	220	--
Methyl Parathion	--	9.1	--
Pentachlorophenol	1	--	--
4-Nitrophenol	--	--	1,095
PCBs (Polychlorinated biphenyls)	0.5	--	--
Tetraethyldithiopyrophosphate (Sulfotepp)	--	18	--
o,o,o-Triethylphosphorothioate	--	--	730
2,4,5-Trichlorophenol	--	3,600	--
2,4,6-Trichlorophenol	--	3.6	--
Arsenic	10	--	--
Barium	2,000	--	--
Beryllium	4	--	--
Cadmium	5	--	--
Chromium	100	--	--
Lead	15	--	--
Manganese	--	880	--
Nickel	--	730	--
Vanadium	--	36	--

Notes:
List includes the 28 Constituents of Interest (COIs) as discussed in Section 4.0 of accompanying report.
USEPA Maximum Contamination Limits (MCLs) are used where available. If MCLs are not available, then USEPA Region IX Preliminary Remediation Goals (PRGs) are used.
Where neither MCLs or Region IX PRGs were available, PRGs were developed using methods consistent with the Region IX PRGs User's Guide. See Appendix E for further details.

TABLE 4-10
Occurrence and Distribution for Facility Constituents in Groundwater

Parameter Group	Constituent	CAS-ID	Unit	Minimum Concentration [7]	Maximum Concentration [5]	Mean Concentration	Location of Maximum Concentration	Most Recent Measurement from all Site Wells	Detection Frequency	Percentage of Detections	Range of Reporting Limits	Prevalent Constituents Based on Detections
PCBs, Pesticides and Dioxin	PCBs, Total [3]	1336-36-3	µg/L	0.32 J	15,500	97.7	OW-21A	ND - 190 J	90 / 368	24%	0.47 - 1,000	Yes
	4,4'-DDE	72-55-9	µg/L	0.14 JN	0.14 JN	0.014	OW-08A	ND - 0.14 JN	1 / 10	10%	0.094 - 9.5	
	Dieldrin	60-57-1	µg/L	0.075 JN	0.075 JN	0.0075	OW-08A	ND - 0.075 JN	1 / 10	10%	0.094 - 95	
	gamma-BHC	58-89-9	µg/L	0.1 J	0.56 JN	0.12	OW-08A	ND - 0.56 JN	3 / 10	30%	0.047 - 4.8	
	Methyl parathion	298-00-0	µg/L	1.4 J	74 J	2.21	OW-21A	ND - 1.4 J	4 / 41	10%	0.5 - 500	
	Parathion	56-38-2	µg/L	0.17 J	23,000	151.1	OW-21A	ND - 7,600	62 / 363	17%	0.94 - 1,100	Yes
	Tetraethyldithiopyrophosphate (Sulfotepp)	3689-24-5	µg/L	0.19 J	150	0.84	OW-21A	ND - 12	18 / 317	6%	0.47 - 500	
	Dioxin TEQ [2]	NA	µg/L	5.6×10^{-8}	3.01×10^{-6} J	7.33×10^{-7}	OW-16A	5.6×10^{-8} - 3.01×10^{-6} J	4 / 10	40%	4.56×10^{-7} - 5.6×10^{-5}	
VOCs	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	0.67 J	0.67 J	0.016	OW-08A	ND - 0.67 J	1 / 41	2%	1 - 50	
	1,2,4-Trichlorobenzene	120-82-1	µg/L	0.8 J	1,200	121	OW-16A	ND - 1,200	3 / 10	30%	1 - 1	
	1,4-Dichlorobenzene	106-46-7	µg/L	0.53 J	21	0.31	OWR-11	ND - 7.5 J	13 / 205	6%	1 - 2,000	Yes
	1,2-Dichlorobenzene	95-50-1	µg/L	1.2 J	39 J	1.70	OW-21A	ND - 39 J	30 / 205	15%	0 - 2,000	Yes
	Benzene	71-43-2	µg/L	0.77 J	0.77 J	0.08	OW-16A	ND - 0.77 J	1 / 10	10%	1 - 1	
	Bromodichloromethane	75-27-4	µg/L	2	2	0.20	OW-10	ND - 2	1 / 10	10%	1 - 1	
	Carbon tetrachloride	56-23-5	µg/L	2.5	2.5	0.25	OW-10	ND - 2.5	1 / 10	10%	1 - 1	
	Chlorobenzene	108-90-7	µg/L	0.51 J	46	0.88	OWR-05D	ND - 3.4	42 / 306	14%	0 - 100	Yes
	Chloroform	67-66-3	µg/L	27	27	2.70	OW-10	ND - 27	1 / 10	10%	1 - 1	
	cis-1,2-Dichloroethene	156-59-2	µg/L	10	10	1	T-4	ND - 10	1 / 10	10%	1 - 1	
	Dibromochloromethane	124-48-1	µg/L	0.77 J	0.77 J	0.08	OW-10	ND - 0.77 J	1 / 10	10%	1 - 1	
	Ethylbenzene	100-41-4	µg/L	2.1	2.1	0.21	OW-16A	ND - 2.1	1 / 10	10%	1 - 1	
	Methylene chloride	75-09-2	µg/L	0.46 J	36	0.30	OWR-08S	ND	7 / 277	3%	5 - 500	
	trans-1,2-Dichloroethene	156-60-5	µg/L	8.2	8.2	0.82	T-4	ND - 8.2	1 / 10	10%	1 - 1	
	Tetrachloroethylene	127-18-4	µg/L	3.1	3.1	0.31	OW-10	ND - 3.1	1 / 10	10%	1 - 1	
	Trichloroethylene	79-01-6	µg/L	3.4	10	1.3	OW-10	ND - 10	2 / 10	20%	1 - 1	
	Xylenes (total)	1330-20-7	µg/L	6	6	0.6	OW-16A	ND - 6	1 / 10	10%	2 - 2	
SVOCs	1,1'-Biphenyl	92-52-4	µg/L	170	170	17	OW-16A	ND - 17	1 / 10	10%	9.4 - 10	
	2,4,5-Trichlorophenol	95-95-4	µg/L	1.5 J	18.2	0.378	MW-20A	ND - 4 J	11 / 288	4%	9.4 - 2,000	
	2,4,6-Trichlorophenol	88-06-2	µg/L	3.4 J	25.1	1.04	MW-20A	6.7 J	19 / 290	7%	9.4 - 2,000	
	2,4-Dichlorophenol	120-83-2	µg/L	.78 J	1.4 J	0.015	MW-20A	ND - 1.1 J	4 / 288	1%	9.4 - 2000	
	4-Nitrophenol	100-02-7	µg/L	3.6 J	31,000	364	OW-21A	ND - 9,500	31 / 363	9%	24 - 19,000	Yes
	Acenaphthene	83-32-9	µg/L	0.73 J	0.73 J	0.073	T-4	ND - 0.73 J	1 / 10	10%	9.4 - 10	
	Benzo(a)pyrene	50-32-8	µg/L	2.5 J	2.5 J	0.25	OW-08A	ND - 2.5 J	1 / 10	10%	9.4 - 10	
	Benzo(b)fluoranthene	205-99-2	µg/L	2.1 J	2.1 J	0.21	OW-08A	ND - 2.1 J	1 / 10	10%	9.4 - 10	
	Benzo(g,h,i)perylene	191-24-2	µg/L	2.1 J	2.1 J	0.21	OW-08A	ND - 2.1 J	1 / 10	10%	9.4 - 10	
	Benzo(k)fluoranthene	207-08-9	µg/L	2.6 J	2.6 J	0.26	OW-08A	ND - 2.6 J	1 / 10	10%	9.4 - 10	
	Butyl benzyl phthalate	85-68-7	µg/L	1.2 J	1.2 J	0.12	OW-16A	ND - 1.2 J	1 / 10	10%	9.4 - 10	
	Caprolactam	105-60-2	µg/L	3.1 J	3.1 J	0.310	T-2	ND - 3.1 J	1 / 10	10%	9.4 - 10	
	Dibenz(a,h)anthracene	53-70-3	µg/L	2.4 J	2.4 J	0.24	OW-08A	ND - 2.4 J	1 / 10	10%	9.4 - 10	
	Dimethyl phthalate	131-11-3	µg/L	1.4 J	1.4 J	0.14	T-2	ND - 1.4 J	1 / 10	10%	9.4 - 10	
	Indeno(1,2,3-cd)pyrene	193-39-5	µg/L	0.73 J	1.9 J	0.26	OW-08A	ND - 1.9 J	2 / 10	20%	9.4 - 10	
	O,O,O-Triethylphosphorothioate	126-68-1	µg/L	1.3 J	530	7.780	OW-21A	ND - 530	81 / 363	22%	0 - 2,000	Yes
	Pentachlorophenol	87-86-5	µg/L	1.2	95.4	1.9	MW-20A	8.8 J	20 / 290	7%	0.94 - 5,000	Yes

TABLE 4-10
Occurrence and Distribution for Facility Constituents in Groundwater

Parameter Group	Constituent	CAS-ID	Unit	Minimum Concentration [7]	Maximum Concentration [5]	Mean Concentration	Location of Maximum Concentration	Most Recent Measurement from all Site Wells	Detection Frequency	Percentage of Detections	Range of Reporting Limits	Prevalent Constituents Based on Detections
Metals	Aluminum	7429-90-5	mg/L	0.056 J	1.5	0.3446	OW-10	ND - 1.5	9 / 10	90%	0.20	
	Antimony	7440-36-0	mg/L	0.0051 J	0.00051 J	0.0051 J	T-4	ND-0.0051 J	1 / 10	10%	0.02	
	Arsenic	7440-38-2	mg/L	0.0044 J	0.0061 J	0.00026	T-4	ND - 0.0061 J	2 / 41	5%	0.01 - 0.1	
	Barium	7440-39-3	mg/L	0.013 J	1.2	0.1578	OWR-05D	0.013 J - 0.092	36 / 41	88%	0.01 - 0.1	
	Beryllium	7440-41-7	mg/L	0.00013 J	0.0068 J	0.00059	OWR-11/OW-10	ND - 0.005	15 / 41	37%	.004 - .04	
	Cadmium	7440-43-9	mg/L	0.0016 J	0.0016 J	3.9E-05	OW-10	ND- 0.0016 J	1 / 41	2%	0.005 - 0.05	
	Calcium	7440-70-2	mg/L	2.5	91	22.36	OW-10	2.5 - 91	10 / 10	100%	0.05	
	Chromium	7440-47-3	mg/L	0.0012 J	0.057	0.00323	WEL-01	ND - 0.0089	9 / 41	22%	0.01 - 0.1	
	Cobalt	7440-48-4	mg/L	0.00078 J	0.3	0.0191	OWR-11	ND - 0.24	119 / 313	38%	0.00071 - 0.01	Yes
	Copper	7440-50-8	mg/L	0.0021 J	0.014 J	0.0023	OW-10	ND - 0.014	4 / 10	40%	0.02	
	Ferrous Iron	NA	mg/L	0.14	0.14	0.14	OWR-05D	ND - 0.14	1 / 9	11%	0.05 - 0.25	
	Iron	7439-89-6	mg/L	0.03 J	1.7	0.2544	T-1	ND - 1.7	8 / 10	80%	0.05	
	Lead	7439-92-1	mg/L	0.0022 J	0.033	0.00236	WEL-01	ND - 0.0092	8 / 41	20%	0.005 - 0.05	
	Magnesium	7439-95-4	mg/L	1.3	34	7.03	OW-10	1.3 - 34	10 / 10	100%	0.5	
	Manganese	7439-96-5	mg/L	0.02	12	1.053	OWR-12	0.02 - 1.5	38 / 41	93%	0.01 - 0.01	Yes
	Mercury	7439-97-6	mg/L	0.000081 J	0.05	0.00049	OW-10	ND - 0.0033	48 / 219	22%	0.0002 - 0.002	Yes
	Nickel	7440-02-0	mg/L	0.0023 J	0.082 J	0.0134	OWR-11	ND - 0.069	24 / 41	59%	0.004 - 0.4	
	Phosphorus	7723-14-0	mg/L	0.039	6.8	0.76	OW-06A	ND - 6.8	2 / 9	22%	0.01 - 0.2	
	Potassium	7440-09-7	mg/L	1.2	10	4.37	T-3	1.2 - 10	10 / 10	100%	1 - 1	
	Sodium	7440-23-5	mg/L	6.5	58	19.39	OW-10	6.5 - 58	10 / 10	100%	1 - 1	
	Vanadium	7440-62-2	mg/L	0.0019 J	0.081	0.0048	WEL-01	ND - 0.018	10/41	24%	0.01 - 0.1	
	Zinc	7440-66-6	mg/L	0.0099 J	1.7	0.418	T-2	ND - 1.7	8 / 10	80%	0.02	

Notes:

(1) Table defines ranges of detections for groundwater concentrations from 1998 to April 2007.
(2) Dioxin TEQ: ITEF TEQ calculated with ND=0 and EMPC=EMPC.
(3) Total PCBs were calculated based on using ND = 0 for individual Aroclors with no detections.
(4) Results from filtered samples were not used in the analysis.
(5) The maximum result from the original / duplicate pair was used in the analysis.
(6) ND = Non-detect. J = Estimated Value. JN = Tentatively Identified.
(7) Note that some analytes were detected below the laboratory reporting limits but above the method detection limits and have been qualified as estimated values.

TABLE 4-11
Parathion Groundwater Sample Results

Location	1988-Jan	1988-Mar	1988-Apr	1988-Jul	1988-Oct	1989-Jan	1989-Mar	1989-Apr	1989-Jul	1989-Sep	1989-Oct	1990-Jan	1990-Mar	1990-Apr	1990-Jul	1990-Sep	1990-Oct	1991-Jan	1991-Mar	1991-Apr
CMW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-01B	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	NA	U	NA	NA	U	NA	NA	U	NA
MW-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-09A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-15	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	NA	3.37	NA	NA	U	NA	NA	U	NA
MW-16	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	NA	U	NA	NA	U	NA	NA	U	NA
MW-20A	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	NA	U	NA	NA	3.24	NA	NA	U	NA
OW-02	NA	NA	U	NA	NA	U	NA	U	U	NA	U	U	NA	U	U	NA	U	NA	NA	U
OW-04	NA	NA	U	NA	NA	U	NA	U	U	NA	U	U	NA	U	19.1	NA	NA	NA	NA	NA
OW-06A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-07	U	NA	U	U	NA	U	NA	U	U	NA	U	U	NA	U	U	NA	U	U	NA	U
OW-08A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-15	2	NA	2.6	U	NA	U	NA	U	U	NA	U	U	NA	U	U	NA	U	U	NA	U
OW-16A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-19	NA	NA	NA	U	NA	U	NA	96.7	57	NA	135	92.5	NA	92.5	36.8	NA	53.4	41.8	NA	50.5
OW-21A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-22	NA	NA	NA	U	NA	U	NA	3.35	U	NA	4.5	1.43	NA	1.4	1.23	NA	U	U	NA	U
OW-24	NA	NA	NA	U	NA	8.4	NA	U	U	NA	U	881.7	NA	865	1491	NA	907	502	NA	566
SBP-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-11
Parathion Groundwater Sample Results

Location	1991-Jul	1991-Sep	1991-Oct	1991-Dec	1992-Mar	1992-Jun	1992-Sep	1992-Oct	1992-Dec	1993-Mar	1993-Jun	1993-Sep	1993-Dec	1994-Mar	1994-May	1994-Jun	1994-Sep	1994-Dec	1995-Mar	1995-Apr
CMW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-01B	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	U	NA	U	U	NA	U	NA	NA	U
MW-08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-09A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-15	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	U	NA	U	NA	NA	U	NA	NA	U
MW-16	NA	U	NA	NA	U	NA	U	NA	NA	U	NA	U	NA	U	NA	NA	U	NA	NA	U
MW-20A	NA	U	NA	NA	U	NA	1.1	2.7	NA	U	NA	U	NA	U	NA	NA	U	NA	NA	U
OW-02	U	NA	U	1.9	U	U	U	NA	U	U	U	U	NA	U	NA	U	U	U	U	NA
OW-04	U	NA	U	NA	NA	U	U	NA	U	2.06	U	U	NA	NA	NA	U	U	NA	U	NA
OW-06A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-07	U	NA	U	U	U	U	U	NA	U	U	U	U	U	U	NA	U	U	U	U	NA
OW-08A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-15	U	NA	U	U	U	U	U	NA	U	U	U	U	U	U	NA	U	U	U	U	NA
OW-16A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-19	30.8	NA	67	66.7	13.6	20.5	18.4	NA	15.9	23.9	44	25.7	15.1	17.4	NA	U	10.9	18	8	NA
OW-21A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-22	U	NA	U	U	U	U	U	NA	U	U	U	U	U	U	NA	U	U	U	U	NA
OW-24	2.91	NA	719	16.9	32.8	31.3	42	NA	188	20.9	139	7.1	U	U	NA	U	U	1.18	1.24	NA
SBP-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-11
Parathion Groundwater Sample Results

Location	1995-Jun	1995-Sep	1995-Dec	1996-Mar	1996-Jun	1996-Aug	1996-Sep	1996-Oct	1997-Apr	1997-Sep	1998-Mar	1998-Apr	1998-Jul	1998-Nov	1999-Apr	1999-Oct	2000-Apr	2000-Oct	2001-Apr	2001-Oct
CMW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CMW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-01B	NA	U	NA	U	NA	NA	U	NA	U	U	U	NA	U	U	U	U	U	U	U	U
MW-08	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	NA	U	NA	NA	U	NA	U	NA	U	NA
MW-09A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-15	NA	U	NA	U	NA	NA	U	NA	U	U	NA	U	NA	U	U	U	U	U	U	U
MW-16	NA	U	NA	U	NA	NA	U	NA	U	U	NA	U	NA	U	U	U	U	U	U	U
MW-20A	NA	U	NA	U	NA	NA	U	NA	U	U	NA	U	NA	3.93	U	U	U	U	3	U
OW-02	U	U	NA	U	U	U	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-04	U	NA	NA	U	U	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-06A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	U	U	U	U	U	U	U
OW-07	U	U	U	U	U	U	NA	U	U	U	U	NA	NA	U	U	NA	NA	NA	NA	NA
OW-08A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	NA	4.12	U	U	2.71	3.85 J	U	1.9
OW-15	U	U	U	U	U	U	NA	U	U	U	U	NA	NA	U	U	U	U	U	U	U
OW-16A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68.5	NA	93.3	95.9	U	109	281	U	47
OW-19	1.7	U	U	1.2	1.53	1.6	NA	2.4	U	NA	NA	U	NA	NA	1.63	NA	U	NA	216	NA
OW-21A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OW-22	U	U	U	U	U	U	NA	U	U	NA	U	NA	NA	NA	U	NA	U	NA	U	NA
OW-24	U	U	U	U	U	19 J	61	1.2	0.97 J	NA	NA	4.35	NA	NA	204	NA	87.1	NA	198	NA
SBP-05	NA	NA	NA	NA	NA	NA	NA	NA	U	U	NA	U	NA	U	U	U	U	U	U	U

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-11
Parathion Groundwater Sample Results

Location	2002-Mar	2002-Apr	2002-Oct	2003-Feb	2003-Mar	2003-Apr	2003-Oct	2004-Apr	2004-Aug	2004-Oct	2005-Apr	2005-Jun	2005-Oct	2006-Apr	2006-Oct	2007-Apr	2007-Oct
CMW-1	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA
CMW-2	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA
CMW-3	NA	NA	NA	NA	NA	NA	NA	NA	U	NA	NA	NA	NA	NA	NA	NA	NA
MW-01B	U	NA	U	NA	U	NA	U	U	NA	U	U	NA	U	U	U	U	U
MW-08	NA	U	NA	NA	NA	U	NA	U	NA	NA	U	NA	NA	0.77 J	NA	1.9	NA
MW-09A	NA	NA	NA	NA	NA	U	NA	U	NA	NA	U	NA	NA	U	NA	U	NA
MW-15	NA	U	U	NA	NA	U	U	U	NA	U	U	NA	U	U	U	U	U
MW-16	NA	U	U	NA	NA	U	U	U	NA	U	U	NA	U	U	U	0.19 J	U
MW-20A	NA	U	U	NA	NA	U	U	U	NA	U	U	NA	U	U	U	U	U
OW-02	NA	U	U	NA	NA	U	U	U	NA	U	U	NA	U	U	U	U	U
OW-04	NA	U	U	NA	1.5	NA	U	U	NA	U	U	NA	U	U	U	U	NA
OW-06A	NA	U	U	NA	U	NA	U	U	NA	U	U	NA	U	0.17 J	U	U	NA
OW-07	NA	U	NA	NA	NA	NA	U	U	NA	NA	NA	NA	NA	U	NA	U	NA
OW-08A	NA	U	1.1	NA	NA	U	2.7	U	NA	U	0.31 J	0.25 J	1.1	0.44 J	0.63 J	0.5 J	1.3
OW-15	NA	U	U	NA	NA	U	U	U	NA	U	U	NA	U	4.6	U	U	U
OW-16A	NA	160 J	40	NA	68 J	NA	83	84	NA	75	U	28 J	81	97	95	57	110
OW-19	NA	U	NA	NA	NA	U	NA	U	NA	NA	U	NA	NA	0.84 J	NA	U	NA
OW-21A	NA	NA	NA	U	NA	4500	NA	U	NA	NA	11000	NA	NA	5100	NA	7600	NA
OW-22	NA	U	NA	NA	NA	U	NA	U	NA	NA	U	NA	NA	1.3	NA	U	NA
OW-24	NA	360 J	NA	NA	NA	83	NA	290	NA	NA	U	NA	NA	U	NA	U	NA
SBP-05	NA	U	U	NA	NA	U	U	U	NA	U	U	NA	U	0.17 J	U	U	U

Notes:
1) Values are in ppb.
2) Results presented are the most recent sampling data for each well.
3) NA=Not Analyzed; U=Non-detect; J=Estimated
4) Filtered samples collected using 0.1 micrometer filter.

TABLE 4-12
Ambient Air PCB Results

Sampling Date	Session Number	Units	1 East		2 South	3 West	4 North	5 Northeast	6 Near East	7 Northwest			8 Far West
(c)	(d)		Primary	Collocated					(b)	Night	Day	24-Hr (g)	
01/25-26/2000	NA	ng/m^3	0.0	0.0	17.4	0.8	2.1	0.0	NM	NM	NM	NM	NM
01/26-27/2000	NA	ng/m^3	0.6	0.6	NM	9.7	2.6	1.2	NM	NM	NM	NM	NM
02/24-25/2000	NA	ng/m^3	0.0	0.1	NM	0.4	16.1	11.4	NM	NM	NM	NM	NM
02/28-29/2000	NA	ng/m^3	1.0	NM	2.1	2.8	23.2	9.2	NM	NM	NM	NM	NM
03/27-28/2000	NA	ng/m^3	22.1	20.3	6.6	24.1	43.5	16.0	NM	NM	NM	NM	NM
03/28-29/2000	NA	ng/m^3	9.9	NM	6.4	7.2	37.4	10.3	NM	NM	NM	NM	NM
04/28-29/2000	NA	ng/m^3	9.9	NM	15.6	43.4	68.8	8.6	NM	NM	NM	NM	NM
04/29-30/2000	NA	ng/m^3	9.9	9.3	9.3	20.5	63.5	7.5	NM	NM	NM	NM	NM
05/20-21/2000	NA	ng/m^3	9.8	NM	14.5	22.4	NM	34.7	NM	NM	NM	NM	NM
05/21-22/2000	NA	ng/m^3	16.2	17.0	20.1	19.0	NM	27.4	NM	NM	NM	NM	NM
06/27-28/2000	NA	ng/m^3	4.6	3.9	3.7	2.6	96.9	14.1	NM	NM	NM	NM	NM
06/28-29/2000	NA	ng/m^3	8.8	NM	10.1	14.9	116.0	19.0	NM	NM	NM	NM	NM
07/25-26/2000	NA	ng/m^3	0.6	0.7	0.5	2.7	4.3	5.2	NM	NM	NM	NM	NM
07/26-27/2000	NA	ng/m^3	2.1	NM	3.0	12.6	77.4	16.4	NM	NM	NM	NM	NM
08/22-23/2000	NA	ng/m^3	NM	NM	0.2	0.2	6.8	NM	NM	NM	NM	NM	NM
08/23-24/2000	NA	ng/m^3	6.6	NM	5.7	10.3	36.9	8.0	NM	NM	NM	NM	NM
09/27-28/2000	NA	ng/m^3	2.8	NM	5.3	7.5	21.0	3.8	NM	NM	NM	NM	NM
09/28-29/2000	NA	ng/m^3	5.2	5.9	3.8	11.7	52.3	10.4	NM	NM	NM	NM	NM
10/25-26/2000	NA	ng/m^3	9.4	NM	5.5	4.3	4.8	9.9	NM	NM	NM	NM	NM
10/26-27/2000	NA	ng/m^3	9.0	8.8	10.1	13.2	30.7	17.6	NM	NM	NM	NM	NM
11/27-28/2000	NA	ng/m^3	4.0	NM	4.4	16.7	16.7	5.7	NM	NM	NM	NM	NM
11/28-29/2000	NA	ng/m^3	4.8	3.2	1.9	6.8	13.7	11.5	NM	NM	NM	NM	NM
12/19-20/2000	NA	ng/m^3	1.4	2.1	2.8	7.5	0.2	2.7	NM	NM	NM	NM	NM
12/20-21/2000	NA	ng/m^3	0.2	NM	0.1	1.8	2.8	2.1	NM	NM	NM	NM	NM
01/16-17/2001	NA	ng/m^3	0.5	0.4	0.7	8.0	1.4	3.1	NM	NM	NM	NM	NM
01/17-18/2001	NA	ng/m^3	0.0	NM	0.0	1.7	0.1	2.2	NM	NM	NM	NM	NM
05/15-16/2001	NA	ng/m^3	7.5	7.4	15.4	36.1	10.3	30.2	NM	NM	NM	NM	NM
05/16-17/2001	NA	ng/m^3	13.8	NM	15.1	24.1	52.6	18.7	NM	NM	NM	NM	NM
06/18-19/2001	NA	ng/m^3	0.5	0.4	0.7	0.7	2.0	25.9	NM	NM	NM	NM	NM
06/19-20/2001	NA	ng/m^3	1.0	NM	1.5	3.2	4.0	13.2	NM	NM	NM	NM	NM
07/18-19/2001	NA	ng/m^3	0.0	9.2	13.8	14.8	17.1	13.7	NM	NM	NM	NM	NM
07/19-20/2001	NA	ng/m^3	27.3	NM	39.2	18.2	18.3	17.3	NM	NM	NM	NM	NM
08/15-16/2001	NA	ng/m^3	4.2	3.8	6.9	11.1	7.7	10.7	NM	NM	NM	NM	NM
08/16-17/2001	NA	ng/m^3	7.9	NM	8.9	16.4	18.4	20.2	NM	NM	NM	NM	NM

TABLE 4-12
Ambient Air PCB Results

Sampling Date	Session Number	Units	1 East		2 South	3 West	4 North	5 Northeast	6 Near East	7 Northwest			8 Far West
(c)	(d)		Primary	Collocated					(b)	Night	Day	24-Hr (g)	
09/18-19/2001	NA	ng/m^3	0.1	0.1	0.1	0.6	1.3	5.6	NM	NM	NM	NM	NM
09/19-20/2001	NA	ng/m^3	3.0	NM	1.8	2.2	11.3	7.0	NM	NM	NM	NM	NM
10/16-17/2001	NA	ng/m^3	10.1	0.2	4.7	7.9	17.1	3.3	NM	NM	NM	NM	NM
10/17-18/2001	NA	ng/m^3	5.5	NM	1.3	2.2	16.8	3.1	NM	NM	NM	NM	NM
11/14-15/2001	NA	ng/m^3	1.5	0.2	1.1	3.4	21.3	2.6	NM	NM	NM	NM	NM
11/15-16/2001	NA	ng/m^3	9.6	NM	4.5	9.8	16.9	2.6	NM	NM	NM	NM	NM
12/12-13/2001	NA	ng/m^3	0.2	0.0	0.3	0.2	0.8	12.7	NM	NM	NM	NM	NM
12/13-14/2001	NA	ng/m^3	1.0	NM	0.8	0.8	2.8	7.3	NM	NM	NM	NM	NM
01/15-16/2002	NA	ng/m^3	6.3	NM	NM	6.4	9.2	3.2	NM	NM	NM	NM	NM
01/16-17/2002	NA	ng/m^3	3.1	NM	2.2	4.1	11.2	3.6	NM	NM	NM	NM	NM
02/20-21/2002	NA	ng/m^3	7.1	7.0	4.0	4.9	19.8	7.8	NM	NM	NM	NM	NM
02/21-22/2002	NA	ng/m^3	7.4	NM	2.8	4.4	14.2	5.8	NM	NM	NM	NM	NM
03/13-14/2002	NA	ng/m^3	4.4	4.6	5.8	9.5	13.9	9.7	NM	NM	NM	NM	NM
03/14-15/2002	NA	ng/m^3	0.0	NM	0.0	0.3	1.6	9.3	NM	NM	NM	NM	NM
04/17-18/2002	NA	ng/m^3	7.9	7.7	9.5	11.2	22.4	11.4	NM	NM	NM	NM	NM
04/18-19/2002	NA	ng/m^3	6.6	NM	8.7	8.5	19.1	12.7	NM	NM	NM	NM	NM
05/20-21/2002	NA	ng/m^3	7.6	6.5	8.2	9.7	45.8	7.6	NM	NM	NM	NM	NM
05/21-22/2002	NA	ng/m^3	6.2	NM	6.3	10.0	55.3	10.1	NM	NM	NM	NM	NM
06/17-18/2002	NA	ng/m^3	4.2	4.0	8.3	7.7	17.7	8.4	NM	NM	NM	NM	NM
06/18-19/2002	NA	ng/m^3	1.1	NM	2.0	NM	2.8	12.5	NM	NM	NM	NM	NM
07/09-10/2002	NA	ng/m^3	4.5	4.6	8.6	7.6	7.6	9.4	NM	NM	NM	NM	NM
07/20-21/2002	NA	ng/m^3	7.4	NM	16.2	14.0	14.6	89.7	NM	NM	NM	NM	NM
08/12-13/2002	NA	ng/m^3	1.5	1.4	5.4	10.9	9.3	6.6	NM	NM	NM	NM	NM
08/13-14/2002	NA	ng/m^3	15.0	NM	12.1	18.1	15.1	13.6	NM	NM	NM	NM	NM
09/16-17/2002	NA	ng/m^3	9.7	9.9	10.3	16.1	14.4	13.3	NM	NM	NM	NM	NM
09/17-18/2002	NA	ng/m^3	2.9	NM	3.6	10.0	9.1	45.0	NM	NM	NM	NM	NM
10/14-15/2002	NA	ng/m^3	0.0	0.0	0.0	0.3	0.0	NM	NM	NM	NM	NM	NM
10/16-17/2002	NA	ng/m^3	0.6	NM	3.8	5.7	0.0	0.6	NM	NM	NM	NM	NM
11/18-19/2002	NA	ng/m^3	1.0	0.7	0.4	1.3	2.2	5.5	NM	NM	NM	NM	NM
11/19-20/2002	NA	ng/m^3	2.8	NM	2.5	6.8	7.9	8.1	NM	NM	NM	NM	NM
12/16-17/2002	NA	ng/m^3	2.3	2.4	2.4	9.2	25.1	11.6	NM	NM	NM	NM	NM
12/17-18/2002	NA	ng/m^3	0.0	NM	0.0	0.0	0.3	4.4	NM	NM	NM	NM	NM

TABLE 4-12
Ambient Air PCB Results

Sampling Date	Session Number	Units	1 East		2 South	3 West	4 North	5 Northeast	6 Near East	7 Northwest			8 Far West
(c)	(d)		Primary	Collocated					(b)	Night	Day	24-Hr (g)	
4/15/2003	106	ng/m^3	ND	ND	0.3	0.6	12.9	8.5	14.3	3.4	7.2	5.5	10.9
4/16/2003	107 (e)	ng/m^3	ND	a	ND	ND	9.4	3.1	0.9	0.2	6.1	3.1	0.4
5/20/2003	108	ng/m^3	ND	ND	ND	ND	13.8	2.9	4.8	3.2	1.6	2.4	0.1
5/21/2003	109	ng/m^3	1.8	a	3.5	5	5	3.9	77.3	9.3	2.4	5.9	27.5
6/17/2003	110	ng/m^3	1.5	1.6	1.2	3.4	17.4	17.1	33.2	9.4	11.8	10.8	16.1
6/18/2003	111	ng/m^3	12.6	a	9.1	9.4	36.9	30.7	85.9	68.2	14.7	41.4	12.8
7/14/2003	112	ng/m^3	1.5	1.2	2.7	4.9	13.8	9.8	32.8	10.4	14.2	12.5	13.4
7/15/2003	113	ng/m^3	6.6	a	7.1	11.7	21.1	12.1	54.8	34.2	51.1	44.3	21.5
8/13/2003	114	ng/m^3	0.5	0.3	0.4	1.8	33	10.9	17.1	8.9	9.1	9.0	6.1
8/14/2003	115	ng/m^3	3.4	a	2.5	7.7	49.6	20	72.6	101.9	7.4	59.3	23.3
9/9/2003	116	ng/m^3	0.4	0.4	1.9	6.8	19.1	6.8	15.6	18.9	9.8	14.3	13.6
9/10/2003	117	ng/m^3	ND	a	0.2	2.7	12.9	6.5	10.7	2.8	15.5	8.2	26.6
10/21/2003	118	ng/m^3	22.5	22.8	10.2	3.2	79.2	22.5	44.9	a	a	145.4	12.1
10/22/2003	119	ng/m^3	9.9	a	5.6	17.5	40.7	9.9	34.4	a	a	54.5	9.9
11/18/2003	120	ng/m^3	ND	ND	0.1	0.6	9.9	3.8	4.9	a	a	9.8	1.3
11/19/2003	121	ng/m^3	1.8	a	0.2	0.5	21.5	16.9	11.9	a	a	32.1	1.1
12/9/2003	122	ng/m^3	ND	ND	ND	ND	3.9	4.4	3.3	a	a	3.0	0.2
12/10/2003	123	ng/m^3	1.1	a	2.6	1.9	3.3	0.5	8.5	a	a	13.1	ND
1/13/2004	124	ng/m^3	9.1	9	4.7	3.6	25.4	12.7	55.2	a	a	48.5	15.8
1/14/2004	125	ng/m^3	3.9	a	1.7	5.9	35.8	8.4	33.6	a	a	54.4	2.8
2/24/2004	126	ng/m^3	ND	ND	0.3	1.2	3.9	3.5	21.7	a	a	2.6	35.2
2/25/2004	127	ng/m^3	ND	a	ND	ND	1.7	f	8.4	a	a	0.4	0.2
3/23/2004	128	ng/m^3	ND	ND	ND	ND	2.5	1.8	2.0	a	a	1.8	1.7
3/24/2004	129	ng/m^3	ND	a	ND	ND	6.4	3.9	1.8	a	a	2.7	0.9
AVERAGE			5.3	4.7	5.5	8.3	20.2	11.3	27.1	22.6	12.6	24.4	11.0

Notes:
a - Not sampled; collocated sample collected once per month per RFI/CS Air Monitoring Plan.
b - Filter and PUF fractions were analyzed separately for samples collected April through September, February and March; results reported are combined for the two fractions.
(all filter analyses were reported as ND).
c - Start date; samplers operated nominally for 24 hour period.
d - Sampling session numbering scheme continued from regimen used for previous monitoring at the site.
e - 6-Near East location mistakenly operated as nocturnal sampler.
f - Power interruption led to sample invalidation; sample not analyzed.
g - Time weighted average of day/night results used to calculate "24-hour" value for samples collected April through September 2003 at the Northwest site.
ng/m^3 = nanograms per cubic meter.
ND = not detected.
NA= not applicable.
NM= not measured.

TABLE 5-1
Soil Sampling Results Preliminary Screening

	Maximum Detected Soil Concentration (mg/kg)[1]	Freq. of Detections[1]	Background Concentration (mg/kg)[3]	MCL-based SSL (mg/kg) [2]	Risk-based SSL (mg/kg) [2]	Number of SSL Exceedances	Location of Exceedances	MCL (ug/L) [2]	Tap Water (ug/L) [2]	Maximum Detected Groundwater Concentration (ug/L)[1]	Detected in Groundwater Above MCL/Tapwater?	Retained for Detailed Screen?[4]	Rationale for Elimination
Inorganics													
Cyanide	0.65	1 of 3	--	2	7.4	--	--	200	730	ND	Below MCL	No	Below Screening Value, Not Detected in GW Above MCL
Aluminum	19,000	3 of 3	15,000	--	55000	--	--	--	37000	1500	Below Tap Water	No	Below Screening Value, Not Detected in GW Above Tap Water Concentration
Antimony	8.7	1 of 3	1.7	0.27	0.66	1	SSRI-11-Q	6	15	5.1	Below MCL	No	Not Detected in GW Above MCL
Arsenic	390	22 of 23	16	0.29	0.0013	22	Multiple locations	10	0.05	6.1	Below MCL	No	Not Detected in GW Above MCL
Barium	780	23 of 23	180	82	300	7	Multiple locations	2000	7300	1200	Below MCL	No	Not Detected in GW Above MCL
Beryllium	1.9	11 of 23	0.83	3.2	58	0	--	4	73	6.8	Yes	No	Below Screening Value
Cadmium	4.7	5 of 23	0.25	0.38	1.4	5	Multiple locations	5	18	1.6	Below MCL	No	Not Detected in GW Above MCL
Calcium	59,000	3 of 3	1,200	--	--	--	--	--	--	--	No MCL	No	Essential Nutrient
Chromium	110	22 of 23	38	--	--	--	--	100	--	57	Below MCL	No	Not Detected in GW Above MCL
Cobalt	74	23 of 23	16	--	0.49	23	Multiple locations	--	11	300	Yes	Yes	
Copper	280	3 of 3	16	46	51	1	SSRI-11-Q	1300	1500	14	Below MCL	No	Not Detected in GW Above MCL
Iron	26,000	3 of 3	39,000	--	640	3	Multiple locations	--	26000	1700	Below Tap Water	No	Below Background, Essential Nutrient, Not Detected in GW Above Tap Water Concentration
Lead	4,700	23 of 23	39	14	--	21	Multiple locations	15	--	33	Yes	Yes	
Magnesium	34,000	3 of 3	910	--	--	--	--	--	--	34000	No MCL	No	Essential Nutrient
Manganese	12,000	23 of 23	1,500	--	57	23	Multiple locations	--	880	12000	Yes	Yes	
Mercury	3.3	24 of 25	0.07	0.10	0.033	13	Multiple locations	2	0.63	50	Yes	Yes	
Nickel	2,400	22 of 23	12	--	48	4	Multiple locations	--	730	82	Below Tap Water	No	Not Detected in GW Above Tap Water Concentration
Potassium	1,800	3 of 3	760	--	--	--	--	--	26	10000	Yes	No	Essential Nutrient
Selenium	4.5	1 of 3	0.48	0.26	0.95	1	SSRI-11-Q	50	180	ND	Below MCL	No	Not Detected in GW Above MCL
Silver	12	1 of 3	0.30	--	1.6	1	SSRI-11-Q	--	180	ND	Below Tap Water	No	Not Detected in GW Above Tap Water Concentration

TABLE 5-1
Soil Sampling Results Preliminary Screening

	Maximum Detected Soil Concentration (mg/kg)[1]	Freq. of Detections[1]	Background Concentration (mg/kg)[3]	MCL-based SSL (mg/kg)[2]	Risk-based SSL (mg/kg)[2]	Number of SSL Exceedances	Location of Exceedances	MCL (ug/L)[2]	Tap Water (ug/L)[2]	Maximum Detected Groundwater Concentration (ug/L)[1]	Detected in Groundwater Above MCL/Tapwater?	Retained for Detailed Screen?[4]	Rationale for Elimination
Sodium	400	3 of 3	670	--	--	--		--	--	58000	No MCL	No	Essential Nutrient
Vanadium	93	23 of 23	62	--	260	0	--	--	260	81	Below Tap Water	No	Below Screening Value, Not Detected in GW Above Tap Water Concentration
Zinc	610	3 of 3	38	--	680	0	--	--	11000	1700	Below Tap Water	No	Below Screening Value, Essential Nutrient, Not Detected in GW Above Tap Water Concentration
PCBs, Aroclor Specific													
Aroclor 1016	-	0 of 76	--	--	0.052	--		--	--	--	--	--	Retained as part of PCBs, Total
Aroclor 1221	-	0 of 76	--	--	0.00014	--	--	--		--	--	--	Retained as part of PCBs, Total
Aroclor 1232	720	4 of 76	--	--	0.00014	--	--	--	--	--	--	--	Retained as part of PCBs, Total
Aroclor 1242	46	5 of 76	--	--	0.003	--	--	--	--	--	--	--	Retained as part of PCBs, Total
Aroclor 1248	16,000	24 of 76	--	--	0.003	--	--	--	--	--	--	--	Retained as part of PCBs, Total
Aroclor 1254	440	53 of 76	-	--	0.0051	--	--	--	--	--	--	--	Retained as part of PCBs, Total
Aroclor 1260	620	55 of 76	-	--	0.014	--	--	--	--	--	--	--	Retained as part of PCBs, Total
Aroclor 1268	100	42 of 57	--	--	-	--	--	--	--	--	--	-	Retained as part of PCBs, Total
PCBs, Totals[5]	16,620	63 of 76	--	0.045	0.015	61	Multiple locations	0.50	0.17	7400	Yes	Yes	
Pesticides	-												
Heptachlor epoxide	0.38	1 of 3	--	0.0021	0.00008	1	SSRI-11-Q	0.20	0.01	ND	Below MCL	No	Not Detected in GW Above MCL
SVOCs													
Benz(a)anthracene	0.83	3 of 3	--	--	0.014	3	Multiple locations	--	0.029	ND	Below Tap Water	No	Not Detected in GW Above Tap Water Concentration
Benzo(a)pyrene[6]	1.9	3 of 3	--	0.31	0.0046	1	SSRI-11-Q	0.20	0.0029	2.5	Yes	Yes	
Benzo(b)fluoranthene	2.1	3 of 3	--	--	0.047	3	Multiple locations	--	0.029	2.1	Yes	Yes	
Benzo(g,h,i)perylene	2.1	3 of 3	--	--	--	--	--	--	--	2.1	Yes	Yes	
Benzo(k)fluoranthene	1.5	2 of 3	--	--	0.46	1	SSRI-11-Q	--	0.29	2.6	Yes	Yes	
Chrysene	1.9	3 of 3	--	--	1.40	1	SSRI-04-Q	--	2.90	ND	Below Tap Water	No	Not Detected in GW Above Tap Water Concentration

TABLE 5-1
Soil Sampling Results Preliminary Screening

	Maximum Detected Soil Concentration (mg/kg)[1]	Freq. of Detections[1]	Background Concentration (mg/kg)[3]	MCL-based SSL (mg/kg)[2]	Risk-based SSL (mg/kg)[2]	Number of SSL Exceedances	Location of Exceedances	MCL (ug/L)[2]	Tap Water (ug/L)[2]	Maximum Detected Groundwater Concentration (ug/L)[1]	Detected in Groundwater Above MCL/Tapwater?	Retained for Detailed Screen?[4]	Rationale for Elimination
Dibenz(a,h)anthracene	0.62	2 of 3	--	--	0.02	2	SSR1-67-Q, SSR1-11-Q	--	0.0029	2.4	Yes	Yes	
Fluoranthene	0.94	3 of 3	--	--	210	0	--	--	1500	ND	Below Tap Water	No	Below Screening Value, Not Detected in GW Above Tap Water Concentration
Indeno(1,2,3-cd)pyrene	1.30	2 of 3	--	--	0.16	1	SSR1-11-Q	--	0.03	1.9	Yes	Yes	
Phenanthrene	0.47	3 of 3	--	--	--	--	--	--	--	ND	No MCL	No	Not Detected in GW
Pyrene	1.2	3 of 3	--	--	150	0	--	--	1100	ND	Below Tap Water	No	Below Screening Value, Not Detected in GW Above Tap Water Concentration
VOCs													
Chlorobenzene	0.017	2 of 23	--	0.075	0.068	0	--	100	91	46	Below MCL	No	Below Screening Value, Not Detected in GW Above MCL
Methylene chloride (Dichloromethane)	0.033	1 of 23	--	0.0013	0.0012	1	SSR-11	5	4.8	36	Yes	No	Less than 5% Frequency of Detection

Shaded chemicals were retained for detailed screening.

Notes:

1. The data is presented in Tables 4-1 and 4-4.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. The MCL for Benzo(a)Pyrene was used as a surrogate for other PAHs that did not have a MCL.

TABLE 5-2
Evaluation of Background/SSL
Exceedances in Soil

PARAMETER [1,4,6,7,8,9]	AOC-A 0-0.5	LFSL89	LFSL93	LSFL94	LFSL99	LFSL103	SL-3A 0-0.25	SL-3B 0-0.25	SL-3C 0-0.25	SL-3D 0-0.25	SLGM-3A 0-0.25	SLGM-3B 0-0.25	SLGM-3C 0-0.25	SLGM-3D 0-0.25	SSR-01 0-2	SSR-02 0-2
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8700	88000
Exceeds Background [3]															0	1
Exceeds MCL Based SSL [2]															0	1
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70000	590000
Exceeds Background [3]															0	0
Exceeds Risk Based SSL [2]															1	1
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	210
Exceeds Background [3]															0	1
Exceeds MCL Based SSL [2]															0	1
Exceeds Risk Based SSL [2]															0	1
PCBs, Totals [5]	5720	10	4.1	1.3	6.7	U	168	70	6290	U	U	71	227	73	23	11200
Exceeds MCL Based SSL [2]	1	0	0	0	0	0	1	1	1	0	0	1	1	1	0	1
Exceeds Risk Based SSL [2]	1	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1

Notes:
1. The data is presented in Tables 4-1 and 4-4 of the Report on Remedial Investigation for Operable Unit 3 dated July 2008.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. 1 = sample concentration exceeds screening concentation; 0 = sample concentration does not exceed screening concentration
7. Concentration values are reported in ppb.
8. NA = Not Analyzed; U = Non-detect; Q = Duplicate
9. Refer to Table 4-1 in the Report on Remedial Investigation for Operable Unit 3 dated July 2008 for qualifiers.
10. Depth listed for samples in sample name are in feet.

TABLE 5-2
Evaluation of Background/SSL
Exceedances in Soil

PARAMETER [1,4,6,7,8,9]	SSR-03 0.5-2.5	SSR-04 6-10	SSR-05 2.5-4.5	SSR-06 0.67-2	SSR-07 2-3	SSR-08 1-3	SSR-09 0.58-2.58	SSR-10 19-21	SSR-10-Q 19-21	SSR-11 6-10	SSR-12 6-8	SSR-13 6-8	SSR-14 10-12	SSR-15 6-10	SSR-15-Q 6-10	SSR-16 0.83-3
Lead	25000	41000	52000	48000	220000	41000	150000	39000	20000	18000	23000	36000	250000	42000	40000	15000
Exceeds Background [3]	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0
Exceeds MCL Based SSL [2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Manganese	220000	120000	610000	690000	620000	520000	12000000	680000	1100000	250000	100000	360000	68000	100000	120000	310000
Exceeds Background [3]	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Exceeds Risk Based SSL [2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mercury	52	1100	1800	330	1400	93	460	76	11	32	50	46	79	3300	1100	56
Exceeds Background [3]	0	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0
Exceeds MCL Based SSL [2]	0	1	1	1	1	0	1	0	0	0	0	0	0	1	1	0
Exceeds Risk Based SSL [2]	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1
PCBs, Totals [5]	2170	104000	106000	9300	229000	34	282000	87	65	204	670	16000	6400	65000	861000	U
Exceeds MCL Based SSL [2]	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0
Exceeds Risk Based SSL [2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0

Notes:
1. The data is presented in Tables 4-1 and 4-4 of the Report on Remedial Investigation for Operable Unit 3 dated July 2008.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. 1 = sample concentration exceeds screening concentation; 0 = sample concentration does not exceed screening concentration
7. Concentration values are reported in ppb.
8. NA = Not Analyzed; U = Non-detect; Q = Duplicate
9. Refer to Table 4-1 in the Report on Remedial Investigation for Operable Unit 3 dated July 2008 for qualifiers.
10. Depth listed for samples in sample name are in feet.

TABLE 5-2
Evaluation of Background/SSL
Exceedances in Soil

PARAMETER [1,4,6,7,8,9]	SSR-17 1.25-3.5	SSR-18 0.25-0.5	SSR-18-Q 0.25-0.5	SSR-19 0.67-3	SSR-20 0.25-0.5	SSR-21 0.33-2.5	SSR-22 0.33-0.5	SSR-22-Q 0.33-0.5	SSRI-01 0-0.5	SSRI-01 3-4	SSRI-02 0-0.5	SSRI-02 3-4	SSRI-03 0-0.5	SSRI-03 3-4	SSRI-04 0-0.5	SSRI-04-Q 0-0.5
Lead	35000	110000	85000	52000	NA	28000	NA	NA	NA	NA	NA	NA	NA	NA	NA	11000
Exceeds Background [3]	0	1	1	1		0										0
Exceeds MCL Based SSL [2]	1	1	1	1		1										0
Manganese	5500000	370000	270000	2600000	NA	670000	NA	NA	NA	NA	NA	NA	NA	NA	NA	160000
Exceeds Background [3]	1	0	0	1		0										0
Exceeds Risk Based SSL [2]	1	1	1	1		1										1
Mercury	49	420	280	55	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	170
Exceeds Background [3]	0	1	1	0		1										1
Exceeds MCL Based SSL [2]	0	1	1	0		1										1
Exceeds Risk Based SSL [2]	1	1	1	1		1										1
PCBs, Totals [5]	205	16620000	9800000	507	NA	559	NA	NA	U	6860	175	40400	1170	590	10860	12200
Exceeds MCL Based SSL [2]	1	1	1	1		1			0	1	1	1	1	1	1	1
Exceeds Risk Based SSL [2]	1	1	1	1		1			0	1	1	1	1	1	1	1

Notes:
1. The data is presented in Tables 4-1 and 4-4 of the Report on Remedial Investigation for Operable Unit 3 dated July 2008.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. 1 = sample concentration exceeds screening concentation; 0 = sample concentration does not exceed screening concentration
7. Concentration values are reported in ppb.
8. NA = Not Analyzed; U = Non-detect; Q = Duplicate
9. Refer to Table 4-1 in the Report on Remedial Investigation for Operable Unit 3 dated July 2008 for qualifiers.
10. Depth listed for samples in sample name are in feet.

TABLE 5-2
Evaluation of Background/SSL
Exceedances in Soil

PARAMETER [1,4,6,7,8,9]	SSRI-04 3-4	SSRI-05 0-0.5	SSRI-05 3-4	SSRI-06 0-0.5	SSRI-06 3-4	SSRI-06-Q 3-4	SSRI-07 0-0.5	SSRI-07-Q 0-0.5	SSRI-07 3.5-3.5	SSRI-08 0-0.5	SSRI-08 3-4	SSRI-09 0-0.5	SSRI-09 3-4	SSRI-10 0-0.5	SSRI-10 3-4	SSRI-11 0-0.5
Lead	NA	NA	NA	NA	NA	NA	NA	41000	NA	NA	NA	NA	NA	NA	NA	NA
Exceeds Background [3]								1								
Exceeds MCL Based SSL [2]								1								
Manganese	NA	NA	NA	NA	NA	NA	NA	830000	NA	NA	NA	NA	NA	NA	NA	NA
Exceeds Background [3]								0								
Exceeds Risk Based SSL [2]								[redacted]								
Mercury	NA	NA	NA	NA	NA	NA	NA	2600	NA	NA	NA	NA	NA	NA	NA	NA
Exceeds Background [3]								1								
Exceeds MCL Based SSL [2]								1								
Exceeds Risk Based SSL [2]								1								
PCBs, Totals [5]	6600	37600	85000	31000	865	744	250000	126000	56000	U	U	38400	13100	11800	220	930000
Exceeds MCL Based SSL [2]	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1
Exceeds Risk Based SSL [2]	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1

Notes:
1. The data is presented in Tables 4-1 and 4-4 of the Report on Remedial Investigation for Operable Unit 3 dated July 2008.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. 1 = sample concentration exceeds screening concentation; 0 = sample concentration does not exceed screening concentration
7. Concentration values are reported in ppb.
8. NA = Not Analyzed; U = Non-detect; Q = Duplicate
9. Refer to Table 4-1 in the Report on Remedial Investigation for Operable Unit 3 dated July 2008 for qualifiers.
10. Depth listed for samples in sample name are in feet.

TABLE 5-2
Evaluation of Background/SSL
Exceedances in Soil

PARAMETER [1,4,6,7,8,9]	SSRI-11-Q 0-0.5	SSRI-11 3-4	SSRI-12 0-0.5	SSRI-12 3-4	SSRI-12-Q 3-4	SSRI-13 0-0.5	SSRI-13 3-4	SSRI-14 0-0.5	SSRI-14 3-4	SSRI-15 0-0.5	SSRI-15-Q 0-0.5	SSRI-16 0-0.5	SWMU-12-24A 0-2	SWMU-12-24A-Q 0-2	SWMU-12-24B 0-2	SWMU-12-24C 0-2
Lead	4700000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Exceeds Background [3]	1															
Exceeds MCL Based SSL [2]	1															
Manganese	670000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Exceeds Background [3]	0															
Exceeds Risk Based SSL [2]	1															
Mercury	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	91	NA
Exceeds Background [3]	1														1	
Exceeds MCL Based SSL [2]	1														0	
Exceeds Risk Based SSL [2]	1														1	
PCBs, Totals [5]	154000	1890	U	U	U	2013	U	630	U	U	U	U	26200	26300	540	84000
Exceeds MCL Based SSL [2]	1	1	0	0	0	1	0	1	0	0	0	0	1	1	1	1
Exceeds Risk Based SSL [2]	1	1	0	0	0	1	0	1	0	0	0	0	1	1	1	1

Notes:
1. The data is presented in Tables 4-1 and 4-4 of the Report on Remedial Investigation for Operable Unit 3 dated July 2008.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. 1 = sample concentration exceeds screening concentation; 0 = sample concentration does not exceed screening concentration
7. Concentration values are reported in ppb.
8. NA = Not Analyzed; U = Non-detect; Q = Duplicate
9. Refer to Table 4-1 in the Report on Remedial Investigation for Operable Unit 3 dated July 2008 for qualifiers.
10. Depth listed for samples in sample name are in feet.

TABLE 5-2
Evaluation of Background/SSL
Exceedances in Soil

PARAMETER [1,4,6,7,8,9]	SWMU-12-24D 0-2	SWMU-12-24E 0-2	SWMU-12-24F 0-2	SWMU-12-24G 0-2	SWMU-12-24H 0-2	SWMU-12-24I 0-2	SWMU-17 0-0.5	SWMU-25 0-0.5	SWMU-31 0-0.5	# of Sampled Locations	Exceedance Count	% of Exceedances	Screening Concentration (µg/kg)[2,3]
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Exceeds Background [3]										26	15	58%	39000
Exceeds MCL Based SSL [2]										26	24	92%	14000
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Exceeds Background [3]										26	3	12%	1500000
Exceeds Risk Based SSL [2]										26	26	100%	57000
Mercury	NA	NA	NA	940	NA	NA	NA	NA	NA				
Exceeds Background [3]				1						28	19	68%	70
Exceeds MCL Based SSL [2]				1						28	15	54%	100
Exceeds Risk Based SSL [2]				1						28	25	89%	33
PCBs, Totals [5]	9110	169000	28100	41200	4440	18000	4120	38600	13670				
Exceeds MCL Based SSL [2]	1	1	1	1	1	1	1	1	1	86	65	76%	45
Exceeds Risk Based SSL [2]	1	1	1	1	1	1	1	1	1	86	67	78%	15

Notes:
1. The data is presented in Tables 4-1 and 4-4 of the Report on Remedial Investigation for Operable Unit 3 dated July 2008.
2. Information obtained from EPA's agreed upon Regional Screening Levels for Regions 3, 6 and 9, dated September 2008.
3. Background concentrations for metals were compiled by the Army Corps of Engineers for the Fort McClellan Site located in Anniston, Alabama (SAIC, 1998). Two times the arithmetic mean of the combined surface and subsurface soil datasets was used in the evaluation.
4. See Section 5.1.1.2 of the text for a description of screening criteria.
5. Maximum detected concentration of PCBs was detected at a location currently under a substantial concrete cap.
6. 1 = sample concentration exceeds screening concentation; 0 = sample concentration does not exceed screening concentration
7. Concentration values are reported in ppb.
8. NA = Not Analyzed; U = Non-detect; Q = Duplicate
9. Refer to Table 4-1 in the Report on Remedial Investigation for Operable Unit 3 dated July 2008 for qualifiers.
10. Depth listed for samples in sample name are in feet.

TABLE 5-3
Molecular Composition of Select Aroclors

Homolog (Chlorines)	1221	1232[a]	1016	1242	1248	1254	1260
0	10						
1	50	26	2	1			
2	35	29	19	13	1		
3	4	24	57	45	22	1	
4	1	15	22	31	49	15	
5				10	27	53	12
6					2	26	42
7						4	38
8							7
9							1

Notes:
[a]Six percent of total unidentified.
Source: Brinkman and De Kok (1980).
Molecular composition in percent by weight.

TABLE 5-4
Physical Characteristics of Constituents

Constituent	Density (at 20°C)	Viscosity (Saybolt Univ. sec) at 98.9°C	n_D^{20}	Flash Point (°C)	Fire Point (°C)	Pour Point (°C)	Boiling Point (°C)	Vapor Pressure (mm Hg @ 25C)	Henry's Law Constant ($atm \cdot m^3/mol$ @ 25C)	Partitioning Coefficient (Log Kow)	Solubility in Water at 24°C (mg/L)	CAS Registry No.[g]
Aroclor-1221	1.18	30-31	1.618	141-150	176	1	275-320	6.7×10^{-3}	3.5×10^{-3}	4.7	0.59	11104-28-2
Aroclor-1232	1.26	31-32	1.621	152-154	238	-35	270-325	4.06×10^{-3}	--	5.1	0.45	11141-16-5
Aroclor-1016	1.37	--	1.623	170	ntb	--	323-356	4×10^{-4}	2.9×10^{-4}	5.6	0.42	12674-11-2
Aroclor-1242	1.38	34-35	1.628	176-180	ntb	-19	325-366	40.6×10^{-4}	5.2×10^{-4}	5.6	0.34	53469-21-9
Aroclor-1248	1.44	36-36	1.631	193-196	ntb	-7	340-375	--	--	--	--	12672-29-6
Aroclor-1254	1.54	44-58	1.64	ntb[a]	ntb	10	365-390	7.71×10^{-5}	2.0×10^{-3}	6.5	0.057	11097-69-1
Aroclor-1260	1.62	72-78	1.648	ntb	ntb	31	385-420	40.5×10^{-5}	4.6×10^{-3}	6.8	0.08	11096-82-5
Aroclor-1262	1.64	86-100	1.651	ntb	ntb	35-38	390-425	--	--	--	0.052	37324-23-5
Aroclor-1268	1.81	--	--	ntb	ntb	--	435-450	--	--	--	0.3	11100-14-4
Aroclor-1270	1.95	--	--	ntb	ntb	--	450-460	--	--	--	--	--
Parathion[c]	1.36	--	--	31.9	--	--	154	9.7×10^{-6}	6.2×10^{-6}	2.86	50	298-00-0
4-Nitrophenol[d]	1.27	--	--	--	--	--	297	3.0×10^{-4}	3.5×10^{-9}	1.91	16,000	100-02-7
Manganese[e]	7.21-7.44	--	--	--	--	--	1,962	h	--	--	Decomposes	7439-96-5
Mercury[f]	13.53	--	--	--	--	--	356.7	2.0×10^{-3}	--	5.95	56.2	7439-97-6

Notes:

[a]ntb = none to boiling.

[b]Aroclor data taken from Toxicological Profile for Polychlorinated Biphenyls (PCBs), U.S. Department of Health and Human Services, Public Health Service. November 2000.

[c]Toxicological Profile for MethylParathion, U.S. Department of Health and Human Services, Public Health Service, September 2001.

[d]Toxicological Profile for Nitrophenol, U.S. Department of Health and Human Services, Public Health Service, July 1992.

[e]Toxicological Profile for Manganese, U.S. Department of Health and Human Services, Public Health Service, March 1999.

[f]Toxicological Profile for Mercury, U.S. Department of Health and Human Services, Public Health Service, March 1999.

[g]The registry number for "Aroclor" (number unspecified) is 12767-79-2.

[h]Non volatile at room temperature (25°C).

mg/L = milligrams per liter.

Log Kow = Log of octanol-water partitioning coefficient.

$atm \cdot m^3/mol$ = atmospheres times cubic meters divided by number of moles.

mm Hg = millimeters of mercury.

°C = degrees celsius.

Source: de Voogt and Brinkman (1989). Copyright 1989, Elsevier Science Publishers Bv.

TABLE 6-1
Summary of Carcinogenic Risks and Non-Carcinogenic Health Hazards
REM, CTE and Modified Exposure

Area	Receptor	Cancer Risk			Noncancer Hazard Index (HI)		
		RME	CTE	Modified	RME	CTE	Modified
Current/Future Land Use							
South Landfill	O&M Worker	$3x10^{-6}$	$1x10^{-7}$	$4x10^{-7}$	0.2	0.04	0.02
	Trespasser - Adolescent (7-16 years)	$2x10^{-6}$	$1x10^{-7}$	$6x10^{-7}$	0.3	0.04	0.1
West End Landfill	O&M Worker	$1x10^{-8}$	$3x10^{-9}$	$3x10^{-8}$	NA	NA	NA
	Trespasser - Adolescent (7-16 years)	$7x10^{-9}$	$7x10^{-10}$	$8x10^{-9}$	NA	NA	NA
Facility Area	Construction Worker	$1x10^{-4}$	$3x10^{-5}$	$8x10^{-5}$	250	90	124
Current Land Use							
Facility Area	Operation Area Worker	$2x10^{-4}$	$4x10^{-5}$	NA	8	3	NA
	O&M Worker	$1x10^{-4}$	$8x10^{-6}$	$2x10^{-5}$	5	1	1
	Trespasser - Adolescent (7-16 years)	$8x10^{-5}$	$1x10^{-5}$	$4x10^{-5}$	8	1	3
Site Wide	Off-Site Resident - Child to Adult (Lifetime Resident)	$2x10^{-6}$	NA	NA	NA	NA	NA
	Off-Site Resident - Child (0-6 yrs)	$1x10^{-6}$	NA	NA	NA	NA	NA
Future Land Use							
Facility Area	Operation Area Worker	$6x10^{-3}$	$1x10^{-3}$	NA	416	364	NA
	O&M Worker	$1x10^{-3}$	$6x10^{-5}$	$2x10^{-4}$	79	20	11
	Trespasser - Adolescent (7-16 years)	$7x10^{-4}$	$6x10^{-5}$	$3x10^{-4}$	124	20	48
Site Wide	Off-Site Resident - Child to Adult (Lifetime Resident)	$4x10^{-1}$	NA	NA	30445	NA	NA
	Off-Site Resident - Child (0-6 yrs)	$2x10^{-1}$	NA	NA	46553	NA	NA
	Operation Area Worker	$2x10^{-2}$	$3x10^{-3}$	NA	1212	432	NA
	O&M Worker	$2x10^{-3}$	$2x10^{-4}$	NA	116	66	NA

NA - not analyzed

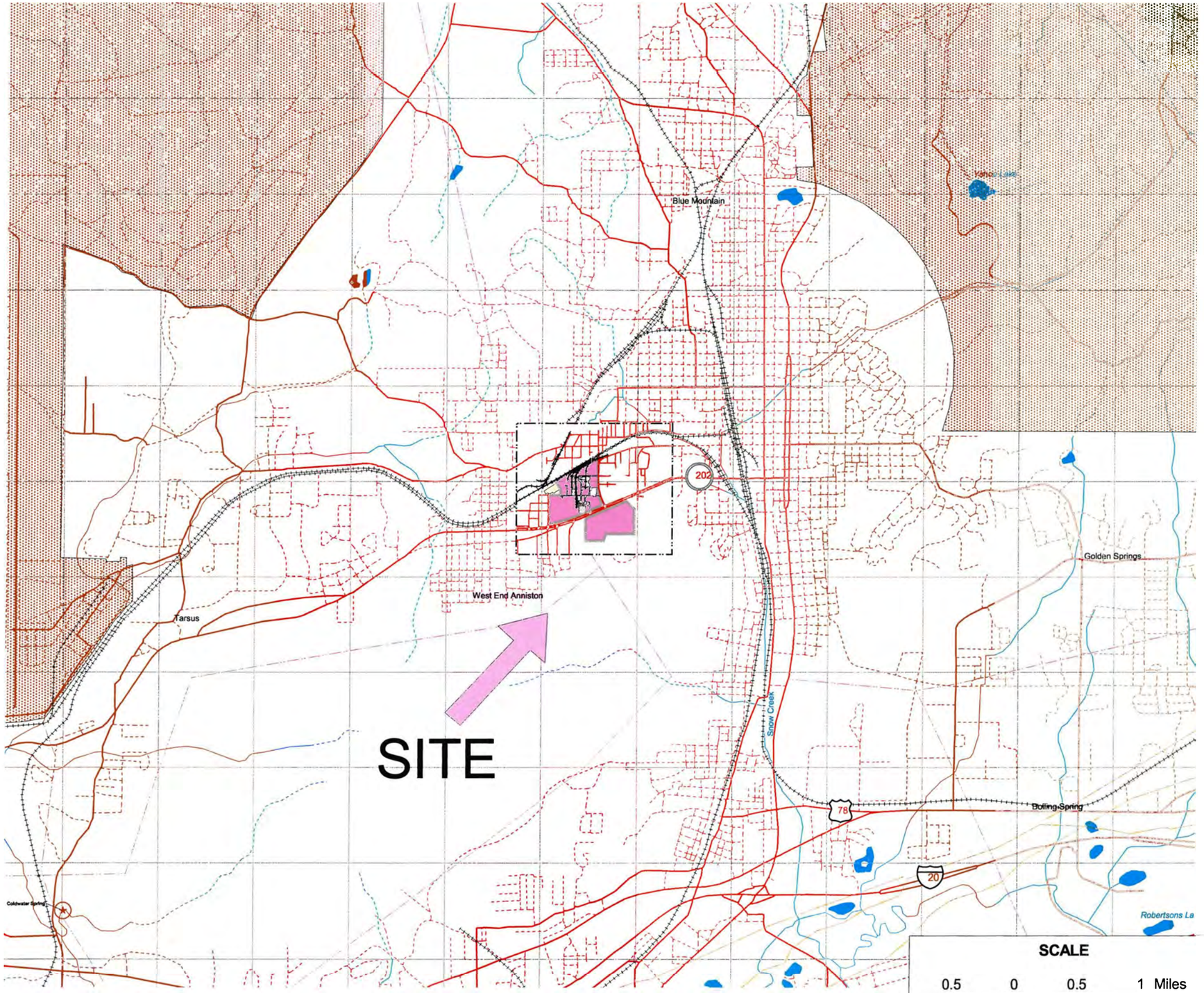
TABLE 6-2
Summary of Constituents of Potential Concern

CAS No.	Chemical	Surface Soil	Surface/ Subsurface Soil	Groundwater	Ambient Air
	Volatile Organic Compounds				
120-82-1	1,2,4-Tricholorobenzene	--	--	YES	--
106-46-7	1,4 Dichlorobenzene	--	--	YES	--
108-90-7	Chlorobenzene	--	NO	YES	--
156-59-2	cis-1,2-Dichloroethene	--	--	YES	--
87-86-5	Pentachlorophenol	--	--	YES	--
79-01-6	Trichloroethylene	--	--	YES	--
	Semi-volatile Organic Compounds				
88-06-2	2,4,6-Trichlorophenol	--	--	YES	--
56-55-3	Benzo(a)anthracene	YES	YES	--	--
50-32-8	Benzo(a)pyrene	YES	YES	--	--
205-99-2	Benzo(b)fluoranthene	YES	YES	--	--
53-70-3	Dibenz(a,h)anthracene	YES	YES	--	--
193-39-5	Indeno(1,2,3-cd)pyrene	YES	YES	YES	--
	Pesticides/PCBs				
1336-36-3	PCBs, Total	YES	YES	YES	YES
58-89-9	gamma-BHC	--	--	YES	--
1024-57-3	Heptachlor epoxide	YES	YES	--	--
298-00-0	Methyl parathion	NO	NO	YES	--
56-38-2	Parathion	NO	NO	YES	--
	Dioxin				
NA	Dioxin TEQ	YES	YES	YES	--
	Inorganics				
7429-90-5	Aluminum	YES	YES	NO	--
7440-36-0	Antimony	YES	YES	YES	--
7440-38-2	Arsenic	YES	YES	YES	--
7440-39-3	Barium	NO	YES	NO	--
7440-43-9	Cadmium	YES	YES	--	--
7440-47-3	Chromium	YES	YES	--	--
7439-89-6	Iron	YES	YES	NO	--
7439-92-1	Lead	YES	YES	NO	--
7439-96-5	Manganese	YES	YES	YES	--
7439-97-6	Mercury	YES	YES	YES	--
7440-02-0	Nickel	NO	YES	--	--
7440-62-2	Vanadium	YES	YES	NO	--

Notes:
Data from January 2008 Human Health Baseline Risk Assessment Report
See Appendix B of the HHRA.

YES = Chemical was detected in media and selected as a COPC.
NO = Chemical was detected in media but not selected as a COPC.
-- = Chemical was not detected in media

FIGURES



Solutia Facility Location

Remedial Investigation Report
Solutia Inc., Anniston, Alabama

LEGEND

- Military Reservation
- Facility Boundary
- Alabama Power
- Facility
- Pipeline
- Powerline
- Railroad - Active
- Highway/Major Road
- Minor Road
- River
- Lakes
- Intermittent Stream
- Perennial Stream

NOTES

ZONE
Alabama East 101

SOURCE
Golder Associates (On Site Base Map)
United States Geological Survey (USGS) 1:100,000 Scale Digital Line Graph (DLG) data (1981).

MAP PROJECTION
US State Plane

DATUM
NAD83

LOCATION MAP

N

SCALE
0.5 0 0.5 1 Miles

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/08	943-3680	9433680J001	1-1

OU-3 Area

Remedial Investigation Report
Solutia Inc., Anniston, Alabama

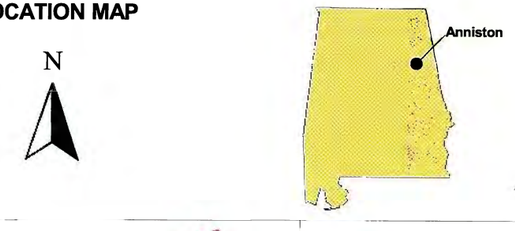
LEGEND

- OU-3 Area
- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- Buildings
- Solutia Inc.
- Alabama Power

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

200 0 200 400 600 Feet

SOLUTIA

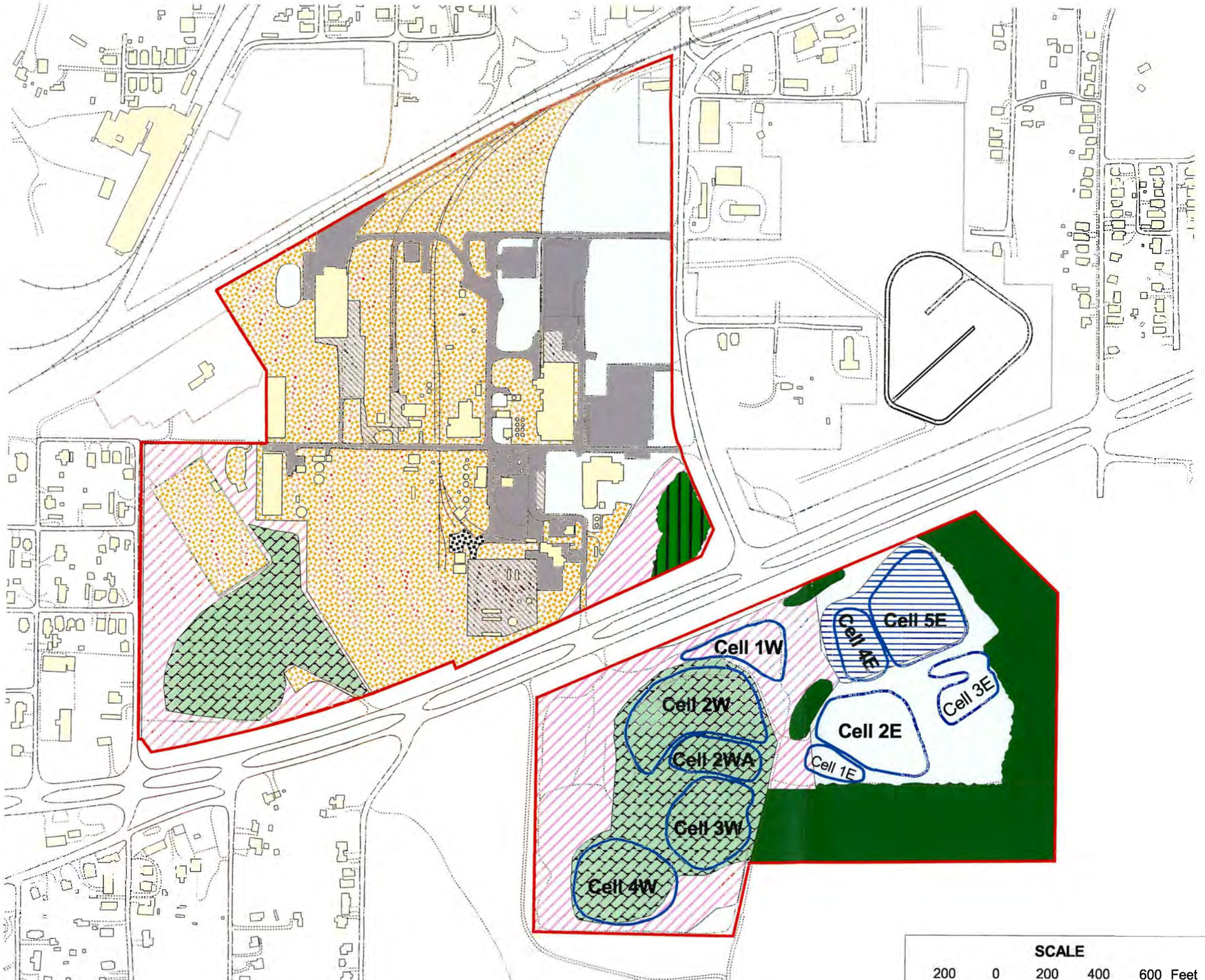
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J002A Rev. 2	1-2

Existing OU-3 Surface Types and Engineered Covers

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

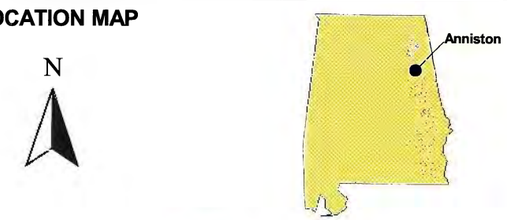
- Railroad
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- OU-3 Area
- Buildings
- Concrete
- Grass
- Grass + Clay Cover
- Grass + HDPE
- Grass + Soil Cover
- Gravel
- Gravel-covered asphalt
- Paved
- Trees
- Trees + Soil Cover

NOTES

1) A detailed description of the cover systems for the closed South and West End Landfills are included in Section 2.2.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SCALE

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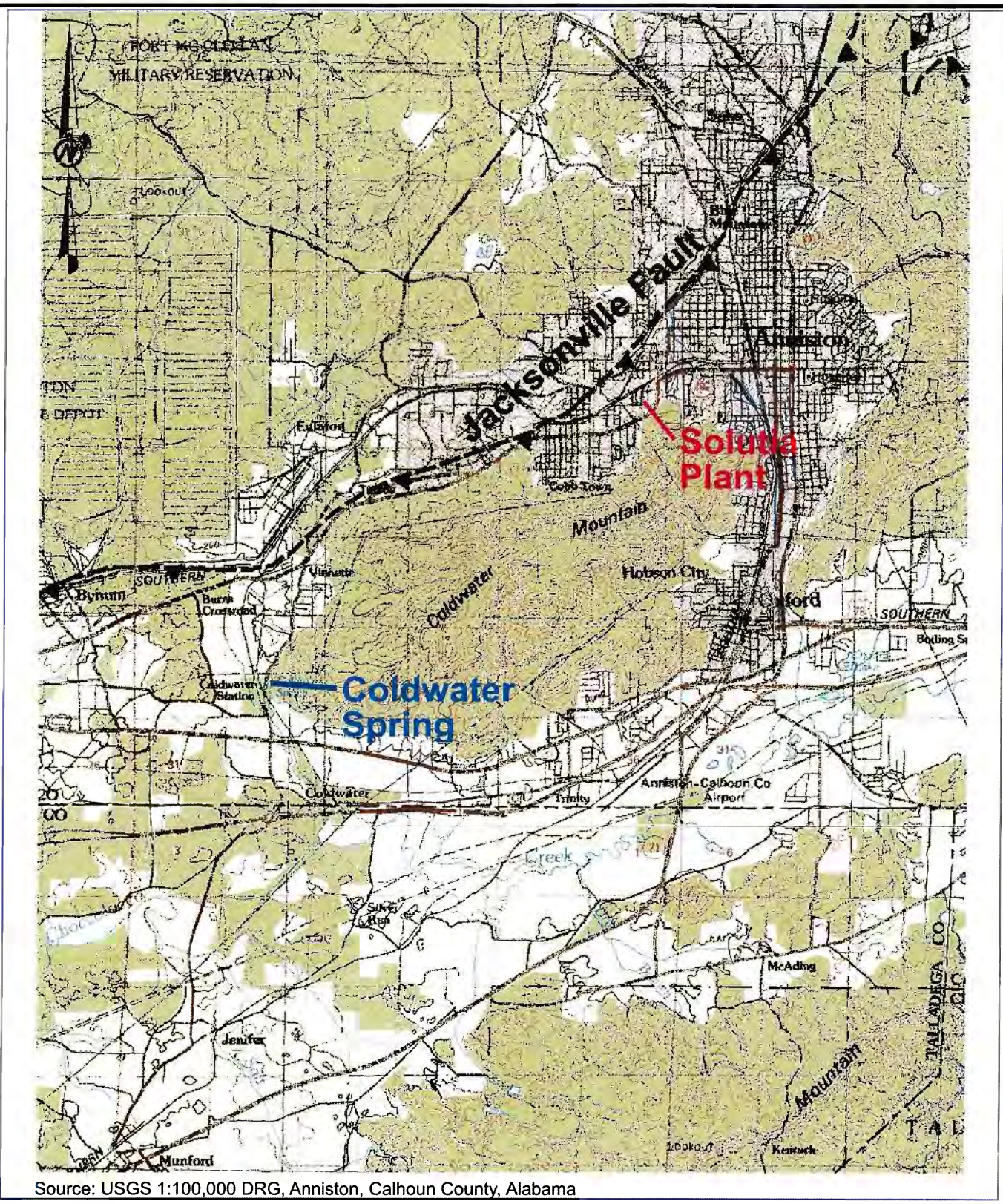
PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
02/17/10	943-3680	9433680J002B Rev. 3	1-3



Source: USGS 1:100,000 DRG, Anniston, Calhoun County, Alabama

REFERENCES

1.) USGS TOPOGRAPHIC MAP, 7.5 MIN. QUADRANGLE MAP SERIES: ANNISTON QUADRANGLE, CALHOUN COUNTY, AL

Golder Associates
Jacksonville, Florida

FILE No.	9433680J007
PROJECT No.	943-3680
REV.	0
SCALE	N.T.S.
DATE	03/20/09
DESIGN	RWP
CADD	MRM
CHECK	RWP
REVIEW	SJM

TITLE

LOCATION OF JACKSONVILLE FAULT LINE

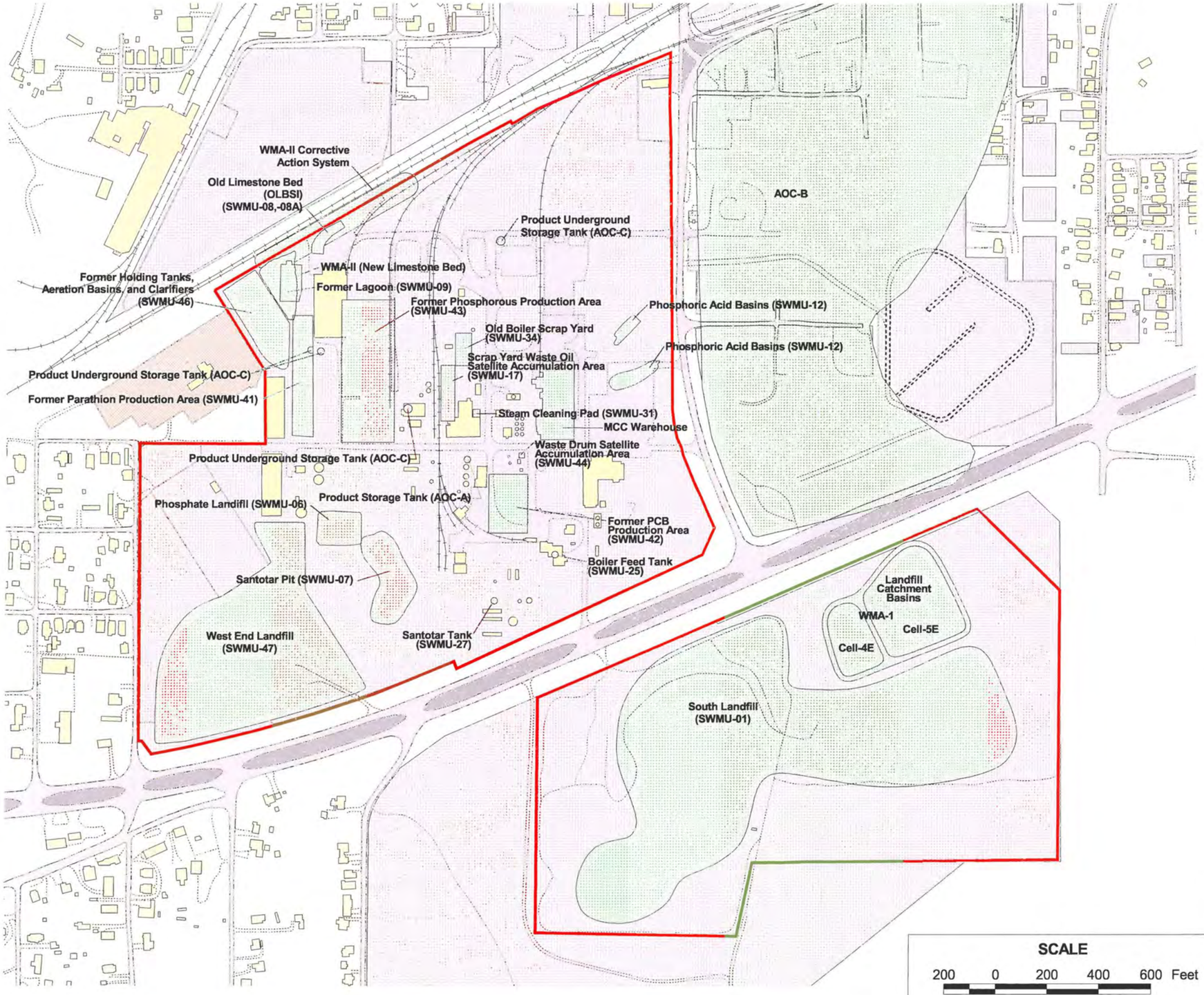
RI REPORT / SOLUTIA INC.

FIGURE 1-4

Drawing file: 9433680J007.dwg May 18, 2010 - 7:48am

Former OU-3 Source Areas

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Property Line
- OU-3 Area
- Buildings
- Paved
- Solutia Inc.
- Alabama Power
- Source Areas

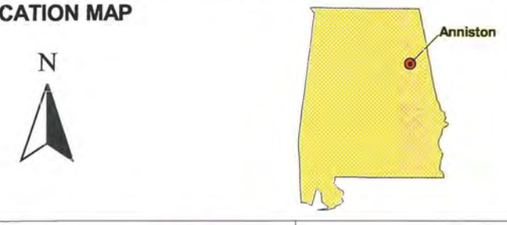
NOTES

SCALE

200 0 200 400 600 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

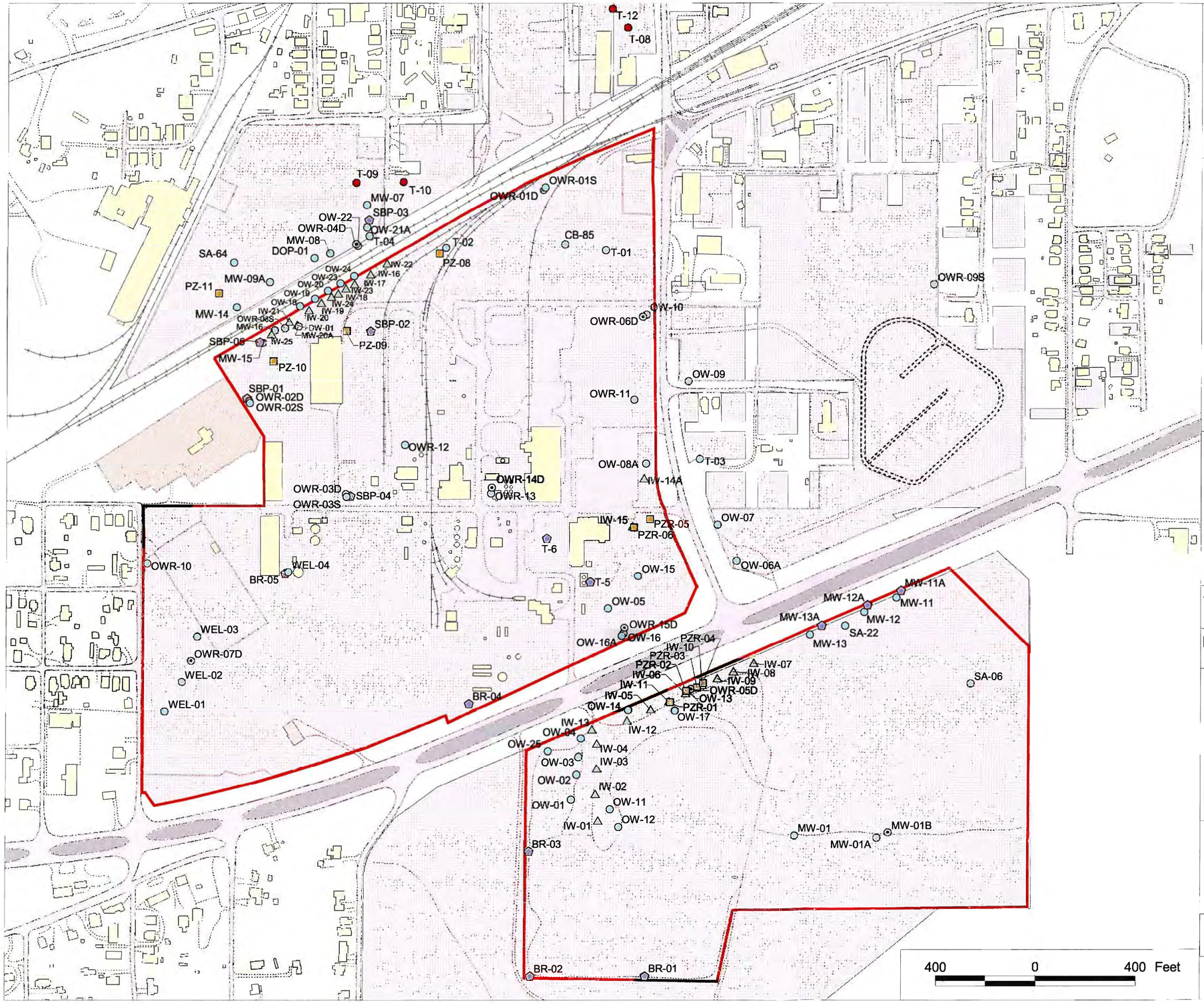
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J002C Rev. 2	2-1

Monitoring Well Locations

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Recovery Well
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- Piezometer
- Bedrock Monitoring Well
- OU-2 Temporary Monitoring Well

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP

N

SOLUTIA

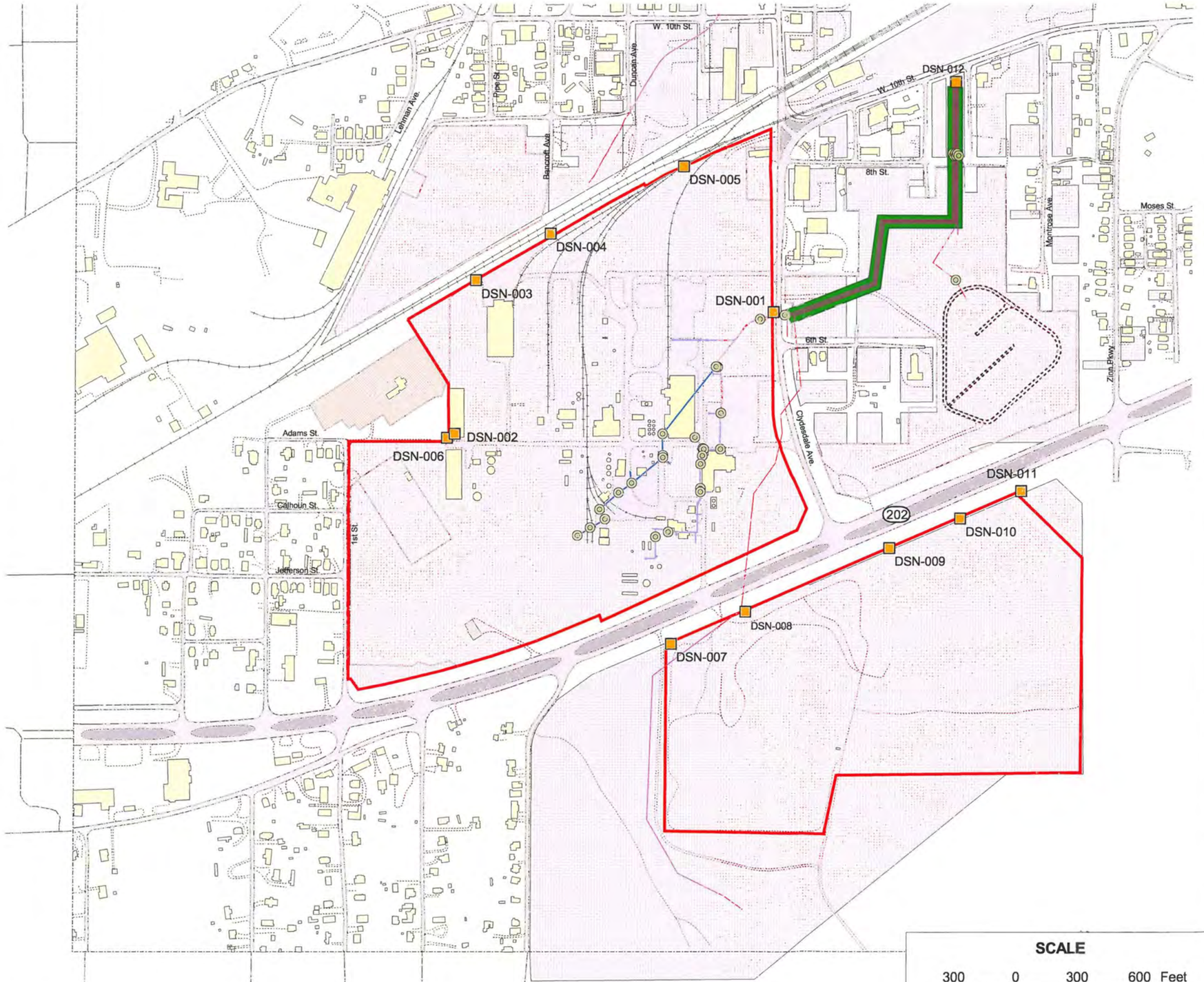
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005B Rev. 1	2-2

Sewer System and On-Site Storm Water Management System

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Railroad - Active
- Major Roads
- Minor Roads
- Drainage Basin
- Facility Boundary
- Buildings
- Paved
- Solutia Inc.
- Alabama Power
- Berm
- Manhole
- Outfalls
- Lined Sewer Main
- Other Sewer Line
- Pipe Line

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N

SCALE

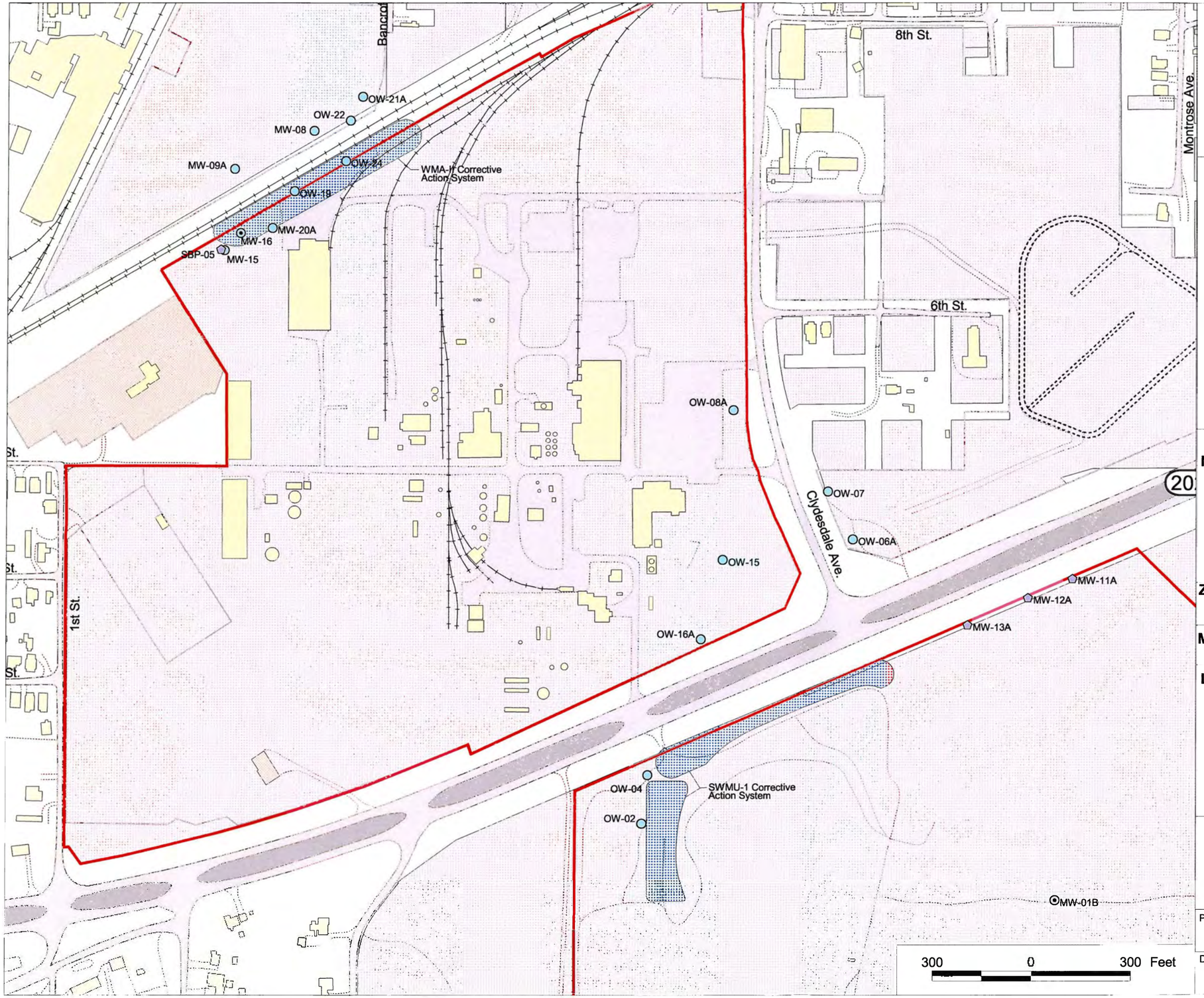
300 0 300 600 Feet

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J003 Rev. 1	2-3

Groundwater Detection/ Corrective Action Monitoring Wells

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

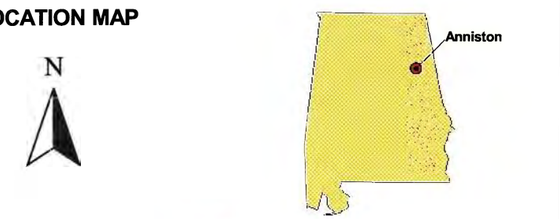
- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Groundwater Corrective Action System
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

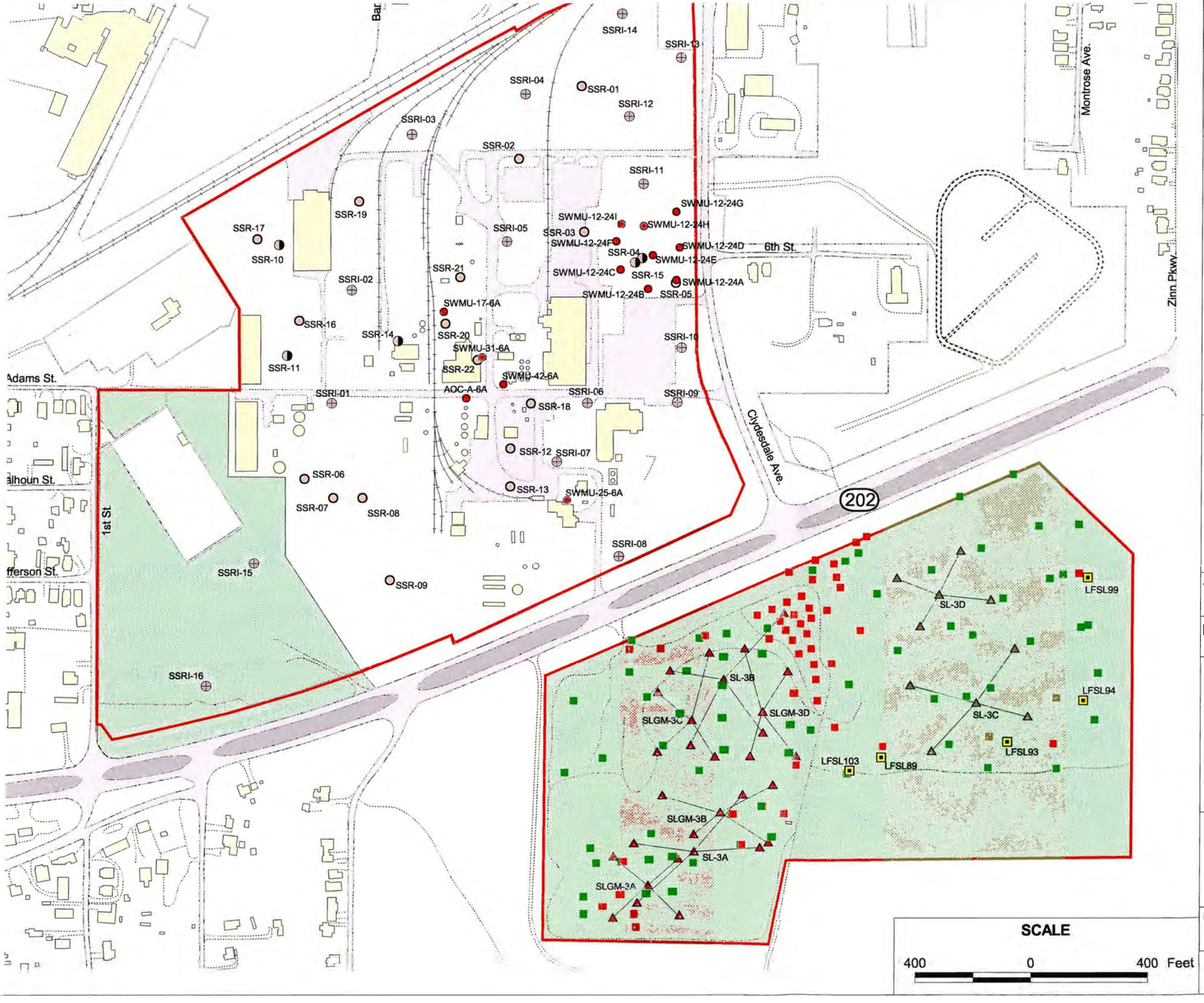
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005A Rev. 1	2-4

Soil Sample Locations

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- OU-3 Area
- Paved
- Buildings
- Landfill Area
- Pre-RFI/CS Surface Samples (Prior to 1998 Cover Upgrades)
- RFI/CS Subsurface soil sample
- RFI/CS Surface (or near surface) soil sample
- Supplemental RFI/CS Soil Sample
- Supplemental RFI/CS Composite Soil Sample
- OU-3 RI Soil Sample Location
- Screening sample locations where PCBs were below 5 ppm (Prior to 1998 Cover Upgrades)
- Screening sample locations where PCBs were above 5 ppm (Prior to 1998 Cover Upgrades)

NOTES

1) Screening samples were collected and analyzed prior to upgraded covers being put in place.

SCALE

400 0 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

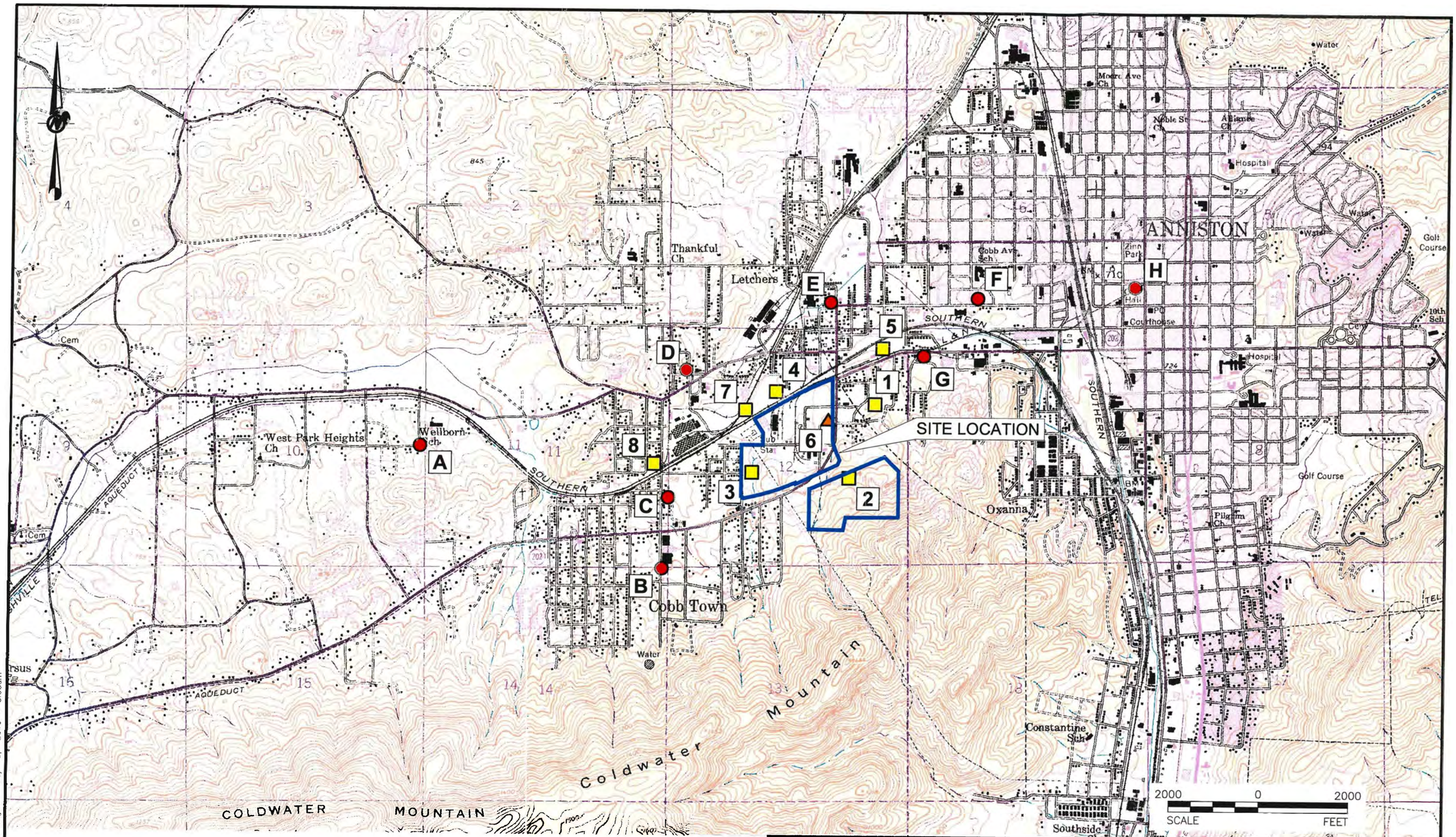
N

SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J006 Rev. 2	2-5



REFERENCES

1.) USGS TOPOGRAPHIC MAP, 7.5 MIN. QUADRANGLE MAP
SERIES: ANNISTON QUADRANGLE, CALHOUN COUNTY, AL

LEGEND

- AIR MONITORING AND METEOROLOGICAL STATION
- AIR MONITORING STATION
- EPA AIR MONITORING STATION

Golder Associates
Jacksonville, Florida

FILE No.	9433680J021		
PROJECT No.	943–3680	REV.	0

SCALE	AS SHOWN
DATE	03/20/09
DESIGN	RWP
CADD	MRM
CHECK	RWP
REVIEW	SJM

TITLE

METEOROLOGICAL AND AIR MONITORING LOCATIONS

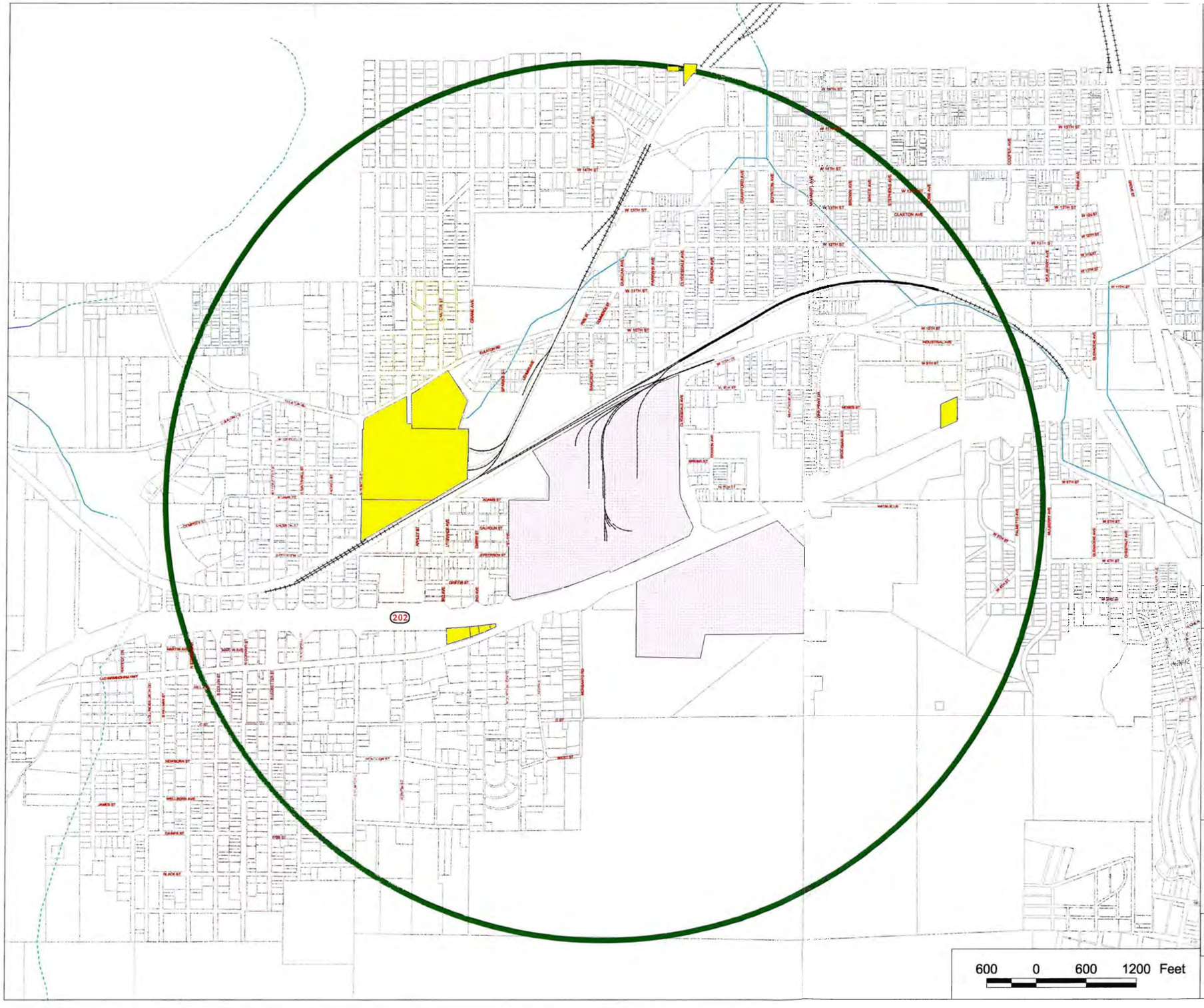
SOLUTIA INC.

FIGURE 2-6

Drawing file: 9433680J021.dwg May 18, 2010 - 8:06am

One Mile Radius Potable Well Survey

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Roads
- Railroads
- OU-3 Area
- One Mile Perimeter
- Parcels with Potable Wells

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N

SOLUTIA

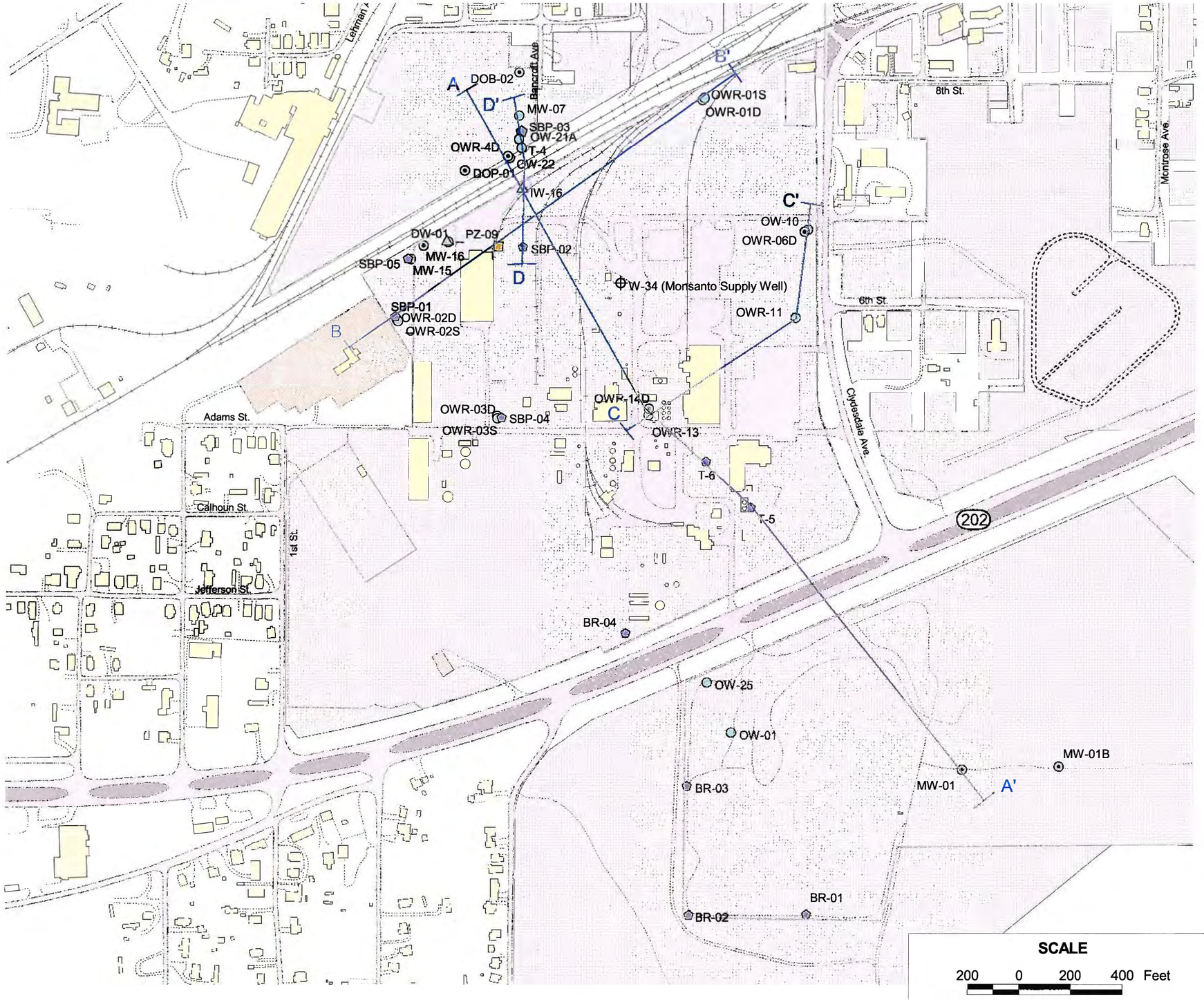
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J011A	2-7

Location of Hydrogeologic Cross Sections

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Railroad
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- Buildings
- Alabama Power
- Solutia Inc.
- Paved
- Cross Section Location
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Recovery Well
- Piezometer

NOTES

Cross Sections A-A', B-B', C-C', and D-D' are shown on Figures 3-2, 3-3, 3-8, and 3-9 respectively.

SCALE

200 0 200 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N

SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J008 Rev. 2	3-1

A (NW)

A' (SE)

ELEVATION (FT. MSL)

900
850
800
750
700
650
600
550
500
450
200

SBP-01
PROJECTED
675 FT. NE

MW-15
PROJECTED
525 FT. NE

SBP-05
PROJECTED
525 FT. NE

DOP-1
PROJECTED
150 FT. NE

DOB-2
PROJECTED
225 FT. SW

OWR-2D
PROJECTED
675 FT. NE

OWR-2S
PROJECTED
675 FT. NE

OWR-3D
PROJECTED
500 FT. NE

OWR-3S
PROJECTED
500 FT. NE

SBP-04
PROJECTED
500 FT. NE

EXISTING GROUND SURFACE

T-06

OWR-14D

T-05

BR-04
PROJECTED
700 FT. NE

OW-01
PROJECTED
600 FT. NE

OW-25
PROJECTED
550 FT. NE

BR-03
PROJECTED
875 FT. NE

BR-01
PROJECTED
820 FT. NE

DRY

?

CONTACT(?)

ROME
FORMATION

SHADY DOLOMITE

WEISNER FORMATION

CONTACT

LEGEND

- FILL
- RESIDUAL CLAYEY/ SILTY SOIL
- WEATHERED DOLOSTONE
- QUARTZITE/ SANDSTONE
- HIGHLY WEATHERED SHALE/SILTSTONE
- DOLOSTONE
- WELL DESIGNATION SBP-04
- HISTORICAL WATER LEVEL
- SCREENED INTERVAL

300 0 300
SCALE FEET
VERTICAL SCALE EXAGGERATED 6X

NOTES:
1) GROUND SURFACE PROFILE ESTIMATED FROM BORING ELEVATIONS.
2) HISTORICAL WATER LEVEL DATA SHOWN FOR REFERENCE.
3) LITHOLOGIC CONTACTS ARE INTERPOLATED BETWEEN BORINGS AND ARE APPROXIMATE.
4) CONTACT INFORMATION TAKEN FROM WARMAN AND CAUSEY 1962.
5) SEE FIGURE 3-1 FOR LOCATION OF CROSS SECTION A-A'.

Golder Associates
Jacksonville, Florida

FILE No.	9433680J009
PROJECT No.	943-3680
REV.	0
SCALE	AS SHOWN
DATE	03/20/09
DESIGN	RWP
CADD	MRM
CHECK	RWP
REVIEW	SJM

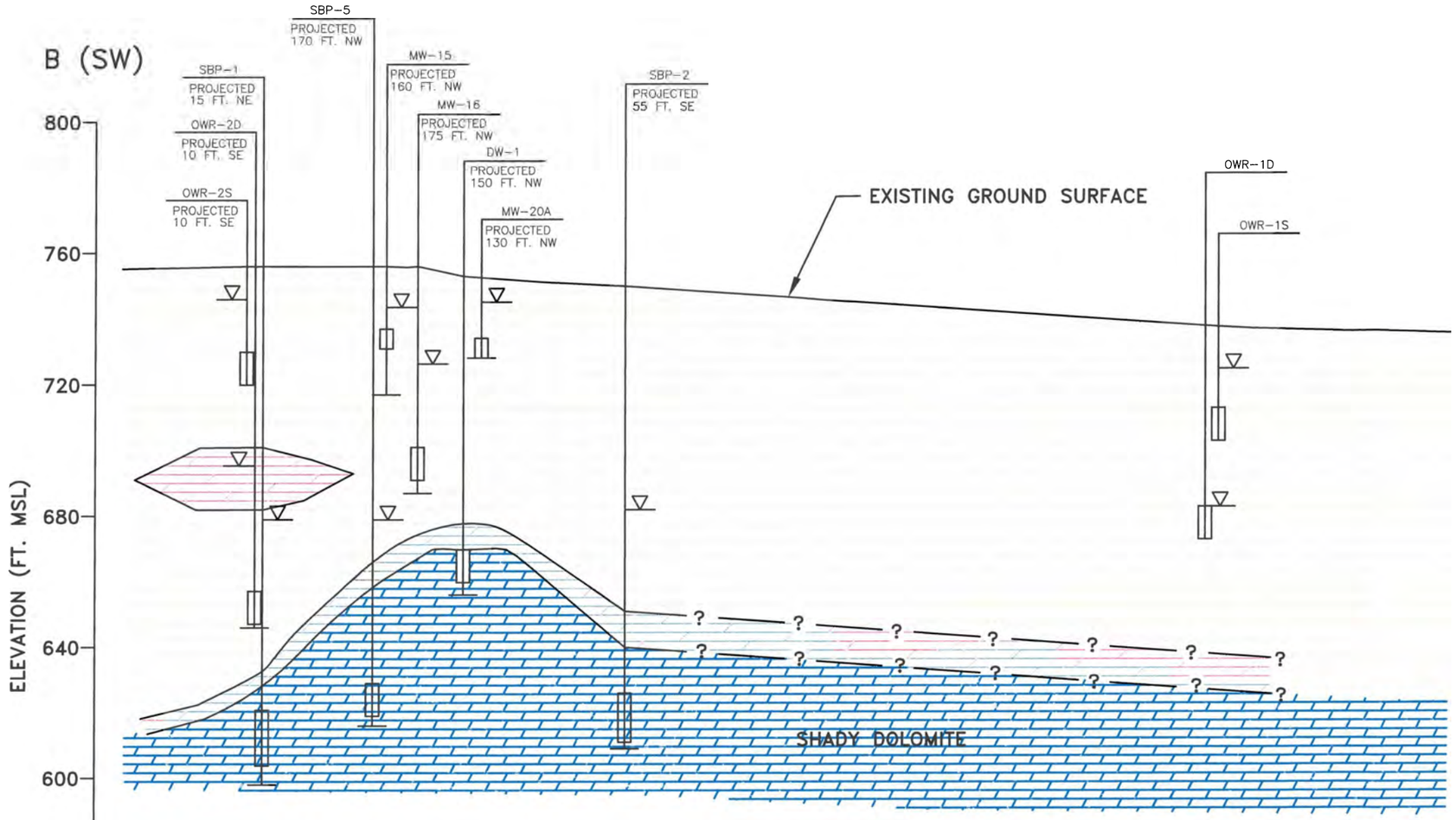
TITLE

HYDROGEOLOGIC CROSS SECTION A-A'

RI REPORT / SOLUTIA INC.

FIGURE 3-2

Drawing file: 9433680J009.dwg May 18, 2010 - 7:53am



LEGEND

- RESIDUAL CLAYEY/ SILTY SOIL
- WEATHERED DOLOSTONE
- DOLOSTONE
- WELL DESIGNATION (SBP-04)
- HISTORICAL WATER LEVEL
- SCREENED INTERVAL

SCALE IN FEET

0 200 400

VERTICAL EXAGGERATION = 5X

NOTES:

1) GROUND SURFACE PROFILE ESTIMATED FROM BORING ELEVATIONS.
2) HISTORICAL WATER LEVEL DATA SHOWN FOR REFERENCE.
3) LITHOLOGIC CONTACTS ARE INTERPOLATED BETWEEN BORINGS AND ARE APPROXIMATE.
4) CONTACT INFORMATION TAKEN FROM WARMAN AND CAUSEY 1962.
5) SEE FIGURE 3-1 FOR LOCATION OF CROSS SECTION B-B'.

Golder Associates
Jacksonville, Florida

FILE No.	9433680J010
PROJECT No.	943-3680
REV.	0
SCALE	AS SHOWN
DATE	03/20/09
DESIGN	RWP
CADD	MRM
CHECK	RWP
REVIEW	SJM

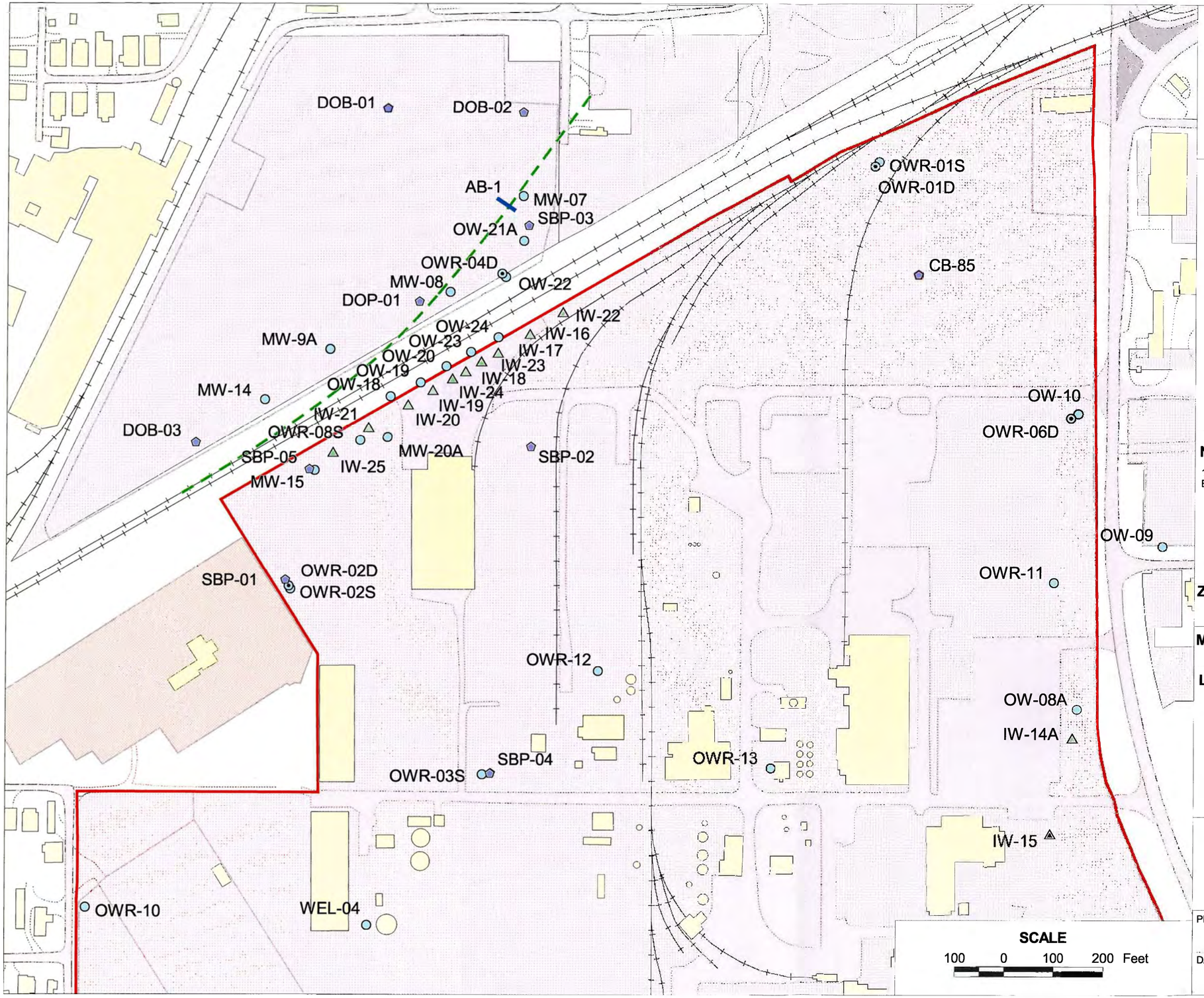
TITLE

HYDROGEOLOGIC CROSS SECTION B-B'

RI REPORT / SOLUTIA INC.

FIGURE 3-3

Drawing file: 9433680J010.dwg May 18, 2010 - 8:01am



Discontinuity Location

Remedial Investigation Report
Solutia Inc., Anniston, Alabama

LEGEND

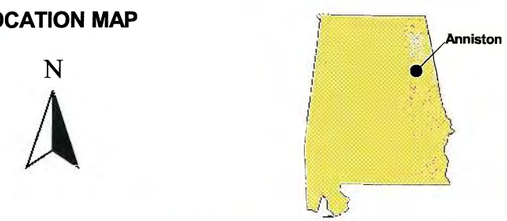
- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Interceptor Well
- Approximate Discontinuity Location
- Angled Boring Location

NOTES

1.) Geologic discontinuity location obtained from Geraghty and Miller, Inc. Bedrock Investigation, 1992

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

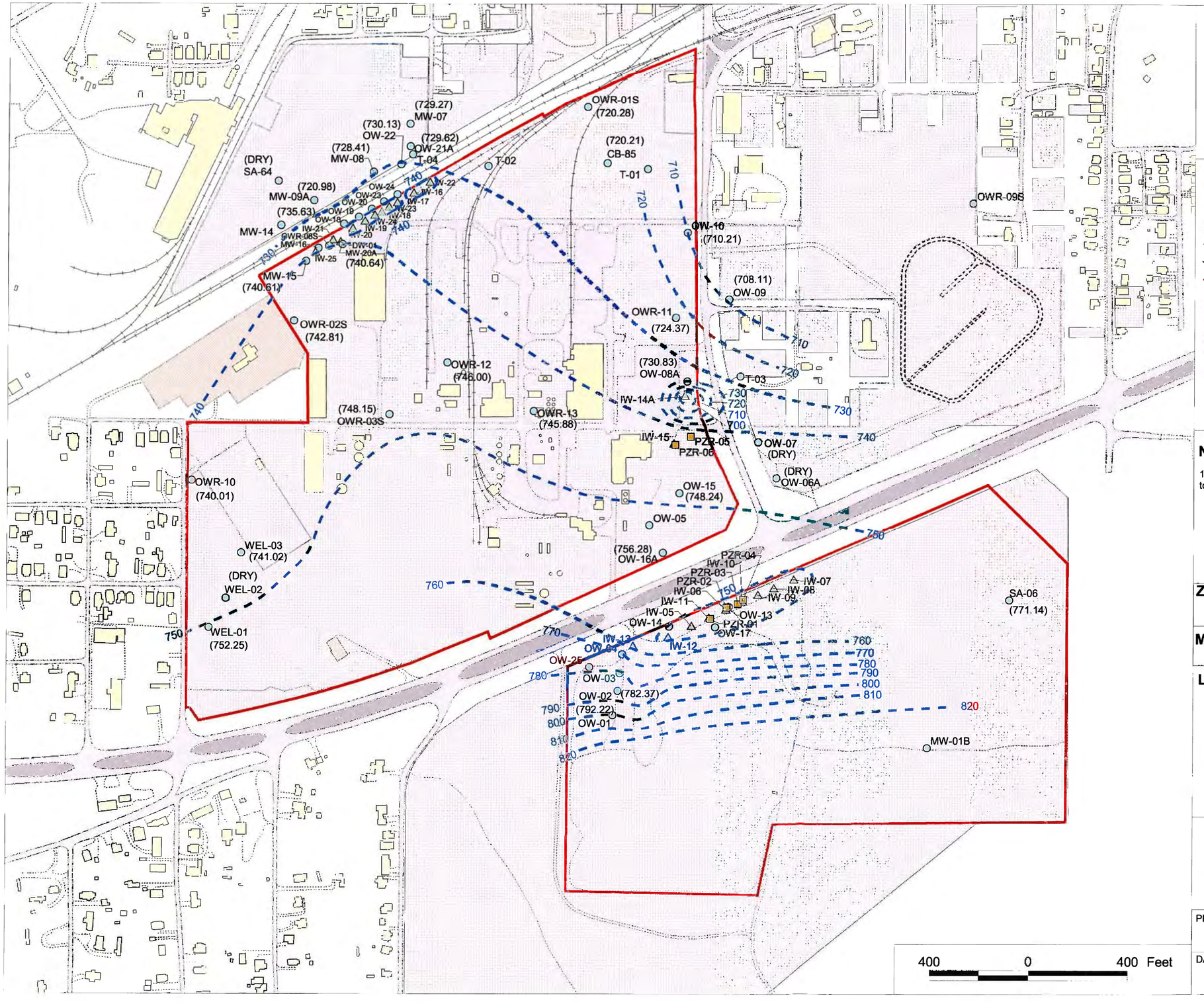
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J011B Rev. 12	3-4

Shallow Residuum Potentiometric Surface for October 2007

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



400 0 400 Feet

LEGEND

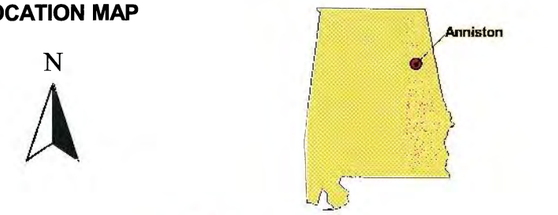
- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Recovery Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Piezometer
- Equipotential Contour (feet above mean sea level)
- (792.22) Groundwater Elevation Data

NOTES

1) Cone of depression around recovery well systems not shown in detail due to map scale.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

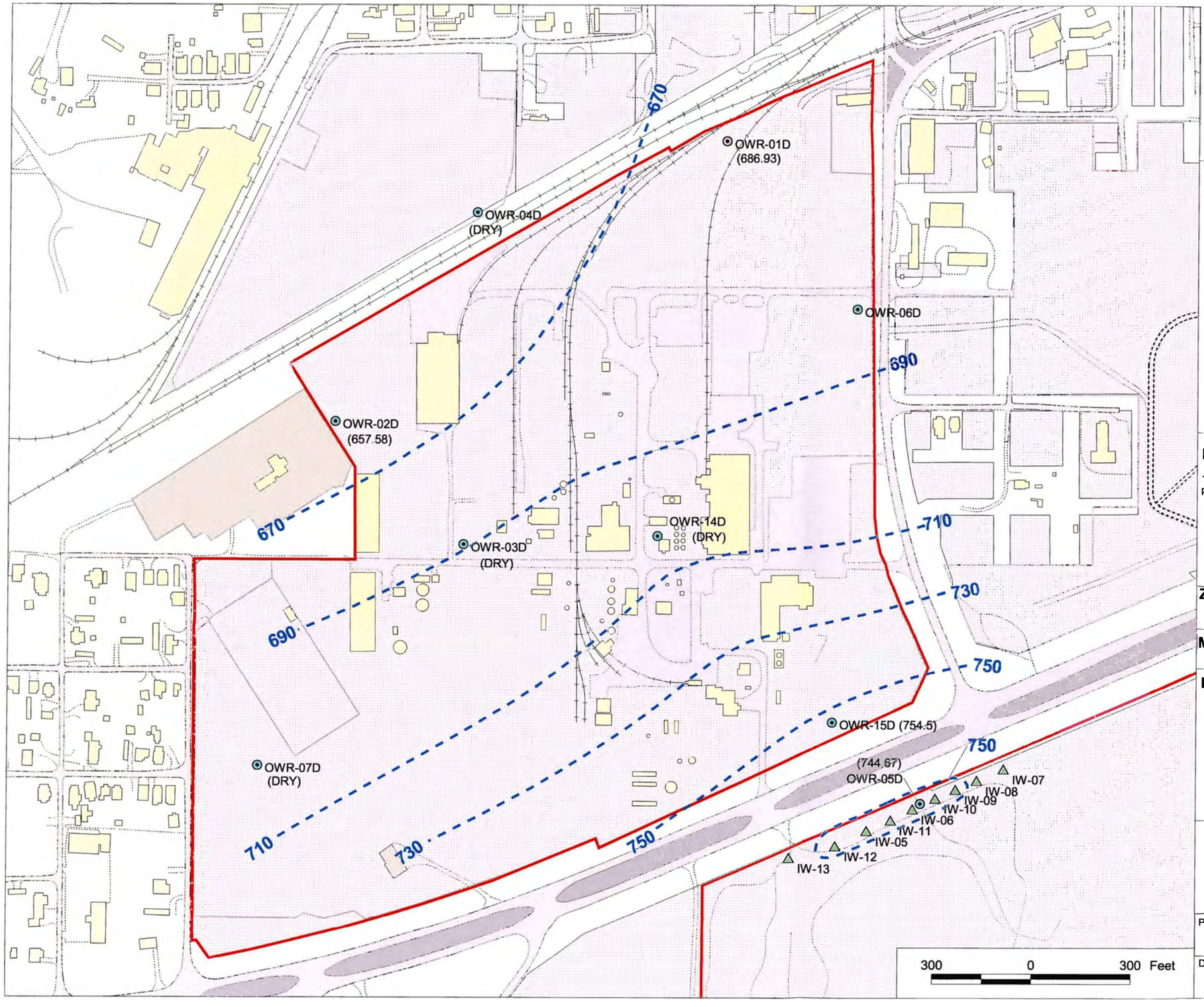
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J012A Rev. 3	3-5

Deep Residuum
Potentiometric Surface for October 2007

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

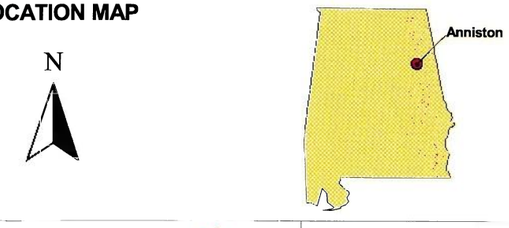
- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Recovery Well
- Deep Residuum Monitoring/ Observation Well
- Equipotential Contour (feet above mean sea level)
- (657.58) Groundwater Elevation Data

NOTES

1) Recovery wells shown for reference only and were not used in the creation of this potentiometric surface.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

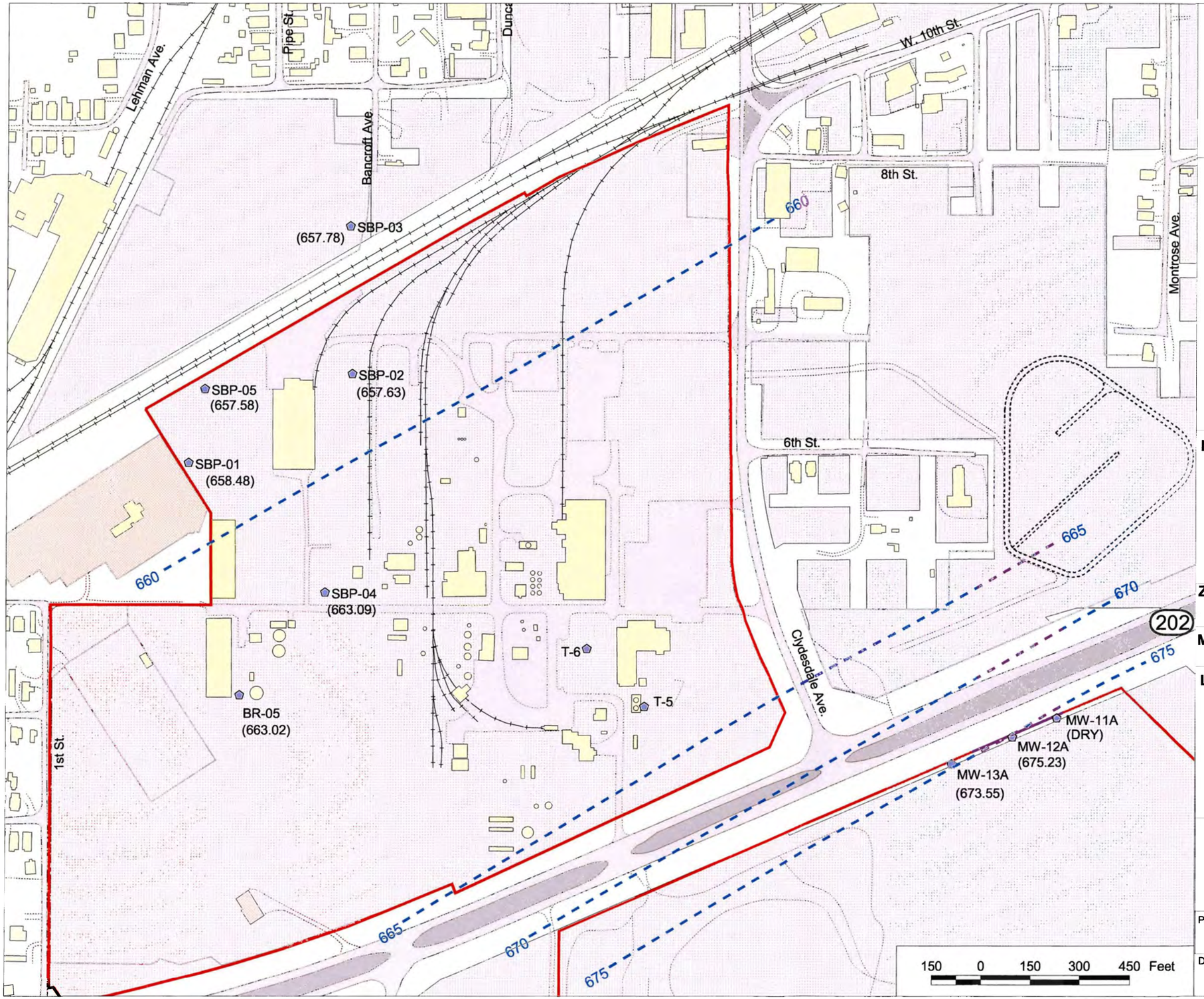
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J012B Rev. 3	3-6

Shallow Bedrock Potentiometric Surface for October 2007

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



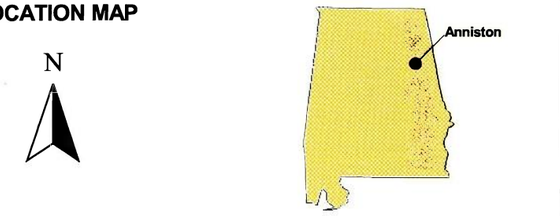
LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Bedrock Monitoring Well
- Equipotential Contour (feet above mean sea level)
- (663.09) Groundwater Elevation Data

NOTES

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP

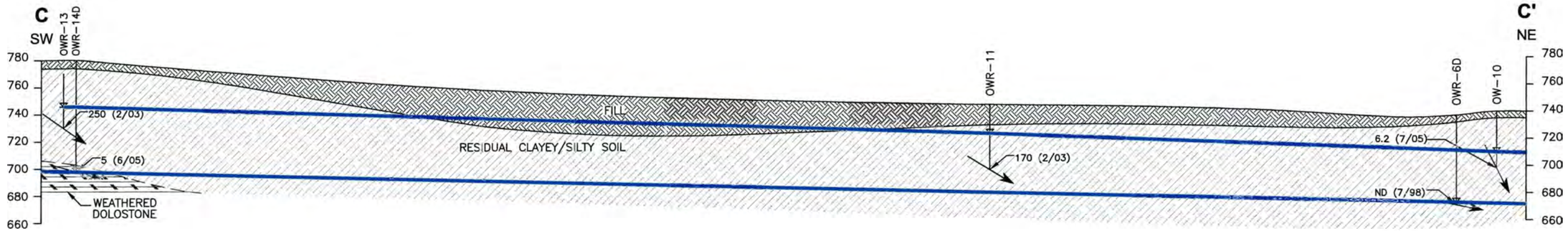


SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J013 Rev. 2	3-7



LEGEND

- FILL
- RESIDUAL CLAYEY/SILTY SOIL
- WEATHERED DOLOSTONE
- GROUNDWATER ELEVATION
- DIRECTION OF FLOW

NOTES

1) GROUNDWATER ELEVATIONS TAKEN FROM OCTOBER 2007.

2) WHERE DRY, DIRECTION OF FLOW BASED ON HISTORICAL DATA (WELL OWR-14D WAS DRY FOR OCTOBER 2007).

3) ND – NON DETECT

4) ALL UNITS IN ug/L (MICROGRAMS PER LITER).

5) INDICATED CONCENTRAIONS ARE FOR TOTAL PCBs.

6) SEE FIGURE 3-1 FOR LOCATION OF CROSS SECTION C-C'.

80 0 80
SCALE FEET

Golder Associates
Jacksonville, Florida

FILE No.	9433680J022
PROJECT No.	943-3680 REV. 0
SCALE	AS SHOWN
DATE	03/20/09
DESIGN	RWP
CADD	MRM
CHECK	RWP
REVIEW	SJM

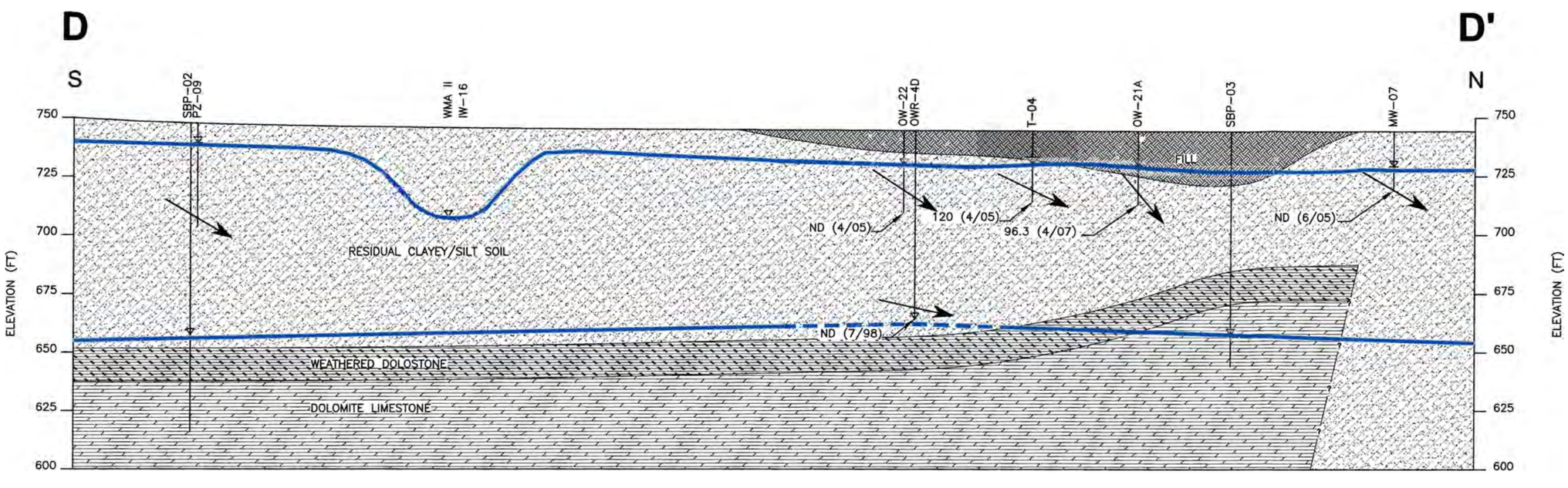
TITLE

FLOW ANALYSIS PLANT SITE AREA (OCTOBER 2007)

RI REPORT / SOLUTIA INC.

FIGURE 3-8

Drawing file: 9433680J022.dwg May 18, 2010 - 8:09am



LEGEND

- FILL
- RESIDUAL CLAYEY/SILTY SOIL
- WEATHERED DOLOSTONE
- DOLOMITE LIMESTONE
- GROUNDWATER ELEVATION
- LITHOLOGICAL CONTACT
- DIRECTION OF FLOW

NOTES

1) GROUNDWATER ELEVATIONS TAKEN FROM OCTOBER 2007.

2) WHERE DRY, DIRECTION OF FLOW BASED ON HISTORICAL DATA (WELL OWR-4D WAS DRY FOR OCTOBER 2007).

3) ND – NON DETECT

4) ALL UNITS IN ug/L (MICROGRAMS PER LITER)

5) INDICATED CONCENTRATIONS ARE FOR TOTAL PCBs.

6) SEE FIGURE 3-1 FOR LOCATION OF CROSS SECTION D-D'.

50 0 50
SCALE FEET

Golder Associates
Jacksonville, Florida

FILE No.	9433680J023
PROJECT No.	943-3680 REV. 0
SCALE	AS SHOWN
DATE	03/20/09
DESIGN	RWP
CADD	MRM
CHECK	RWP
REVIEW	SJM

TITLE

FLOW ANALYSIS OLBSI AREA (OCTOBER 2007)

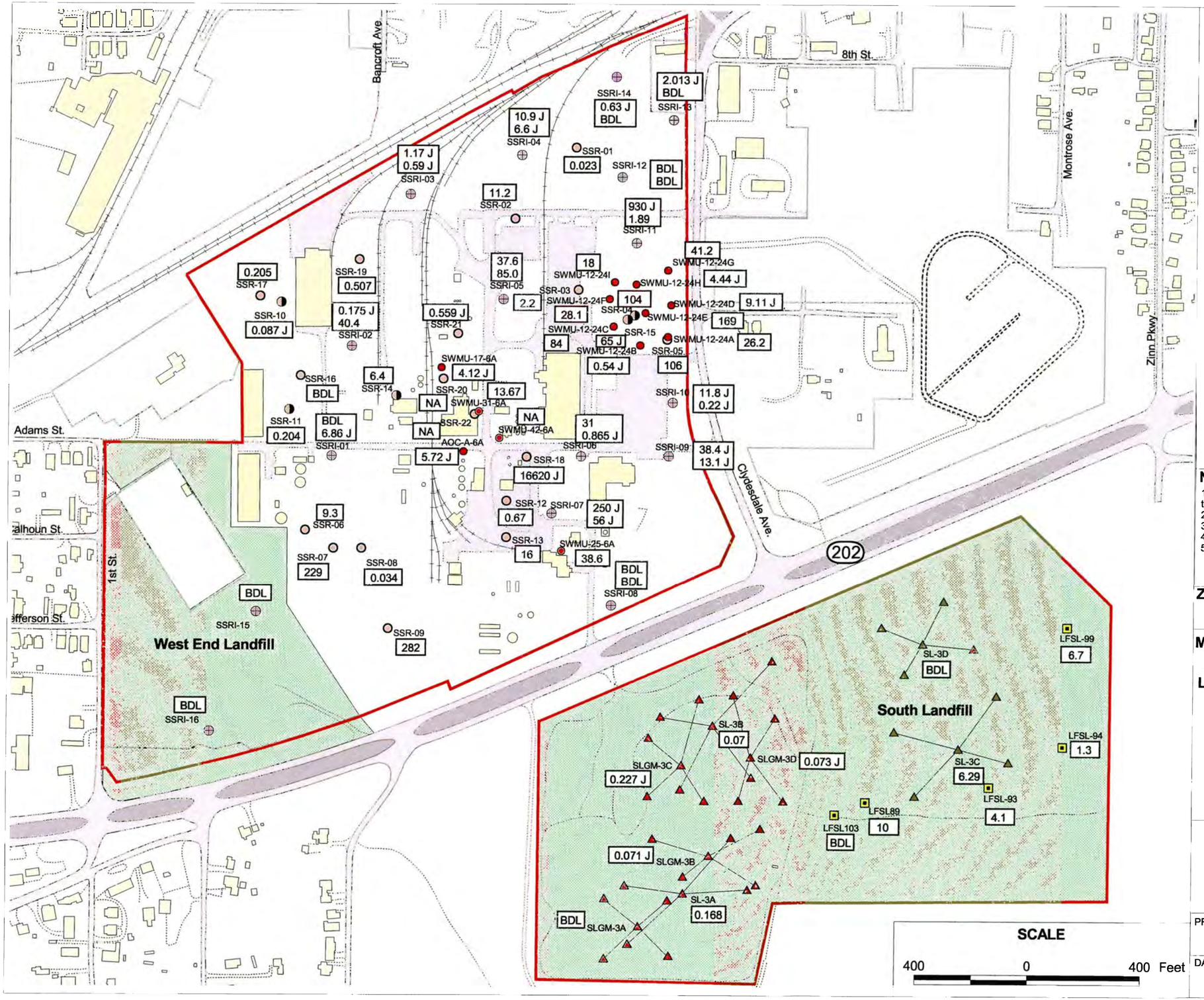
RI REPORT / SOLUTIA INC.

FIGURE 3-9

Drawing file: 9433680J023.dwg May 18, 2010 - 9:19am

PCB Soil Sample Results

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- OU-3 Area
- Paved
- Buildings
- Landfill Area

- Pre-RFI/CS Surface Samples (Prior to 1998 Cover Upgrades)
- RFI/CS Subsurface soil sample
- RFI/CS Surface (or near surface) soil sample
- Supplemental RFI/CS Soil Sample collected within 24 inches of surface
- Supplemental RFI/CS Composite Soil Sample
- OU-3 RI Soil Sample Location

1.17 / NR — PCB Results in mg/kg
Top result is surface or near surface
Bottom result is subsurface

NOTES

1) At each location, if only one result is shown, there is only a surface sample at that point.
2) Only primary sample results shown, see Table 4-1 for duplicate results.
3) BDL = Below Detection Limit.
4) J = Estimated value.
5) mg/kg = milligrams per kilogram.

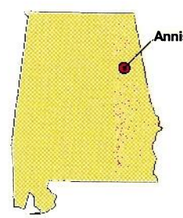
SCALE
400 0 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N



SOLUTIA

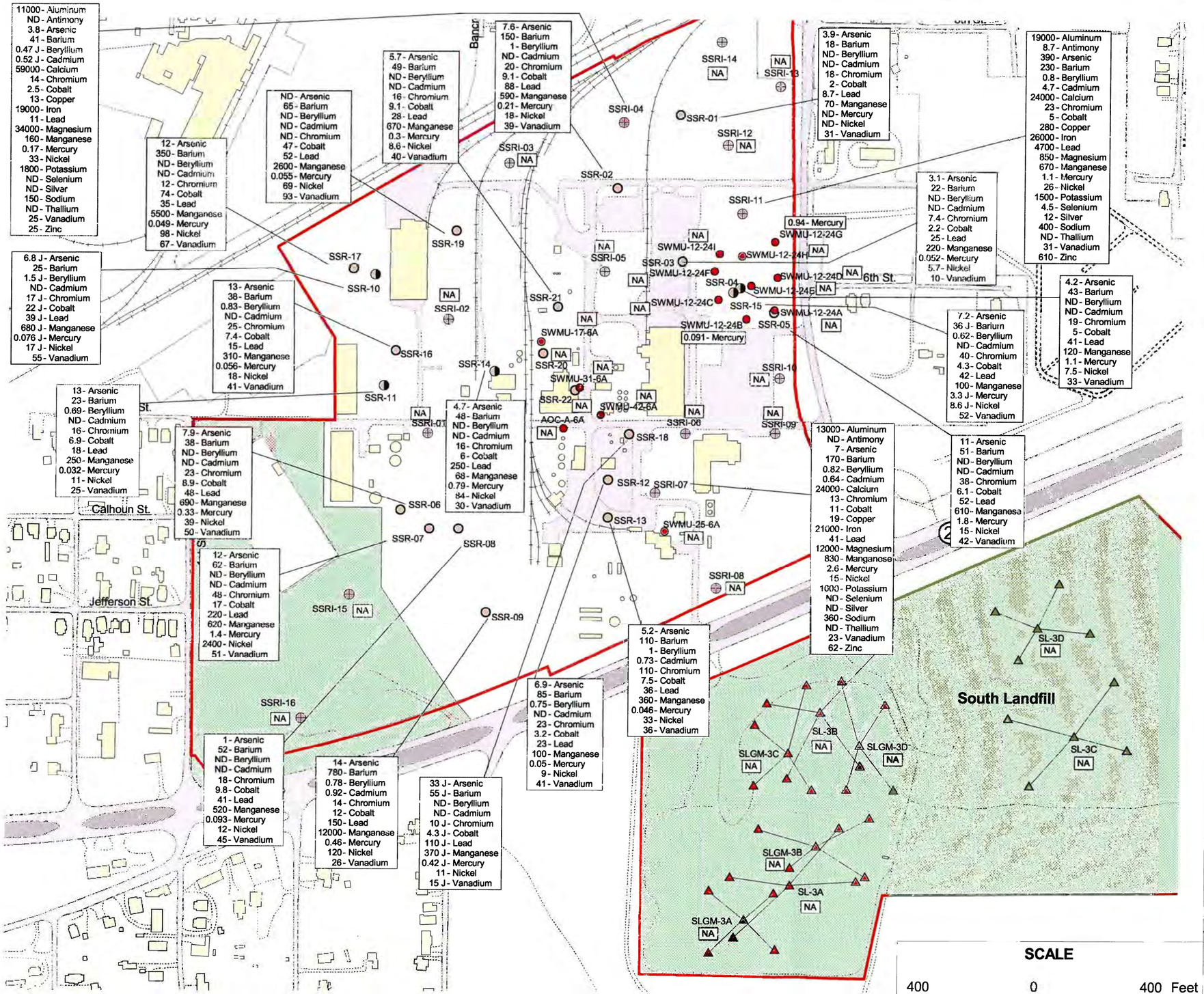
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/23/09	943-3680	9433680J026	4-1

Metal Soil Sample Results

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- OU-3 Area
- Paved
- Buildings
- Landfill Area
- RFI/CS Subsurface soil sample
- RFI/CS Surface (or near surface) soil sample
- Supplemental RFI/CS Soil Sample collected within 24 inches of surface
- Supplemental RFI/CS Composite Soil Sample
- OU-3 RI Soil Sample Location

NOTES

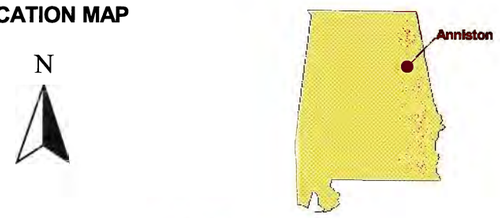
1) Only detections are shown. See Table 4-1 for complete results.
2) J = Estimated value
3) NA = Not Analyzed
4) Soil samples collected from both surface and subsurface.
5) Concentrations in milligrams per kilogram.

SCALE

400 0 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

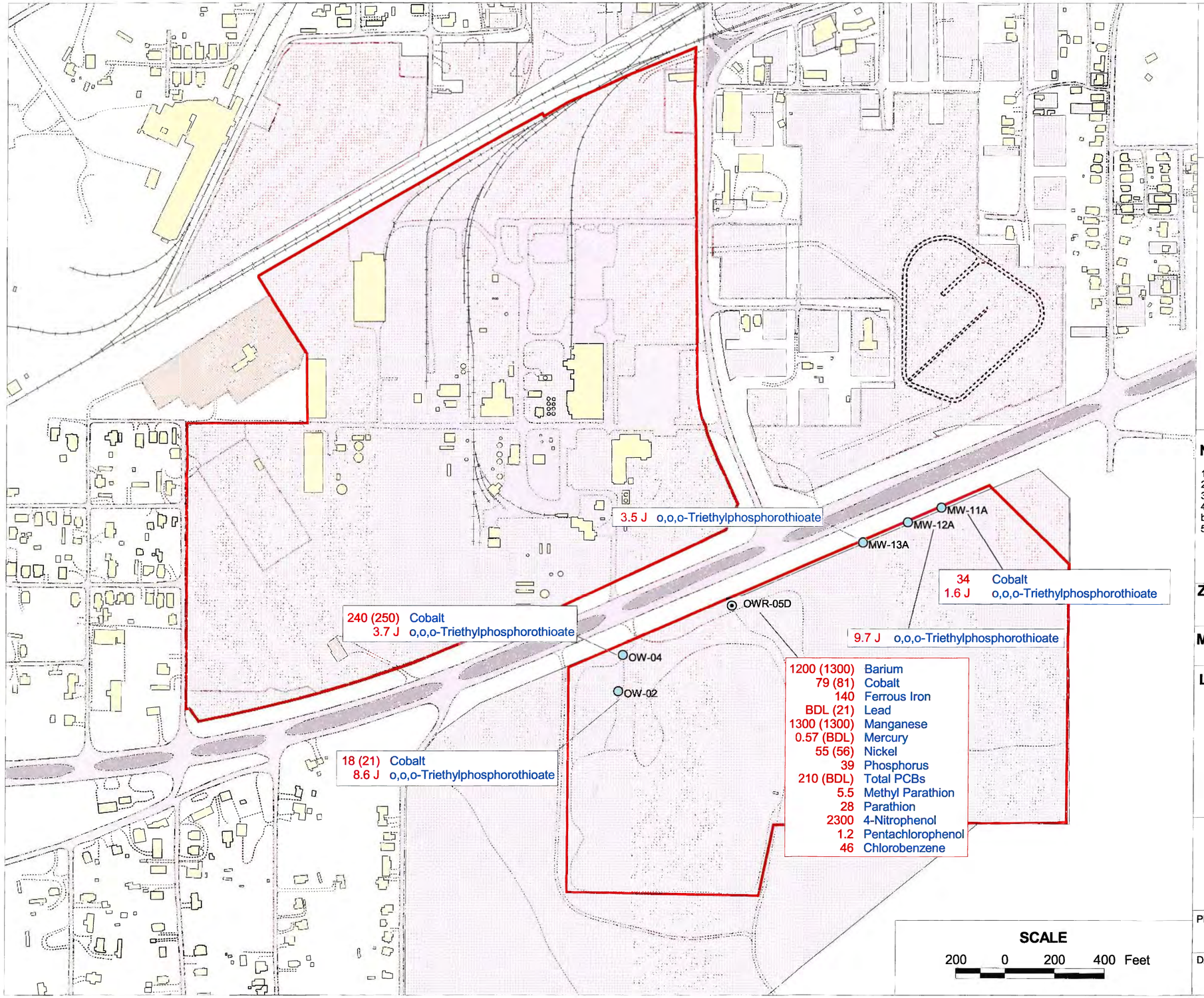
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J014B Rev. 1	4-2

WMA I and South Landfill Groundwater Chemistry

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- 52 Sample Result
- (54) Filtered Sample Result

NOTES

1) BDL = Concentration below detection limit.
2) J = Estimated.
3) All concentration results are in µg/l.
4) Only detections are shown. Results are from 2005 RI Program for OWR-05D, but from 2007 RCRA Program for all others.
5) For duplicate sample pairs, only results from the primary sample are shown.

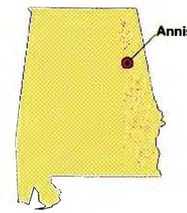
SCALE
200 0 200 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N

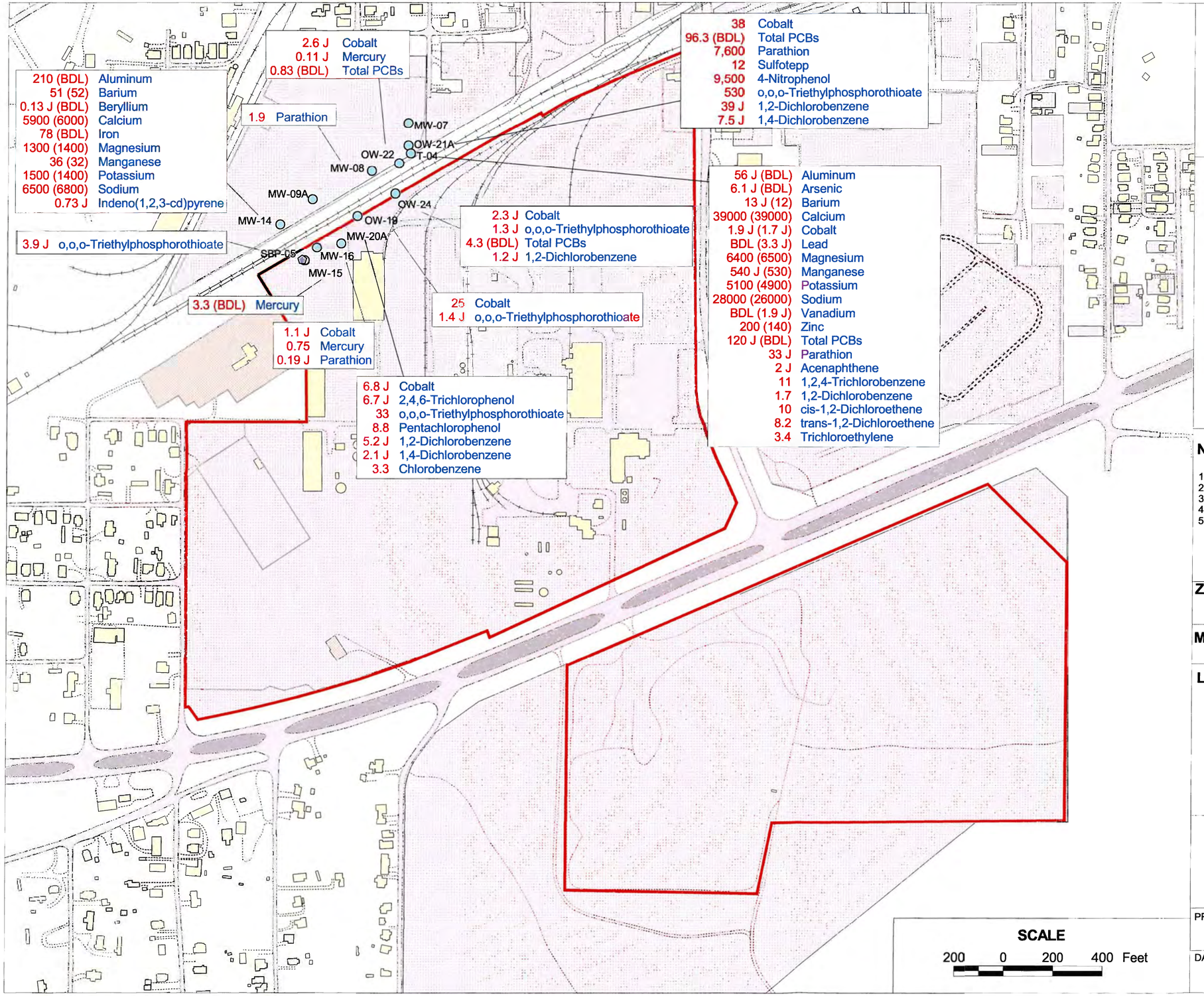


SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005C Rev. 2	4-3



WMA II & OLBSI Groundwater Chemistry

Remedial Investigation Report
Solutia Inc., Anniston, Alabama

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Shallow Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- 52 Sample Result
- (54) Filtered Sample Result

NOTES

1) BDL = Concentration below detection limit.
2) J = Estimated.
3) All concentration results are in µg/l.
4) Only detections are shown. Results are from 2005 RI or 2007 RCRA Program.
5) For duplicate sample pairs, only results from the primary sample are shown.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N

SOLUTIA

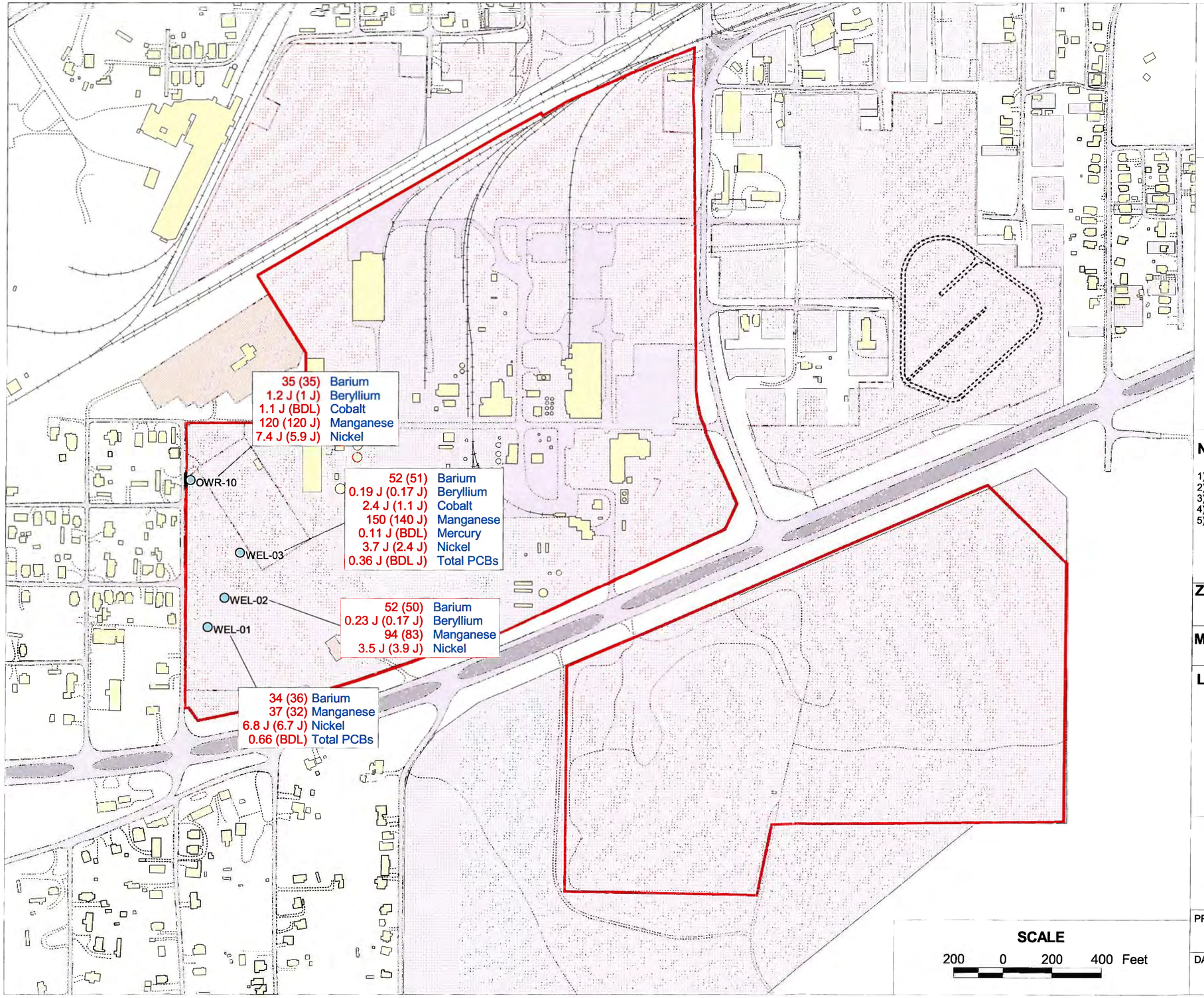
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005D Rev. 2	4-4

West End Landfill Groundwater Chemistry

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Shallow Residuum Monitoring/ Observation Well
- 52 Sample Result
- (54) Filtered Sample Result

NOTES

1) BDL = Concentration below detection limit.
2) J = Estimated.
3) All concentration results are in µg/l.
4) Only detections are shown. Results are from 2005 RI or 2007 RCRA Program.
5) For duplicate sample pairs, only results from the primary sample are shown.

SCALE

200 0 200 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP

N

SOLUTIA

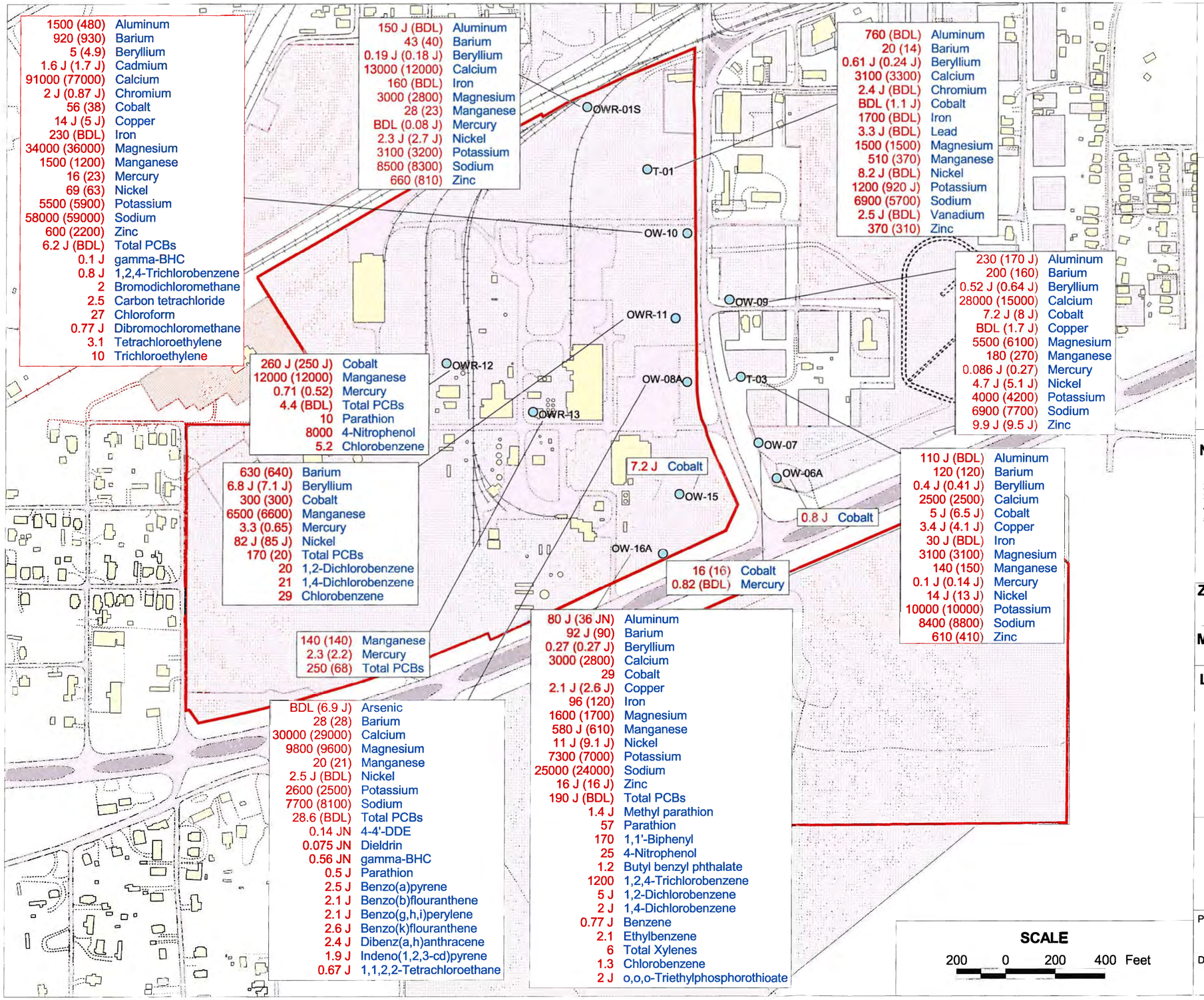
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005E Rev. 2	4-5

Interior & Northeast Perimeter Groundwater Chemistry

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Shallow Residuum Monitoring/ Observation Well
- 52 Sample Result
- (54) Filtered Sample Result

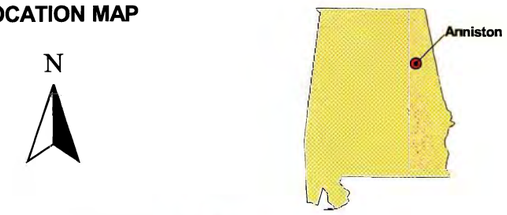
NOTES

1) BDL = Concentration below detection limit.
2) J = Estimated.
3) All concentration results are in µg/l.
4) Only detections are shown. Results from 2005 RI or 2007 RCRA Program.
5) For duplicate sample pairs, only results from the primary sample are shown.

SCALE
200 0 200 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

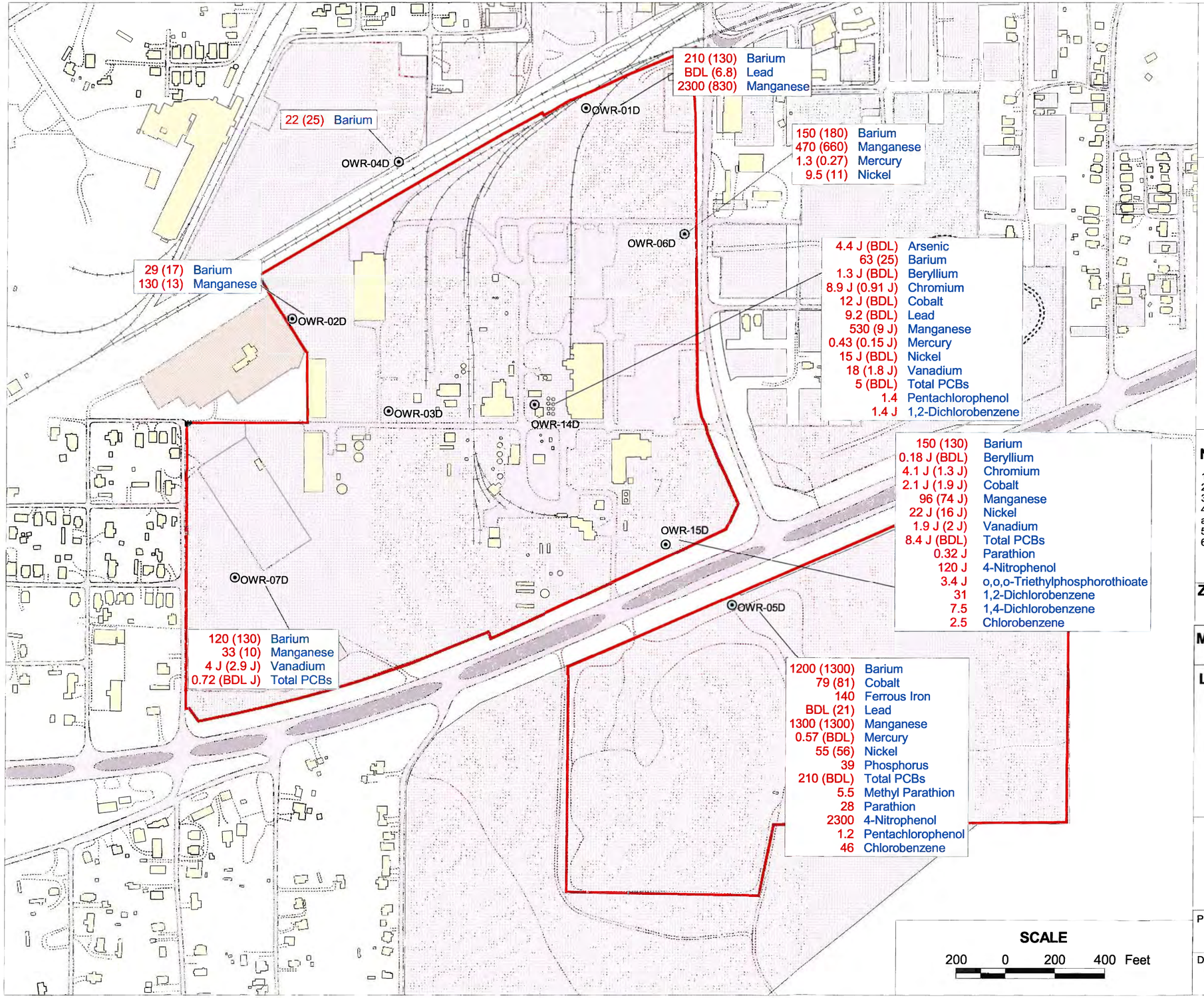
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005F Rev. 2	4-6

Deep Residuum Groundwater Chemistry

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Deep Residuum Monitoring/ Observation Well
- 52 Sample Result
- (54) Filtered Sample Result

NOTES

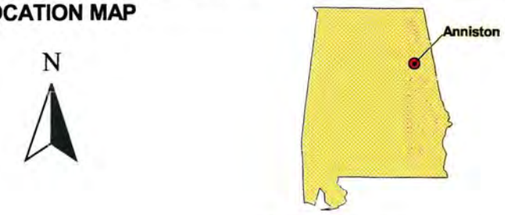
1) BDL = Concentration below detection limit.
2) J = Estimated.
3) All concentration results are in µg/l.
4) Only detections are shown. Results are from 2005 RI, 2007 RCRA Program, and RFI/CS Program.
5) For duplicate sample pairs, only results from the primary sample are shown.
6) OWR-3D was dry during the RFI/CS Program.

SCALE
200 0 200 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

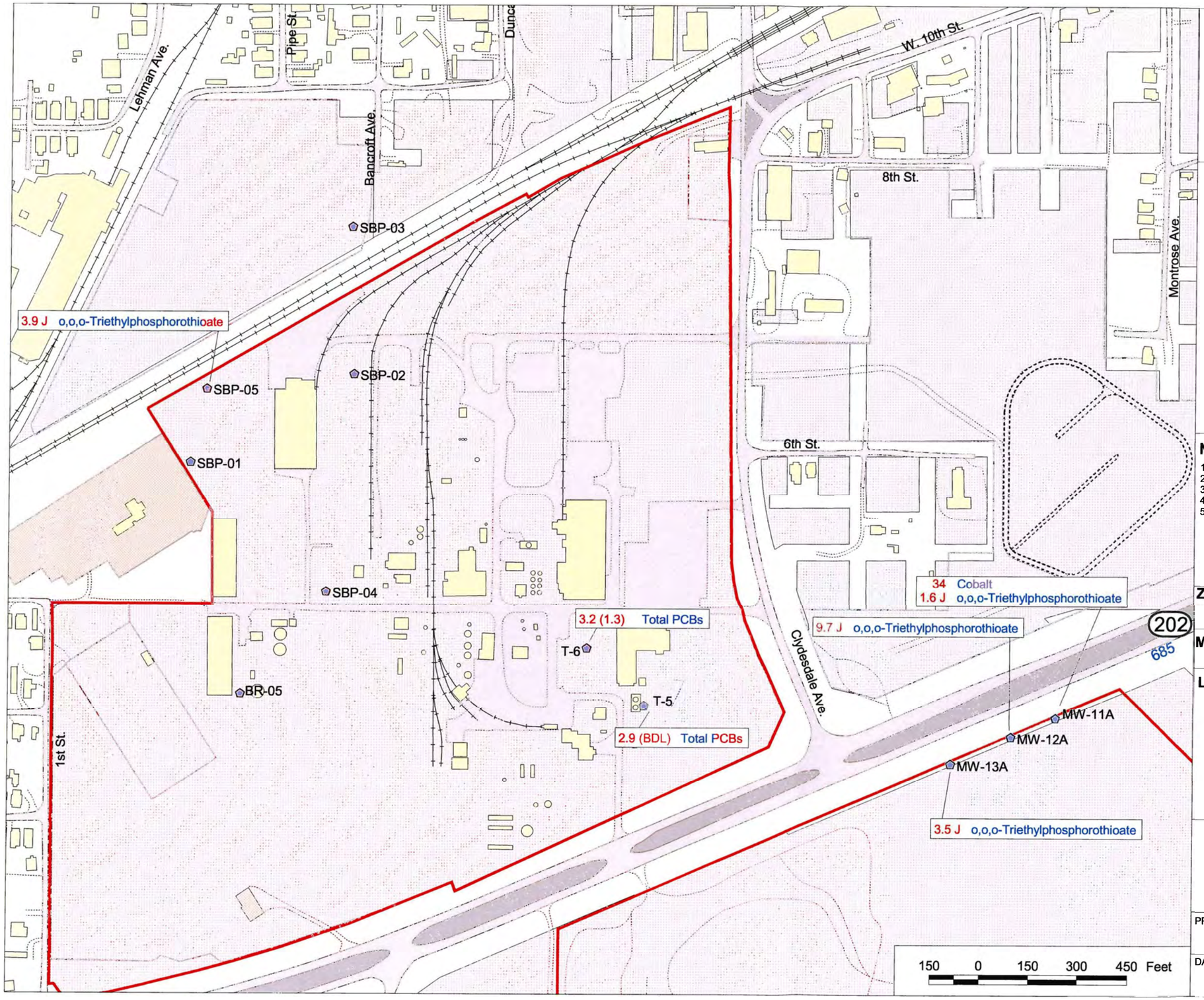
Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J005G Rev. 2	4-7

Shallow Bedrock Groundwater Chemistry

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- Bedrock Monitoring Well
- 52 Sample Result
- (54) Filtered Sample Result

NOTES

1) BDL = Concentration below detection limit.
2) J = Estimated.
3) All concentration results are in µg/l.
4) Only detections are shown. Results are from 2005 RI or 2007 RCA Program.
5) For duplicate sample pairs, only results from the primary sample are shown.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP

N

SOLUTIA

Golder Associates

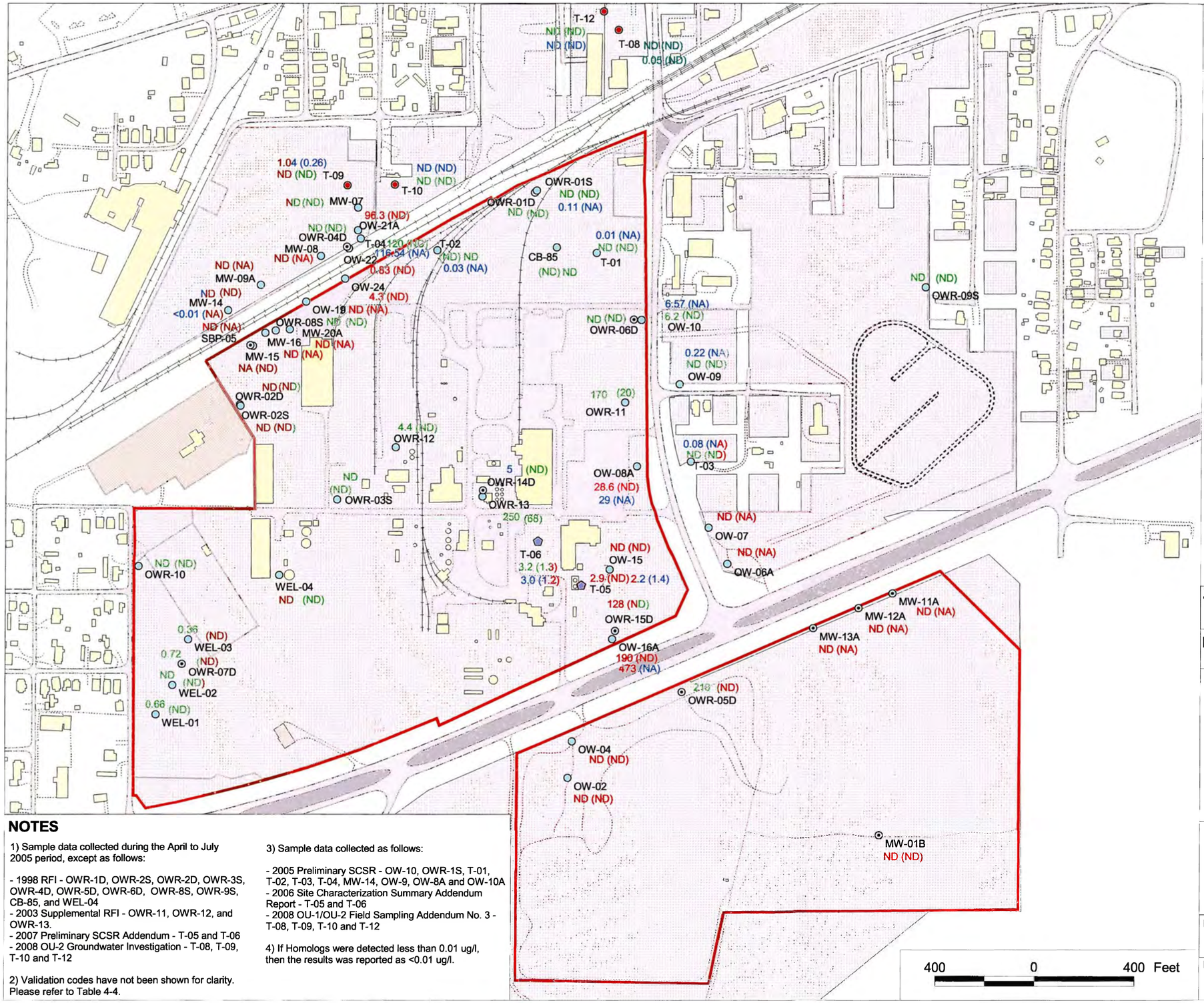
PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J015 Rev. 2	4-8

PCB Concentrations in Groundwater

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface
- OU-2 Temporary Monitoring Well
- Bedrock Monitoring Well
- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

6.2 Aroclor Concentration (ug/l) Filtered Results Shown in Parenthesis NA = Not Analyzed ND = Not Detected (As defined in Note 1)

3.5 Aroclor Concentration (ug/l) Filtered Results Shown in Parenthesis NA = Not Analyzed ND = Not Detected (2007 RCRA Program)

2.2 Homolog Concentration (ug/l) Filtered Results Shown in Parenthesis NA = Not Analyzed ND = Not Detected (As defined in Note 3)

NOTES

1) Sample data collected during the April to July 2005 period, except as follows:

- 1998 RFI - OWR-1D, OWR-2S, OWR-2D, OWR-3S, OWR-4D, OWR-5D, OWR-6D, OWR-8S, OWR-9S, CB-85, and WEL-04
- 2003 Supplemental RFI - OWR-11, OWR-12, and OWR-13.
- 2007 Preliminary SCSR Addendum - T-05 and T-06
- 2008 OU-2 Groundwater Investigation - T-08, T-09, T-10 and T-12

2) Validation codes have not been shown for clarity. Please refer to Table 4-4.

3) Sample data collected as follows:

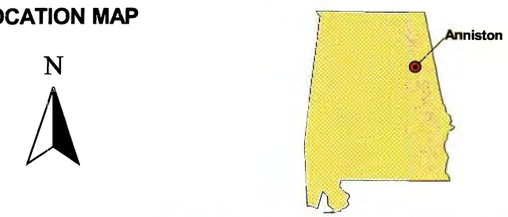
- 2005 Preliminary SCSR - OW-10, OWR-1S, T-01, T-02, T-03, T-04, MW-14, OW-9, OW-8A and OW-10A
- 2006 Site Characterization Summary Addendum Report - T-05 and T-06
- 2008 OU-1/OU-2 Field Sampling Addendum No. 3 - T-08, T-09, T-10 and T-12

4) If Homologs were detected less than 0.01 ug/l, then the results was reported as <0.01 ug/l.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

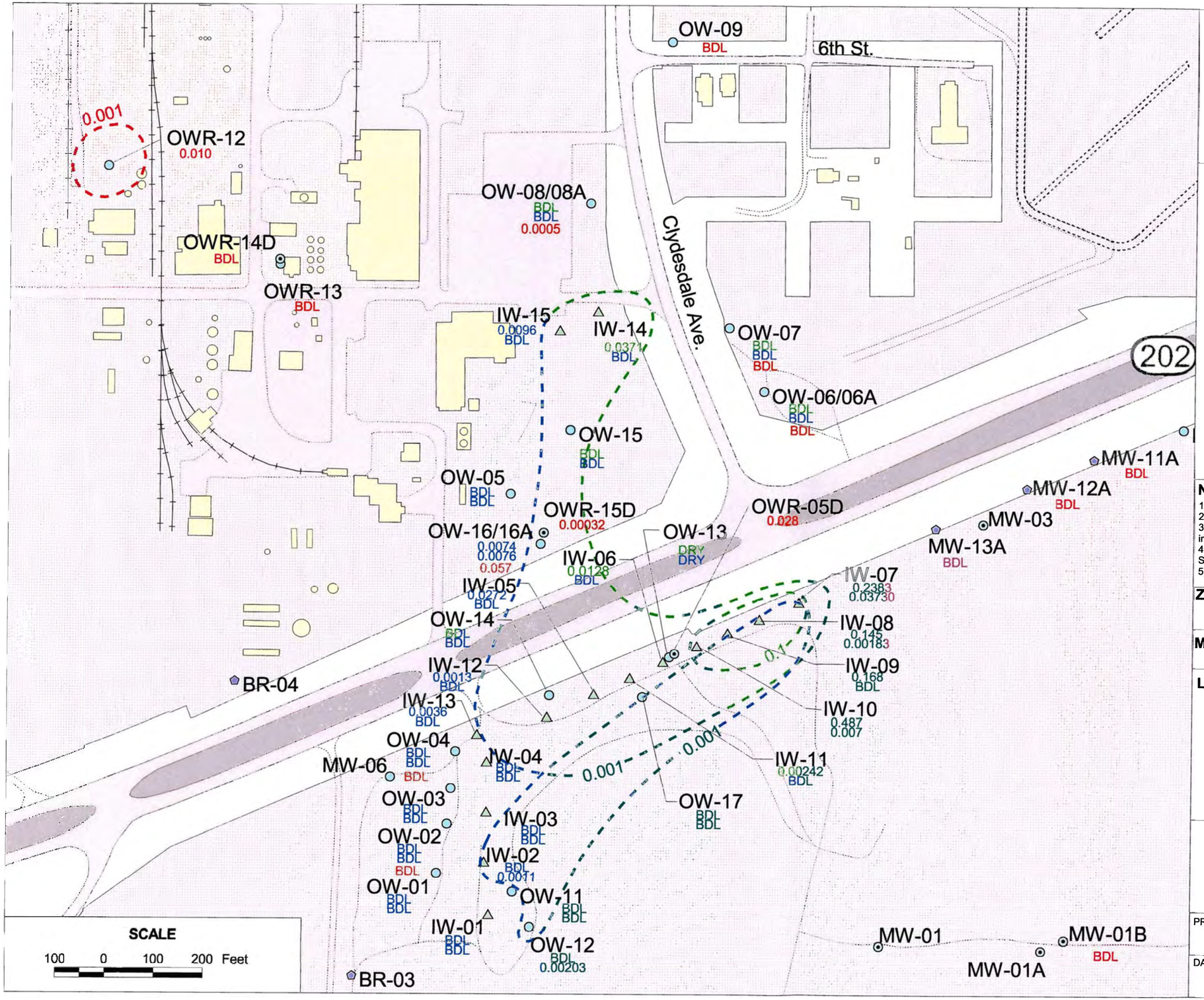
PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
02/18/10	943-3680	9433680J017 Rev. 2	4-9

Parathion Isoconcentrations in South Landfill and Plant Site

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Buildings
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- Line of Equal Concentration (mg/l) 2003, 2005 or 2007 data
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996
- 0.095 Concentration (mg/l) 2003 RFI, 2005 RI or 2007 RCRA

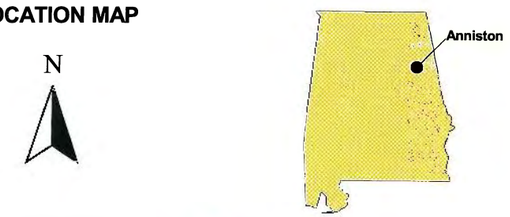
NOTES

1) BDL = Concentration below detection limit.
2) DRY = Well dry during sampling event.
3) OW-6, OW-08 and OW-16 were replaced with OW-6A, OW08A and OW-16A in March 1998.
4) Latest data taken from either 2007 RCRA Program, 2005 RI or 2003 Supplimental RFI.
5) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

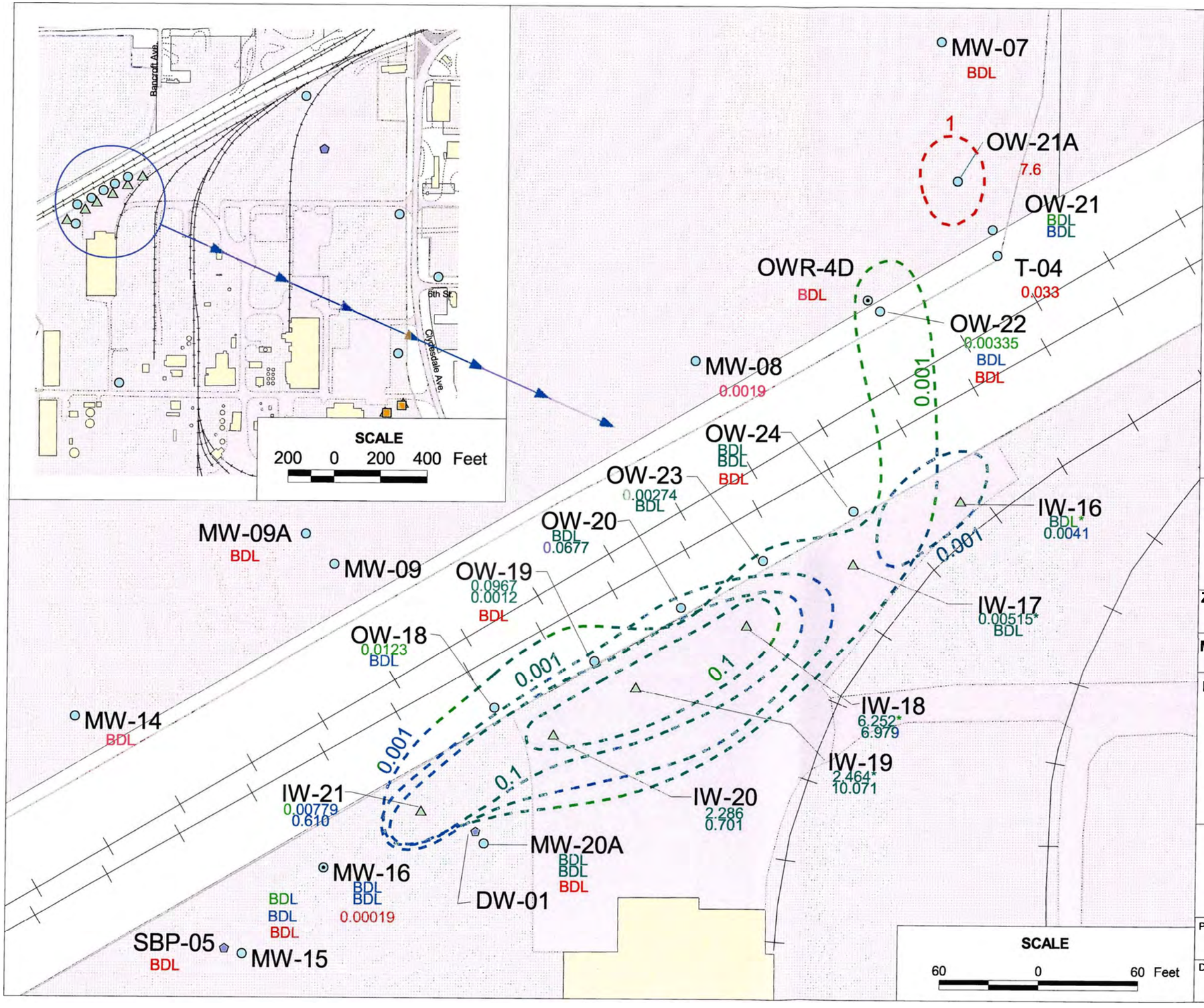
PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J016A Rev. 2	4-10

Parathion Isoconcentrations in OLBSI

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Railroads
- Buildings
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- Line of Equal Concentration (mg/l) 2003, 2005 or 2007 data
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996
- 0.033 Concentration (mg/l) 2005 (RI) or 2007 (RCRA)

NOTES

1) BDL = Concentration below detection limit

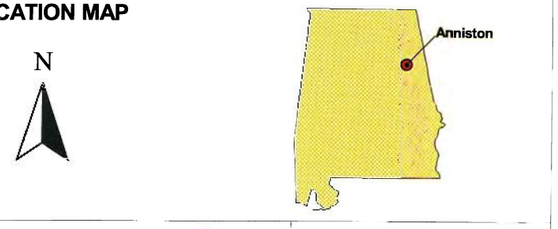
2) * Data from May 1989 (no March / April data)

3) Latest data taken from either 2007 RCRA Program results or 2005 RI.

4) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

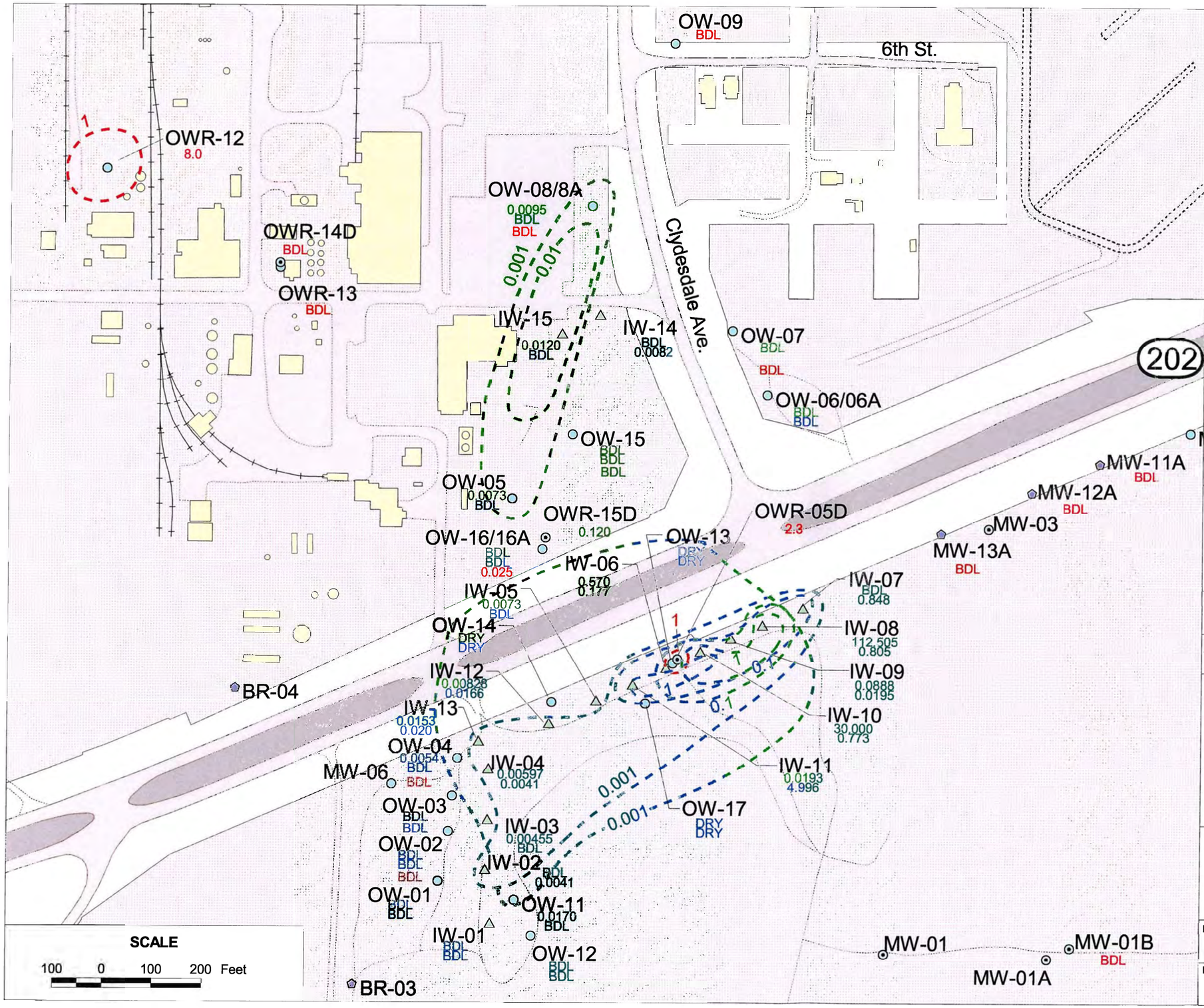
PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
02/02/10	943-3680	9433680J020A Rev. 4	4-11

p-Nitrophenol Isoconcentrations in South Landfill and Plant Site

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- Buildings
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- Line of Equal Concentration (mg/l) 2003, 2005 or 2007 data
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996
- 0.069 Concentration (mg/l) 2003 RFI, 2005 RI or 2007 RCRA

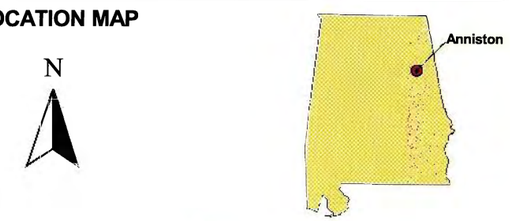
NOTES

1) BDL = Concentration below detection limit.
2) DRY = Well dry during sampling event.
3) OW-6, OW-08 and OW-16 were replaced with OW-6A, OW08A and OW-16A in March 1998.
4) Latest data taken from either 2007 RCRA Program, 2005 RI or 2003 Supplimental RFI.
5) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

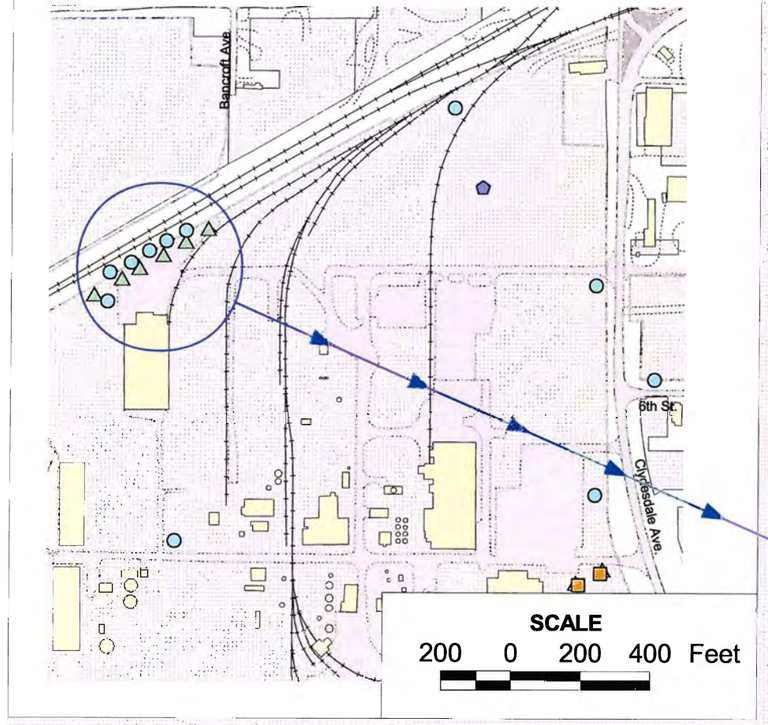
PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

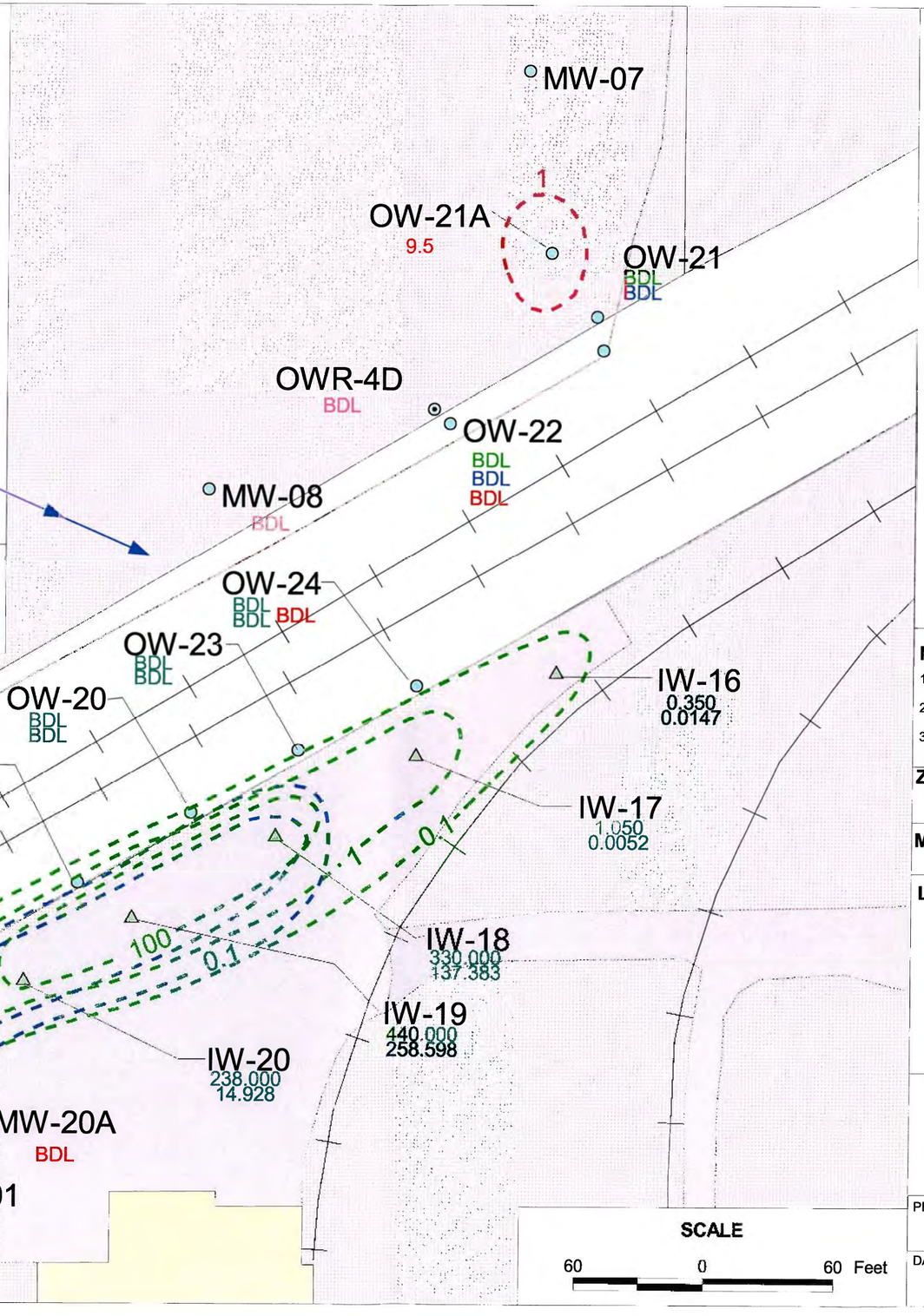
DATE:	PROJECT No:	FILE No:	FIGURE NO.
02/02/10	943-3680	9433680J016B Rev. 3	4-12

p-Nitrophenol Isoconcentrations in OLBSI

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama





LEGEND

- Major Roads
- Minor Roads
- Railroads
- Buildings
- Solutia Inc.
- Paved Surface
- Interceptor Well
- Shallow Residuum Monitoring/ Observation Well
- Deep Residuum Monitoring/ Observation Well
- Bedrock Monitoring Well
- Line of Equal Concentration (mg/l) March/April 1989
- Line of Equal Concentration (mg/l) March 1996
- Line of Equal Concentration (mg/l) 2003, 2005 or 2007 data
- 0.350 Concentration (mg/l) March/April 1989
- 0.0147 Concentration (mg/l) March 1996
- 0.095 Concentration (mg/l) 2005 (RI) or 2007 (RCRA)

NOTES

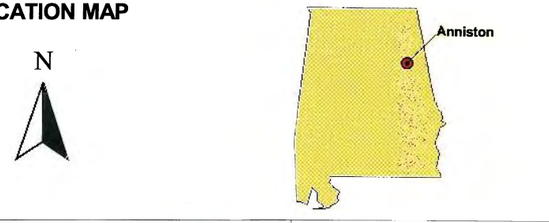
1) BDL = Concentration below detection limit.

2) Latest data taken from either 2007 RCRA Program results or 2005 RI.

3) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps
MAP PROJECTION	**DATUM**
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J020B Rev 3	4-13

Prevalent Volatile Organic Compounds in Groundwater

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface

- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

NA = Not Analyzed
ND = Not Detected

3.3	Chlorobenzene
5.2	1,2-Dichlorobenzene
2.1	1,4-Dichlorobenzene

NOTES

1.) The sample data presented represents the most recent data collected and included in the RI Report.

2.) All concentration results are in ug/l.

3.) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

N

Anniston

SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

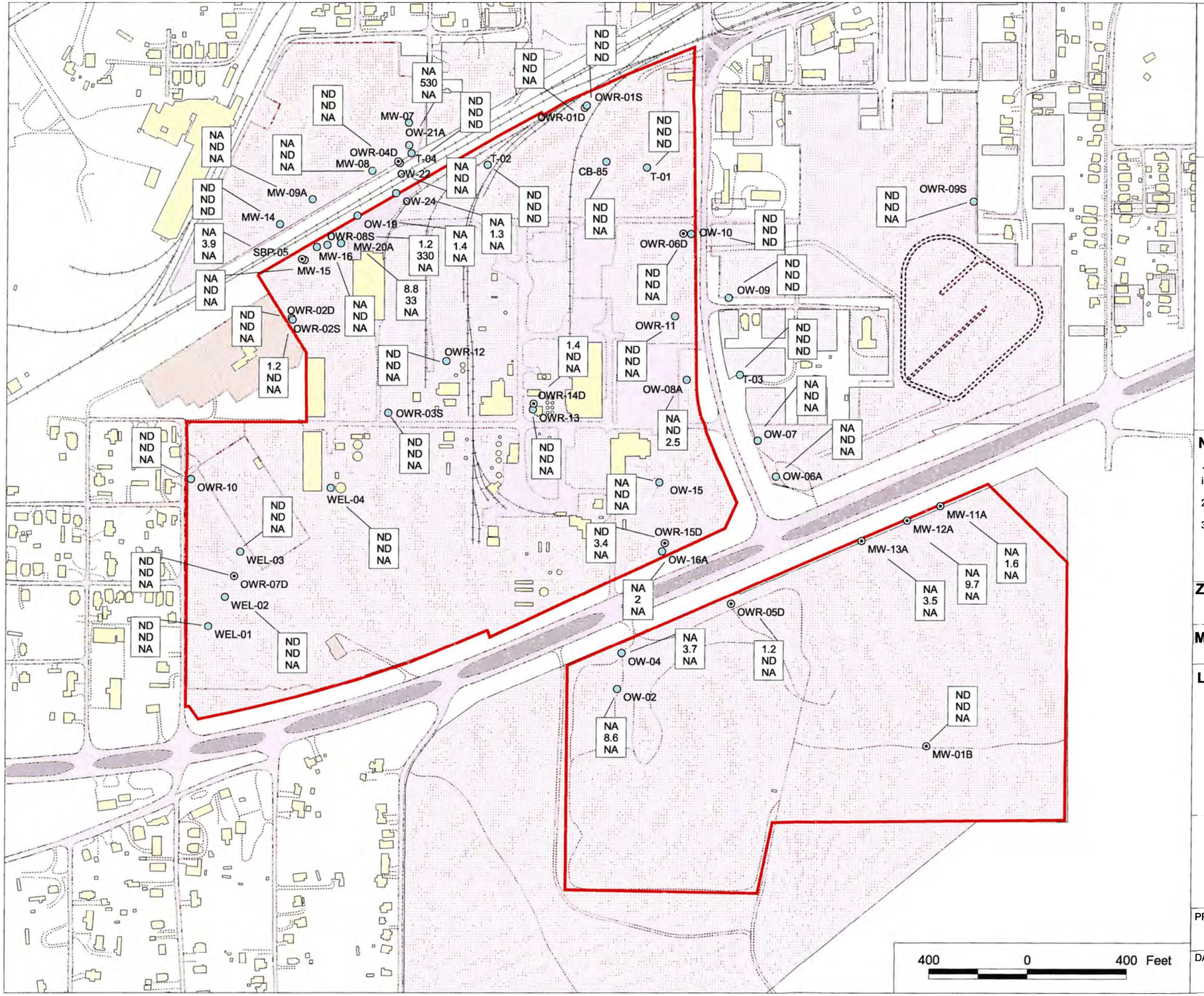
DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J025A	4-14

400 0 400 Feet

Other Prevalent Semi-Volatile Organic Compounds in Groundwater

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama



LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface

- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well
- NA = Not Analyzed
- ND = Not Detected

8.8 / 33 / NA — Pentachlorophenol / o,o,o-Triethylphosphorothioate / Benzo(a)pyrene

NOTES

1.) The sample data presented represents the most recent data collected and included in the RI Report.

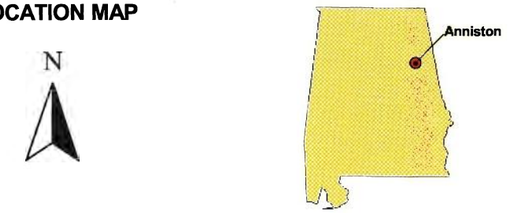
2.) All concentration results are in ug/l.

3.) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J025B	4-15

Prevalent Metal Concentrations in Groundwater

Remedial Investigation Report

Anniston PCB Site, Anniston, Alabama

LEGEND

- Major Roads
- Minor Roads
- Drainage Basin
- Railroads
- OU-3 Area
- Buildings
- Alabama Power
- Solutia Inc.
- Paved Surface

- Deep Residuum Monitoring/ Observation Well
- Shallow Residuum Monitoring/ Observation Well

470 — Metal Concentration (ug/L) Filtered Results Shown in Parenthesis NA = Not Analyzed ND = Not Detected

ND (6.9)	Arsenic
ND (ND)	Cobalt
ND (ND)	Lead
20 (21)	Manganese
ND (ND)	Mercury
2.5 J (ND)	Nickel

NOTES

1.) The sample data presented represents the most recent data collected and included in the RI Report.

2.) Validation codes have not been shown for clarity. Please refer to Table 4-4.

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP

SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/20/09	943-3680	9433680J024 Rev 1	4-16

400 0 400 Feet

APPENDIX A-1

Response to the EPA Regarding Final Summary Report of Technical Review and Evaluation of Potential PCB Releases/Historical South landfill Data

APPENDIX A-2

Walking Trail Area Sampling Data

APPENDIX A-3

Field Documentation from West End Landfill Cover Construction

The following attachment includes the available documentation regarding the excavation and off-site removal of PCB-containing soil from the West End Landfill during construction of an upgraded multi-layer cover in 1995 - 1996. Field monitoring reports are provided that indicate PCB-contaminated material was loaded onto semi-trailer dump trucks and hauled to an off-site disposal facility. Additionally, waste manifests from this period showing the disposal of contaminated material at Waste Management's TSCA-approved landfill in Emelle, Alabama are attached. The date range of the manifests is consistent with the excavation and removal activities completed at the West End Landfill.

ALL FILES PROVIDED IN ELECTRONIC FORMAT ON CD

Golder Associates Inc.

3730 Chamblee Tucker Road
Atlanta, GA USA 30341
Telephone (770) 496-1893
Fax (770) 934-9476

June 16, 2009

Our Ref.: 043-3746.008

Solutia Inc.
702 Clydesdale Avenue
Anniston, Alabama 36201

Attention: Ms. E. Gayle Macolly

RE: Response to the Environmental Protection Agency Regarding
Final Summary Report of Technical Review and Evaluation of Potential PCB Releases
Solutia Facility, Anniston, Alabama

Dear Ms. Macolly:

The Final Remedial Investigation (RI) and Final Feasibility Study (FS) Reports for Operable Unit 3 (OU-3) of the Anniston Polychlorinated Biphenyl (PCB) Site were recently submitted to the United States Environmental Protection Agency (EPA) on March 23, 2009 and May 8, 2009, respectively. Prior to submitting these reports, several conference calls and meetings were held between the EPA, Solutia Inc./Pharmacia Corporation (collectively, P/S) and Golder Associates Inc. (Golder) to discuss issues related to OU-3. As part of these discussions, the EPA requested additional information and clarification regarding issues raised for the closed South and West End Landfills in the *Final Summary Report of Technical Review and Evaluation of Potential PCB Releases,* prepared by the EPA Environmental Response Team (ERT Report), dated May 2001. The ERT Report represents a summary of the EPA's findings at the beginning of EPA's involvement with the Site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The information in the May 2001 ERT Report is supplemented by a letter from the Alabama Department of Environmental Management (ADEM) issued July 26, 2001 and a subsequent response letter from P/S regarding these two reports, dated October 8, 2001.

This letter report, which supersedes an earlier response letter sent to EPA on May 29, 2009, summarizes the main issues raised by the EPA and provides information included in the RI and FS Reports, supplemented with additional information, to address EPA's concerns. During the discussions with the EPA, the following issues were raised:

- What are the PCB concentrations in soil underlying the cover systems at the South and West End Landfills outside the areas previously covered with a multi-media cap?
- What are the extents of the soil cover systems around the two landfills?
- Are these cover systems effective at reducing risks at the two landfills?

The next sections of this report address each of these issues for the South and West End Landfill, respectively.

SOUTH LANDFILL

As described in the RI Report, the portions of the South Landfill designated as Waste Management Area (WMA) I were closed with a Resource Conservation and Recovery Act (RCRA)-compliant cap in 1989, while the remaining cells, closed prior to the effective date of RCRA, were covered with compacted soil and a vegetative layer. In 1997 and 1998, additional interim measures were constructed for the closed South Landfill to reduce infiltration into the landfill and prevent the transport of affected soils. These additional interim measures included upgrading portions of the cap on the closed South Landfill with a multi-media high density polyethylene (HDPE) liner system, diverting stormwater run-on from upstream areas around the landfill, and placing a soil cover layer over adjacent areas of the closed South Landfill. The soil cover layer included a geotextile marker layer and 12 inches of soil. The limits for the current surface types and engineered covers for the closed South Landfill are shown on Figure 1. The upgraded portions of the cover completed in 1997 and 1998 are shown as the *Grass and HDPE Liner* area and the *Grass and Soil Cover* area on Figure 1. A complete description of the cover systems and additional background information is included in the RI Report.

The PCB concentrations measured in soil prior to placing the upgraded cover system described above are shown on the figure entitled "Sampling Results South Landfill Prior to Implementing Interim Measures" included in Attachment A (Figure A-1). These samples were collected in 1996 under a Consent Decree with ADEM. This figure also shows PCB concentrations in surface soil over the eastern cells south of WMA I where an upgraded cover system was not installed. Surface soil samples were collected from the closed South Landfill (following completion of the upgraded cover systems) and analyzed for PCBs. The PCB concentrations ranged from non detect to 10 milligrams per kilogram (mg/kg). The results are shown on the figure entitled "PCB Soil Sample Results" included in Attachment A (Figure A-2).

Significant interim measures have been completed at the closed South Landfill, which is subject to long-term monitoring and maintenance under provisions of the Facility's RCRA Permit. The interim measures have eliminated direct contact with landfill contents and have prevented off-Site migration of contaminated soil from these locations. Operation and maintenance of the closed landfill includes mowing, general maintenance and routine inspections of the landfill caps, fencing, access controls, surface water management structures, and access roads. The effectiveness of these completed measures is demonstrated by the following:

- The cover system remains intact, and there have not been any significant erosion, slides, or geotechnical failures. The cover system has been effective at reducing exposures to landfill content as was demonstrated by the EPA's Human Health Risk Assessment (HHRA) which indicated no unacceptable risks associated with the landfill;
- Ambient air monitoring conducted at the landfill indicates that the landfill is not a source of airborne PCBs either through particulate suspension or evaporation. Based on the results of the studies performed, the air pathway does not contribute significantly to the total PCB risk at the Site (Golder, 2009a);
- Data from the surface water monitoring station (DSN-012), which includes runoff from the landfill, indicates mostly no or low-level detections of PCBs in the years following construction of the stormwater system enhancements. These data (as presented in the RI Report) indicate that the South Landfill stormwater system enhancements and cover systems have been effective at minimizing the migration of constituents through surface water transport;

- As discussed in the RI Report, it appears that the groundwater levels across the landfill have lowered due to upgrades in the cap and redirection of surface water run-off away from the landfill. This drop in the water table indicates that the amount of infiltration entering the landfill has been reduced; and
- Access restrictions (perimeter fencing and signage) have been effective at minimizing the potential for trespassers. As indicated in the HHRA, there are no unacceptable risks associated with a trespasser at the landfill.

With regards to groundwater, various constituents have been reported in observation wells located around the closed South Landfill. The most recent detections are included in the RI Report. During the RCRA Facility Investigation and Confirmatory Sampling (RFI/CS) Program, well OWR-05D was sampled and exceedances above the constituent concentration limits (as defined in the RI Report) were reported for lead, manganese, PCBs, para-nitrophenol (PNP), and pentachlorophenol. During the semi-annual sampling events, sporadic detections of PCBs have been reported in samples from OW-02 and OW-04 at concentrations less than 1 microgram per liter (µg/l). Each of these three wells are located either upgradient or within the cone of influence of the groundwater recovery system located on the closed South Landfill, and impacts are controlled by this recovery system. There have been no recent exceedances detected in monitoring wells MW-11A, MW-12A, and MW-13A located downgradient of WMA I.

Overall, the HHRA conducted by EPA's contractor (CDM Federal Programs Corporation) for OU-3 determined that risks associated with the closed South Landfill were below or within EPA's acceptable risk range (CDM, 2008).

WEST END LANDFILL

As described in the RI Report, remedial activities were completed at the West End Landfill in 1996, which included constructing a multi-media HDPE cover system over the landfill area, excavating and removing PCB-containing soil and placing clean soil cover over adjacent areas of the landfill, and collecting stormwater run-off from the landfill and installing hard piping and lined channels to transport the run-off. This allowed the closure of drainage ditches with affected sediment. PCB-containing soils excavated from the adjacent areas of the landfill were either hauled off to Chemical Waste Management's hazardous waste landfill in Emelle, Alabama or placed beneath the HDPE cover system constructed over the landfill. The limits for the current surface types and engineered covers are shown on Figure 2. The spatial limits and thickness of soil cover placed over surrounding areas to the east, west, and north of the landfill are included on this figure. The soil cover thickness variations are shown in the form of a "tick-map", which shows the cut/fill thickness at discrete points across the area based on comparison of the pre- and post-remedial action topographic surveys. As shown on the figure, the soil cover extends to the fence line around the closed West End Landfill, and the cover is approximately two to three feet thick to the east and north of the landfill. Although topographic information was not available for the entire area, design and construction records indicate that a minimum of 18 inches of clean cover soil were placed over all of the adjacent landfill areas including around the sedimentation pond. A complete description of the cover systems and additional background information is included in the RI Report.

The PCB concentrations measured in soil prior to constructing the cover system described above are shown on the figures entitled "Concentration of PCB's in Soil at the Anniston West End Landfill", "Concentrations of PCBs in Ditch Samples at the Anniston West End Landfill", "West End Historical Soil Sampling Locations", "West End Present Soil Sampling Locations", and "West End Landfill

Ditch Samples (adjacent to 1st Avenue)" included in Attachment A (Figures A-3, A-4, A-5, A-6, A-7). Additional laboratory analytical data for the sample locations shown on Figure A-7 are included in Attachment B. The samples included on these figures were collected in 1994 through 1996 and reported to ADEM. As indicated above, P/S excavated and removed soil from the adjacent areas of the landfill prior to placing the soil cover. With the exception of Figure A-6, the PCB concentrations shown on these figures represent the concentrations measured prior to conducting soil removal activities and capping the area. Figure A-6 represents PCB concentrations post-excavation activities but prior to placing the soil cover on the adjacent areas. As shown on Figure 2, the areas of the West End Landfill with elevated PCB concentrations were capped with a multi-media HDPE liner system or covered with clean soil and vegetative cover.

Additionally, as reported by members of the remediation team, soil was excavated from outside the fence line of the West End Landfill along 1st Avenue to address PCBs found in soil/sediment and to improve drainage in the area. The area addressed includes a strip of grass between the road and the fence line approximately eight to ten feet wide. Post excavation sample results for this area are included as Figure A-8 (Post Excavation Soil Sample Results 1st Avenue).

Surface and subsurface soil samples were collected from the closed West End Landfill following completion of the cover systems and analyzed for PCBs. The results are shown on the figures entitled "PCB Soil Sample Results" and "Soil Sample Results Alabama Power Structure Relocation" included in Attachment A (Figures A-2 and A-9).

As shown on Figure A-3, elevated PCB concentrations were also detected in the soil underlying the Alabama Power Company switch yard located within the limits of the West End Landfill property. The samples were collected from beneath the gravel present in the switch yard. Although no additional capping of this area was completed as part of the interim measures, Alabama Power maintains a substantial gravel cover over the area and restricts access to the switch yard to its employees only. The area is enclosed with a chain link fence, which remains locked to prevent unauthorized entry or trespass.

Similar to the closed South Landfill, significant interim measures have been completed at the closed West End Landfill, which is subject to long-term monitoring and maintenance under RCRA. The interim measures have eliminated direct contact with landfill contents and have prevented off-Site migration of contaminated soil from these locations. Operation and maintenance of the closed landfill include mowing, general maintenance and routine inspections of the landfill caps, fencing, access controls, surface water management structures, and access roads. The effectiveness of these completed measures is demonstrated by the following:

- The cover system remains intact, and there have not been any significant erosion, slides, or geotechnical failures. The cover system has been effective at reducing exposures to landfill content as was demonstrated by the HHRA which indicated no unacceptable risk associated with the landfill;
- Ambient air monitoring conducted at the landfill indicates that the landfill is not a source of airborne PCBs either through particulate suspension or evaporation. Based on the results of the studies performed, the air pathway does not contribute significantly to the total PCB risk at the Site (Golder, 2009a);
- Stormwater runoff from the landfill was routed to a stormwater outfall designated as DSN-006. Surface water monitoring at this outfall reported no detections for PCBs between

December 1997 and May 2001. As a result, monitoring at this outfall is no longer required by the Facility's National Pollutant Discharge Elimination System (NPDES) Permit. Therefore, the landfill is effective at minimizing the migration of constituents through surface water; and

- Access restrictions (perimeter fencing and signage) have been effective at minimizing the potential for trespassers. As indicated in the HHRA, there are no unacceptable risks associated with a trespasser at the landfill.

With regards to groundwater, monitoring in the vicinity of the closed West End Landfill has not been a requirement of the RCRA Permit. However, as part of the RFI/CS Program, P/S agreed to conduct semi-annual groundwater monitoring for a two-year period. The two-year monitoring was completed in 2004; however, at the request of EPA, P/S agreed to conduct one additional round of sampling as part of the RI Program. PCBs were the only constituent detected above the constituent concentration limits for all sampling conducted at the closed West End Landfill over the last eight years prior to completing the RI. The concentrations of PCBs in the wells have consistently remained low with values from non detect to just above the constituent concentration limit of 0.5 µg/l. Further information on groundwater results for the closed West End Landfill is presented in the RI Report.

Overall, the HHRA conducted by EPA's contractor for OU-3 determined that there were no unacceptable risks associated with the closed West End Landfill (CDM, 2008).

Golder is pleased to present this letter report addressing EPA's concerns raised in the May 2001 ERT Report for the closed South and West End Landfills. Please call if you have any questions or need additional information related to these matters.

Sincerely,

GOLDER ASSOCIATES INC.

Gregory L. Hebeler, Ph.D., P.E.
Project Geotechnical Engineer

Steven J. Moeller, P.E.
Principal and Senior Consultant

Reference List

Figure 1 South Landfill Surface Types and Engineered Covers
Figure 2 West End Landfill Cover Limits

Attachment A Referenced Data and Figures
Attachment B Analytical Data

GLH/SJM/glh/jlg

REFERENCES

Alabama Department of Environmental Management (ADEM), 2001. *ERT Report and ADEM Comments Regarding the ERT Report,* July 2001.

CDM Federal Programs Corporation (CDM), 2008. *Revised Final Human Health Baseline Risk Assessment Report for Anniston PCB Site Operable Unit 3, Anniston AL*, January 2008.

Genesis Project Inc., 2002. *Soil Sampling Results, Alabama Power Structure Relocation, Choccolocco Creek Flood Plain, Anniston, Alabama,* September 27, 2002.

Geraghty & Miller, Inc., 1994. *Anniston West End Landfill Site Investigation*, August 1994.

Golder Associates Inc. (Golder), 1995. *Detailed Design – West End Landfill – Cover Revisions, Anniston, Alabama Facility*, May 1995.

Golder, 1997a. *Construction Quality Assurance Services Revised Cover System – West End Landfill, Anniston, Alabama Facility*, March 1997.

Golder, 1997b. *January 22 1997* d*ata submittal to ADEM, Anniston PCB Site, Anniston, Alabama,* January 1997.

Golder, 2002. *RFI/CS Report for the Anniston, Alabama Facility*, October 2002.

Golder, 2003. *Supplemental RFI/CS Report for the Solutia Inc., Anniston, Alabama Facility*, May 2003.

Golder, 2009a. *Report on Remedial Investigation for Operable Unit 3, Anniston, Alabama Facility*, March 2009.

Golder, 2009b. *Report on Feasibility Study for Operable Unit 3, Anniston, Alabama Facility*, May 2009.

Solutia Inc., 2001. *Letter Response to: Final Summary Report of Technical Review and Evaluation of Potential PCB Releases, Anniston PCB Site, Anniston, Alabama,* October 2001.

United States Environmental Protection Agency (EPA), 2001. *Final Summary Report of Technical Review and Evaluation of Potential PCB Releases, Anniston PCB Site, Anniston, Alabama,* May 2001.

FIGURES

SOUTH LANDFILL SURFACE TYPES AND ENGINEERED COVERS

LEGEND

- OU-3 Area
- Roads
- Trees
- Grass
- Grass and Clay Cover
- Grass and HDPE Liner
- Grass and Soil Cover

NOTES

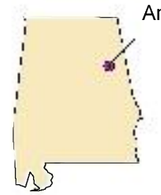
SOURCE USGS 1:2,400 Quad Maps; Golder Associates (on-site base map)

ZONE Alabama East 101

MAP PROJECTION US State Plane

DATUM NAD83

LOCATION MAP

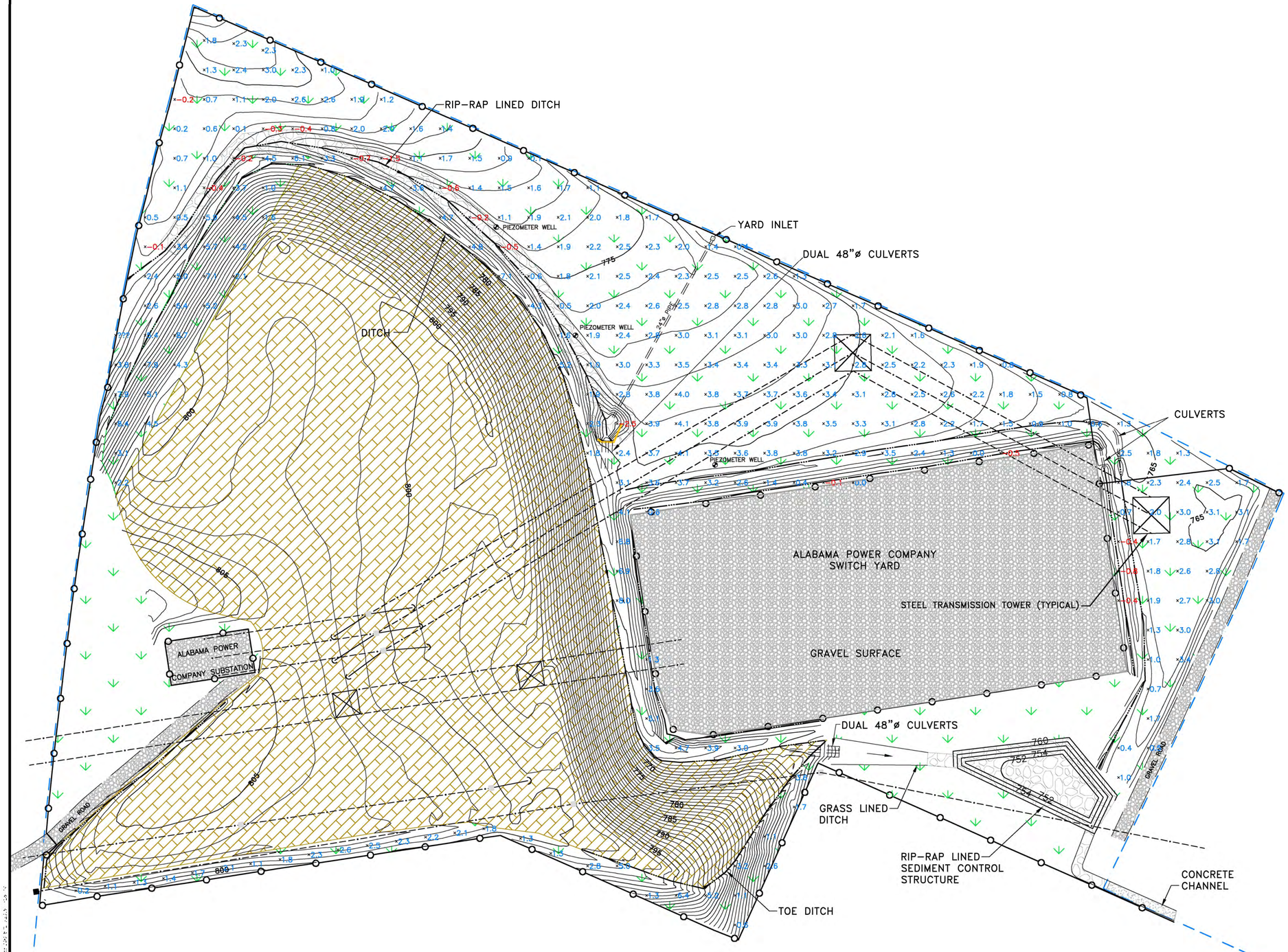


SCALE

200 100 0 200 Feet

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MTC	GLH	SJM
DATE:	PROJECT NO:	FIGURE NO.
May 2009	0433746008	1

FILE: Q:\GIS\SOLUTIA\+GIS\PROJECTS\OU-3_Feasibility_Study_Final\FS_Figure_4_South_Landfill.mxd



LEGEND

- GRASS AND HDPE LINER
- GRASS AND SOIL COVER
- GRAVEL SURFACE
- RIP RAP
- CONTOUR LINE (REF. 2)
- LIMITS OF OU-3
- ×2.6 SEE REFERENCE 3
- CHAIN LINK FENCE

REFERENCES

1. BASE MAP (EXISTING TOPOGRAPHY) IS TOPOGRAPHY PROVIDED BY BROOKS & BROOKS, INC. DATED 10/11/95.

2. AS-BUILT TOPOGRAPHY PROVIDED BY: BROOKS & BROOKS, INC. DATED 9/20/96.

3. CUT/FILL TICK MAP WAS CREATED BY COMPARING THE EXISTING TOPOGRAPHY TO THE AS-BUILT TOPOGRAPHY AND REPRESENTS THE THICKNESS OF CLEAN SOIL COVER. NEGATIVE VALUES (-) INDICATE CUT. FOR AREAS SHOWN WITHOUT CUT/FILL TICK MAP, TOPOGRAPHIC INFORMATION WAS NOT AVAILABLE TO DETERMINE COVER THICKNESS.

4. GEOMEMBRANE LIMITS DETERMINED BY A COMBINATION OF AS-BUILT SURVEY DATA (REF. 2) AND COMPARISON WITH THE HAND DRAWN PANEL LAYOUT BY MID AMERICA LINING CO. DATED 5/09/96.

50 0 50 100
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	-	-	--	-	-	-

PROJECT

WEST END LANDFILL
ANNISTON PCB SITE

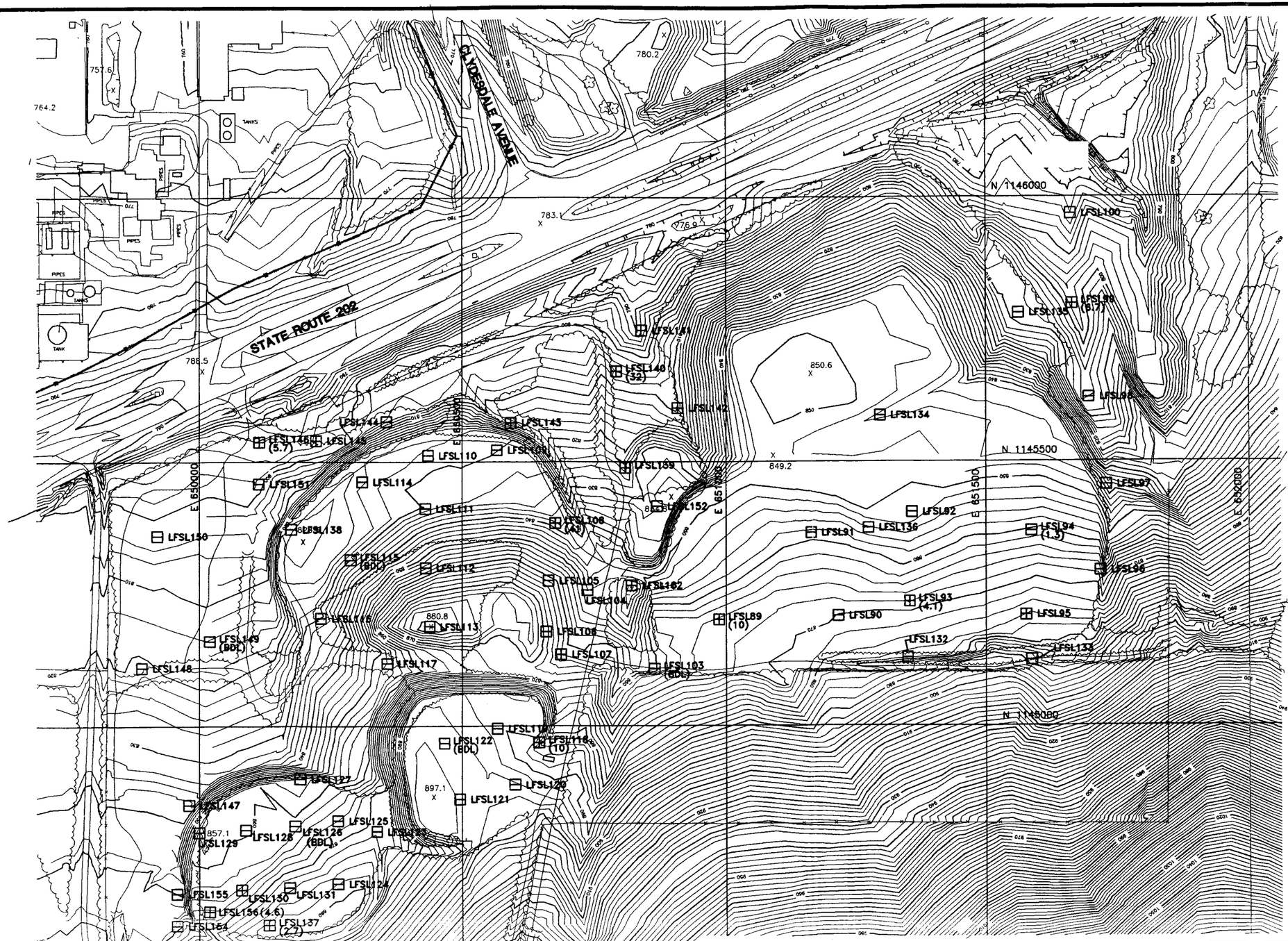
TITLE

COVER LIMITS

Golder Associates
Atlanta, Georgia

PROJECT No.		-	FILE No. Tick Map	
DESIGN	-	-	SCALE AS SHOWN	REV. -
CADD	CCP	05/09	2	
CHECK	GLH	05/09		
REVIEW	SJM	05/09		

ATTACHMENT A



LEGEND

LFSL-100	SAMPLE ID
(27)	LABORATORY RESULTS PCB's mg/kg
⊞	>10 ppm PCB's FIELD SCREENING RESULT
⊟	<10 ppm PCB's FIELD SCREENING RESULT
BDL	BELOW DETECTION LIMITS

SCALE IN FEET

0 200 400

Golder Associates — Atlanta, Georgia

CLIENT/PROJECT

MONSANTO

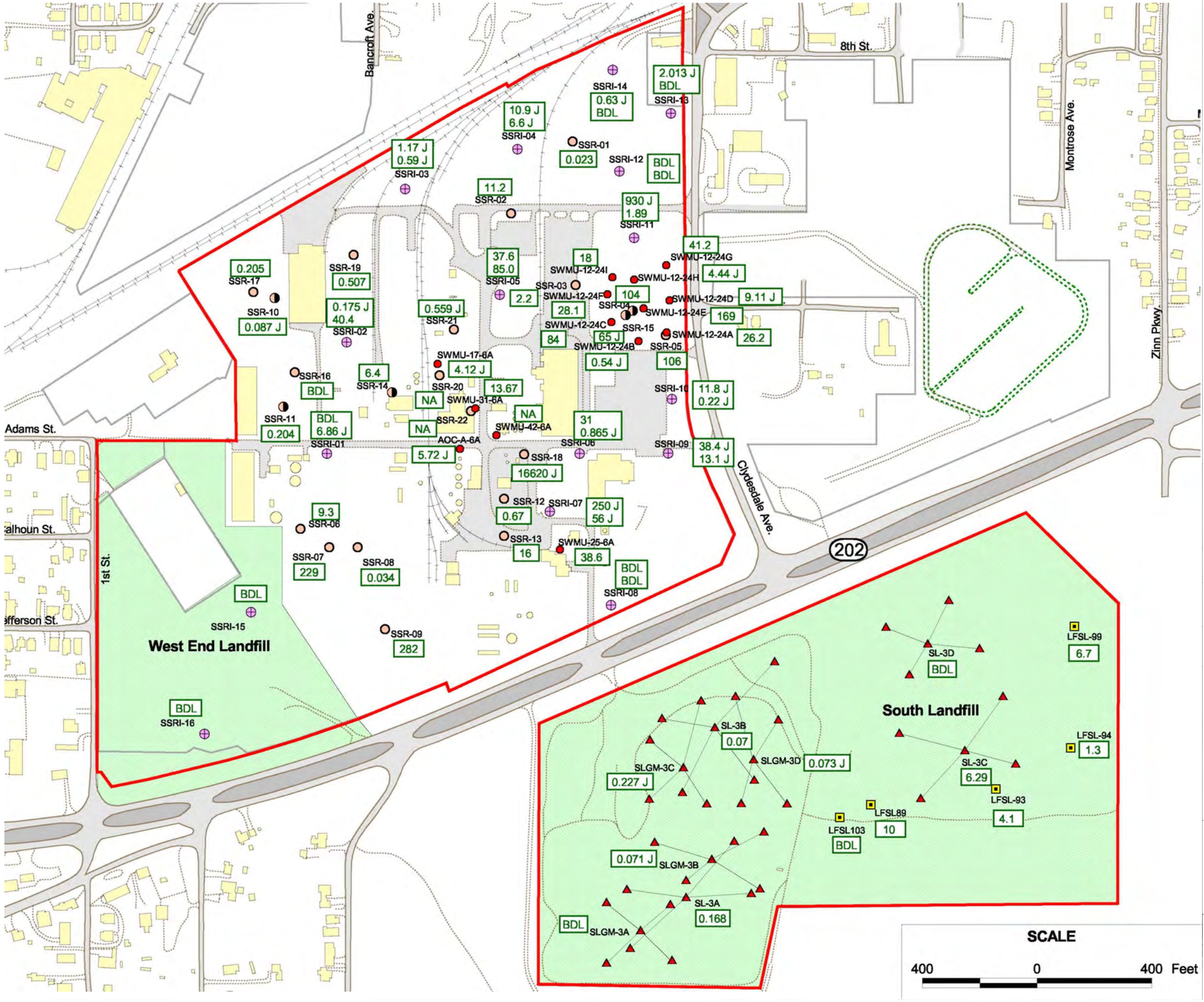
TITLE

SAMPLE RESULTS SOUTH LANDFILL
PRIOR TO IMPLEMENTING INTERIM MEASURES

DRAWN	JLW	DATE	8/96	JOB NO.	943-3680
CHECKED		SCALE	AS SHOWN	DWG. NO. 104	REV. NO.
REVIEWED		FILE NO.	943-3	FIGURE A-1	RE NO. 8

PCB Soil Sample Results

Remedial Investigation Report
Solutia Inc., Anniston, Alabama



LEGEND

- Railroads
- Major Roads
- Minor Roads
- Drainage Basin
- Property Line
- OU-3 Area
- Paved
- Buildings
- Landfill Area

- Pre-RFI/CS Surface Samples (Prior to 1998 Cover Upgrades)
- RFI/CS Subsurface soil sample
- RFI/CS Surface (or near surface) soil sample
- Supplemental RFI/CS Soil Sample collected within 24 inches of surface
- Supplemental RFI/CS Composite Soil Sample
- OU-3 RI Soil Sample Location

1.17 / NR — PCB Results in mg/kg
Top result is surface or near surface
Bottom result is subsurface

NOTES

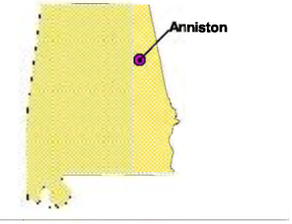
1) At each location, if only one result is shown, there is only a surface sample at that point.
2) Only primary sample results shown, see Table 4-1 for duplicate results.
3) BDL = Below Detection Limit.
4) J = Estimated value.
5) mg/kg = milligrams per kilogram.

SCALE
400 0 400 Feet

ZONE	SOURCE
Alabama East 101	Golder Associates (on-site base map) USGS 1:2400 Quad Maps

MAP PROJECTION	DATUM
US State Plane	NAD83

LOCATION MAP



SOLUTIA

Golder Associates

PRODUCED BY:	CHECKED BY:	REVIEWED BY:
MRM	RWP	SJM

DATE:	PROJECT No:	FILE No:	FIGURE NO.
03/23/09	943-3680	9433680J026	4-1

FIGURE A-2

DWG DATE: 8/16/94 | PRJCT NO.: TF0525.020 | FILE NO.: MONSANTO | DRAWING: MON-ST2.DWG | CHECKED: LH | APPROVED: LH | DRAFTER: BJH

ALABAMA POWER SUBSTATION

AERATION BASIN

GRAVEL ROAD

GATE

FL-1 12.8 ND

FL-2 92.9 ND

258

ADJACENT AREA 4 (AA4)

ALABAMA POWER 230 kv SWITCH YARD

WEL-4

0' 100 200

SCALE: 1" = 100'

FL-3 7.4 ND

ADJACENT AREA 3 (AA3) 138

BR-5

FL-4 36 ND

FL-5 6.5 ND

ADJACENT AREA 2 (AA2) 1940

WEL-3

GATE

FL-6 <1.0 ND

LANDFILL QUADRANT 1 (LF1) 798

LANDFILL QUADRANT 2 (LF2) 18

CRUSHED STONE

FL-7 <1.0 ND

WEL-2

CALHOUN COUNTY SECTION 12 TWN-16-S, RNG-07-E

ADAMS STREET

WEL-1

CONCRETE DRAINAGE FLUME

FL-8 61.9 ND

ADJACENT AREA 1 (AA1) 382

LANDFILL QUADRANT 3 (LF3) 760

LANDFILL QUADRANT 4 (LF4) 43

ANNISTON WEST END SUBSTATION

<1.0

FL-9 2.0 ND

GATE

FL-10 10.1 ND

ALABAMA 202

LEGEND

- BEDROCK MONITORING WELL LOCATION
- SOIL SAMPLING LOCATION
- EARTHEN DRAINAGE DITCH

TOTAL PCB's IN mg/Kg

- 36 / ND — SURFACE SAMPLE / 12-INCH DEPTH
- ND — NONE DETECTED

GERAGHTY & MILLER, INC.
Environmental Services

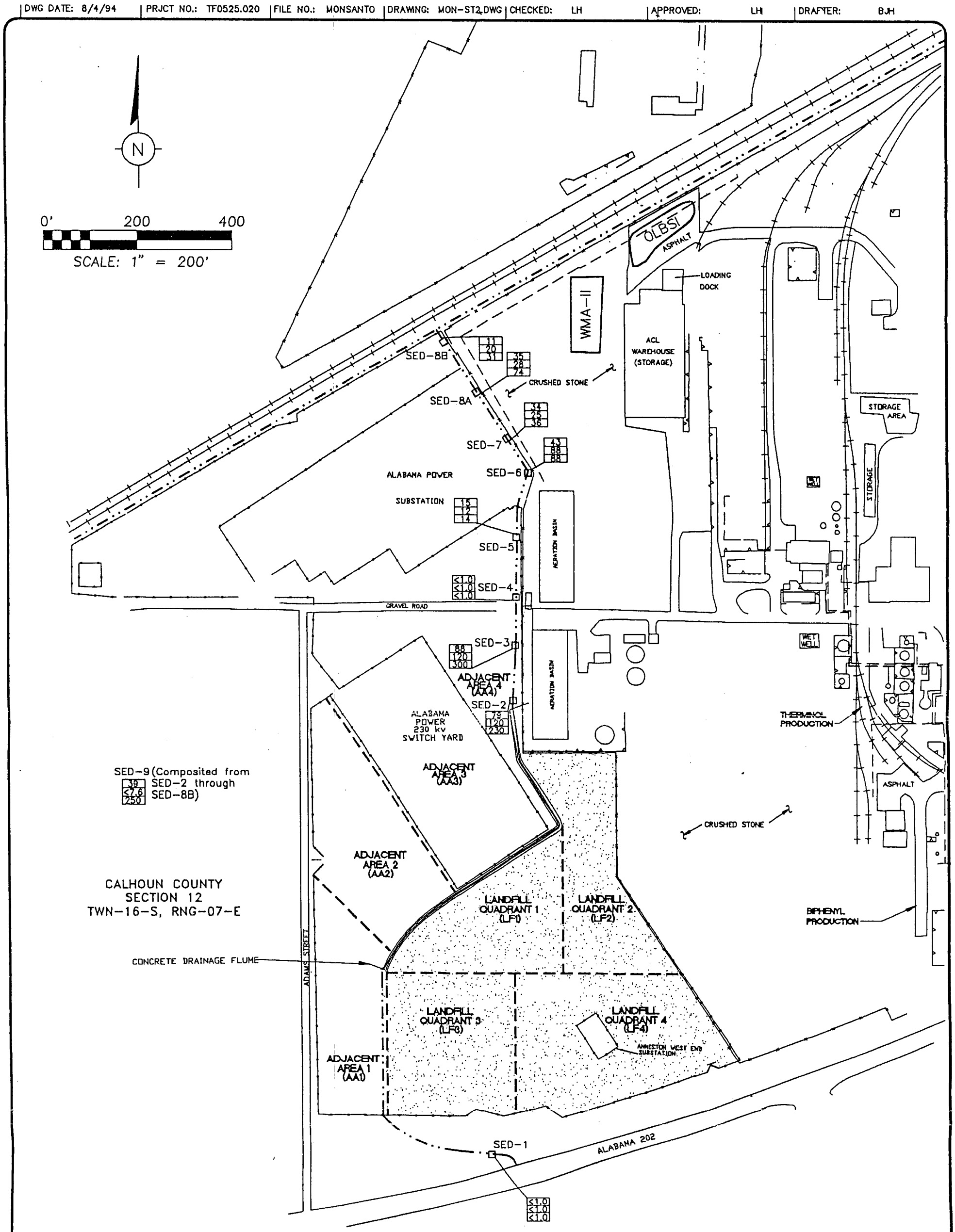
CONCENTRATION OF PCB's IN SOIL AT THE ANNISTON WEST END LANDFILL

MONSANTO COMPANY
ANNISTON, ALABAMA

FIGURE 9-1

FIGURE A-3

DWG DATE: 8/4/94	PRJCT NO.: TF0525.020	FILE NO.: MONSANTO	DRAWING: MON-ST2.DWG	CHECKED: LH	APPROVED: LH	DRAFTER: BJH



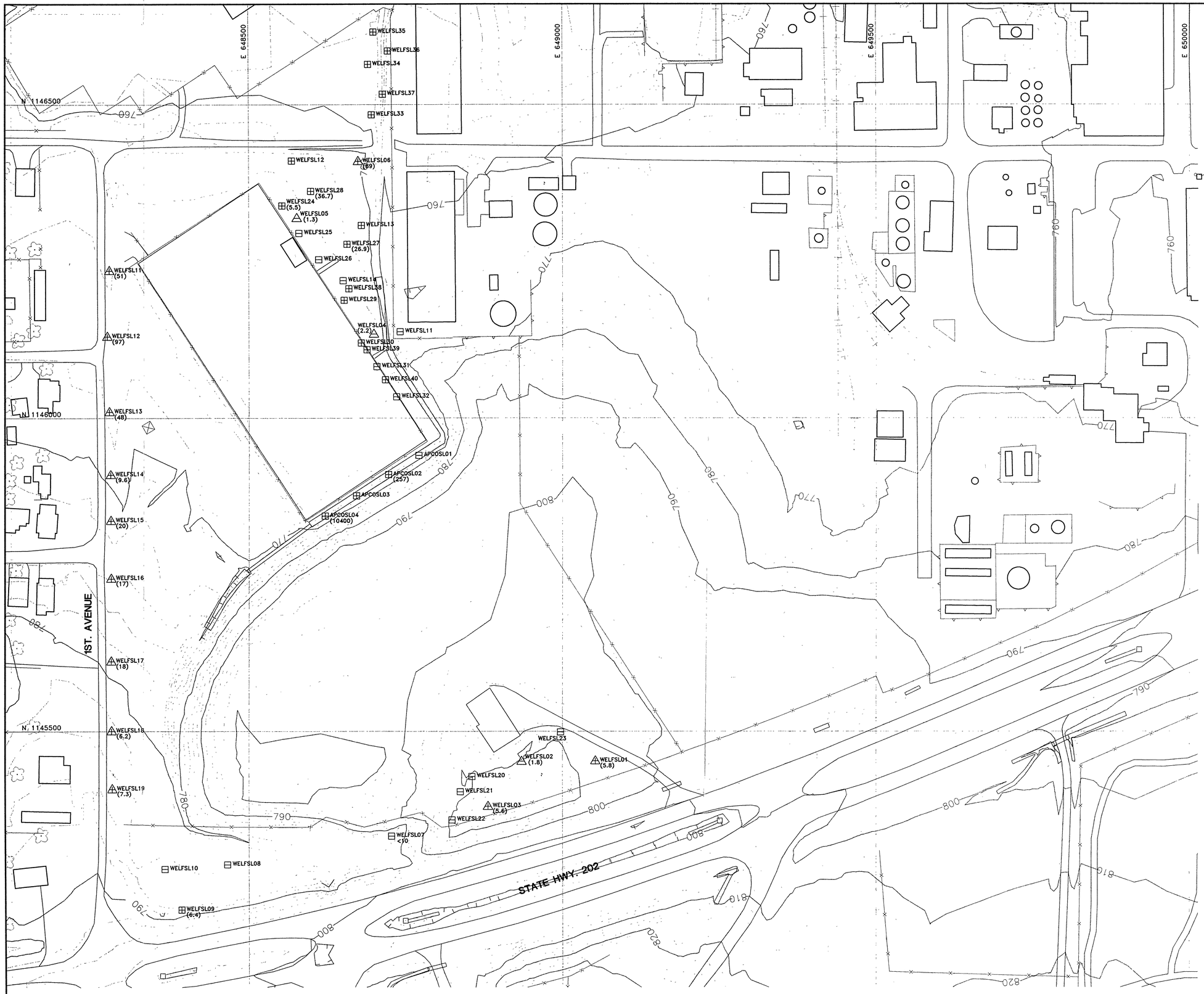
GERAGHTY & MILLER, INC.
Environmental Services

CONCENTRATIONS OF PCBs IN DITCH SAMPLES AT THE ANNISTON WEST END LANDFILL

MONSANTO COMPANY
ANNISTON, ALABAMA

FIGURE
9-2

FIGURE A-4



LEGEND

- FIELD SCREENED SOIL SAMPLE > SCREENING LEVEL
- FIELD SCREENED SOIL SAMPLE < SCREENING LEVEL
- SOIL SAMPLE (LAB RESULTS > 5 PPM PCB's)
- SOIL SAMPLE (LAB RESULTS < 5 PPM PCB's)
- FIELD SCREENED SEDIMENT SAMPLE > SCREENING LEVEL
- FIELD SCREENED SEDIMENT SAMPLE < SCREENING LEVEL

SYMBOL — FSL68 (20.5) — SAMPLE ID / LAB DATA

SCALE IN FEET
0 60 120 180 240

CLIENT/PROJECT: SOLUTIA

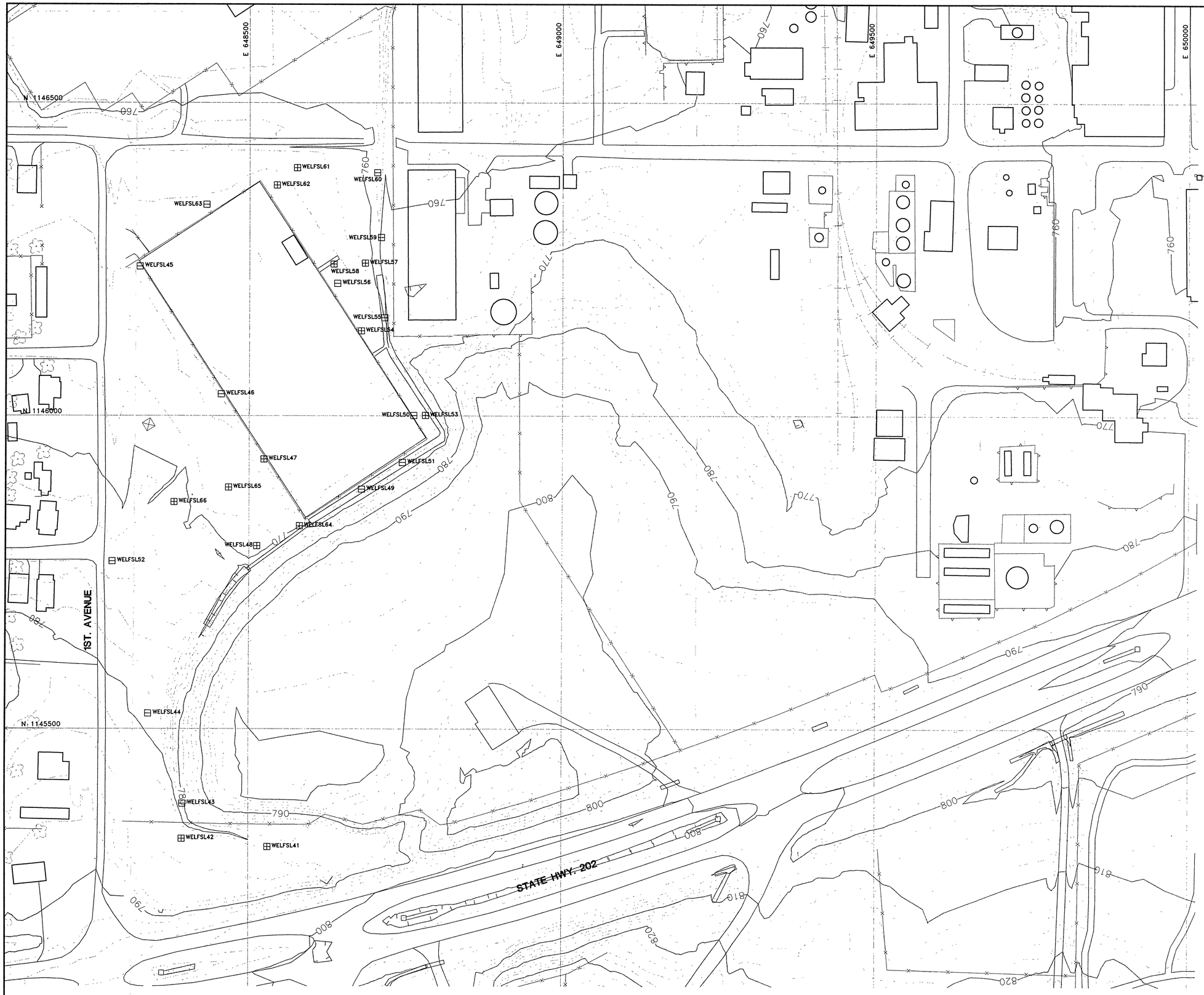
TITLE: WEST END
HISTORICAL SOIL SAMPLING LOCATIONS

Golder Associates — Atlanta, Georgia

DRAWN RMS	DATE 11/97
CHECKED	SCALE AS SHOWN
REVIEWED	DWG. NO. 301 REV. NO
APPROVED	JOB NO. 943-3680 SHEET
FILE NO. 943-3680	SUBTITLE

REV.	DATE	DESCRIPTION	DR. BY	APP. BY

FIGURE A-5



LEGEND

- FIELD SCREENED SOIL SAMPLE > SCREENING LEVEL
- FIELD SCREENED SOIL SAMPLE < SCREENING LEVEL
- SOIL SAMPLE (LAB RESULTS > 5 PPM PCB's)
- SOIL SAMPLE (LAB RESULTS < 5 PPM PCB's)
- FIELD SCREENED SEDIMENT SAMPLE > SCREENING LEVEL
- FIELD SCREENED SEDIMENT SAMPLE < SCREENING LEVEL

SCALE IN FEET

0 60 120 180 240

REV.	DATE	DESCRIPTION	DR. BY	APP. BY

CLIENT/PROJECT

SOLUTIA

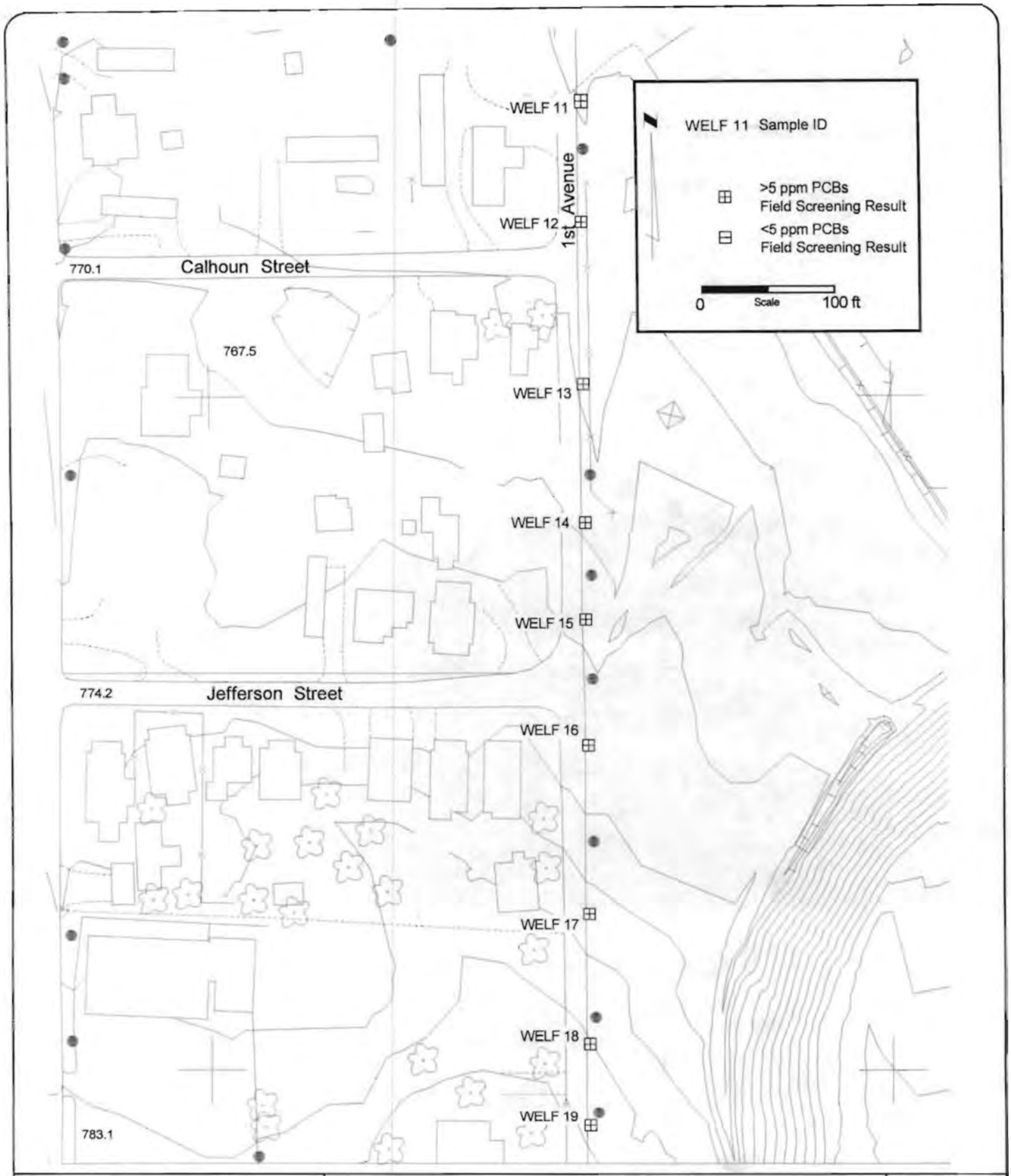
TITLE

WEST END
PRESENT SOIL SAMPLING LOCATIONS

Golder Associates
Atlanta, Georgia

DRAWN	RMS	DATE	11/97
CHECKED		SCALE	AS SHOWN
REVIEWED		DWG. NO. 300	REV. NO.
APPROVED		JOB NO. 943-3680	SHEET
FILE NO. 943-3680		SUBTITLE	

FIGURE A-6

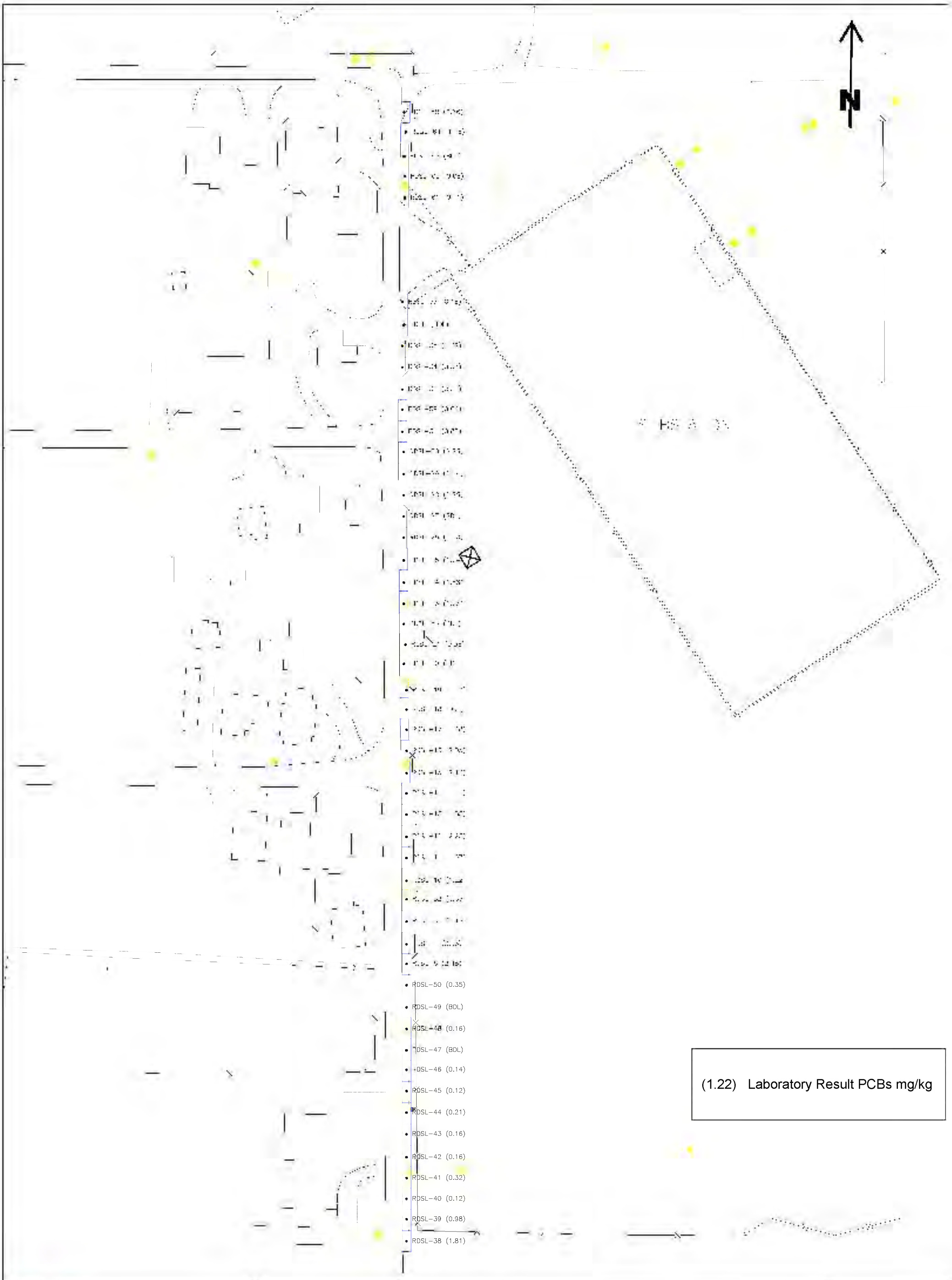


Genesis Project, Inc.™
Environmental Services

West End Landfill Ditch Samples
(adjacent to 1st Avenue)

Figure
1

FIGURE A-7



(1.22) Laboratory Result PCBs mg/kg

Genesis Project, Inc.
Environmental Services

Not to Scale

Post Excavation Soil Sample Results
First Avenue
Solutia
Anniston, Alabama

Figure
1

FIGURE A-8

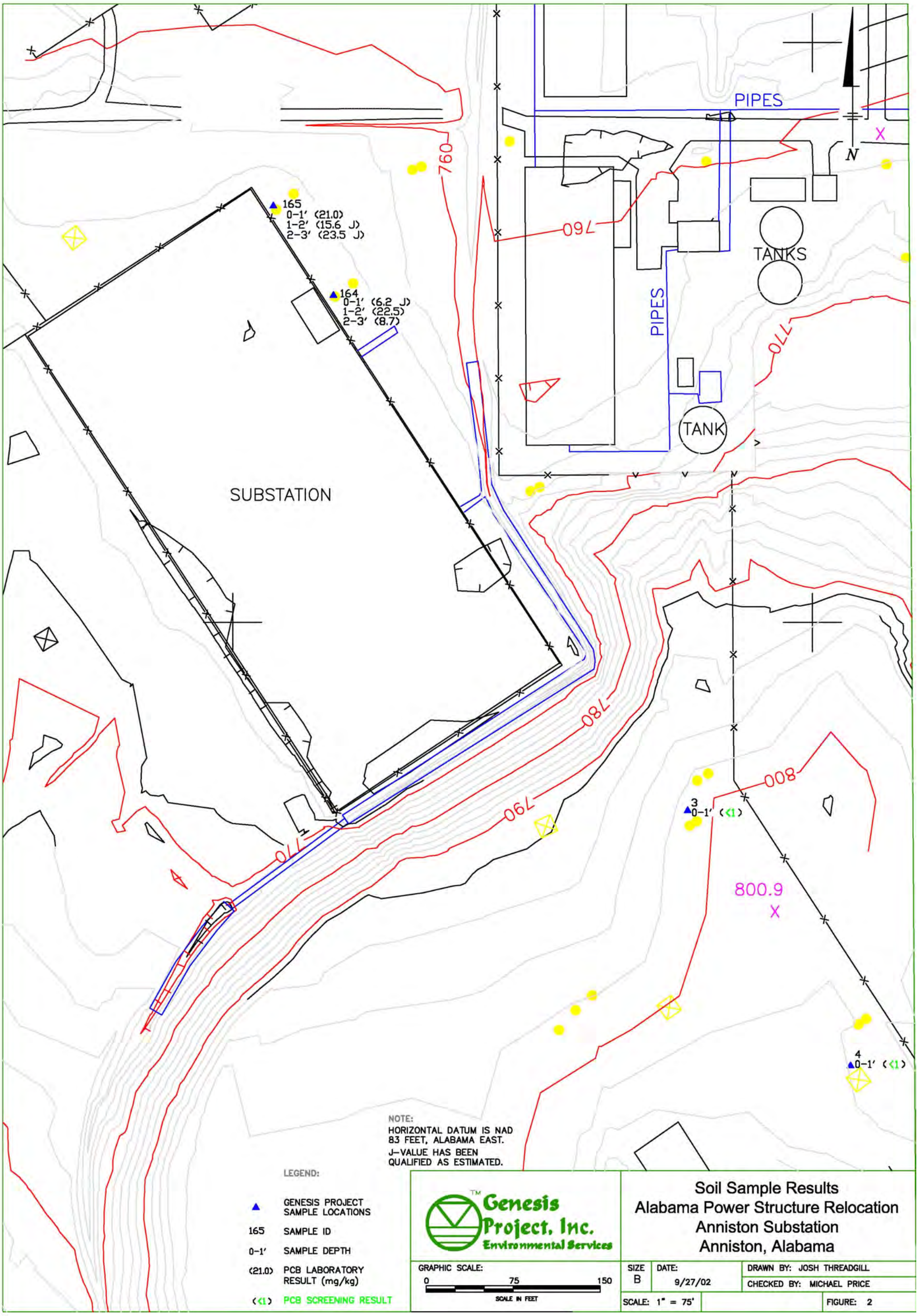

PIPES
760
760
X
N
TANKS
PIPES
770
TANK
SUBSTATION
780
790
770
800
165
0-1' (21.0)
1-2' (15.6 J)
2-3' (23.5 J)
164
0-1' (6.2 J)
1-2' (22.5)
2-3' (8.7)
3
0-1' (<1)
800.9
X
4
0-1' (<1)
NOTE:
HORIZONTAL DATUM IS NAD 83 FEET, ALABAMA EAST.
J-VALUE HAS BEEN QUALIFIED AS ESTIMATED.
LEGEND:
GENESIS PROJECT SAMPLE LOCATIONS
165 SAMPLE ID
0-1' SAMPLE DEPTH
(21.0) PCB LABORATORY RESULT (mg/kg)
(<1) PCB SCREENING RESULT
Genesis Project, Inc.
Environmental Services
GRAPHIC SCALE:
0 75 150
SCALE IN FEET
Soil Sample Results
Alabama Power Structure Relocation
Anniston Substation
Anniston, Alabama
SIZE B
DATE: 9/27/02
DRAWN BY: JOSH THREADGILL
CHECKED BY: MICHAEL PRICE
SCALE: 1" = 75'
FIGURE: 2

FIGURE A-9

ATTACHMENT B

SL *SAVANNAH LABORATORIES*
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-54373

Received: 08 AUG 95

Mr. Mike Price
Geraghty & Miller, Inc.
2675 Paces Ferry Rd., Suite 200
Atlanta, GA 30339

Purchase Order: 8020-1-0007

Project: MON20/GA0124.001/Monsanto-Westend Landfill
Sampled By: Client

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
54373-1	080395WELFSL11 (0-3")	08-03-95/1557	MON20
54373-2	080395WELFSL12 (0-3")	08-03-95/1559	MON20
54373-3	080395WELFSL13 (0-3")	08-03-95/1602	MON20
54373-4	080395WELFSL14 (0-3")	08-03-95/1639	MON20
54373-5	080395WELFSL14 DUP (0-3")	08-03-95/1639	MON20

PARAMETER	54373-1	54373-2	54373-3	54373-4	54373-5
Polychlorinated Biphenyls (8080)					
Total PCB's, mg/kg dw	51	97	48	9.6	12
Batch ID	0809P	0809P	0809P	0809P	0809P
Percent Solids (160.3), %	87	82	88	88	90

SL *SAVANNAH LABORATORIES*
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-54373

Received: 08 AUG 95

Mr. Mike Price
Geraghty & Miller, Inc.
2675 Paces Ferry Rd., Suite 200
Atlanta, GA 30339

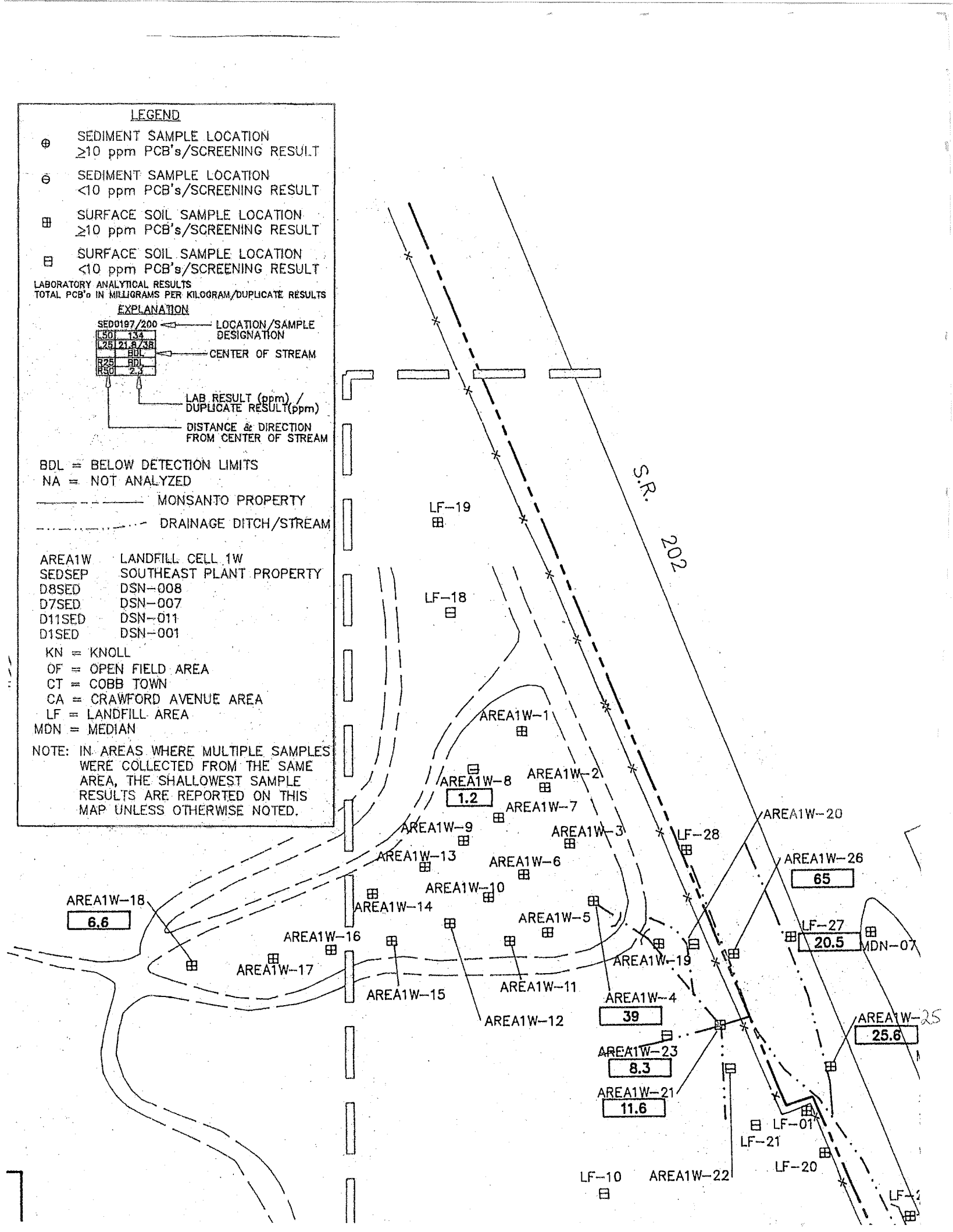
Purchase Order: 8020-1-0007

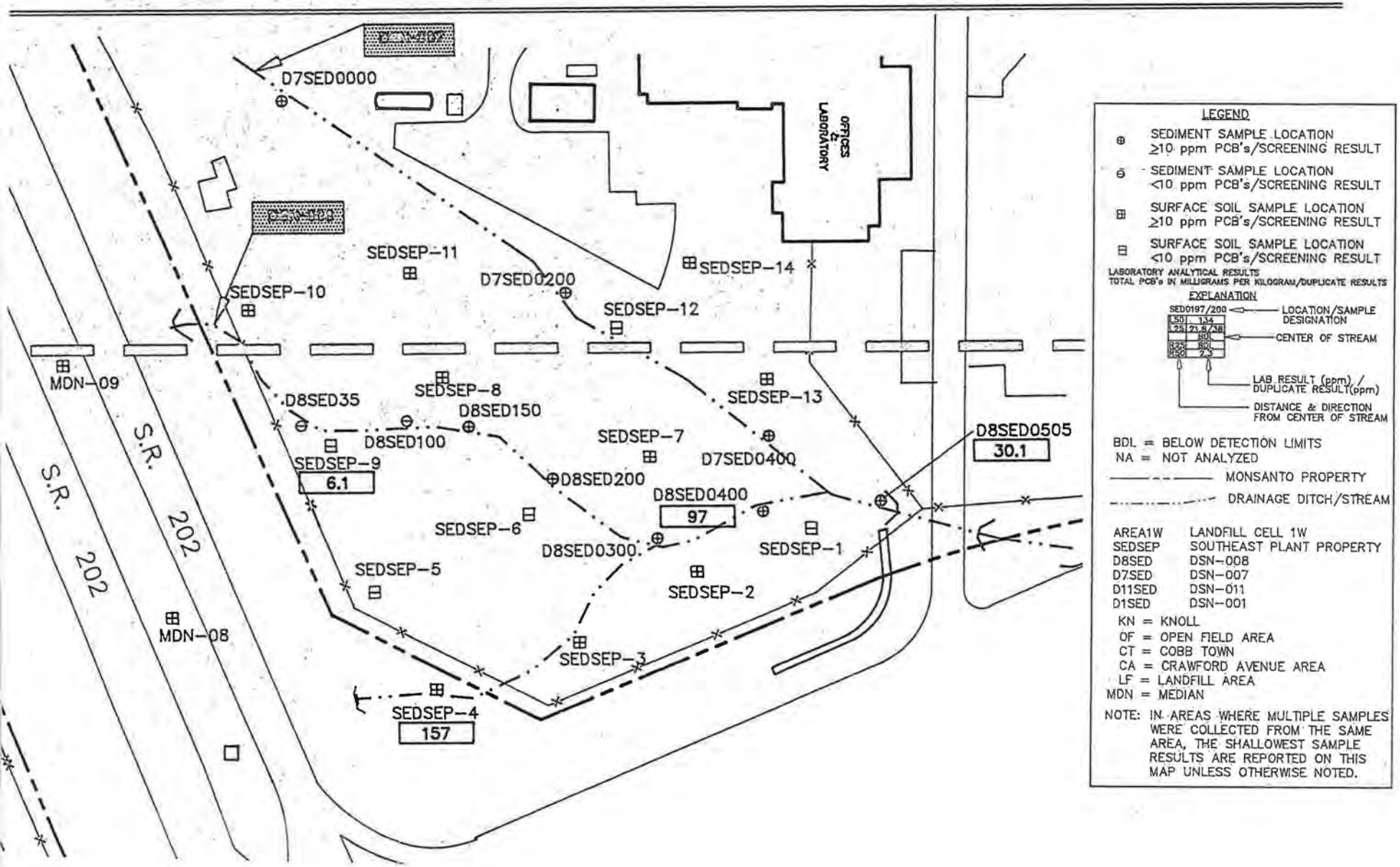
Project: MON20/GA0124.001/Monsanto-Westend Landfill
Sampled By: Client

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
54373-6	080395WELFSL15 (0-3")	08-03-95/1643	MON20
54373-7	080395WELFSL16 (0-3")	08-03-95/1646	MON20
54373-8	080395WELFSL17 (0-3")	08-03-95/1640	MON20
54373-9	080395WELFSL18 (0-3")	08-03-95/1645	MON20
54373-10	080395WELFSL19 (0-3")	08-03-95/1650	MON20

PARAMETER	54373-6	54373-7	54373-8	54373-9	54373-10
Polychlorinated Biphenyls (8080)					
Total PCB's, mg/kg dw	20	14	18	6.2	7.3
Batch ID	0809P	0809P	0809P	0809P	0809P
Percent Solids (160.3), %	85	90	91	90	88


LEGEND
SEDIMENT SAMPLE LOCATION ≥10 ppm PCB's/SCREENING RESULT
SEDIMENT SAMPLE LOCATION <10 ppm PCB's/SCREENING RESULT
SURFACE SOIL SAMPLE LOCATION ≥10 ppm PCB's/SCREENING RESULT
SURFACE SOIL SAMPLE LOCATION <10 ppm PCB's/SCREENING RESULT
LABORATORY ANALYTICAL RESULTS
TOTAL PCB's IN MILLIGRAMS PER KILOGRAM/DUPLICATE RESULTS
EXPLANATION
SED0197/200
L50 134
L25 21.8/38
BDL
R25 BDL
R50 2.3
LOCATION/SAMPLE DESIGNATION
CENTER OF STREAM
LAB RESULT (ppm) / DUPLICATE RESULT(ppm)
DISTANCE & DIRECTION FROM CENTER OF STREAM
BDL = BELOW DETECTION LIMITS
NA = NOT ANALYZED
MONSANTO PROPERTY
DRAINAGE DITCH/STREAM
AREA1W LANDFILL CELL 1W
SEDSEP SOUTHEAST PLANT PROPERTY
D8SED DSN-008
D7SED DSN-007
D11SED DSN-011
D1SED DSN-001
KN = KNOLL
OF = OPEN FIELD AREA
CT = COBB TOWN
CA = CRAWFORD AVENUE AREA
LF = LANDFILL AREA
MDN = MEDIAN
NOTE: IN AREAS WHERE MULTIPLE SAMPLES WERE COLLECTED FROM THE SAME AREA, THE SHALLOWEST SAMPLE RESULTS ARE REPORTED ON THIS MAP UNLESS OTHERWISE NOTED.
S.R. 202
LF-19
LF-18
AREA1W-1
AREA1W-8
1.2
AREA1W-2
AREA1W-7
AREA1W-9
AREA1W-3
AREA1W-13
AREA1W-6
AREA1W-10
AREA1W-14
AREA1W-18
6.6
AREA1W-5
AREA1W-16
AREA1W-17
AREA1W-15
AREA1W-11
AREA1W-12
AREA1W-19
AREA1W-4
39
AREA1W-23
8.3
AREA1W-21
11.6
LF-28
AREA1W-20
AREA1W-26
65
LF-27
20.5
MDN-07
AREA1W-25
25.6
LF-01
LF-21
LF-20
LF-10
AREA1W-22



LEGEND

- ⊕ SEDIMENT SAMPLE LOCATION ≥10 ppm PCB's/SCREENING RESULT
- ⊖ SEDIMENT SAMPLE LOCATION <10 ppm PCB's/SCREENING RESULT
- ⊞ SURFACE SOIL SAMPLE LOCATION ≥10 ppm PCB's/SCREENING RESULT
- ⊟ SURFACE SOIL SAMPLE LOCATION <10 ppm PCB's/SCREENING RESULT

LABORATORY ANALYTICAL RESULTS
TOTAL PCB's IN MILLIGRAMS PER KILOGRAM/DUPLICATE RESULTS

EXPLANATION

SED0197/200 ← LOCATION/SAMPLE DESIGNATION

L50	134
L25	21.8/38
	BDL
R25	BDL
R50	2.5

← CENTER OF STREAM

← LAB RESULT (ppm) / DUPLICATE RESULT(ppm)

← DISTANCE & DIRECTION FROM CENTER OF STREAM

BDL = BELOW DETECTION LIMITS
NA = NOT ANALYZED

——— MONSANTO PROPERTY

·—·—·—· DRAINAGE DITCH/STREAM

AREA1W	LANDFILL CELL 1W
SEDSEP	SOUTHEAST PLANT PROPERTY
D8SED	DSN–008
D7SED	DSN–007
D11SED	DSN–011
D1SED	DSN–001

KN = KNOLL
OF = OPEN FIELD AREA
CT = COBB TOWN
CA = CRAWFORD AVENUE AREA
LF = LANDFILL AREA
MDN = MEDIAN

NOTE: IN AREAS WHERE MULTIPLE SAMPLES WERE COLLECTED FROM THE SAME AREA, THE SHALLOWEST SAMPLE RESULTS ARE REPORTED ON THIS MAP UNLESS OTHERWISE NOTED.

The following attachment includes the available documentation regarding the excavation and off-site removal of PCB-containing soil from the West End Landfill during construction of an upgraded multi-layer cover in 1995 - 1996. Field monitoring reports are provided that indicate PCB-contaminated material was loaded onto semi-trailer dump trucks and hauled to an off-site disposal facility. Additionally, waste manifests from this period showing the disposal of contaminated material at Waste Management's TSCA-approved landfill in Emelle, Alabama are attached. The date range of the manifests is consistent with the excavation and removal activities completed at the West End Landfill.

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013 PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6.30 – 15.00
<8.0>

DATE: 10-20-95 S M T W T F S

WEATHER: MILD TEMPERATURE: LOW: 60 @ 7:00 HIGH 73 @ 1400
CLOUD COVER MOSTLY (AM) – PARTLY (PM) PRECIPITATION RAINFALL (9:00 – 10:30) WIND 5 – 15 MPH

GCS PERSONNEL ON SITE: JEFF AKANDU

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS CONTINUED REMOVING THE PCB-CONTAMINATED EARTHFILL MATERIAL FROM THE SITE. SEMI-TRAILER DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. 1T24F LOADER AND A KOMATSU PC220LC TRACKHOE WERE USED FOR LOADING THE DUMP-TRUCKS.

~ WRS INSTALLED ADDITIONAL HAY BALES/ SILT FENCE ALONG THE WEST PROPERTY LINE.

BROWN BROTHERS GRADING COMPANY PLACED ADDITIONAL EARTHFILL MATERIAL ON THE MID-EAST SECTION OF THE LANDFILL. TANDEM-AXLE DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE EARTHFILL MATERIAL FROM AN OFF-SITE BORROW PIT. PLACEMENT OF THE FILL WAS SUSPENDED AT 9.15AM DUE TO HEAVY RAINFALL.

GCS ACTIVITIES AND TEST RESULTS:

~~ARRIVED~~ ON THE SITE AT 6.30 AM. OBSERVED THE CONSTRUCTION ACTIVITIES. PERFORMED AN INVENTORY FOR THE TRUCKLOAD OF GEO-COMPOSITE (24 ROLLS OF 36" HYDRAWAY 2000) THAT WAS DELIVERED TO THE SITE TODAY.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-20-95 S M T W T (F) S

SUMMARY OF SURVEYOR'S ACTIVITIES:

BROOKS / BROOKS SURVEYING INC. PERFORMED ADDITIONAL TOPOGRAPHIC SURVEY TODAY.

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013 PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6.30 – 16.00
<9.0>

DATE: 10-23-95 S (M) T W T F S

WEATHER: MILD TEMPERATURE: LOW: 50 @ 7.00 HIGH 75 @ 1400
CLOUD COVER PARTLY PRECIPITATION NONE WIND 5–10MPH

GCS PERSONNEL ON SITE: JEFF AKANDU / THOMAS FRANCIS

SUMMARY OF CONSTRUCTION PROGRESS:

WRS REMOVED ADDITIONAL PCB-CONTAMINATED EARTHFILL MATERIAL FROM THE SITE. SEMI-TRAILER DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. IT24F LOADER AND A KOMATSU PC220LC TRAKHOE WERE USED FOR LOADING THE DUMPTRUCKS.

WRS INSTALLED ADDITIONAL SILT FENCES ALONG THE WEST PROPERTY LINE.

WRS RESUMED EXCAVATION OF THE 24" STORM LINE AT THE MID-WEST SECTION OF THE SITE. A KOMATSU PC220LC TRAKHOE ~~FOI~~ WAS USED FOR THE EXCAVATION ACTIVITIES.

A TRUCKLOAD OF GEO-COMPOSITE (9 ROLLS OF HYDRAWAY 2000) WAS DELIVERED TO THE SITE.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6.30AM. OBSERVED THE CONSTRUCTION ACTIVITIES. PERFORMED AN INVENTORY FOR THE GEO-COMPOSITE THAT WAS DELIVERED TO THE SITE TODAY.

SUBMITTED BY GCS

RESIDENT MANAGER

FIELD MONITORING SUMMARY

SHEET 2 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-23-95 S(M)T W T F S

SUMMARY OF SURVEYOR'S ACTIVITIES:

BROOKS/BROOKS INC PERFORMED ADDITIONAL TOPOGRAPHIC SURVEY TODAY. SURVEYORS ALSO INSTALLED GRADE STAKES ALONG THE 24" STORM LINE.

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 3

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

13.00 — 17.30
<4.5>

DATE: 10-24-95 S M (T) W T F S

WEATHER: MILD TEMPERATURE: LOW: 48 @ 7.00 HIGH 76 @ 1400
CLOUD COVER MOSTLY — PARTLY PRECIPITATION OCCASIONAL DRIZZLE WIND 5-15 MPH

GCS PERSONNEL ON SITE: JEFF AKANDU

SUMMARY OF CONSTRUCTION PROGRESS:

WRS REMOVED ADDITIONAL PCB-CONTAMINATED EARTHFILL MATERIAL FROM THE SITE. SEMI-TRAILER DUMP TRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. IT24F LOADER AND A KOMATSU PC220LC TRAKHOE WERE USED FOR LOADING THE DUMPTRUCKS.

WRS INSTALLED ADDITIONAL 24" POLYETHYLENE PIPE ALONG THE PIPE-L STORM LINE AT THE MID-WESTERN SECTION OF THE SITE. EARTHFILL MATERIAL WILL BE PLACED ALONG THE PIPE-LINE IN THE FUTURE.

WRS PLACED EARTHFILL MATERIAL (INITIAL BRIDGE LIFT) ON THE NORTHWEST SECTION OF THE ADJACENT COVER AREA. THE EARTHFILL MATERIAL PLACED, WAS PREVIOUSLY EXCAVATED FROM THE SEDIMENTATION POND AND STORM DRAIN LINE.

BROWN BROTHERS GRADING CO. PLACED ADDITIONAL EARTHFILL

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 1.00PM. OBSERVED THE CONSTRUCTION ACTIVITIES. ~~AND~~ PERFORMED INPLACE DENSITY TEST NOS. SF-03 THROUGH SF-07 WITH A NUCLEAR GAUGE. RESULTS OF ALL THE DENSITY TESTS MET THE PROJECT'S COMPACTION REQUIREMENTS.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 3

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-24-95 S M (T) W T F S

WEATHER: TEMPERATURE: LOW: _____ @ _____ HIGH _____ @ _____
CLOUD COVER _____ PRECIPITATION _____ WIND _____

GCS PERSONNEL ON SITE:

SUMMARY OF CONSTRUCTION PROGRESS:

MATERIAL IN SECTIONS OF THE LANDFILL AREA. TANDEM-AXLE DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL FROM AN OFF-SITE BORROW PIT. A KOMATSU D68E DOZER AND A CAT. 815B SHEEPSFOOT ROLLER WERE RESPECTIVELY USED FOR THE GRADING/COMPACTION OF THE EARTHFILL MATERIAL.

SIBERTONE FENCE CO. PLACED CONCRETE IN THE FENCE-POST HOLES ON THE EAST/NORTH SECTIONS OF THE JOB TRAILERS (SUPPORT ZONE).

GCS ACTIVITIES AND TEST RESULTS:

SUBMITTED BY GCS

RESIDENT MANAGER

FIELD MONITORING SUMMARY

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-24-95 S M (T) W T F S

SUMMARY OF SURVEYOR'S ACTIVITIES: NONE

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 3

PROJECT NUMBER: 943-3680.013 PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6.30 – 18.00
L11.07

DATE: 10-25-95 S M T (W) T F S

WEATHER: MILD TEMPERATURE: LOW: 56 @ 7.00 HIGH 75 @ 1400
CLOUD COVER PARTLY PRECIPITATION NONE WIND 5-10 MPH

GCS PERSONNEL ON SITE: JEFF AKANDU / WILSTON ETIENNE

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS REMOVED ADDITIONAL PCB-CONTAMINATED EARTHFILL MATERIAL / CONCRETE DEBRIS FROM THE SITE. SEMI-TRAILER DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. IT24F LOADER AND A KOMATSU PC220LC TRACKHOE WERE USED FOR LOADING THE DUMPTRUCKS.

~ WRS STARTED PLACING EARTHFILL MATERIAL ON SECTIONS OF THE 24" STORM LINE AT THE MID-WESTERN SECTION OF THE SITE. EACH 6" EARTHFILL LIFT WAS COMPACTED WITH A MECHANICAL TAMPING MACHINE PRIOR TO ADDITIONAL FILL PLACEMENT.

~ WRS RESUMED THE REMOVAL OF EARTHFILL MATERIAL FROM THE PROPOSED SEDIMENTATION POND AREA. A CAT. D7H DOZER WAS UTILIZED FOR THIS OPERATION.

~ A CONSTRUCTION PROGRESS MEETING WAS HELD ON THE SITE TODAY. REPRESENTATIVES FROM WRS, MONSANTO, AND GOLDER WERE (CONT'P)

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6.30AM. OBSERVED THE CONSTRUCTION ACTIVITIES AND ATTENDED THE CONSTRUCTION PROGRESS MEETING.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 2 OF 3

PROJECT NUMBER: 943-3680.013 PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-25-95 S M T (W) T F S

WEATHER: TEMPERATURE: LOW: _____ @ _____ HIGH _____ @ _____
CLOUD COVER _____ PRECIPITATION _____ WIND _____

GCS PERSONNEL ON SITE: _____

SUMMARY OF CONSTRUCTION PROGRESS:

PRESENT AT THE MEETING.
~ BROWN BROTHERS GRADING CO. PLACED ADDITIONAL EARTH-FILL MATERIAL ON SECTIONS OF THE COVER AREA AND ADJACENT COVER AREA. TANDEM-AXLE DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE FILL MATERIAL FROM AN OFF-SITE BORROW FILL. A KOMATSU D68E DOZER / CAT. 815B SHEEPSFOOT ROLLER WAS USED FOR THE GRADING / COMPACTION OF THE EARTHFILL MATERIAL.
~ MIKE PRICE (GERAGHTY) / MILLETT ENVIRONMENTAL SERVICES PERFORMED ADD PCB ANALYSIS FOR ADDITIONAL SOIL SAMPLES THAT WERE COLLECTED FROM VARIOUS LOCATIONS OF THE SITE. AS PER THE PROJECT'S SPECIFICATION'S, THE SOIL SAMPLES WITH 50 OR MORE PPM OF PCB WILL BE TRANSPORTED TO AN OFF-SITE HARZADOUS MATERIAL LANDFILL.

GCS ACTIVITIES AND TEST RESULTS:

SUBMITTED BY GCS

_____
RESIDENT MANAGER

FIELD MONITORING SUMMARY

SHEET 2 OF 3

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-25-95 S M T (W) T F S

SUMMARY OF SURVEYOR'S ACTIVITIES: NONE

SUMMARY OF PROBLEMS AND RESOLUTIONS: /

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES): /

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

GOLDER CONSTRUCTION SERVICES, INC.

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6.30 – 18.00 <11.0>

DATE: 10-26-95 S M T W T F S

WEATHER: MILD TEMPERATURE: LOW: 57 @ 7.00 HIGH 74 @ 14.00
CLOUD COVER PARTLY PRECIPITATION NONE WIND 5–10MPH

GCS PERSONNEL ON SITE: JEFF AKANDU

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS REMOVED ADDITIONAL PCB-CONTAMINATED EARTHFILL MATERIAL / CONCRETE DEBRIS FROM THE SITE. SEMI-TRAILER DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. IT24F LOADER AND A KOMATSU PC220LC TRACKHOE WERE USED FOR LOADING THE DUMPTRUCKS.

~ WRS PLACED ADDITIONAL EARTHFILL MATERIAL ON SECTIONS OF THE 24" STORM LINE. EACH 6" LIFT WAS COMPACTED WITH MECHANICAL TAMPERS (HAND-HELD) PRIOR TO ADDITIONAL FILL PLACEMENT.

~ WRS FINE-GRADED THE SLOPES OF THE ~~PROPOSED~~ SEDIMENTATION POND WITH A KOMATSU D37P DOZER. A VIBRATORY SMOOTH DRUM-ROLLER WAS USED FOR COMPACTING THE RESIDUAL SOIL ALONG THE SLOPES.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6.30AM. OBSERVED THE COMPACTION ACTIVITIES. PERFORMED IN-PLACE DENSITY TEST NOS. SF-08DC, SF-09DC (DRIVE CYLINDER METHOD), SF-10, AND SF-11 (NUCLEAR GAUGE METHOD). RESULTS OF ALL THE TESTS MET THE PROJECT'S COMPACTION REQUIREMENTS.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-26-95 S M T W T F S

WEATHER: TEMPERATURE: LOW: _____ @ _____ HIGH _____ @ _____
CLOUD COVER _____ PRECIPITATION _____ WIND _____

GCS PERSONNEL ON SITE:

SUMMARY OF CONSTRUCTION PROGRESS:

BROWN BROTHERS GRADING CO. PLACED ADDITIONAL EARTH-FILL MATERIAL ON THE WEST AND SOUTH ADJACENT COVER AREA. THE INITIAL 6" COMPACTED BRIDGE LIFT WAS RESPECTIVELY GRADED/COMPACTED WITH A KOMATSU D6BE DOZER AND CAT. 815B SHEEPSFOOT ROLLER.

GCS ACTIVITIES AND TEST RESULTS:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 1

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6:30 – 17:00
<10:07

DATE: 10-27-95 S M T W T (F) S

WEATHER: MILD TEMPERATURE: LOW: 55 @ 7:00 HIGH 72 @ 1400
CLOUD COVER MOSTLY PRECIPITATION ON/OFF SHOWERS WIND 5-20MPH

GCS PERSONNEL ON SITE: JEFF AKANDU

SUMMARY OF CONSTRUCTION PROGRESS:

~ WAS REMOVED ADDITIONAL PCB-CONTAMINATED EARTHFILL MATERIAL/ CONCRETE DEBRIS FROM THE SITE. SEMI-TRAILER DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. IT24F LOADER AND A KOMATSU PC220LC TRAKHOE WERE USED FOR LOADING THE DUMPTRUCKS.

~ WAS PLACED ADDITIONAL EARTHFILL MATERIAL ON SECTIONS OF THE STORM LINE.

~ BROWN BROTHERS GRADING CO. PLACED ADDITIONAL EARTHFILL MATERIAL ON THE SOUTH SLOPE OF THE COVER AREA. PLACEMENT OF THE FILL WAS SUSPENDED AT 9:30AM DUE TO RAINFALL.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6:30AM. OBSERVED THE CONSTRUCTION ACTIVITIES.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 3

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-30-95 S(M)TWTFS 6.30-17.30 <10.5>

WEATHER: COOL TEMPERATURE: LOW: 52 @ 7.00 HIGH 70 @ 1400
CLOUD COVER MOSTLY PRECIPITATION NONE WIND 5-10MPH

GCS PERSONNEL ON SITE: JEFF ARANDA

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS REMOVED THE PRE-EXISTING REINFORCED CONCRETE PIPE ON THE DITCH ALONG THE TOE OF THE SLOPE AT THE CENTRAL SECTION OF THE SITE. THE CONCRETE DEBRIS WAS TEMPORARILY STOCKPILED ON THE SITE. THE MATERIAL WILL BE REMOVED FROM THE SITE IN THE FUTURE.

~ WRS RESUMED REMOVAL OF THE CONCRETE DEBRIS/ CONTN PCB-CONTAMINATED MATERIAL FROM THE SITE. SEMI-TRAILER DUMP TRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A CAT. IT24S LOADER AND A KOMATSU PC220LC TRACKHOE WAS USED FOR LOADING THE DUMPTRUCKS.

~ SIBERTONE FENCE ERECTED THE FENCE ON THE EAST AND NORTH SECTIONS OF THE JOB TRAILERS.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6.30AM. OBSERVED THE CONSTRUCTION ACTIVITIES. PERFORMED IN-PLACE DENSITY TEST NOS. SF-12 THROUGH SF-14 WITH A NUCLEAR GAUGE. RESULTS OF TEST NOS. SF-13 AND SF-14 DID NOT MEET THE PROJECTS COMPACTION REQUIREMENTS. THE GRADING CONTRACTOR STATED THAT THE UNSATISFACTORY AREA WILL BE SCARIFIED/REWORKED IN THE FUTURE.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 2 OF 3

PROJECT NUMBER: 943-3680.013 PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-30-95 S M T W T F S

WEATHER: TEMPERATURE: LOW: _____ @ _____ HIGH _____ @ _____
CLOUD COVER _____ PRECIPITATION _____ WIND _____

GCS PERSONNEL ON SITE: _____

SUMMARY OF CONSTRUCTION PROGRESS:

~ BROWN BROTHERS GRADING CO. PLACED ADDITIONAL EARTH-FILL MATERIAL ALONG THE WEST SLOPE OF THE COVER AREA / SOUTH-WEST CORNER OF THE ADJACENT COVER AREA. TANDEM-AXLE DUMP TRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL FROM AN OFF-SITE BORROW PIT.

GCS ACTIVITIES AND TEST RESULTS:

SUBMITTED BY GCS

RESIDENT MANAGER

FIELD MONITORING SUMMARY

SHEET 3 OF 3

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 10-30-95 S M T W T F S

SUMMARY OF SURVEYOR'S ACTIVITIES:

BROOKS/ BROOKS INC. PERFORMED ADDITIONAL TOPOGRAPHICAL SURVEY TODAY.

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6.30 — 16.00
9.07

DATE: 10-31-95 S M T W T F S

WEATHER: COOL TEMPERATURE: LOW: 54 @ 7.00 HIGH 65 @ 1400
CLOUD COVER MOSTLY PRECIPITATION OCCASIONAL SHOWERS WIND 5-20mPH

GCS PERSONNEL ON SITE: JEFF. AKANDU

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS REMOVED ADDITIONAL CONCRETE DEBRIS FROM THE SITE TODAY. SEMI-TRAILER DUMPTRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL. A KOMATSU PC220LC TRACKHOE WAS USED FOR LOADING THE DUMPTRUCKS.

~ WRS INSTALLED WOODEN FORMS AROUND THE PRE-EXISTING ELECTRIC POLE FOUNDATION. CONCRETE WILL BE PLACED IN THE FORMS ON A LATER DAY, FOR THE EXTENSION OF THE FOUNDATION.

~ ALL THE EARTHWORK ACTIVITIES WERE SUSPENDED TODAY DUE TO THE MUDDY CONDITION OF THE SITE.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6.30AM. OBSERVED THE CONSTRUCTION ACTIVITIES.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 2 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL.

DATE: 10-31-95 S M T W T F S

SUMMARY OF SURVEYOR'S ACTIVITIES:

BROOKS/ BROOKS SURVEYING PERFORMED ADDITIONAL SURVEY TODAY.

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6.30 - 16.30
9.57

DATE: 11-1-95 S M T (W) T F S

WEATHER: COOL TEMPERATURE: LOW: 60 @ 7.00 HIGH 66 @ 1400
CLOUD COVER MOSTLY PRECIPITATION ON/OFF SHOWERS WIND 5 - 20 MPH

GCS PERSONNEL ON SITE: JEFF AKANDU / WILSTON ETIENNE

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS REMOVED ADDITIONAL CONCRETE DEBRIS (ONE TRUCKLOAD) FROM THE SITE TODAY. A SEMI-TRAILER DUMPTRUCK WAS USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL.

~ WRS ERECTED ADDITIONAL WOODEN FORMS AROUND THE PRE-EXISTING ELECTRIC POLE FOUNDATION. CONCRETE WILL BE PLACED IN THE FORMS ON A LATER DAY.

~ WRS REMOVED EARTHFILL MATERIAL FROM THE SEDIMENTATION POND AREA. THE MATERIAL WAS TEMPORARILY STOCKPILED ON THE OUTER NORTHWEST CORNER OF THE POND.

~ PLACEMENT OF COVER MATERIAL WAS SUSPENDED TODAY DUE TO THE MUDDY CONDITION OF THE SITE.

~ A CONSTRUCTION PROGRESS MEETING WAS HELD ON THE SITE TODAY. REPRESENTATIVES FROM MONSANTO, WRS, AND GOLDER WERE PRESENT AT THE MEETING.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 630AM. OBSERVED THE CONSTRUCTION ACTIVITIES. ATTENDED THE CONSTRUCTION PROGRESS MEETING.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 2 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

DATE: 11-1-95 S M T (W) T F S

SUMMARY OF SURVEYOR'S ACTIVITIES:

BROOKS BROOKS INC PERFORMED ADDITIONAL TOPOGRAPHIC SURVEY TODAY

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL

6:30 – 15:00
<8.07

DATE: 11-2-98 S M T W (T) F S

WEATHER: COOL TEMPERATURE: LOW: 59 @ 7:00 HIGH 66 @ 1400
CLOUD COVER MOSTLY PRECIPITATION ON/OFF SHOWERS WIND 5-20MPH

GCS PERSONNEL ON SITE: JEFF AKANJU

SUMMARY OF CONSTRUCTION PROGRESS:

~ WRS REMOVED ADDITIONAL CONCRETE DEBRIS FROM THE SITE. SEMI-TRAILER DUMP TRUCKS WERE USED FOR THE TRANSPORTATION OF THE MATERIAL TO AN OFF-SITE LANDFILL.

~ WRS INSTALLED ADDITIONAL HAY BALES ALONG THE CHANNELS FOR SILT CONTROL.

~ ALL THE EARTHWORK ACTIVITIES WERE SUSPENDED TODAY DUE TO THE MUDDY CONDITION OF THE SITE.

GCS ACTIVITIES AND TEST RESULTS:

ARRIVED ON THE SITE AT 6:30AM. OBSERVED THE CONSTRUCTION ACTIVITIES.

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R4

(JUNE 1992)

FIELD MONITORING SUMMARY

SHEET 2 OF 2

PROJECT NUMBER: 943-3680.013
PROJECT TITLE: MONSANTO / REVISED COVER SYS. / AL
OWNER: MONSANTO
CONTRACTOR: WESTINGHOUSE REMEDIATION SVCS.
LOCATION: ANNISTON, AL.

DATE: 11-2-95 S M T W T F S

SUMMARY OF SURVEYOR'S ACTIVITIES:

BROOKS (BROOKS INC PERFORMED ADDITIONAL TOPOGRAPHIC SURVEY TODAY).

SUMMARY OF PROBLEMS AND RESOLUTIONS:

SUMMARY OF MEETINGS AND DISCUSSIONS HELD (ATTENDEES AND ISSUES):

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES:

SUBMITTED BY GCS

RESIDENT MANAGER

GCS FORM: R5

(JUNE 1992)

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 95017 0

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 801691**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III (PCB) Disposal Approval # 071496-AOO6 CWM Profile # BK3714	P P	DT	20178	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/18/95
DE 10/19/95

State of Generation AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 25513 M 5 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	18	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Thomas Mathis	Thomas Mathis	10	18	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space added OSA to Sect. J per Robert Jones DE 10/19/95
DE to OSA 10/18/95

RECEIVED
OCT 24 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible] Ans'd	10	18	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95010

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801691-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/18/95	801691-01	BK3714	10/18/95

RECEIVED
OCT 24 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality
...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 413015	10/18/95	08:25	79820 LB G GROSS
			34120 LB (M)TARE
			45700 LB N NET

20,748 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tonsue #65 Heilea #765 Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 915015

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 801696**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID ALD981023492

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III (PCB) 9pt Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	20684	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/18/95 ve 10/19/95

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255140 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	18	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILLIAM C. LONG	Wm. C. Long	10	18	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space: Added 050 to Sect. g per Robert Jones. ve 10/19/95.

RECEIVED
OCT 24 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		10	16	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95015

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801696-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/18/95	801696-01	BK3714	10/18/95

RECEIVED
OCT 24 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	10/18/95	10:07	79040 LB G	GROSS
ID 65			33480 LB (M) T	TARE
			45560 LB N	NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

James H. McFall
Public Weighmaster
ALABAMA

20,684 IC

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer # 55 / Trailer 55 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 — Manifest Document No. 5011 4
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 801695

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC
6. US EPA ID Number: ALD981023492
C. State Transporter's ID: ALD981023492
D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459
10. US EPA ID Number: ALD 000 622 464
G. State Facility's ID:
H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III (PCB) ~~500 PPM~~ ~~WASTE PCB LIQUID~~ Jnf Disposal Approval # 071496-AOOS CWM Profile # BK3714	001	DT	19804		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/18/95 ve 10/19/95

K. Handling Codes for Wastes Listed Above: a. b. c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255139 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry D. Hopper	Terry D. Hopper	10/19/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bill Long Jr	Bill Long Jr	10/19/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space: Added OSD to Sect. g per Robert Jones. ve 10/19/95.

RECEIVED
OCT 24 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		Ans'd 10/18/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95014

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801695-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/18/95	801695-01	BK3714	10/18/95

RECEIVED
OCT 24 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality
...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
			GROSS
	10/18/95	09:55	76560 LB G
			TARE
ID 55			33380 LB (M) T
			NET
			43180 LB N

19,604 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36209-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 801694.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/20/95

RECEIVED
OCT 24 1995
Ans

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) TRACTOR # 2648 / TRAILER D-33 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 8 9 — Manifest Document No. 5012

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 801694**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7155

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III (PCB) 500 PPM [illegible] 90K Disposal Approval # 071495-AO06 CWM Profile # BK3714	001	DT	18823	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/18/95
ve 10/19/95

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255138 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 18 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Robert Pennington	Robert Pennington	10 19 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space Added OSD to Sect. g per Robert Jones. ve 10/19/95

RECEIVED
OCT 24 1995
ARMD

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible] Gaine	[illegible] Gaine	10 19 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95013

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801694-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/18/95	801694-01	BK3714	10/18/95

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NOV 03 1995
AHS

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PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
			GROSS
	10/18/95	09:24	75120 LB G
			TARE
ID 33			33660 LB (M) T
			NET
			41460 LB N

James H. McFall
Public Weighmaster
ALABAMA

18,823 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR # 2072 / TRAILER # D40 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 95012

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6361

A. State Manifest Document Number: CWMA 801693

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III (PCB) ~~500-02%~~ VARIABLE POLLUTANT) 9M	001	DT	19713	K	PCB
Disposal Approval # 071496-A006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/18/95 VE 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255137 EMERGENCY CONTACT: 1-800-765-8713 ERD 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Terry A. Hopper	Terry A. Hopper	10 18 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Wiley Chiles	Wiley Chiles	10 19 1995

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space: Added OSD to Sect. J per Robert Jones. VE 10/19/95

RECEIVED OCT 24 1995 Ans'd.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Caine	Anne Caine	10 19 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95012

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801693-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

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Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/18/95	801693-01	BK3714	10/18/95

RECEIVED
OCT 24 1995
Ans'd.....

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19,713

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PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/18/95	09:22	76100 LB G	GROSS
ID 40			32680 LB (M) T	TARE
			43420 LB N	NET

19,713 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tarrson 3103 / D44 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 95017 7

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0849

A. State Manifest Document Number: CWMA 801692

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III (PCB) ~~SOLID, NOS (PCB'S)~~ GDR Disposal Approval # 071495-8006 CWM Profile # BK3714	001	DT	18796	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/18/95 RE 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # ~~8020-1-0017~~ 8020-1-0017

Work Order # 255136

EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	18	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
George Nelson	George Nelson	10	18	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space added OSD to Sect g per Robert Jones 10/19/95 RE 10/19/95 RECEIVED OCT 24 1995 Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Carl Watson	Carl Watson	10	24	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95011

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801692-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

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Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/18/95	801692-01	BK3714	10/18/95

RECEIVED
OCT 24 1995
Ans'd.....

Printed on recycled paper.

18,796

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/18/95	08:20	76300 LB G	
				TARE
ID 44			34900 LB (M) T	
				NET
			41400 LB N	

18,796 Kg

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 95-01116

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 801667

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC

6. US EPA ID Number: AL 0198102814 92

C. State Transporter's ID:

D. Transporter's Phone:

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. NA, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~PG~~ II (PCB) ~~SOC-LRX~~ ~~MARINE POLLUTANT~~ Gork 10/19/95					PCB
Disposal Approval # 071496-NOOS CWM Profile # BK3714	0 0 1	DT	15790	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255 158 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
JERRY D. HOPPER	Jerry D. Hopper	10 19 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
George Nelson	George Nelson	10 19 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 24 1995
Ans'd

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Odle	Anne Odle	10 19 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95016

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801667-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver / Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/19/95	801667-01	BK3714	10/19/95

RECEIVED
OCT 24 1995
Ans'd.....

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS
			GROSS
	10/19/95	08:04	69240 LB G
			TARE
ID 44			34460 LB (M) T
			NET
			34780 LB N

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

James H. McFall
Public Weighmaster
ALABAMA

15,790 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36201

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 801668.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/23/95

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Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 | Manifest Document No. AR 6 0 1 V

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 801668

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST, INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID

D. Transporter's Phone: 1 800 695 9163

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III ~~II~~ (PCB) ~~500 PPM~~ MARINE POLLUTANT ~~9004~~ 10/19/95 Disposal Approval # 071496-0006 CWM Profile # BK3714	0 0 1	DT	19640	K	PCB
b. Disposal Approval # ____ CWM Profile # ____					
c. Disposal Approval # ____ CWM Profile # ____					
d. Disposal Approval # ____ CWM Profile # ____					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255160 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated, to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 19 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bill Long Jr	Bill Long Jr	10 19 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

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OCT 24 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Mike Gaines	Mike Gaines	10 19 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/19/95	08:14	76300 LB G	GROSS
ID 55			33040 LB (M) T	TARE
			43260 LB N	NET

19,640 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 A — Manifest Document No. 19510 JB

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 801669

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD 981023492

D. Transporter's Phone: (205) 695-1115

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III II (PCB) 500 PPM - - - MARINE POLLUTANT) QOH 10/19/95	001	DT	19916	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b. Disposal Approval # ____ CWM Profile # ____					
c. Disposal Approval # ____ CWM Profile # ____					
d. Disposal Approval # ____ CWM Profile # ____					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10-19-95 VE 10/20/95

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255159 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 19 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Thomas Mathis	Thomas Mathis	10 19 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

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19. Discrepancy Indication Space: added OSD to Sect. J per Robert Jones. VE 10/20/95

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10 19 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95018

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801669-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/19/95	801669-01	BK3714	10/19/95

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Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/19/95	08:51	77600 LB G	GROSS
ID 413015			33600 LB (M)	TARE
			44000 LB N	NET

19,996

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019041 | 95019

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 801670

B. State Generator's ID: 1572

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: TERRA FIRST, INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD 981023492

D. Transporter's Phone: (205) 655-7945

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hezerd Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II (PCB > 500 PPM ~~MARINE POLLUTANT~~) 9 ON 10/19/95	001	DT	20000	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255161 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Terry D. Hopper	Terry D. Hopper	10	19	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILLIAM C. LONG	[signature]	10	19	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

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Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	19	95

GENERATOR | TRANSPORTER | FACILITY

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95019

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801670-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/19/95	801670-01	BK3714	10/19/95

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OCT 24 1995
Ans'd.....

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PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/19/95	08:53	78880 LB G	TARE
ID 65			33120 LB (M) T	NET
			45760 LB N	

20,775 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: A L D 0 0 4 0 1 9 0 4 8 | 9 5 0 2 0

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 801671

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: A L 0 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD 981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II (PCB) ~~500 PPM MARINE POLLUTANT~~ 9076 10/19/95 Disposal Approval # 071496-0006 CWM Profile # BK3714	0 1	D M	PT 20839 K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255162 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	19	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Robert Pennington	Robert Pennington	10	19	1995

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
OCT 24 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Jaime Gaines	Jaime Gaines	10	19	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95020

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801671-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/19/95	801671-01	BK3714	10/19/95

RECEIVED
OCT 24 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/19/95	09:26	79120 LB G	GROSS
ID 33			33220 LB (M) T	TARE
			45900 LB N	NET

James H. McFall
Public Weighmaster
ALABAMA

20,838.6 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 801667, 801669, 801670, 801671, 801672, 801691, 801692, 801693, 801695, 801696

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/23/95

RECEIVED
OCT 24 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: ALD004013041 / 9502

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 801672

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 645-9195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III-PL (PCB) 500 PPM ~~MARINE POLLUTANT~~ 90A 10/19/95 Disposal Approval # 071496-0005 CWM Profile # BK3714	001	PT	20902K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/19/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255156 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	19	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	19	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
OCT 24 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Inna Oakes	Inna Oakes	10	19	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95021

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801672-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/23/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/19/95	801672-01	BK3714	10/19/95

RECEIVED
OCT 24 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/19/95	09:28	78260 LB G	GROSS
ID 40			32220 LB (M)	TARE
			46040 LB N	NET

20,902 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019041 — Manifest Document No. 95022

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6361

A. State Manifest Document Number: CWMA 801673

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALO981023492

D. Transporter's Phone: 205-695-5195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, PG II (PCB > 500 PPM — MARINE POLLUTANT) Jok Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	20630K		PCB
b. Disposal Approval # [illegible] CWM Profile #					
c. Disposal Approval # [illegible] CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/20/95

K. Handling Codes for Wastes Listed Above: b. ✓ c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256089 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 20 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
WILLIAM C. LONG	[signature]	10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 25 1995
ANSI

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anna Odum	Anna Odum	10 20 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95022

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801673-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801673-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd

Printed on recycled paper.

256085

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

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ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/20/95	07:48	79480 LB G	TARE
ID 65			34040 LB (M)	NET
			45440 LB N	

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

20,630 K

James H. McFall Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019043 — Manifest Document No. 95023

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6361

A. State Manifest Document Number: CWMA 801674

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205-695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II (PCB) 500 PPM ~~MARINE POLLUTANT~~	001	DT	20966	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/20/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256087 EMERGENCY CONTACT: 1-800-765-0713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Terry O. Hopper	Terry O. Hopper	10	20	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Bill Long Jr.	Bill Long Jr.	10	20	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
OCT 25 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Inc Cains,	Inc Cains,	10	20	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95023

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801674-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801674-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:03	79980 LB G	GROSS
ID 55			33800 LB (M) T	TARE
			46180 LB N	NET

James H. McFall Public Weighmaster ALABAMA

20,966 K

DRIVER ON ☐ OFF ☒ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 — Manifest Document No. 95024

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202--0249

A. State Manifest Document Number: CWMA 801675

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRAFIRST, INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205-695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III - II (PCB) 500 PPM — MARINE POLLUTANT) Disposal Approval # 071496-BDDS CWM Profile # PK3714	001	PT	20430	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above — A) OUT OF SERVICE DATE: 10/20/95

State of Generation AL

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256081 EMERGENCY CONTACT: 1-800-765-0713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 20 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Thomas Mathis	Thomas Mathis	10 20 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 25 1995
Ans'd

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anna Eaves	Anna Eaves	10 20 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95024

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801675-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801675-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:06	79240 LB G	GROSS
ID 413015			34240 LB (M)	TARE
			45000 LB N	NET

20,430 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019404 | 95025

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 801676

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA First, Inc.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205-695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II (PCB) ~~500 PPM (MARINE POLLUTANT)~~ Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	19041	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/20/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. 2 c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8080-1-0017

Work Order # 255392 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hooper	Jerry O. Hooper	10	20	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
George Nelson	George Nelson	10	20	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 25 1995
AMS

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Donna Carlile	Donna Carlile	10	20	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95025

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801676-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801676-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:14	77140 LB G	GROSS
ID 44			35200 LB (M) T	TARE
			41940 LB N	NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

19,041 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019014 — Manifest Document No. 50216

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL. 36202-0249

A. State Manifest Document Number: CWMA 801677

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST, INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205-695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II (PCB) ~~500 PPM~~ MARINE POLLUTANT) JOW Disposal Approval # 071495-AOOS CWM Profile # BW3714	001	DM	19595K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/20/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256084 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 20 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Charles Holmes	Charles Holmes	10 20 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 25 1995
Ans'd.

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anna Odom	Anna Odom	10 20 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95026

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801677-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801677-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
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300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/20/95	08:13	75520 LB G GROSS
ID 18			32360 LB (M)TARE
			43160 LB N NET

19,595 K

DRIVER ON [X] OFF [ ] WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO.
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO.
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 801674, 801678.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/24/95

RECEIVED
OCT 25 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004013014 Manifest Document No. 91502

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6301

A. State Manifest Document Number: CWMA 801678

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II 9 (PCB) ~~500 PPM (MARINE POLLUTANT)~~ Disposal Approval # 071492-0005 CWM Profile # BK3714	001	PT	19713	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/20/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255400 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 20 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
James Odom	James Odom	10 20 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

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Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Collins	Anne Collins	10 25 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95027

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801678-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801678-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
AMS

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:18	75760 LB G	GROSS
ID 20			32340 LB (M) T	TARE
			43420 LB N	NET

19,713 K

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004011904 Manifest Document No. 950128

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 801679**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA-FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205-695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II gen (PCB) 500 PPM MARINE POLLUTANT		DT	1	4	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/20/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 255381 EMERGENCY CONTACT: 1-800-765-8713 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Terry O. Hopper	Terry O. Hopper	10	20	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Robert Pennington	Robert Pennington	10	20	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 25 1995
Ans'd

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anne Gaines	Anne Gaines	10	20	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95028

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0801679-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	801679-01	BK3714	10/20/95

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:28	77020 LB G	GROSS
ID 33			34280 LB (M) T	TARE
			42740 LB N	NET

19,464 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 9 1 9 0 4 8 Manifest Document No. 9 5 0 2 9

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Monsanto Co, 300 Birmingham Hwy, Anniston, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 566436

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC

6. US EPA ID Number: AL D 0 9 8 1 9 2 3 4 9 2

C. State Transporter's ID: AL09810234 92

D. Transporter's Phone: 205 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERATOR a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, II (PCB) Disp App# 071496-A006 CWM Profile Number BK3714	001	DT	19749	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: Out of Date Service: 10/20/95
STATE OF ORIGIN — ALABAMA

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT 1-800-765-8713 ERG31

Work Order #: 255398 Purchase Order #: 8020-1-0017

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jerry O. Hopper — Signature: Jerry O. Hopper — Month Day Year: 10 20 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JOE MILLER — Signature: Joe Miller — Month Day Year: 10 20 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

RECEIVED
OCT 25 1995
Ans'd

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: SALLY LUKE — Signature: Sally Luke — Month Day Year: 10 20 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (Mail Approved Signed)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95029

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566436-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	566436-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality
...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:30	74600 LB G	GROSS
ID 876			31100 LB (M) T	TARE
			43500 LB N	NET

19,749

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 95070

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Monsanto Company
300 Birmingham Hwy.
Anniston, AL 36202-0249

4. Generator's Phone (205-236-6381)

A. State Manifest Document Number
CWMA 566425

B. State Generator's ID

5. Transporter 1 Company Name
TERRA First, Inc.

6. US EPA ID Number
ALD981023492

C. State Transporter's ID ALD981023492

D. Transporter's Phone 205-695-2195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number
ALD006224644

G. State Facility's ID

H. Facility's Phone
205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, II (PCB) Disposal Approval #071496-AD06 CWM Profile Number BK3714	001	~~DT~~ CM ~~DT~~	1	22 K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above
State of Origin - ALABAMA
Out of Service Date: 10/20/95

K. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
In the event of an emergency, contact Chemical Waste Management, Inc. at (205)652-9721

Work Order #: 255135

Purchase Order #: 8020-1-0017

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	20	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Melinda Stone	Melinda Stone	10	20	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 25 1995
ADEM

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Sally Luke	Sally Luke	10	20	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR — TRANSPORTER — FACILITY

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95030

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566425-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	566425-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality
...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:32	75520 LB G	GROSS
ID 413018			33400 LB (M) T	TARE
			42120 LB N	NET

19,122 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY

HAZARDOUS WASTE MANIFEST (D)

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 9 0 4 8 | Manifest Document No. 9 5 0 9 7 1 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Monsanto Co. 300 Birmingham Hwy Anniston, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 566426

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC. | 6. US EPA ID Number: A L D 0 9 8 1 0 2 3 4 9 2 | C. State Transporter's ID: ALD981023492 | D. Transporter's Phone: 205-695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address: CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle, Alabama 35459 | 10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4 | G. State Facility's ID | H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, II (PCB) CWM Disposal Approval # 07149G-A006 CWM Profile Number BK3714	001	~~DM~~ DT ~~CM~~ ~~DF~~	18514	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: STATE OF ORIGIN - ALABAMA Out of Service Date: 10/20/95

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information: IN THE EVENT OF AN EMERGENCY CONTACT CHEMICAL WASTE MANAGEMENT INC. at (205) 652-9721

Work Order #: ~~235131~~ 256078 Jnt Purchase Order #: 8020-1-0017

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	20	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Harzell Conway	Harzell Conway	10	20	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 25 1995
Ans'd

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19...

Printed/Typed Name	Signature	Month	Day	Year
Martha Neal	Martha Neal	10	24	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 White Accompany Shipment

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95031

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566426-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	556426-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:47	74180 LB G	GROSS
ID 893			33400 LB (M)	TARE
			40780 LB N	NET

18,514 K

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

D.40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

CD

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 95032

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY.
ANNISTON, AL 36202-0249

A. State Manifest Document Number
CWMA 566427

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name
TERRA FIRST, INC.

6. US EPA ID Number
ALD981023492

C. State Transporter's ID ALD981023492

D. Transporter's Phone 205 695 2195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number
ALD006224644

G. State Facility's ID

H. Facility's Phone
205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, II (PCB) CWM Disp. App.# 071496-A006 CWM Profile Number BK3714	001	~~DT~~ ~~CA~~ ~~DT~~	19314	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above
STATE OF ORIGIN - ALABAMA
OUT OF SERVICE AREA 10/20/95

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information
IN THE EVENT OF AN EMERGENCY, CONTACT CHEMICAL WASTE MANAGEMENT, INC. AT (205)652-9721

Work Order #: ~~255137~~ 255389 ~~001~~ Purchase Order #: 8020-1-0017

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 20 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
WILEY CHILES	Wiley Chiles	10 20 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
		RECEIVED

FACILITY

19. Discrepancy Indication Space

OCT 25 1995

Ans'd.....

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Martha Newton	Martha Newton	10 20 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (Multi Accompany Shipment)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95032

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566427-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	566427-01	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality
...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	10/20/95	08:45	75340 LB G	GROSS
ID 40			32800 LB (M) T	TARE
			42540 LB N	NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

19,314 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO.
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO.
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 566425, 566426, 566427, 566428, 566436, 801673, 801675, 801676, 801677, 801679.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/24/95

RECEIVED
OCT 25 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST (1)

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 004 010 904 8 — Manifest Document No. 95033 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Monsanto Co. 300 Birmingham Hwy Anniston, AL 36202-0249

A. State Manifest Document Number: CWMA 566428

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: ~~Terra First, Inc~~ Robbie Walker — 6. US EPA ID Number: AL D 987 385 492 — C. State Transporter's ID: ALD982102349 — D. Transporter's Phone: ~~205-695-7195~~ 744-5151

7. Transporter 2 Company Name — 8. US EPA ID Number — E. State Transporter's ID — F. Transporter's Phone

9. Designated Facility Name and Site Address: CHEMICAL WASTE MANAGEMENT, INC. Emelle Facility, Alabama Highway 17 at Mile Marker 163, Emelle, Alabama 35459 — 10. US EPA ID Number: AL D 000 622 464 — G. State Facility's ID — H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERATOR a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, II (PCB) Clean Disp App.# 071496-A006 CWM Profile Number BK3714	001	DT	15318	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: State of Origin - Alabama — Out of Service Date: 10/20/95

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information: In the Event of an Emergency, contact Chemical Waste Management Inc. at (205) 652-9721.

Work Order #: ~~255138~~ 255397 — Purchase Order #: 8020-1-0017

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 20 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
ERNEST W. STREET	Ernest W. Street	10 20 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 25 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Cynthia Newton	Cynthia Newton	10 20 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (White, Accompany Shipment)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95033

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566428-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/24/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/20/95	556428-001	BK3714	10/20/95

RECEIVED
OCT 25 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/20/95	11:12	68540 LB G	GROSS
ID 516			34800 LB (M) T	TARE
			33740 LB N	NET

15,318 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: A L D 0 0 4 0 1 9 0 4 9 5 e 3 4

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798578

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 625-7125

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-GOOG CWM Profile # BK3714	0 0 1	DT	19958	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above: a. C c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 EXT 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 23 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bill Long Jr	Bill Long Jr	10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Collins	Anne Collins	10 23 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95034

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798578-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798578-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	Monsanto
	10/23/95	07:40	76640 LB G	GROSS
ID 55			33120 LB (M)	TARE
			43520 LB N	NET

19,758 K

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004013045 | 95036

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: **CWMA 798579**

B. State Generator's ID:

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023498

C. State Transporter's ID: ALD981023498

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-BOOS CWM Profile # BK3714	001	DT	19250	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry D. Hopper	Terry D. Hopper	10 13 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Joe Miller	Joe Miller	10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995
Ass'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10 23 95

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95035

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798579-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798579-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/23/95	07:42	73380 LB G	GROSS
ID 876			30980 LB (M) T	TARE
			42400 LB N	NET

19,250 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

T2072- D 40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 95236

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798580

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071495-NONE CWM Profile # BK3714	001	DT	20784	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above: a: L c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Terry D. Hopper	Terry D. Hopper	10	23	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	24	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
CAROL WELDON	Carol Weldon	10	23	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95036

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798580-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798580-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 40	10/23/95	07:46	78040 LB G GROSS 32260 LB (M) TARE 45780 LB N NET

20,784 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

2048-D-30 (1)

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 4 — Manifest Document No. 95294

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798581

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D98102349 2

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071495-0006 CWM Profile # BK3714	0 0 1	DT	18423	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0019

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry D. Hopper	Jerry D. Hopper	10	23	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Charles Holmes	Charles Holmes	10	23	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	23	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95037

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798581-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798581-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS
	10/23/95	07:53	74580 LB G GROSS
ID 30			34000 LB (M)TARE
			40580 LB N NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

18,423 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Truck #2048 Dump #0-33

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004013404 | 95028

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL. 36202-0249

A. State Manifest Document Number: **CWMA 798582**

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 655-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-0006 CWM Profile # WX2714	001	DT	1761	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above: a. c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 25684 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry D. Hopper	Jerry D. Hopper	10	23	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Robert Pennington	Robert Pennington	10	23	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995
Ans'd

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Linda Gibbs	Linda Gibbs	10	23	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95038

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798582-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798582-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/23/95	07:55	73120 LB G	TARE
ID 33			34320 LB (M)	NET
			38800 LB N	

17,615 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019404 Manifest Document No. 950039

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798583

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	195176	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/23/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 23 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Thomas Mathis	Thomas Mathis	10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995
Ans'd.....

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		10 23 95

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95039

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798583-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798583-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	10/23/95	08:05	76620 LB G	GROSS
ID 413015			33500 LB (M)	TARE
			43120 LB N	NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

19,756 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD984023492 | 95404

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798584

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)	010	DT	186519	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. C b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	23	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Melinda Stone	Melinda Stone	10	23	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
OCT 26 1995
Ans'd

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Coates	Anna Coates	10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95040

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798584-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798584-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	Monsanto
	10/23/95	08:18	75000 LB G	GROSS
D 413018			33900 LB (M) T	TARE
			41100 LB N	NET

18,659 K

DRIVER ON [X] OFF [ ] WEIGHED BY

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Type or print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019604 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 798585

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: ALD981023492 | C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-A006 CWM Profile # BK3714	001	DT	18514	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 12 3 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
William M Woods JR	William M Woods JR	10 12 3 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 26 1995
Ans'd

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anna Cole	Anna Cole	10 23 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95041

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798585-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct inetructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798585-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

GROSS

10/23/95 08:22 74000 LB G TARE

ID 893 33220 LB (M)NET

40780 LB N

18,514 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON [X] OFF [ ] WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 798585, 798586, 798580, 798583, 798582, 798579, 798581, 798584, 798578.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/25/95

RECEIVED
OCT 26 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019504 — Manifest Document No. 95047

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798586

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023452

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # PK3714	001	DT	19132	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 23 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
CHARLES DIVEL		10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

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OCT 26 1995
ADEM

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		10 23 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95042

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798586-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798586-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-8381

Total Quality ...the best have the competitive edge.

Monsanto

ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

GROSS
10/25/95 09:09 75620 LB G
TARE
ID 18 33480 LB (M) T
NET
42140 LB N
19,132 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36201

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 798587.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/25/95

RECEIVED
OCT 26 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tracton # 109 / Tonkawa 592 Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD041013414 Manifest Document No. 50443

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 798587**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC
6. US EPA ID Number: ALD981023492
C. State Transporter's ID: ALD981023492
D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name: Robbie D. Wood
8. US EPA ID Number: AL D010417133911
E. State Transporter's ID
F. Transporter's Phone: 205-884-8440

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459
10. US EPA ID Number: ALD006226464
G. State Facility's ID
H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)	001	DT	212174	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 23 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Kenneth J. Donaldson	Kenneth J Donaldson	10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 26 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anna Caine	Anna Caine	10 23 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95043

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798587-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/25/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798587-01	BK3714	10/23/95

RECEIVED
OCT 26 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
ID 592	10/23/95	09:57	77520 LB G	GROSS
			28680 LB (K) T	TARE
			48840 LB N	NET

22,174-K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

*No work order forms w/Drivers

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Tractor 121 / Trailer 590 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004191464 Manifest Document No. 95144

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798588

B. State Generator's ID:

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: ROBBIE D WOODS

6. US EPA ID Number: ALD067138691

C. State Transporter's ID: ALD981023493

D. Transporter's Phone: 205 820-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071495-0006 CWM Profile # BW3714	001	DT	20167	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/23/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. C c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256184 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 23 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Stan Wood	Stan Wood	10 23 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 27 1995
Ans'd.....

19. Discrepancy Indication Space
& Truck was Robbie D Woods 10/24/95

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95044

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798588-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/23/95	798588-01	BK3714	10/23/95

RECEIVED
OCT 27 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/23/95	11:27	74280 LB G	TARE
ID 590			29860 LB (M)	NET
			44420 LB N	

20,169 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019046 — Manifest Document No. 960145

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798589

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7135

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	16026K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95 24 DOT

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 3020-1-0017

Work Order # ~~256184~~ 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 24 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Charles Holmes	Charles Holmes	10 26 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
OCT 27 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead	Nelwyn Armistead	10 26 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95045

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798589-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798589-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/24/95	07:47	69540 LB G	
				TARE
ID 30			34240 LB (M) T	
				NET
			35300 LB N	

16,026 K

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 713172

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778447

B. State Generator's ID:

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 904					PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	16998	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
JERRY O. HOPPER	Jerry O. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
W. G. STANFORD	W. G. Stanford	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 02 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	30	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/30/95	08:31	71260 LB G	GROSS
ID 19			33820 LB (M) T	TARE
			37440 LB N	NET

16,998 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019404 — Manifest Document No. 95073

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778448

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL 0981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III	001	DT	16680	K	PCB
Disposal Approval # 071496-8006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 259650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	10 30 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
James Odom	James Odom	10 31 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
NOV 02 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melvyn Armistead	Melvyn Armistead	10 30 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95093

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778448-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778448-01	BK3714	10/30/95

RECEIVED
NOV 02 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/30/95	08:34	69340 LB G	TARE
D 20			32600 LB (M)	NET
			36740 LB N	

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

16,680 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* NO WORK ORDER FORMS W/ DRIVER

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) TRACOR # 5617 / TEMPLE # 5617 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019404 Manifest Document No. 95 0474

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778449

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III	001	DT	16553	K	PCB
Disposal Approval # 071495-0006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above — A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 259650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Wendell M. Wheeles	Wendell M Wheeles	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 02 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	30	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95094

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778449-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778449-01	BK3714	10/30/95

RECEIVED
NOV 02 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/30/95	08:53	68680 LB G	GROSS
ID 5617			32220 LB (M) T	TARE
			36460 LB N	NET

16,553 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

110 WORK ORDER Forms W/ Driver

HAZARDOUS WASTE MANIFEST (1)

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Tractor # 5616 / Trailer # 5616 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 915075

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0849

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778450

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III DOT Disposal Approval # 021496-0006 CWM Profile # BK3714	001	DT	16235	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 FOR 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	30	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John R Trantham	John R. Trantham	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
NOV 02 1995
Ans'd.....

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	30	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/30/95	08:57	68620 LB GGROSS
ID 5616			32860 LB (TARE
			35760 LB NNET

16,235K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* No work order forms w/ Driver

HAZARDOUS WASTE MANIFEST (1)

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Terra 5649 / Trailer 5649 Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004013404 Manifest Document No. 93076

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778451

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 9DK Disposal Approval # 071495-0005 CWM Profile # MK3714	001	DT	19177	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	30	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Andy Dunaway #5649		10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
NOV 02 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		10	30	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 5649	10/30/95	09:29	74100 LB G GROSS 31860 LB (M)TARE 42240 LB N NET

19,177 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019041 — Manifest Document No. 915097

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778452

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III Sort Disposal Approval # 071496-0005 CWM Profile # BK3714	001	CT	20203	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Jerry D. Hopper	Jerry D. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Melinda Stone	Melinda Stone	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

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NOV 02 1995
Ans'd

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Brad Wilson		10	30	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95097

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778452-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778452-01	BK3714	10/30/95

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NOV 02 1995
Ans 6.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 413018	10/30/95	10:09	78340 LB GROSS 33840 LB TARE 44500 LB NET

20,203 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Truck # 2048 Dump # 893

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 004 019 044 — Manifest Document No. 75948

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6301

A. State Manifest Document Number: CWMA 778453

B. State Generator's ID:

5. Transporter 1 Company Name: TERRO FIRST INC

6. US EPA ID Number: AL D 981 023 392

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: AL D 000 622 464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90*	001	DT	15336	K	PCB
Disposal Approval # 071495-BODE CWM Profile # BK3714					
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Terry O. Hopper	Terry O. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Robert Pennington	Robert Pennington	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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NOV 02 1995
Ans's

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	30	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

			GROSS
	10/30/95	09:55	68760 LB G
			TARE
ID 893			34980 LB (M) T
			NET
			33780 LB N

15,336 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* NO WORK ORDER FORMS W/ DRIVER

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailers 45 / Trailer # 514

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 3 9 0 4 A — Manifest Document No. 9 5 0 1 7 7

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6361

A. State Manifest Document Number: CWMA 778454

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 9HH Disposal Approval # 071486-9006 CWM Profile # PK3714	001	DT	19368	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hooper	Jerry O. Hooper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kevin King	Kevin King	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kevin King JOB	Kevin King	10	30	95

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 02 1995
AM

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Nelwyn Armistead	Nelwyn	10	31	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95099

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778454-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778454-01	BK3714	10/30/95

RECEIVED
NOV 02 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/30/95	10:49	76280 LB G	
				TARE
ID 514			33620 LB (M) T	
				NET
			42660 LB N	

9,368 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* No Work Order Forms w/ Driver

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Terrell #20 / Trailer #513 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 4 9 5 Manifest Document No. 10 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778455

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: A L D 0 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL098102349?

D. Transporter's Phone: (205) 695-2195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90R Disposal Approval # 071496-0005 CWM Profile # BK3714	001	DT	19658	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

K. Handling Codes for Wastes Listed Above: a. c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 30 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
RAY COX		10 30 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED NOV 02 1995 Ans'd

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melvyn Armistead	Melvyn Armistead	10 30 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95100

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778455-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778455-01	BK3714	10/30/95

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NOV 02 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	10/30/95	11:10	77320 LB G	GROSS
ID 513			34020 LB (K)	TARE
			43300 LB N	NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

19,658 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON [X] OFF [ ] WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778441, 778442, 778443, 778444, 778445, 778446, 778447, 778448, 778449, 778450, 778451, 778452, 778453, 778454, 778455, 778456

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/01/95

RECEIVED
NOV 02 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 3 0 4 A — Manifest Document No. 93707

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778456

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D98102349

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: AL D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	4. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 904 Disposal Approval # 071486-HOOG CWM Profile # BK3714	001	DT	18323	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 30 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Joe Miller	Joe Miller	10 30 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

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NOV 02 1995
AMD

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Carol Wilson	Carol Wilson	10 30 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95101

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778456-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver /BP

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778456-01	BK3714	10/30/95

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NOV 02 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/30/95	11:25	71720 LB G	TARE
ID 33			31360 LB (M)	NET
			40360 LB N	

18,323 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778457.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/02/95

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HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019041 Manifest Document No. 913702

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778457

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Merker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III Disposal Approval # 071486-BUOS CWM Profile # BK3714	001	DT	20	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Thomas Mathis	Thomas Mathis	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		10	31	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95102

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778457-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/02/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778457-01	BK3714	10/31/95

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/30/95	13:21	79080 LB G	TARE
ID 413015			33900 LB (M)	NET
			45180 LB N	

20,512 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778458.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/02/95

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NOV 06 1995
ARS'D.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 3 0 4 4 — Manifest Document No. 915709

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6361

A. State Manifest Document Number: CWMA 778458

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D98102349P

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: AL D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 904 Disposal Approval # 071496-BDDS CWM Profile # BK3714	001	DT	20376	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 EXT 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
CHARLES DIVEL		10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
NOV 06 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		10	31	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95103

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778458-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/02/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778458-01	BK3714	10/31/95

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NOV 06 1995

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 18	10/30/95	13:38	77240 LB G GROSS 32360 LB (M) TARE 44880 LB N NET

20,376 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

T 2072. D 40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004013046 Manifest Document No. 93787

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6301

A. State Manifest Document Number: CWMA 778461

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED DIPHENYLS MIXTURE, 9, UN2315, III 90A Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	14	L	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/31/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257651 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 38

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	10	31	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	31	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 06 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	31	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95104

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778461-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/02/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/31/95	778461-01	BK3714	10/31/95

RECEIVED
NOV 06 1995

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/31/95	08:45	63340 LB G	TARE
ID 40			32240 LB (M)	NET
			31100 LB N	

14, 119 K

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO COMPANY
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO COMPANY
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778460, 778461.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/02/95

RECEIVED
NOV 06 1995
ARS

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: ALD004019045 — Manifest Document No.: 93705

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778460

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90*					PCB
Disposal Approval # 071496-8006 CWM Profile # BK3714	001	OTT	10687	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/31/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. [illegible] c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257651 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	10	31	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
George Nelson	George Nelson	10	31	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
NOV 06 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	31	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95105

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778460-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/02/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/31/95	778460-01	BK3714	10/31/95

RECEIVED
NOV 06 1995

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 238-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS
	10/31/95	08:08	57020 LB G GROSS
ID 17			33480 LB (M)TARE
			23540 LB N NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

10,687 Yh

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO.
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO.
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778462.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/03/95

RECEIVED
NOV 06 1995
Ans'd.....

T2012. D40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019044 Manifest Document No. 95706

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778462

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90*					PCB
Disposal Approval # 071496-8005 CWM Profile # DK3714	001	DT	194168	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/01/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-00M

Work Order # 258235 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	11	10	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	11	10	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 06 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Gina Gaines	Gina Gaines	11	10	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95106

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778462-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/03/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/01/95	778462-01	BK3714	11/01/95

RECEIVED
NOV 06 1995

Printed on recycled paper

WO # 258236

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	11/01/95	08:05	75740 LB G	GROSS
ID 40			32860 LB (M) T	TARE
			42880 LB N	NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

19,468 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST (1)

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004151464 Manifest Document No. 75707

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778463

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III PCB Disposal Approval # 071495-0005 CWM Profile # WCI714	001	DT	17552		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	11	02	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Thomas Mathis	Thomas Mathis	11	02	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED NOV 08 1995 Ans'd.....

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anne Dalke	Anne Dalke	11	07	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95107

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778463-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/06/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778463-01	BK3714	11/02/95

RECEIVED
NOV 08 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

			GROSS
11/02/95	08:33	72880 LB G	
			TARE
ID 413041		34220 LB (M) T	
			NET
		38660 LB N	

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778464.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/06/95

RECEIVED
NOV 08 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 3 0 4 4 — Manifest Document No. 95108

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778464

B. State Generator's ID:

4. Generator's Phone (205) 236-8301

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 A 1 0 2 3 4 9 2

C. State Transporter's ID: AL D9A1023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90K Disposal Approval # 071486-0006 CWM Profile # PCB714	001	DT	16734	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	11 02 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
JOE MILLER	Joe Miller	11 02 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
		RECEIVED

FACILITY

19. Discrepancy Indication Space

NOV 08 1995

Ala'd.....

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Lynne Gaines	Lynne Gaines	11 07 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95108

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778464-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver/KP

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/06/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778464-01	BK3714	11/02/95

RECEIVED
NOV 08 1995
ARS C.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 238-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	11/02/95	09:52	69180 LB G GROSS
ID 33			32320 LB (M) T TARE
			36860 LB N NET

16,734 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004613464 Manifest Document No. 95704

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number CWMA 778465

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 900 Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	18895	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	11 02 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
WILEY CHILES	Wiley Chiles	11 02 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 08 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Caine	Anne Caine	11 02 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95109

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778465-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/06/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778465-01	BK3714	11/02/95

RECEIVED
NOV 08 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	11/02/95	09:54	74020 LB G GROSS
ID 40			32400 LB (M)TARE
			41620 LB N NET

18,895 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 4 — Manifest Document No. 95170

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778466

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II PA Disposal Approval # 071496-5005 CWM Profile # BK3714	001	DT	16562	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
JERRY D. HOOPER	Jerry D. Hooper	11	02	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
~~JERRY D. HOOPER~~ DAYLON ALFORD	Daylon Alford	11	02	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 08 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anne Gaines	Anne Gaines	11	07	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95110

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778466-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/06/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778466-01	BK3714	11/02/95

RECEIVED
NOV 08 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ID #	DATE	TIME	WEIGHTS	
	11/02/95	10:51	70700 LB G	GROSS
			34220	TARE
ID 413041			36480	NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

16,562 K

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO COMPANY
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO COMPANY
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778467.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/13/95

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NOV 15 1995
Ans'd.....

Dump #893

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 3 0 4 4 — Manifest Document No. 95111

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778467

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90#	0 0 2	DT	20021	K	PCB
Disposal Approval # 071496-9006 CWM Profile # 883714					
b. Disposal Approval # ____ CWM Profile # ____					
c. Disposal Approval # ____ CWM Profile # ____					
d. Disposal Approval # ____ CWM Profile # ____					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. P c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	11	02	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Robert Pennington	Robert Pennington	11	02	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space: Liquid is most likely from rainwater per Rachel Reynolds-OK to general Handy/Northcutt no addtl charge. per Ann Atkins 11/9/95

RECEIVED NOV 15 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Collins	Anna Collins	11	09	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95111

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778467-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver/ Recordkeeping and Reporting Supervisor

Date: 11/13/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778467-01	BK3714	11/09/95

RECEIVED
NOV 15 1995
Ans'd...

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	11/02/95	11:36	78600 LB G GROSS
ID 893			34500 LB (M)TARE
			44100 LB N NET

20,021 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778463, 778465, 778466, 778468.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/06/95

RECEIVED
NOV 08 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 95112

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778468

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III DOT Disposal Approval # 071496-BUOS CWM Profile # BK3714	001	DT	13 DOT 29311	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hooper	Jerry O. Hooper	11	02	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Melinda Stone	Melinda Stone	11	02	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED NOV 08 1995 AUS

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
MMC	MMC	11	02	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95112

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778468-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/06/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778468-01	BK3714	11/02/95

RECEIVED
NOV 08 1995
AHS

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PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	11/02/95	11:55	62960 LB G	
				TARE
ID 29			33640 LB (M) T	
				NET
			29320 LB N	

13311 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 3 0 4 4 — Manifest Document No. 93773

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778469

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (805) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III GOX Disposal Approval # 071496-BUOG CWM Profile # BK3714	001	DT	19449	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8080-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 FRG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
JERRY O. HOPPER	Jerry O. Hopper	11	02	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
CHARLES DIVEL	Charles Divel	11	02	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Bame	Anna Bame	11	03	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95113

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778469-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver/kl

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/07/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778469-01	BK3714	11/03/95

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NOV 09 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality
...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 18	11/02/95	12:33	75260 LB GROSS 32420 LB TARE 42840 LB NET

19,449 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO.
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO.
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778469, 778470.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/07/95

RECEIVED
NOV 09 1995
Ans'd

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 73774

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778470

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 3 2

C. State Transporter's ID: AL D98A102343?

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, PG II	001	DT	16789	K	PCB
Disposal Approval # 071435-BUOC CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/02/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 258826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry D. Hopper	Jerry D. Hopper	11 02 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
DAVID DAVIS	David Davis	11 09 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
NOV 09 1995
ADEM

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Caine	Anne Caine	11 10 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95114

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778470-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver LD

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/07/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/02/95	778470-01	BK3714	11/03/95

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PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ID #	DATE	TIME	WEIGHTS	
	11/02/95	12:40	68220 LB G	GROSS
ID 876			31240 LB (M)	TARE
			36980 LB N	NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

16,789 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

WORK ORDER FORMS BY DRIVER — (NONE)

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR #5649 / TRAILER #5649 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 8 0 4 8 — Manifest Document No. 95117

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778471

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA TEST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7105

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 9004 Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	14991	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/14/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 261309 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
JERRY O. HOPPER	Jerry O. Hopper	11	14	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Andy Dunaway #5649	Andy D	11	14	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

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NOV 17 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Melvyn Armistead	Melvyn Armistead	11	14	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95115

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778471-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/16/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/14/95	778471-01	BK3714	11/14/95

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NOV 17 1995
Ans'd.....

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PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	11/14/95	09:09	65100 LB G	TARE
ID 5649			32080 LB (M)	NET
			33020 LB N	

James H. McFall Public Weighmaster ALABAMA

14,991 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778471, 778472.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/16/95

RECEIVED
NOV 17 1995
Ans'd.....

WORK ORDER FORMS W/ DRIVERS — NO

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) TRACTOR # 5616 / TRAILER # 5616 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 3 0 4 A — Manifest Document No. 95776

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778472

B. State Generator's ID

5. Transporter 1 Company Name: TERRA FIRST INC
6. US EPA ID Number: A L D 9 8 1 0 2 3 6 9 2
C. State Transporter's ID: AL D981023692
D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459
10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4
G. State Facility's ID
H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90# Disposal Approval # 071496-9006 CWM Profile # BK3714	001	DT	19513	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/14/95
State of Generation AL

K. Handling Codes for Wastes Listed Above: a. C b. c. d.

15. Special Handling Instructions and Additional Information
Purchase Order # 8020-1-0017
Work Order # 261307
EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E Pugh	11	14	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John R Trantham	John R. Trantham	11	14	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
	RECEIVED NOV 17 1995 Ans'd.....			

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Melvyn Armistead	Melvyn Armistead	11	14	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95116

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778472-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

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Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 11/16/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/14/95	778472-01	BK3714	11/14/95

RECEIVED
NOV 17 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	11/14/95	10:54	75800 LB G	TARE
ID 5616			32820 LB (M)NET	
			42980 LB N	

19,513 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778489.

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As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/20/95

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Ans'd.....

WORK ORDER FORMS W/ DRIVER — NO

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR # 22 TRAILER # 541 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 93777

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778489

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: Robbie D Wood Inc | 6. US EPA ID Number: ALD006721388

C. State Transporter's ID

D. Transporter's Phone: 205 371-8410

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459 | 10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 984					PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	20067	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/14/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: V

a. c.

b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 38020-1-0017

Work Order # 261307 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ESG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	11	14	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
ERNEST W. STREET Cary Chevy 22		11	14	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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NOV 21 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		11	16	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95117

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778489-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver/ Recordkeeping and Reporting Supervisor

Date: 11/20/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/14/95	0778489-01	BK3714	11/16/95

RECEIVED
NOV 21 1995
AMD.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
				GROSS
	11/14/95	13:12	76400 LB G	TARE
ID 541			32200 LB (M)	NET
			44200 LB N	

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

20,067 #

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

WORK ORDER FORMS W/ DRIVER — NO

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR # 109 TRAILER # 592 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L N 0 0 4 0 1 8 0 4 8 — Manifest Document No. 93178

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778490

B. State Generator's ID:

4. Generator's Phone (205) 236-6341

5. Transporter 1 Company Name: ROBBIE D. WOODS TERRA LAST

6. US EPA ID Number: ALA 981 923 492

C. State Transporter's ID:

D. Transporter's Phone: 800 [illegible] 7651

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	L Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III					PCB
Disposal Approval # 071496-0006 CWM Profile # BW2714	001	DT	21910	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/14/95

State of Generation AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 261307 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
TERRY O. HOOPER	Terry O. Hooper	11 14 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Kenneth J Donaldson	Kenneth J Donaldson	11 14 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

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NOV 20 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month Day Year
CHARLIE WELDON	[signature]	11 17 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95118

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778490-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver /BP

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/14/95	778490-01	BK3714	11/14/95

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NOV 20 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 592	11/14/95	14:32	77500 LB G GROSS
			29240 LB (M) T TARE
			49260 LB N NET

21,910 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

WORK ORDER FORMS W/ DRIVER — NONE

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR # 75 / TRAILER # 549 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD041041491 Manifest Document No. 95111119

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY.
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778491

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: Terra First

6. US EPA ID Number: ALD981023192

C. State Transporter's ID

D. Transporter's Phone: 800 414-1651

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III gm Disposal Approval # 071686-0005 CWM Profile # BK3714	001	DT	20866	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/14/95

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 261307 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	11	14	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kevin King	Kevin King	11	14	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

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NOV 20 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anne Cain	Anne Cain	11	15	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95119

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778491-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PC8 Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/14/95	778491-01	BK3714	11/15/95

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	11/14/95	15:40	78380 LB G GROSS
ID 549			32420 LB (M)TARE
			45960 LB N NET

20,866 K

James H. McFall
Ala Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95120

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778492-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/14/95	778492-01	BK3714	11/15/95

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NOV 20 1995
Ans'd.....

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WORK ORDER FORMS W/ DRIVER — NO

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR # 104 TRAILER # 540 Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 4 1 8 0 4 Manifest Document No. 91518

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778492

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: Ier1A First — 6. US EPA ID Number: MAD981023492

C. State Transporter's ID

D. Transporter's Phone: 800 441-7165

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III	001	DT	10848	K	PCB
Disposal Approval # 071495-0006 CWM Profile # BK3714					
b. Disposal Approval # ____ CWM Profile # ____					
c. Disposal Approval # ____ CWM Profile # ____					
d. Disposal Approval # ____ CWM Profile # ____					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/14/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. ____ b. ____ d. ____

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 261307 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 EXG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	11 14 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Sylvester Connell	Sylvester Connell	11 14 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

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NOV 20 1995
Ins'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melvyn Armistead	Melvyn Armistead	11 14 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

			GROSS
11/14/95	16:17	77380 LB G	TARE
ID 540		31460 LB (M)	NET
		45920 LB N	

20,848 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95121

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778493-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/15/95	778493-01	BK3714	11/15/95

RECEIVED
NOV 20 1995
Ans'd

Printed on recycled paper

Driver has paper work — 5649

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Truck #5649 / Trailer #5649 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 915721

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778493

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: Terra First | 6. US EPA ID Number: ALD981102342

C. State Transporter's ID:

D. Transporter's Phone: 205/695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 9HK Disposal Approval # 873495-0005 CWM Profile # 2W3714	001	DT	17718	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/15/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. C | b. | c. | d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 262154 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 SMS 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	11/15/95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Andy Dunaway #5649	Andy Dunaway	11/15/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED NOV 20 1995 Ans'd

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Mike Lane	Mike Lane	11/15/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	11/15/95	09:00	70640 LB G	GROSS
ID 5649			31460 LB (M) T	TARE
			39180 LB N	NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

17,788 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95122

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778494-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/15/95	778494-01	BK3714	11/15/95

RECEIVED
NOV 20 1995
Ans'd.....

Printed on recycled paper.

Driver has paperwork - NO

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer #5617 / Tractor #5617 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 5 0 4 4 Manifest Document No. 9531682

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778494

B. State Generator's ID:

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: Jerry Wilt

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: 205/695-9195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III ~~PGIII~~					PCB
Disposal Approval # 071495-0006 CWM Profile # BK3714	001	DT	12016	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/15/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 76215Y EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	11	15	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Jimmy Turner Jr	Jimmy Turner Jr	11	15	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 20 1995
Ans'l

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	11	15	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	11/15/95	09:49	57900 LB G	GROSS
ID 2			31320 LB (K) T	TARE
			26580 LB N	NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

12,067 lb

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95123

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778495-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/15/95	778495-01	BK3714	11/15/95

RECEIVED
NOV 20 1995
AHS

Printed on recycled paper

Driver has paperwork - No

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer # 5616 / Tractor # 5616 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 9515123

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778495

B. State Generator's ID:

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: TEMA TRST | 6. US EPA ID Number: ALD 988 162 134

C. State Transporter's ID:

D. Transporter's Phone: 205-695-9195

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 006 224 644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 9m*					PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	116934	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 11/15/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 262154 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 71

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	11	15	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John R. Trantham	John R. Trantham	11	15	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED NOV 20 1995 Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Gains	Anna Gains	11	15	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

11/15/95 10:33 69480 LB G GROSS
32180 LB (MTARE
ID 5616
37300 LB N NET
16,934 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778490 ✓ 778491 ✓ 778492, ✓ 778493, ✓ 778494 ✓ 778495, ✓ 778496. ✓

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

11/17/95

RECEIVED
NOV 20 1995
Ans'd.....

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95124

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778496-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/17/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
11/15/95	778496-01	BK3714	11/15/95

RECEIVED
NOV 20 1995
Ans'd.....

Printed on recycled paper.

Driver has paperwork - NO

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer #5615 / Tractor #5615 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 4 0 3 9 0 4 8 7 — Manifest Document No. 95112

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778496

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: Terra First — 6. US EPA ID Number: A L D 9 8 1 1 0 2 3 1 4 9 2

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459 — 10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III Disposal Approval # 971496-0005 CWM Profile # BV3714	001	DT	20966	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above — A) OUT OF SERVICE DATE: 11/15/95

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 262154 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	11 16 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Ronnie Ogles by	Ronnie Ogles	11 16 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED NOV 20 1995 Ans'd

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead	Nelwyn Armistead	11 15 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	11/15/95	11:03	77540 LB G	
				TARE
ID 5615			31360 LB (M) T	
				NET
			46180 LB N	

20,966 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36201

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778497.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING TECHNICIAN

12/13/95

RECEIVED
DEC 15 1995
Ans'd.....

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95125

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778497-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 12/13/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
12/06/95	778497-01	BK3714	12/08/95

RECEIVED
DEC 15 1995
Ans'd.

Printed on recycled paper

Dump = D29

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

D29

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR #2047 TRAILER #D29 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 915725 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6391

A. State Manifest Document Number: CWMA 778497

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC. | 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: 205 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III gnt Disposal Approval # 071496-0006 CWM Profile # BW3714	001	DT	17779	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 12/06/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. d. b.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0019

Work Order # 265826 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
TERRY D. HOOPER	Terry D. Hooper	12 06 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
W T Ryder	W T Ryder	12 06 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
DEC 15 1995
Ans'd

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	12/06/95	16:12	73780 LB G	GROSS
ID 29			34620 LB (M) T	TARE
			39160 LB N	NET

17,779

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. Morgan Public Weighmaster

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778499.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING TECHNICIAN

01/23/96

RECEIVED
JAN 24 1996

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* TRACTOR # 2071 / Box # 921028 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6391

A. State Manifest Document Number: CWMA 778499

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: 205, 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR					
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 90#		CM			PCB
Disposal Approval # 971496-0005 CWM Profile # BK3714	001	DF	10179	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 01/12/96

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 274414 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
JERRY D. HOOPER	Jerry D. Hooper	01	12	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
H.B. HERRON	H.B. Herron	01	12	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
JAN 24 1996

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		01	19	96

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 96001

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778499-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 01/23/96

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
01/12/96	778499-01	BK3714	01/19/96

RECEIVED
JAN 24 1996

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS
			GROSS
	01/12/96	12:45	64980 LB G
ID 9210219			TARE 42560 LB (M) T
			NET 22420 LB N

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

James H. McFall
Public Weighmaster
ALABAMA

10,179 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36201

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 566441.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING TECHNICIAN

02/15/96

RECEIVED
FEB 16 1996

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 76002

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO COMPANY
300 BIRMINGHAM HWY
ANNISTON, ALABAMA 36201

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 566441

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: 205-675-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III ADEM # 071496-A006 CWM Profile Number BK3714	001	CM	1169	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: OUT OF SERVICE DATE: 2/8/96

STATE OF GENERATION: ALABAMA

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information
IN THE EVENT OF AN EMERGENCY, CONTACT CHEMTREC AT 1-800-424-9300. ERG 31

Work Order #: 279-619 Purchase Order #: 8020-1-0017

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
ROBERT T. JONES	Robert T. Jones	02 08 96

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
THOMAS MATHIS	Thomas Mathis	02 08 96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
FEB 16 1996

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
ANNE OWEN	Anne Owen	02 09 96

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (Must Accompany Shipment)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 96002

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36201-

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566441-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 02/15/96

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
02/08/96	566441-01	BK3714	02/08/96

RECEIVED
FEB 1[illegible]

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	02/08/96	09:39	66780 LB G	
				TARE
ID 194			41060 LB (M) T	
				NET
			25720 LB N	

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 96005

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: MONSANTO COMPANY, 300 Birmingham Hwy., ANNISTON, AL 36201

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 566444

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, III ADEM # 091496-A006 CWM Profile Number BK3714	001	CM	18096	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: OUT OF SERVICE DATE: 3/14/96

STATE OF ORIGIN: ALABAMA

K. Handling Codes for Wastes Listed Above: a. [ ] b. c. d.

15. Special Handling Instructions and Additional Information

IN THE EVENT OF AN EMERGENCY, CONTACT CHEMTREC AT 1-800-424-9300, ERG 31

Work Order #: 286000 Purchase Order #: 8020-1-0017

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	03	14	96

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Joe Miller	Joe Miller	03	14	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Coulis	Anna Coulis	03	18	96

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (Must Accompany Shipment)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 96005

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36201-

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566444-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 03/21/96

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
03/15/96	566444-01	BK3714	03/18/96

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	03/14/96	12:26	71800 LB G	TARE
ID 48			31940 LB (M) T	NET
			39860 LB N	

James H. McFall
Public Weighmaster
ALABAMA

18,096 K

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

(NO PAPERWORK OR WORK ORDER W/ DRIVER)
(ROBBIE D. WOOD RIG)

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

se print or type. (Form designed for use on elite (12-pitch) typewriter.) TRACTOR # 201 / TRAILER # A6 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 98006
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO COMPANY
300 Birmingham Hwy.
ANNISTON, AL 36201

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 566445

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.
6. US EPA ID Number: ALD981023492
C. State Transporter's ID:
D. Transporter's Phone: (205) 675-7195

7. Transporter 2 Company Name: Robbie D. Wood
8. US EPA ID Number: ALD067136871
E. State Transporter's ID:
F. Transporter's Phone: 205 744-8440

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459
10. US EPA ID Number: ALD006224644
G. State Facility's ID:
H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, Polychlorinated Biphenyls Mixture, 9, UN 2315, III ADEM # 091496-A006 CWM Profile Number BK 3714	001	CM	11940	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: OUT OF SERVICE DATE: 3/15/96
STATE OF ORIGIN: ALABAMA

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information
IN THE EVENT OF AN EMERGENCY, CONTACT CHEMTREC AT 1-800-424-9300 - ERG31

Work Order #:
Purchase Order #: 8020-1-0019

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
JERRY O. HOPPER	Jerry O. Hopper	03	15	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Jamie Perkins	Jamie Perkins	03	15	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Glenn Eccles	Glenn Eccles	03	15	96

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (Must Accompany Shipment)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 96006

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36201-

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566445-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 03/21/96

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
03/15/96	566445-01	BK3714	03/15/96

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 201	03/15/96	09:01	61120 LB G GROSS
			34820 LB (K)TARE
			26300 LB N NET

11940 K

DRIVER ON ☐ OFF ☐ WEIGHED BY _____

Public Weighmaster
ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO COMPANY
300 BIRMINGHAM HWY
ANNISTON, AL 36201

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO COMPANY
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 566444, 566445, 566446.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING TECHNICIAN

03/21/96

NO PAPERWORK W/ DRIVER (Robbie Wood) 201

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) TRACTOR 201 / Dump Trailer A6 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019048 Manifest Document No. 98067

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO COMPANY
300 Birmingham Hwy.
Anniston, AL 36201

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 566446

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST, INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: (205) 685-9995

7. Transporter 2 Company Name: Robbie Dwood Inc

8. US EPA ID Number: ALD067138891

E. State Transporter's ID: 205-744-8490

F. Transporter's Phone: 205-744-8490

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, Polychlorinated Biphenyls Mixture, 9, UN2315, III ADEM # 071496 — A006 CWM Profile Number BK 3714	001	DT	9234	K	PCB
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above: OUT OF SERVICE DATE: 3/18/96
STATE OF ORIGIN: Alabama

K. Handling Codes for Wastes Listed Above: a. C b. c. d.

15. Special Handling Instructions and Additional Information
IN THE EVENT OF AN EMERGENCY, CONTACT CHEMTREC @ 1-800-424-9300 - ERG 31

Work Order #:

Purchase Order #: 8020-1-0017

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry D. Hopper	Jerry D. Hopper	03	18	96

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
	Jamie Parker	03	18	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Jamie Parker	Jamie Parker	03	18	96

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		03	18	96

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete. GENERATOR No. 2 (Mail Accompany Shipment)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 96007

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36201-

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0566446-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 03/21/96

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
03/18/96	566446-01	BK3714	03/18/96

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	03/18/96	10:10	55180 LB G	GROSS
ID 6			34840 LB (M) T	TARE
			20340 LB N	NET

9234 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: A L D 0 0 4 0 1 3 0 4 9 | 5 0 4 6

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798590

B. State Generator's ID

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # BW3714	001	DM	20194	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry R. Hopper	Terry R. Hopper	10 12 4 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Thomas Mathis	Thomas Mathis	10 12 4 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 7 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead	Nelwyn Armistead	10 12 4 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95046

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798590-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798590-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/24/95	07:49	78340 LB G	TARE
ID 413015			33860 LB (M)NET	
			44480 LB N	

20,194 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 A — Manifest Document No. 95043

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798591

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 A 1 0 2 3 4 9 2

C. State Transporter's ID: AL D9A1023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: AL D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DM	18296	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford

Printed/Typed Name	Signature	Month Day Year
Terry A. Hopper	Terry A. Hopper	10 24 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
JOE MILLER	Joe Miller	10 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 27 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead	Nelwyn Armistead	10 26 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95047

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798591-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798591-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/24/95	08:01	71840 LB G	GROSS
ID 876			31540 LB (M) T	TARE
			40300 LB N	NET

18,296 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: A L D 0 0 4 0 1 9 0 4 8 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: **CWMA 798592**

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # BK3716	001	DM	19731	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 25690 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 24 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
WILLIAM C. LONG	William C. Long	10 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
OCT 27 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melvyn Armistead	Melvyn Armistead	10 26 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95048

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798592-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798592-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/24/95	08:03	76820 LB G	TARE
ID 65			33360 LB (M	NET
			43460 LB N	
			19,731 K	

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019041 | 95014

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798593

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071486-BDDS CWM Profile # BW3714	001	DT	19413	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

K. Handling Codes for Wastes Listed Above: a. c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0013

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10 24 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bill Long Jr	Bill Long Jr	10 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 27 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Arlon Letson	Arlon Letson	10 27 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95049

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798593-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798593-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/24/95	08:20	76440 LB G	GROSS
ID 55			33680 LB (M) T	TARE
			42760 LB N	NET

19,413 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

T2072 D 40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: A L D 0 0 4 0 1 3 0 4 6 | 9 5 0 5 2

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: **CWMA 798594**

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-AOOS CWM Profile # PK3714	001	DT	20884		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. 1 b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Terry O. Hopper	Terry O. Hopper	10	24	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	24	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
OCT 27 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible] WELDON	[illegible]	10	24	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/24/95	08:17	78840 LB G	GROSS
ID 40			32840 LB (M) T	TARE
			46000 LB N	NET

29,884 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD041413045 Manifest Document No. 95051

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAN HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798595

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC.

6. US EPA ID Number: ALD981023492

C. State Transporter's ID

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)	001	DT	16211	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/24/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Melinda Stone	Melinda Stone	10/24/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

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OCT 27 1995
Ans'd

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melissa Armistead		10/24/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95051

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798595-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798595-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-5381

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Monsanto

ID #	DATE	TIME	WEIGHTS
	10/24/95	08:38	69780 LB G GROSS
ID 413018			33940 LB (M) T TARE
			35840 LB N NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

16,271 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD041419505

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 798596

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)	001	DM	21185	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BM3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Jean D. Hopper	Jean D. Hopper	10 24 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
CHARLES DIXEL		10 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

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OCT 27 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		10 24 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95052

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798596-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798596-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 18	10/24/95	08:56	77680 LB G GROSS
			33220 LB (M) TARE
			44460 LB N NET

20,185 R

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019045 — Manifest Document No. 50513

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAN HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798597

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023498

C. State Transporter's ID

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-0005 CWM Profile # BK3714	001	DT	16480	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/24/95

K. Handling Codes for Wastes Listed Above
a. ✓ c.
b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 3020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10/24/95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Williams M Woods JR		10/24/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

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OCT 27 1995
Ans'l

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Quinn	Anne Quinn	10/24/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95053

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798597-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798597-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/24/95	08:53	70020 LB G GROSS
ID 893			33720 LB (M)TARE
			36300 LB N NET

16,480 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 798588, 798589, 798590, 798591, 798592, 798593, 798594, 798595, 798596, 798597, 798598

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/26/95

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OCT 27 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD041419454

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798598

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: ALD981023492 | C. State Transporter's ID: ALD981023492 | D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644 | G. State Facility's ID | H. Facility's Phone: 205/652-9721

GENERATOR

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-0005 CWM Profile # BK3714	001	DT	19164		
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/24/95

State of Generation AL

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 256190 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

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Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/24/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Robert Pennington	Robert Pennington	10/24/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 27 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead	Nelwyn Armistead	10/24/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95054

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798598-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

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Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/26/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/24/95	798598-01	BK3714	10/24/95

RECEIVED
OCT 27 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/24/95	09:02	75900 LB G	GROSS
ID 33			33820 LB (M) T	TARE
			42080 LB N	NET

19,104 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004011314 — Manifest Document No. 51515

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number **CWMA 798599**

B. State Generator's ID

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0005 CWM Profile # BK3714	001	DT	17642	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	10	25	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Thomas Mathis	Thomas Mathis	10	25	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 30 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Otto Weldon		10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95055

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798599-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798599-01	BK3714	10/25/95

RECEIVED
OCT 30 1995

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-8381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/25/95	07:46	72880 LB G	TARE
ID 403015 JRM			34020 LB (M) T	NET
			38860 LB N	
			17,642 K	

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019056

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798600

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023452

C. State Transporter's ID: ALD981023452

D. Transporter's Phone: (205) 695-7196

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071495-0006 CWM Profile # BK3714	001	DT	15354	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 253060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/25/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
James Odom	James Odom	10/25/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
OCT 30 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10/25/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95056

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798600-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798600-01	BK3714	10/25/95

RECEIVED
OCT 30 1995

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/25/95	07:53	66460 LB G	TARE
ID 20			32640 LB (M)	NET
			33820 LB N	
			15,354 KL	

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

T2072 D40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 4 5 0 5 3 — Manifest Document No.

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 798601**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name — 6. US EPA ID Number
TERRA FIRST INC — ALD981023492

C. State Transporter's ID

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address — 10. US EPA ID Number
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459 — ALD 000 622 464

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-AOOS CWM Profile # BK3714	001	DT	19963	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above — A) OUT OF SERVICE DATE: 10/25/95

State of Generation AL

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 3020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	10	25	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	25	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED OCT 30 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Carol Wilson	Carol Wilson	10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95051

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798601-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798601-01	BK3714	10/25/95

RECEIVED
OCT 30 1995

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/25/95	08:00	76360 LB G	GROSS
D 40			32380 LB (M) T	TARE
			43980 LB N	NET
			19,967 K	

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD041019045 | 50658

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798602

B. State Generator's ID:

4. Generator's Phone (205) 236-6341

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II (PCB)					PCB
Disposal Approval # 071496-0006 CWM Profile # BW3714	001	DT	02357	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10 25 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bill Long Jr	Bill Long	10 26 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 30 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		10 25 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95058

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798602-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver/ Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798602-01	BK3714	10/25/95

RECEIVED
OCT 30 1995

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/25/95	08:09	78960 LB G	GROSS
ID 55			33240 LB (M) T	TARE
			45720 LB N	NET

20,757 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* No work order forms w/ drives

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer # 542 / Tractor #85 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004013049 Manifest Document No. 50599

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798603

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0005 CWM Profile # BW3714	001	DT	16017K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

K. Handling Codes for Wastes Listed Above: a. c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/25/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Timothy Donaldson	Timothy Donaldson	10/25/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
OCT 30 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Carol Wilson	Carol Wilson	10/30/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95059

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798603-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798603-01	BK3714	10/25/95

RECEIVED
OCT 30 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/25/95	08:04	67120 LB G	GROSS
ID 542			31840 LB (M) T	TARE
			35280 LB N	NET

16,017 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD041419450 | 50610

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798604

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023498

C. State Transporter's ID

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071488-BDDS CWM Profile # BK3714	010	DM	18414	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

State of Generation AL

K. Handling Codes for Wastes Listed Above
a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 3020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 25 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
James A. Anders	James A. Anders	10 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

TRANSPORTER

19. Discrepancy Indication Space

RECEIVED
OCT 30 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10 25 95

FACILITY

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95060

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798604-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver /BP

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798604-01	BK3714	10/25/95

RECEIVED
OCT 30 1995

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/25/95	10:18	72660 LB G	TARE
ID 19			32100 LB (M)	NET
			40560 LB N	

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

18,414 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 798599, 798600, 798601, 798602, 798603, 798604, 798605.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/27/95

RECEIVED
OCT 30 1995
Ans'd.....

IR#2051 0876

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD041019045 | 5041

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798605

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: ALD981023498 | C. State Transporter's ID: ALD981023498

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-NOOE CWM Profile # BK3714	001	DT	19803	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-3300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry R. Hopper	Jerry R. Hopper	10 25 95

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bobby Hill	Bobby Hill	10 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
OCT 30 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Collins	Anne Collins	10 25 95

GENERATOR

TRANSPORTER

FACILITY

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95061

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798605-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/27/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798605-01	BK3714	10/25/95

RECEIVED
OCT 30 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/25/95	10:29	76800 LB G GROSS
ID 876			33180 LB (M) T TARE
			43620 LB N NET

19,803 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Trk. #893

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004619504 | 915062

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6301

A. State Manifest Document Number: CWMA 798606

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID:

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	16607		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0013

Work Order # 259060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 25 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
DAYLON ALFORD	Daylon Alford	10 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
ADEM

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		10 30 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95062

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798606-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798606-01	BK3714	10/26/95

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NOV 0 1 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/25/95	13:17	70460 LB G	GROSS
ID 893			33880 LB (M) T	TARE
			36580 LB N	NET

16,607 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

*No work order items with Driver

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tractor 114 Trailer 583 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019044 — Manifest Document No. 95043

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798607

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023432

C. State Transporter's ID: ALD981023432

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-AOO6 CWM Profile # BK3714	001	DM	209184	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above — A) OUT OF SERVICE DATE: 10/25/95

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Terry A. Hoggle	Terry A. Hoggle	10 25 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Elvis Spence	Elvis Spence	10 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
Ans'd

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10 26 95

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/25/95	13:48	76260 LB G	GROSS
ID 583			30040 LB (M)	TARE
			46220 LB N	NET

20,984

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* No work order forms w/ driver

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Terra ~~108~~ / Terra ~~584~~ Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD981023458 — Manifest Document No. 798608

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798608

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023458

C. State Transporter's ID: ~~ALD981023458~~

D. Transporter's Phone: ~~(205) 695-7195~~

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459 — 10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-NOOS CWM Profile # PM3714	001	DT	16889	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/25/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Terry O. Hopper	Terry O. Hopper	10 25 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
WILLIE FORTNER	Willie Fortner	10 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melanie Armistead	Melanie Armistead	10 26 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95064

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798608-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798608-01	BK3714	10/26/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-5381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/25/95	15:00	66040 LB G	GROSS
ID 584			28840 LB (M) T	TARE
			37200 LB N	NET

16,889 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

NO Work order Forms W/ Driver

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tenn # 45 / Trailer # 549 Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 4 — Manifest Document No. 95065

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798609

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name: Robbie D. Woods — 8. US EPA ID Number: ALD006171309911

E. State Transporter's ID:

F. Transporter's Phone: 205-744-8440

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459 — 10. US EPA ID Number: ALD 006 224 644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB)					PCB
Disposal Approval # 071496-0005 CWM Profile # BK3714	001	DM	19631	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above — A) OUT OF SERVICE DATE: 10/25/95

State of Generation AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 259060 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 25 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
ERNEST W. STREET / James Bierbrd		10 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Ernest W. STREET	Ernest W. Street	10 27 95

19. Discrepancy Indication Space: line 17 - Transporter #2 signed in wrong space of manifest 10/30/95 m

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	11 01 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95065

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798609-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/25/95	798609-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/25/95	15:24	74640 LB G GROSS
			31400 LB (M)TARE
ID 549			43240 LB N NET

19,631 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: A L D 0 0 4 0 1 3 0 4 1 9 5 0 6 6

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0849

A. State Manifest Document Number: CWMA 798610

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071495-0006 CWM Profile # PA3714	001	DM	21020K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10 26 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bill Long Jr.	Bill Long Jr.	10 26 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

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NOV 01 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Gill	Anne Gill	10 26 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95066

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798610-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798610-01	BK3714	10/26/95

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NOV 0 1 1995
Ans'd.....

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ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/26/95	09:06	79980 LB G	GROSS
ID 55			33680 LB (M) T	TARE
			46300 LB N	NET

21,020 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: ALD004019047 5067

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798611

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071495-0006 CWM Profile # BK3714	001	DM	17425K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/27/95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
James Odom	James Odom	10/27/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anna Sams	Anna Sams	10/26/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95067

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798611-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798611-01	BK3714	10/26/95

RECEIVED
NOV 0 1 1995
Ans'd

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

10/26/95 09:32 70600 LB G GROSS

32220 LB (TARE

ID 20

38380 LB NNET

17,425 KL

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO CO.
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO CO.
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 798612.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/30/95

RECEIVED
NOV 0 1 1995
Ans'd.....

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019045 | 95068

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798612

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED DIPHENYLS MIXTURE, 9, UN2315, II, (PCB) Disposal Approval # 071496-0006 CWM Profile # BK2714	001	DT	17978K		PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0019

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/26/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Thomas Mathis	Thomas Mathis	10/26/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
Received

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead	Nelwyn Armistead	10/26/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95068

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798612-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798612-01	BK3714	10/26/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/26/95	09:21	73140 LB G	TARE
ID 413015			33540 LB (K)	NET
			39600 LB N	

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

17,978 KL

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

T2072 D40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019404 Manifest Document No. 950469

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798613

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC
6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II (PCB)					PCB
Disposal Approval # 071496-0006 CWM Profile # BW3714	001	DT	18578	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/26/95

K. Handling Codes for Wastes Listed Above
a. T c.
b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment, OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	10	26	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	26	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Ans'd	Ans'd	10	26	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95069

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798613-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798613-01	BK3714	10/26/95

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NOV 01 1995

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/26/95	09:58	72840 LB G	TARE
ID 40			31920 LB (M) T	NET
			40920 LB N	

18,578 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004013404 | 150714

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798546

B. State Generator's ID:

4. Generator's Phone (205) 236-6301

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II. MEP ~~(PCB's 500 PPM MARINE POLLUTANT).~~					PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DF	1/64/08	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

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If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/17/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Freddie Lee Williams	Freddie Lee Williams	10/26/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelwyn Armistead		10/26/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95071

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798546-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798546-01	BK3714	10/26/95

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NOV 0 1 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/26/95	10:01	68820 LB G	GROSS
ID 19			32680 LB (M) T	TARE
			36140 LB N	NET

16,408 Kg

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 9560 72

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number **CWMA 798554**

B. State Generator's ID

5. Transporter 1 Company Name: TERRA FIRST INC. — 6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID AL D981023492

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III-~~II~~, MP (PCB->500 PPM - - - MARINE POLLUTANT). Disposal Approval # 071496-AOO6 CWM Profile # BK3714	001	DT	17	33K	PCB
b. Disposal Approval # ____ CWM Profile # ____					
c. Disposal Approval # ____ CWM Profile # ____					
d. Disposal Approval # ____ CWM Profile # ____					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

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If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/26/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
GAYLON ALFORD	Gaylon Alford	10/26/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
AWM

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10/26/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95072

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798554-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798554-01	BK3714	10/26/95

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NOV 01 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/26/95	10:27	73400 LB G
			34340 LB (M) GROSS
ID 413041			39060 LB N TARE
			NET
			17,733 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 5073

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number **CWMA 798553**

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D9A1023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: AL D 0 0 0 6 2 2 4 6 4

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II. MED (PCB's 500 PPM, MARINE POLLUTANT)					PCB
Disposal Approval # 071495-BOO6 CWM Profile # BW3714	0 0 1	DM	2 0 4 8 1 4	K	
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ENG 31

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GENERATOR

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10 26 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bobby Hill	Bobby Hill	10 26 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
NOV 01 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Nelson Armistead	Nelson Armistead	10 26 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95073

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798553-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798553-01	BK3714	10/26/95

RECEIVED
NOV 01 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/26/95	10:36	77780 LB G	
				TARE
ID 876			32660 LB (M) T	
				NET
			45120 LB N	

20,484 K

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 798546, 798552, 798553, 798554, 798606, 798607, 798608, 798610, 798611, 798613

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/30/95

RECEIVED
NOV 0 1 1995
Ans'd.....

* Driver did not have paperwork

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer #542 / Trailer #85 — Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019046 — Manifest Document No. 95074

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798552

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023492 — C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number — E. State Transporter's ID — F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III, MEP (PCB > 500 PPM - MARINE POLLUTANT). Disposal Approval # 071495-0006 CWM Profile # BK3714	001	DT	19931	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 2530623 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E Pugh	10	26	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Timothy Donaldson	Timothy Donaldson	10	26	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	26	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95074

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798552-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/30/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798552-01	BK3714	10/26/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/26/95	10:42	76380 LB G	
				TARE
ID 542			32480 LB (M) T	
				NET
			43900 LB N	

19,931 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☑ OFF ☐ WEIGHED BY _____

* Driver does not have work order papers.

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer # 540 / Tractor # 114 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019045 Manifest Document No. 50735

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number **CWMA 798551**

B. State Generator's ID

5. Transporter 1 Company Name: TERRA FIRST INC
6. US EPA ID Number: ALD982102492

C. State Transporter's ID AL D981023492

D. Transporter's Phone (205) 695-7195

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459
10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone **205/652-9721**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~II~~ III MEP (PCB's 500 PPM ~~MARINE POLLUTANT~~)	001	DT	1919	ZK	PCB
Disposal Approval # 071496-0006 CWM Profile # BK3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

K. Handling Codes for Wastes Listed Above: a. c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/26/95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Elvis Spence	Elvis Spence	10/26/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10/27/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95075

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798551-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798551-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS
			GROSS
	10/26/95	14:20	76420 LB G
			TARE
ID 540			32540 LB (M) T
			NET
			43880 LB N

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

19,922 KL

James H. McFall Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* Driver did not have work order papers

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* 534 / Trailer # / Tractor #

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019043 | 50316

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 798541

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II, MEP ~~(PCB's 500 PPM, MARINE POLLUTANT)~~					PCB
Disposal Approval # 071495-0006 CWM Profile # BK3714	001	DT	21075	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/26/95

K. Handling Codes for Wastes Listed Above: a. 2 c. b. d.

State of Generation AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257063 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/26/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Willie Fortner	Willie Fortner	10/26/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Melvyn Armistead	Melvyn Armistead	10/26/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95076

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0798541-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/26/95	798541-01	BK3714	10/27/95

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NOV 0 1 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/26/95	15:04	78160 LB G	GROSS
			31740 LB (M) T	
ID 534			46420 LB N	TARE
				NET
				21,075 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004019044 — Manifest Document No. 950377

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778433

B. State Generator's ID:

4. Generator's Phone (205) 236-6391

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, II Dot Disposal Approval # 071496-BDDS CWM Profile # BK3714	001	DT	20076	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

K. Handling Codes for Wastes Listed Above
a. C c.
b. d.

State of Generation: AL

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-00177

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Michele E. Pugh	Michele E. Pugh	10	27	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
DAVID DAVIS	David Davis	10	27	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anne Wells	Anne Wells	10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95077

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778433-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18U.S.C. 1001 and 15U.S.C 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778433-01	BK3714	10/27/95

RECEIVED
NOV 01 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 879	10/27/95	07:50	75480 LB G GROSS
			31260 LB (M)TARE
			44220 LB N NET

20,076 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Truck # 2048 Dump # 893

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004013044 — Manifest Document No. 95C778

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778434

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ PCB Disposal Approval # 071496-0006 CWM Profile # PX3714	001	DT	15	15K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
A) OUT OF SERVICE DATE: 10/27/95

State of Generation AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 2570655 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ENG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10 27 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Robert Pennington	Robert Pennington	10 27 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Davis	Anne Davis	10 27 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95078

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778434-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778434-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS	
	10/27/95	07:52	67360 LB G	GROSS
ID 893			33980 LB (M) T	TARE
			33380 LB N	NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

15,155 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

* NO WORK ORDER W/ DRIVER -- TRAILER # 109 / TRAILER # 530

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 6 1 3 0 4 9 — Manifest Document No. 91519 FY

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778435

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: AL D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III PCB Disposal Approval # 071496-0005 CWM Profile # BK3714	001	DT	17461	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	27	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kenneth J. Donaldson	Kenneth J Donaldson	10	27	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
AWM

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	27	95

EPA Form 8700-22--(Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95079

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778435-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778435-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/27/95	08:00	69640 LB G	TARE
ID 550			31180 LB (M	NET
			38460 LB N	

17,461 Kg

DRIVER ON ☒ OFF ☐ WEIGHED BY James H. McFall Public Weighmaster ALABAMA

T 2072 D40

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004013404 — Manifest Document No. 75080

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778436

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	20357	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/7/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-00174

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	27	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	27	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
ANNE OWENS	ANNE OWENS	10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95080

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778436-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778436-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/27/95	08:05	76980 LB G	GROSS
ID 40			32140 LB (M) T	TARE
			44840 LB N	NET

20,357 Kg

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

Truck # 2069 Dump # D-19

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. * *(Form designed for use on elite (12-pitch) typewriter.)* Form Approved, OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. ALD004015404 Manifest Document No. 97588

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAN HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778437

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III	001	DT	16398	K	PCB
Disposal Approval # 071496-0006 CWM Profile # BW3714					
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. C c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	27	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Freddie Lee Williams	Freddie Lee Williams	10	27	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Bains	Anna Bains	10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95081

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778437-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778437-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/27/95	08:11	68420 LB G	GROSS
ID 19			32300 LB (M) T	TARE
			36120 LB N	NET

16,398 K

DRIVER ON [X] OFF [ ] WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019404 | 95082

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778438

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III 705					PCB
Disposal Approval # 071496-8006 CWM Profile # BX3714	001	DT	18995	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. ✓ c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-00017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 FRG 31

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
JERRY O. HOPPER	Jerry O. Hopper	10 27 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
TONNY CONRAD	Kennard Brand	10 27 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995
AWM

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
		10 27 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95082

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778438-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778438-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6361

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
	10/27/95	08:16	72300 LB G GROSS
ID 876			30460 LB (M)TARE
			41840 LB N NET

18,995 K

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 75083

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778439

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, TEC 9074 Disposal Approval # 071496-0006 CWM Profile # BK3714	001	DT	20475	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a: ✓ c: b: d:

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	27	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Albert Little	Albert Little	10	27	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 01 1995

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
		10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALDOOO622464
MANIFEST DOCUMENT NUMBER: 95083

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778439-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver /bp

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778439-01	BK3714	10/27/95

RECEIVED
NOV 0 1 1995
Ans'd.....

Printed on recycled paper.

Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID #	DATE	TIME	WEIGHTS
	10/27/95	08:47	78860 LB G GROSS
D 17			33760 LB (M TARE
			45100 LB N NET

ALL MATERIAL IS WEIGHED ON STATE CERTIFIED SCALES

20,475 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459

EPA ID Number: ALD000622464
(205) 652-9721 - Recordkeeping & Reporting

MONSANTO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generators Name.....: MONSANTO
Generators US EPA ID: ALD004019048

Enclosed is/are your Generator Number Two copy/copies for Alabama manifest number(s): CWMA - 778433, 778434, 778435, 778436, 778437, 778438, 778439, 778440, 798541, 798551, 798609.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b). This letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under an RCRA permit issued by U.S. E.P.A, Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

DOROTHY OLIVER
RECORDKEEPING/REPORTING SUPERVISOR

10/31/95

RECEIVED
NOV 0 1 1995
Ans'd.....

* NO WORK ORDER Form W/DRIVER

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tractor 85 Trailer # 542 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 95034

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778440

B. State Generator's ID

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC
6. US EPA ID Number: ALD981023492

C. State Transporter's ID: ALD981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD 000 622 246 4

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ TOX Disposal Approval # 071496-2006 CWM Profile # BK3714	001	DT	19204	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/21/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 FRG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hooper	Jerry O. Hooper	10	27	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Timothy Donaldson	Timothy Donaldson	10	27	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

RECEIVED
NOV 01 1995
Ans'd.....

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Anna Davis	Anna Davis	10	27	95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95084

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778440-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver Recordkeeping and Reporting Supervisor

Date: 10/31/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778440-01	BK3714	10/27/95

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NOV 0 1 1995
AES .....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS
ID 542	10/27/95	08:52	74200 LB G GROSS
			31900 LB (M)TARE
			42300 LB N NET

19,204 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

* NO WORK ORDER Form W/ Driver

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Tractor # 5615 / Trailer 5615 Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 9 0 4 8 — Manifest Document No. 97585

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6361

A. State Manifest Document Number: CWMA 778441

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL998023492

D. Transporter's Phone: (205) 695-7156

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vo	Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III	001	DT	19468	K	PCB
Disposal Approval # 07149S-0006 CWM Profile # BW3714					
b. Disposal Approval # ____ CWM Profile # ____					
c. Disposal Approval # ____ CWM Profile # ____					
d. Disposal Approval # ____ CWM Profile # ____					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	10 27 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Ronnie Oglesby	Ronnie Oglesby	10 27 95

19. Discrepancy Indication Space

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NOV 02 1995

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Anne Oates	Anne Oates	10 30 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95085

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778441-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778441-001	BK3714	10/30/95

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NOV 02 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ID #	DATE	TIME	WEIGHTS
	10/27/95	10:07	74060 LB G GROSS
ID 5615			31180 LB (M)TARE
			42880 LB N NET

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

19,468 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Trailer #540 / Tractor #114 Form Approved, OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: ALD004019504 | 95086

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778442

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: ALD981023492

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7145

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III PCB	001	DT	19185	K	PCB
Disposal Approval # 071496-BOOS CWM Profile # BK3714					
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. X c. b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065

EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10/27/95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Elvis Spence	Elvis Spence	10/27/95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

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NOV 02 1995
Ans'd

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10/30/95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95086

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778442-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778442-01	BK3714	10/30/95

RECEIVED
NOV 02 1995
Ans'd.....

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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CERTIFIED SCALES

ID #	DATE	TIME	WEIGHTS	
	10/27/95	13:25	76100 LB G	GROSS
ID 540			32080 LB (M) T	TARE
			44020 LB N	NET

19,985 lb

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

James H. McFall
Public Weighmaster
ALABAMA

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)* Tractor #108 / Trailer # 534 — Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 2 0 4 A — Manifest Document No. 91508

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778444

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC — 6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 655-7195

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459 — 10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, ~~III~~ II					PCB
Disposal Approval # 071496-9005 CWM Profile # BK3714	0 0 1	DT	2 0 6 5 7	K	
b.					
Disposal Approval # CWM Profile #					
c.					
Disposal Approval # CWM Profile #					
d.					
Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/27/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257065 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Michele E. Pugh	Michele E. Pugh	10 27 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Willie Fortune	Willie Fortune	10 27 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED
NOV 02 1995
Ans'd

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[illegible]	[illegible]	10 30 95

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95088

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778444-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/27/95	778444-01	BK3714	10/30/95

RECEIVED
NOV 02 1995
Ans'd

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Monsanto

PERFORMANCE PRODUCTS DIVISION
ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

Total Quality ...the best have the competitive edge.

Monsanto

ID # DATE TIME WEIGHTS

ALL MATERIAL IS
WEIGHED ON STATE
CERTIFIED SCALES

				GROSS
	10/27/95	14:00	76760 LB G	
				TARE
ID 534			31260 LB (M) T	
				NET
			45500 LB N	

20,657 K

James H. McFall
Public Weighmaster
ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. AL D 0 0 4 0 1 3 0 4 9 — Manifest Document No. 95089

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0849

A. State Manifest Document Number: CWMA 778443

B. State Generator's ID:

4. Generator's Phone (205) 236-5381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D981023492

D. Transporter's Phone: (205) 695-7195

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. 6Q, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III DOT Disposal Approval # 071486-AOOS CWM Profile # BK3714	001	DT	10814	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above
a. C c.
b. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 FOR 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Jerry O. Hopper	Jerry O. Hopper	1 03 09 5

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
George Nelson	George Nelson	10 30 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

RECEIVED
NOV 02 1995
Aos'd

FACILITY

19. Discrepancy Indication Space

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		10 30 95

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GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95089

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778443-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the indentified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
10/30/95	778443-01	BK3714	10/30/95

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ANNISTON PLANT
The Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201
(205) 236-6381

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ID #	DATE	TIME	WEIGHTS
ID 17	10/30/95	08:05 Jm	57780 LB G GROSS
			33960 LB (M)TARE
			23820 LB N NET

10,814 K

James H. McFall
Public Weighmaster

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

2043
D-30

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

ALD004041954 | 95010

3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

4. Generator's Phone (205) 236-6381

A. State Manifest Document Number: CWMA 778445

B. State Generator's ID:

5. Transporter 1 Company Name: TERRA FIRST INC | 6. US EPA ID Number: ALD981025492 | C. State Transporter's ID: AL-R981025492 | D. Transporter's Phone: (205) 695-7196

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD006224644 | G. State Facility's ID | H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
GENERATOR a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III PCB Disposal Approval # 071695-0005 CWM Profile # BK3714	001	DT	14319	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: A) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # 257650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 ERG 31

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jerry O. Hopper	Jerry O. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Charles Holmes	Charles Holmes	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

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Ans'd.....

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19. Discrepancy Indication Space

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Nelson Archibald	Nelson Archibald	10	30	95

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Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95090

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778445-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

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Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
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ID #	DATE	TIME	WEIGHTS	
				GROSS
	10/30/95	08:09	65500 LB G	TARE
ID 30			33960 LB (M)	T
			31540 LB N	NET

14,319 K

James H. McFall Public Weighmaster ALABAMA

DRIVER ON ☒ OFF ☐ WEIGHED BY _____

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HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. A L D 0 0 4 0 1 3 0 4 A — Manifest Document No. 95071

2. Page 1 of 1

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3. Generator's Name and Mailing Address
MONSANTO CO
300 BIRMINGHAM HWY
ANNISTON, AL 36202-0249

A. State Manifest Document Number: CWMA 778446

B. State Generator's ID:

4. Generator's Phone (205) 236-6381

5. Transporter 1 Company Name: TERRA FIRST INC

6. US EPA ID Number: A L D 9 8 1 0 2 3 4 9 2

C. State Transporter's ID: AL D98102349P

D. Transporter's Phone: (205) 695-2195

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: A L D 0 0 0 6 2 2 4 6 4

G. State Facility's ID:

H. Facility's Phone: 205/652-9721

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS MIXTURE, 9, UN2315, III PCB Disposal Approval # 071496-8006 CWM Profile # BK3714	001	DT	55 09	K	PCB
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above: 0) OUT OF SERVICE DATE: 10/30/95

State of Generation: AL

K. Handling Codes for Wastes Listed Above: a. L b. c. d.

15. Special Handling Instructions and Additional Information

Purchase Order # 8020-1-0017

Work Order # JM Jerry D. Hopper 259650 EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 FRG 31

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Printed/Typed Name	Signature	Month	Day	Year
Jerry D. Hopper	Jerry D. Hopper	10	30	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILEY CHILES	Wiley Chiles	10	30	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	10	30	95

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GENERATOR NO. 2 (MUST ACCOMPANY SHIPMENT)

Chemical Waste Management
Emelle Facility
P. O. Box 55
Emelle, Alabama 35459-0055
205-652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 95091

MONSANTO CO
300 BIRMINGHAM HWY

ANNISTON, AL 36202-0249

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from MONSANTO CO described on Alabama Hazardous Waste Manifest number 0778446-1. Chemical Waste Management, Inc. hereby certifies that the above described material (excluding PCB Liquids, if applicable) was landfilled on the dates shown below, in compliance withwith state and federal regulations.

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Dorothy Oliver

Dorothy Oliver, Recordkeeping and Reporting Supervisor

Date: 11/01/95

DESCRIPTION/ OSD	UNIQUE ID	PROFILE	DISPOSED
PCB CONTAMINATED SOIL, DEBRIS			
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ID #	DATE	TIME	WEIGHTS
	10/30/95	08:20	66860 LB G GROSS
			32700 LB (M)TARE
ID 40			34160 LB N NET

15,509 KL

DRIVER ON [X] OFF [ ] WEIGHED BY Public Weighmaster

James H. McFall
ALABAMA

APPENDIX B

Historical Geraghty & Miller Reports
(provided in electronic format on CD)

OLD LIMESTONE BED
SURFACE IMPOUNDMENT
AND
WASTE MANAGEMENT UNIT II
FIELD INVESTIGATION REPORT

November 1991

Prepared for:

Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201

Prepared by:

Geraghty & Miller, Inc.
14497 North Dale Mabry Highway, Suite 115
Tampa, Florida 33618

Geraghty & Miller Project Number TF525.09

GERAGHTY & MILLER, INC.
Environmental Services

Ground Water *Engineering* *Hydrocarbon* *Remediation* *Education*

November 4, 1991

Mr. Robert T. Jones
Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201

Re: Final Old Limestone Bed Surface Impoundment and Waste Management Unit II Field Investigation Report

Dear Mr. Jones:

Please find enclosed five copies of the above-referenced document.

Geraghty & Miller, Inc. appreciates the opportunity to work for Monsanto Chemical Company at the Anniston Alabama Facility. If your have any questions or comments concerning this report, please contact one of the individuals listed below.

Very truly yours,
GERAGHTY & MILLER, INC.

Leslie L. Herd
Project Scientist/Project Manager

P. L. Palmer by J. Smith VP

Peter L. Palmer
Vice President/Project Officer

LLH:PLP
Encl.

14497 North Dale Mabry, Suite 115 • Tampa, Florida 33618 • P.O. Box 273630 • Tampa, Florida 33688-3630
(813) 961-1921 • FAX (813) 961-2599

OLD LIMESTONE BED SURFACE IMPOUNDMENT
AND
WASTE MANAGEMENT UNIT II
FIELD INVESTIGATION REPORT

November 4, 1991

Geraghty & Miller appreciates the opportunity to work for Monsanto Chemical Company at the Anniston, Alabama facility. If you have any questions or comments concerning this report, please contact one of the individuals listed below.

Respectfully submitted,

Leslie L. Herd
Project Scientist II

P. L. Palmer by JMW VP

Peter L. Palmer, P.E.
Vice President

PROJ\TF525\RPT\WMA-II.W51

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2. Site Location Map.

3. Study Area Location Map: OLBSI and WMA-II.

4. Water Elevation Map (25 - 35 foot Interval), October 1, 1991

5. Water Elevation Map (40 - 50 foot Interval), October 1, 1991

6v.. Geologic Cross Section through OLBSI Interceptor Well System.

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A. Lithologic Logs.

B. Piezometer and Well Construction Logs.

C. Surveys Data Tables.

1.0 INTRODUCTION

Monsanto Chemical Company's Anniston Plant retained Geraghty & Miller, Inc. to conduct two hydrogeologic investigations in the vicinity of the Old Limestone Bed Surface Impoundment (OLBSI) corrective action system and the closed Waste Management Area II (WMA-II), respectively. The objective of the first investigation was to evaluate the effectiveness of the OLBSI interceptor well system. The objective of the second investigation was to evaluate the ground-water quality and the vertical extent of soil and ground-water contamination immediately downgradient to WMA-II, specifically in the vicinity of monitoring well MW-20A. This report documents the operations and findings of the field work that was conducted to achieve the stated objectives.

1.1 SITE BACKGROUND

The Anniston Plant (Facility) is located in Calhoun County, in northeastern Alabama, near the town of Anniston (Figure 1). The Facility is located approximately one mile west of downtown Anniston along Highway 202 and covers an area of roughly 10 acres (Figure 2). The OLBSI and WMA-II are located along the facility's northern plant boundary, adjacent to and directly south of the Southern Railroad tracks (Figure 3).

1.1.1 Old Limestone Bed Surface Impoundment

The OLBSI was an asphalt-lined surface impoundment that received acidic wastewater from the parathion intermediates operation from approximately 1962 to 1980. In 1981, when the impoundment was taken out of service, closure activities included removal of the lining and underlying material, backfilling with clay, and covering with asphalt. This surface impoundment was not a Resource Conservation and Recovery Act (RCRA) regulated unit and was closed under interim status. This impoundment is listed as a solid waste management unit (SWMU) on the Facility's RCRA permit. In response to the Facility's

RCRA permitting requirements a corrective action system was installed at the OLBSI in late 1988 and the system was operational in February 1989.

1.1.2 Waste Management Area II

WMA-II was a lined surface impoundment that received acidic wastewater from the parathion intermediates operation from 1978 to 1986. WMA-II is a RCRA-regulated waste management area; therefore, in 1987, when this impoundment was dismantled, the unit was closed as per the approved RCRA Closure Plan. As part of the Facility's RCRA permitting activities a ground-water monitoring system was installed in 1986 at WMA-II.

1.2 GENERAL GEOLOGY

The Anniston facility is located in the Valley and Ridge physiographic province. Complex folding and faulting is characteristic of this physiographic area. The topography of the area is characterized by northeastward trending valleys paralleled by ridges and mountains.

This area is underlain by sedimentary and slightly metamorphosed sedimentary rocks ranging in age from Cambrian to Ordovician. Fluvial deposits and residuum overlie these rocks in some areas. The ridges are composed of sandstone units that are more resistant to chemical and mechanical weathering. The valleys are composed of the less resistant carbonate units that are more susceptible to weathering, especially in the humid climate of northeastern Alabama.

The carbonate rocks in the area are deeply weathered and a mantle of residuum (in situ decomposed rock) has developed on the outcrops (Scott, *et al*, 1987). The Lower Cambrian Shady Dolomite and the overlying residuum lie beneath the Monsanto facility.

Regionally, the Shady Dolomite consists of 500 to 1,000 feet of sandy dolostone and dolomitic limestone (Scott, *et al*, 1987). Karst topography, characteristic of the Shady Dolomite, has been produced by solution channelling and fracturing near the top of the formation (Warman and Causey, 1962). The residuum commonly fills the ancestral topography and reportedly extends to depths in excess of 100 feet below land surface (bls).

Locally, the upper part of this residuum consists of fine-to-coarse grained sandy clay. This sandy clay overlies a dense clay with localized lenses of very fine to fine-grained sand and tight, silty clay.

2.0 DESCRIPTION OF CURRENT CONDITIONS

The two areas of investigation, the OLBSI and WMA-II, are adjacent to each other. Geographically, the areas are located along the northern boundary of the plant site, immediately south of the Southern Railroad tracks. Monsanto property, however, extends beyond the plant site boundary to the other side of the Southern Railroad tracks (Figure 2). Topographically, the area is flat and the land surface is either covered with asphalt or gravel. The railroad tracks are approximately 10 to 15 feet lower than the land surface at the study site.

2.1 OLBSI

The OLBSI corrective action system consists of six interceptor wells (IW-16 through IW-21) designed to recover ground water in the uppermost saturated zone hydraulically downgradient from the OLBSI SWMU. A network of observation wells (OW-18 through OW-24) was installed to measure ground-water quality and water levels to monitor the effectiveness of the corrective action system. These observation wells are located immediately downgradient from the interceptor wells and under non-pumping conditions, the ground-water flow direction is northward, in the direction of the observation wells.

Under pumping conditions, however, water levels around each interceptor well are lowered due to dewatering of the upper sandy clay material. The lowering of the water levels (potentiometric head) in the surrounding material creates a cone of depression around each interceptor well. Ground-water migration through this cone of depression is directed toward the interceptor wells.

2.1.1 Interceptor Wells

The corrective action system is located immediately downgradient to the northernmost lateral extent of the OLBSI SWMU. The corrective action system was installed approximately nine years after the unit was taken out of service and eight years after completion of the closure activities.

The interceptor wells are spaced approximately 70 feet apart and were installed to total depths between 50 and 55 feet bls. These wells are constructed of 3-foot sections of 24-inch diameter concrete caissons that are stacked inside a 30-inch diameter borehole. A fine-grained sand filter pack fills the annular space and extends from the bottom of the borehole to one foot bls. The remainder of the annular space was filled with concrete. These interceptor wells function as fully-screened wells because of this construction design, thus allowing ground water at all levels above its base to enter the well.

Each of the interceptor wells have produced varying amounts of water. The system is designed so that each interceptor well is equipped with a submersible pump that has a dual point adjustable automatic float switch and an event recorder to determine pump cycles. As ground water seeps into the wellbore and a predetermined water level is reached, the floating device triggers on the pump. Pumping continues until the wellbore is evacuated (the water level drops below the second float level). The collected ground water is then pumped through a pipeline into Monsanto's treatment plant. Therefore, the volume of ground water collected by each interceptor well is not dependant on a pumping rate, rather, the volume of water collected is dependant on the surrounding lithology at each interceptor well and the ability of that material to transport ground water.

Generally, the lithology in this area is characterized by a natural fill material usually 10 to 15 feet thick, followed by alternating lenses, of varying thicknesses, of dense, dry clay,

and saturated, sandy to silty clay. The natural fill material is typically a fine to coarse-grained sandy clay. The variable sandy clay and clay lithologies release ground water to the interceptor wells at different rates. The rate that ground water moves through sandy clay zones is higher than the rate that ground water moves through tight clay zones. Interceptor wells that intersect the sandy and silty clay lenses will capture more ground water as the water passes through these preferred pathways. The dense clay layers are typically dry and less clastic than the sandy or silty clay lenses.

The system as a whole, however, produced 135,996 gallons of captured ground water in 1990. Roughly 80 percent of that volume was pumped from three of the six interceptor wells (IW-16, IW-20, and IW-21).

2.1.2 Observation Wells

The observation wells are located hydraulically downgradient from the interceptor wells. Five of the seven observation wells (OW-18, OW-19, OW-20, OW-23, and OW-24) are in close proximity to the interceptor wells, approximately 30 to 40 feet downgradient. The closeness of these wells was due to the limited amount of ground surface between the old unit and the facility fence line at the railroad right-of-way. The remaining two observation wells (OW-21 and OW-22) are located north of the railroad tracks.

The observation wells are installed to depths ranging from 23 to 36 feet bls. Each of the five observation wells located in close proximity to the corrective action system (south of the railroad tracks) contain a 5-foot section of 2-inch diameter, 0.010-inch factory slotted PVC well screen attached to threaded PVC casing. The two observation wells located north of the railroad tracks contain a 10-foot section of 2-inch diameter, 0.010-inch factory slotted PVC well screen attached to threaded PVC casing. The screened interval is located at the bottom of each observation well. The sand pack in each of the observation wells extends

from the bottom of the borehole to an average of five feet above the well screen. A 2-foot bentonite seal is above each sand pack and the remainder of the annular space is filled with Class A cement grout.

Constituents (parathion and PNP) have been detected in the ground water in three of the observation wells (OW-19, OW-20, and OW-24); however, the concentrations of constituents are approximately one order of magnitude (or more) less than the constituent concentrations in the ground water being intercepted by the corrective action system.

2.1.3 Investigation Objectives

The detection of constituents in the observation wells necessitated this investigation to evaluate the effectiveness of the OLBSI corrective action system. Two potential scenarios may explain why constituents have been detected in these observation wells. One explanation may be that impacted ground water had already migrated past the corrective action system prior to its installation. Another explanation may be that the corrective action system is not effectively capturing the impacted ground water that is moving horizontally through this saturated section.

The effectiveness of these interceptor wells can be evaluated by comparison of water elevations in the downgradient observation wells with water elevations of piezometers installed midway between the interceptor wells. The basis for this evaluation is that ground water moves from areas of high potentiometric head to areas of low potentiometric head. It is anticipated that water elevations in these piezometers will be lower than the downgradient observation wells, indicating influence of the system. In this situation, horizontal ground water flow in this section of the saturated zone, will be directed toward the interceptor wells.

The hydrologic properties of clay residuum required comparison of water elevation information from points at the same interval/depth in the saturated strata; therefore, two sets of piezometers were installed. All of the piezometers were designed to have five-foot screened intervals at the bottom of the borehole. One set of piezometers was installed at the midpoint between two interceptor wells to the same total depth as the interceptor well network (approximately 50 feet bls). The second set of piezometers was installed adjacent to the first set of piezometers, however, they were installed to the total depth of the adjacent observation wells.

2.2 WMA-II

The ground-water monitoring system at WMA-II consists of three downgradient monitoring wells (MW-15, MW-16, and MW-20A) installed at the point of compliance, the hydraulically downgradient limit of the waste management unit. The background monitoring well (MW-1B) is located upgradient of the Monsanto landfill area. These monitoring wells are screened within the saturated section and are designed to yield ground-water samples from this zone that will (1) represent the quality of background water that has not been affected by leakage from the regulated unit; (2) represent the quality of ground water passing the point of compliance; and (3) allow for the detection of contamination when leakage occurs.

2.2.1 Compliance Monitoring Wells

The downgradient compliance point monitoring wells at WMA-II are located immediately downgradient of the reported edges of the closed surface impoundment. Monitoring wells MW-15 and MW-16 were installed in October, 1985. Monitoring well MW-15 was installed to a depth of 39 feet bls and monitoring well MW-16 was installed to a total depth of 68 feet bls. The third compliance monitoring well (MW-20) was installed

in June 1986 to a total depth of 24 feet bls. This monitoring well was destroyed in 1988 during plant demolition activities and was replaced with MW-20A that was installed to the same depth as MW-20.

These monitoring wells contain a 5-foot section of 2-inch diameter, 0.010-inch factory slotted PVC well screen attached to threaded PVC casing. The sand pack in each of the monitoring wells extends from the bottom of the borehole to an average of five feet above the well screen. A two-foot bentonite seal is above the sand pack and the remainder of the annular space is filled with Class A neat cement.

Constituents have been detected intermittently in MW-20A since 1990. Immediately adjacent to the MW-20A borehole, a concrete culvert was installed and monitoring well damage is suspected. Well damage may explain the intermittent detection of constituents in the ground water from this well.

2.2.2 Investigation Objectives

The detection of constituents in compliance monitoring well MW-20A necessitated this investigation of the ground water quality in the saturated zone (24 feet bls) in the immediate downgradient vicinity of WMA-II. Additionally, the ground-water quality of the bedrock aquifer, which is the uppermost aquifer beneath WMA-II, was evaluated.

Four potential scenarios may explain the intermittent detection of constituents in MW-20A.

(1) Constituents may be migrating from the surface soils through damaged well casing and/or well construction materials (i.e. cracked cement grout seal).

(2) Another scenario may be that this compliance point monitoring well is within the cone of influence of the OLBSI corrective action system. In that case, the corrective action system may be dewatering the uppermost saturated zone at MW-20A and as that dewatering occurs, constituents are drawn from WMA-II.

(3) The third potential scenario may be that MW-20A is not located outside the former areal extent of WMA-II.

(4) Finally, the last potential explanation for the detection of constituents in the ground water at MW-20A may be that the monitoring point (MW-20A) may be downgradient and outside the limits of WMA-II; however, another unidentified former waste unit may also underlie this area. The ground water concentrations detected may not be the result of leaking from WMA-II, but, may be the result of another source, as yet unidentified and/or documented.

The integrity of the compliance monitoring well MW-20A was evaluated by installing a twin well (MW-20B) to the same depth as MW-20A. Additionally, a bedrock monitoring well was installed adjacent to MW-20A to evaluate the ground-water quality of the uppermost aquifer beneath WMA-II. The bedrock well was installed with protective casings as required to prevent potential contamination of lower zones during drilling.

3.0 OLBSI INVESTIGATION

Eleven piezometers (PZ-1 through PZ-11) were installed from April 15 through April 20, 1991 (Figure 3). These piezometers were installed to evaluate the effectiveness of the OLBSI corrective action system. Five of the piezometers, PZ-2 through PZ-6, were installed at the midpoint between each of the 24-inch-diameter interceptor wells. Two piezometers, PZ-1 and PZ-7, were placed at either end of the interceptor well system. The remaining four piezometers, PZ-8 through PZ-11, were installed around the edges of the study area to provide additional ground-water level data.

Prior to commencement of drilling operations, interceptor wells IW-20 and IW-21 were sounded to determine their total depth, and thus the projected total depth of the piezometers. The depth of these interceptor wells are approximately 52 feet below land surface (bls), which is approximately 20 feet deeper than the schematic construction logs indicate.

The eleven deep piezometers (PZ-1 through PZ-11) were installed to the same depth as the interceptor wells. The screened interval, at the bottom of the piezometer borehole, allows for discrete monitoring of the potentiometric surface at approximately 45 to 50 feet bls. This is the same level as the bottom of the interceptor wells.

A second set of shallow piezometers, (PZ-2A through PZ-6A, PZ-4B, and PZ-4C) was installed to obtain water-level data of the saturated zone monitored by the downgradient observation wells (OW-18 through OW-20, OW-23, and OW-24) (Figure 3). This second set of piezometers was installed from September 4 through September 12, 1991. These piezometers are constructed in the same manner as the first set of piezometers, however, these piezometers are screened at the same elevation as the downgradient observation wells and are approximately 30 to 35 feet bls.

3.1 INSTALLATION PROCEDURES

Graves Well Drilling Company, Inc., under the direction of Geraghty & Miller geologists, installed the deep and shallow piezometers. The boreholes for the deep piezometers and one shallow piezometer (PZ-2A) were advanced using a truck-mounted hollow-stem auger Quikdrill™ drill rig. The boreholes for the remainder of the shallow piezometers were advanced using a hollow-stem auger CP-650 drill rig. Split-spoon samples were collected from the first boring (PZ-2) only for the set of deep piezometers. This piezometer was sampled continuously for the first 10 feet, then at five-foot intervals thereafter. Split-spoon samples were collected at five-foot intervals for all of the shallow piezometers. All split-spoon samples were described by the on-site geologist. Lithologic logs for PZ-2 and all of the shallow piezometers are provided in Appendix A.

3.2 PIEZOMETER SPECIFICATIONS

Once the borehole had been advanced to the proposed total depth of the piezometer, the augers were removed from the borehole and the piezometer was installed. Each piezometer is constructed of a 5-foot, 2-inch diameter, 0.010-inch factory slotted, Schedule 40 PVC screen attached to an internally threaded Schedule 40 PVC casing. Clean 20/40 graded sand was then placed in the annular space surrounding the well screen and brought to approximately two to three feet above the top of the screen. In cases where the borehole was overdrilled, sand was placed at the bottom of the borehole to raise the screen to the desired level. In cases where the borehole was not dry, the sand pack was installed using a tremie pipe and simultaneously adding potable water to wash the sand through the borehole fluids. The water was obtained from a fire hydrant located adjacent to the ACL warehouse.

A bentonite seal (1/2-inch pellets) was placed above the sand pack to within one foot of land surface. The remainder of the annular space was filled with either a Portland Type I cement or a cement/bentonite grout. A protective steel casing with locking cap was installed over each piezometer and set into the cement grout. The well construction logs for all piezometers are provided in Appendix B.

Five to ten gallons of water were evacuated from piezometers PZ-2A through PZ-6A during the development process. A Teflon™ bailer was used to develop these piezometers. The development water was clear green and contained the characteristic odor that is associated with the presence of organophosphorous compounds (compounds associated with the manufacture of parathion) in the ground water. All the piezometers went dry upon bailing and were allowed to recharge for further development. PZ-4B and PZ-4C were dry and, therefore, were unable to develop. PZ-1 through PZ-11 were not developed.

Measuring point elevations (top of casing) and ground elevations at each piezometer were surveyed relative to mean sea level and these results are presented in Appendix C.

4.0 WMA-II INVESTIGATION

From May 6 through May 10, 1991, monitoring well MW-20B was installed adjacent to MW-20A and an intermediate borehole (MW-22) was drilled, sampled, and abandoned (Figure 3). The intermediate borehole was drilled for the installation of an intermediate monitoring well MW-22. Both boreholes were initially advanced with hollow-stem augers by a truck-mounted Quikdrill™ drill rig. The boreholes for both of these monitoring wells were continuously split-spoon sampled for lithology to ensure correct well design and construction. The soil samples were described for lithologic classification by the on-site geologist. The lithologic log for MW-20B and MW-22 is provided in Appendix A.

From September 3 through September 14, 1991, a bedrock monitoring well, DW-1, was installed in the vicinity of abandoned well MW-22 (Figure 3). The borehole was advanced using a CP-650 drill rig. Samples were collected on five-foot centers Since continuous samples were collected from MW-22 approximately eight feet away, the borehole was split-spoon sampled on 5-foot centers to 80 feet bls. Soil samples were retained for lithologic classification as well as evaluation of the vertical extent of contamination by the on-site geologist. The vertical extent of contamination was determined in the field by the presence or absence of a characteristic odor that is associated with the presence of organophosphorous compounds. The presence or absence of this odor in the samples was used for gross determinations of constituent contamination within the saturated zone. The lithologic log for DW-1 is presented in Appendix A.

4.1 MW-20B SPECIFICATIONS

Once the borehole for MW-20B had been advanced to the appropriate depth (24 feet bls), the augers were removed and the monitoring well was installed. The monitoring well is constructed of a 5-foot, 2-inch diameter, 0.010-inch factory slotted,

Schedule 40 PVC screen attached to internally threaded Schedule 40 PVC casing. Clean 20/30 graded sand was poured in the annular space and brought to approximately two feet above the top of the well screen. A two-foot bentonite pellet seal was added and the remainder of the annular space was then filled with a Portland Type I cement/bentonite grout. A protective steel casing and locking cap was installed over the PVC well and set in the cement seal.

The well was developed by purging five standing water well volumes with a Teflon™ bailer. The development water was clear and odorless. The well went dry upon bailing and was allowed to recharge for further development. The well construction log is provided in Appendix B. Measuring point elevations were surveyed relative to mean sea level and the results are provided in Appendix C.

4.2 MW-22 SPECIFICATIONS

The intermediate-depth boring (MW-22), was continuously split-spoon sampled from 23 feet to its total depth of 86 feet bls. The soil samples were described for lithologic classification and were used for determining the vertical extent of contamination as indicated by the presence of the characteristic organophosphorous odor in ground water. The lithologic log for MW-22 is provided in Appendix A.

In an effort to prevent downward contamination into potentially unaffected strata during drilling, steel protective casings were installed. These protective casings were installed when dense dry clay layers, that did not exhibit the characteristic organophosphorous odor, were encountered. The first clay layer was encountered at 34 feet bls. The hollow-stem augers were removed from the borehole and a 14-inch mud rotary bit was used to ream the 6 1/4-inch diameter borehole to 40 feet bls. A 10-inch-diameter steel surface casing was installed within the clay layer and set from 40 feet to land surface to seal

off the uppermost contaminated zone. A tremie pipe was used to pressure grout the annular space with a Portland cement/bentonite grout. The grout was allowed to cure overnight.

The borehole was advanced by a 6 1/4-inch hollow-stem auger through the competent clay layer to approximately 46 feet bls. The underlying sandy clay exhibited the characteristic organophosphorous odor to 86 feet bls.. Based on the presence of this odor, this sandy clay layer was determined to be contaminated. Drilling continued until another dense dry clay layer was encountered at 67 feet bls. The augers were removed from the borehole and an 8 1/4-inch mud rotary bit was used to ream out the borehole to 73 feet. A 6-inch diameter steel surface casing was installed inside the 10-inch surface casing to a total depth of 73 feet to seal off this second contaminated zone. The annular space was filled with a cement/bentonite grout in the same fashion as before and was allowed to cure overnight.

The borehole was advanced by 5 3/4-inch hollow-stem auger through this second dense dry clay layer at approximately 81 feet bls. The underlying sandy clay also exhibited the characteristic organophosphorous odor. Based on the presence of this odor, this sandy clay layer was also determined to be contaminated.

The diameter of the borehole (5 3/4-inch) was too narrow to seal off this third contaminated zone with another protective casing, should another dense dry clay zone be encountered; therefore, the boring was not advanced. The augers were removed from the borehole and the hole was abandoned and filled with a Portland cement/bentonite grout.

All development water, drill cuttings, drilling mud, and soil samples were placed in DOT-approved 55-gallon drums. The drums were sealed, labelled, and placed on pallets.

Labels noted contents of the drum and date they were filled. At the end of drilling MW-22, all drums were collected and stored in one central staging area for later processing.

4.3 DW-1 SPECIFICATIONS

Protective steel casing was also installed in the bedrock monitoring well, DW-1, to prevent downward contamination of potentially unaffected strata. The dense dry clay layer encountered in MW-22 was encountered, as expected, in DW-1 at 34 feet bls. The 6 1/4-inch hollow-stem augers were removed from the borehole and a 12-inch mud rotary bit was used to ream the borehole to 37 feet bls. An 8-inch diameter steel surface casing was set into the clay layer and extended from 37 feet to land surface and the annular space was filled with Portland Class I cement\bentonite grout. A tremie pipe was used to pressure grout the cement. The surface casing and grout were allowed to set up overnight.

The borehole was advanced using 6 1/4-inch hollow-stem augers to 80 feet bls. The drill rig could not advance the augers deeper and a 7 1/8 air rotary bit was used to ream the 6 1/4-inch borehole. Bedrock was encountered at 81 feet bls. Additional sandy clay zones, similar to the ones encountered in MW-22, were not encountered in this borehole. The clay layer that the surface casing was set in was continuous to the bedrock (47 feet thick).

The potential for downward contamination of the bedrock was not anticipated since this clay layer was continuous to the bedrock. Therefore, additional protective casings were not installed and the borehole was advanced 15 feet into the bedrock. The bedrock appeared to be dry until approximately 91 feet bls. The driller estimated that this zone (approximately 91 feet bls) was producing approximately one to three gallons per minute.

The bit and rods were removed and the monitoring well was installed at 93.25 feet bls. The monitoring well was constructed of a 10-foot, 4-inch diameter, 0.010-inch factory slotted, Schedule 40 PVC screen attached to internally threaded Schedule 40 PVC casing.

Twelve feet of 20/40 sand pack was tremied into the annular space in the borehole to approximately two feet above the screen. A 2.5-foot seal of 1/2-inch bentonite pellets was placed on top of the sand pack. The remainder of the annular space was grouted to land surface with a Portland Type I cement/bentonite grout. A protective casing with a locking cap was installed into the grout.

Prior to well development, the four-inch PVC well casing collapsed at 38 feet bls during curing. After removal of the steel protective cover, a 3 7/8-inch air-rotary bit was used to drill through the collapsed area; the collapsed area extended from approximately 38 to 39.5 feet bls. The remainder of the four-inch well was unaffected.

The drill bit was lowered down to 93 feet where air was used to develop the 4-inch well. The well was developed for 50 minutes and approximately 150 gallons of water was evacuated. After development, the rods were removed and a 2-inch diameter Schedule 40 PVC well, of the same specifications as the 4-inch well was installed. The sand pack was poured down the well, followed by 1/4-inch bentonite pellets and the remainder of the annular space was grouted to surface. Monitoring well DW-1 is fully screened within the bedrock and the filter pack extends to the bedrock interface. The steel protective cover was welded back in place. The well construction log for DW-1 is provided in Appendix B.

All drill cuttings generated while using the hollow-stem augers were shoveled onto plastic sheeting for future processing.

5.0 NATURE AND EXTENT OF CONTAMINATION

5.1 SOIL AND BEDROCK CHARACTERIZATION

The lithology within the study area consists primarily of a brown sandy clay which ranges in thickness from 34 feet near DW-1 to 13 feet near PZ-5A. The upper horizon of this sandy clay contains subrounded pebbles and cobbles. The sandy clay is underlain by a dense dry clay. The clay is mottled red, orange, yellow, light grey, and various shades of brown and extends to the bedrock surface. However, the clay is interspersed with brown sandy clay and silty clay lenses.

Contaminated soils were first encountered at approximately 23 feet near DW-1 and as shallow as 8 feet near PZ-4A. The soils were field characterized as contaminated when the characteristic odor associated with the presence of organophosphorous compounds in the ground water was detected in the split-spoon samples. Upon drilling into the dense dry, clay layer, the odor dissipated and was therefore characterized as uncontaminated. The characteristic odor was again detected in the sandy clay layers within the clay and were inferred to be contaminated.

Bedrock was encountered at 81 feet bls while drilling DW-1. In abandoned borehole MW-22, however, the lithology at 86 feet bls was sandy clay. These two locations are approximately eight feet from each other, suggesting the surface of the bedrock is highly irregular.

5.2 GROUND-WATER CHARACTERIZATION

The ground-water quality in the upper saturated zone north of the railroad tracks and the upper saturated zone along the perimeters of the OLBSI SWMU and WMA-II areas does not appear to be impacted by the constituents of concern. This interpretation, based on the absence of the characteristic odor, was made in the field during drilling of PZ-11 and PZ-1, PZ-10, and PZ-8, respectively. The ground-water quality in the upper saturated zone immediately downgradient of the OLBSI SWMU, however, appears to be impacted. This interpretation, based on the presence of the characteristic odor, was made in the field during drilling of PZ-2, PZ-2A, PZ-3, PZ-3A, PZ-4, PZ-4A, PZ-4B, PZ-4C, and PZ-5.

The ground-water quality in the upper and lower saturated zones near MW-20B are also affected, based on the presence of the characteristic odor that was detected during drilling. The characteristic odor was detected in MW-20B at approximately 24 feet bls, at the bottom of the borehole. The odor was also detected in the sandy clay zones at 43 feet bls and at 81 feet bls in borehole MW-22.

The ground-water quality of the upper part of aquifer beneath the WMA-II site also appears to be contaminated. The characteristic odor was detected at approximately 91 feet bls in DW-1, approximately ten feet into the bedrock.

6.0 FINDINGS

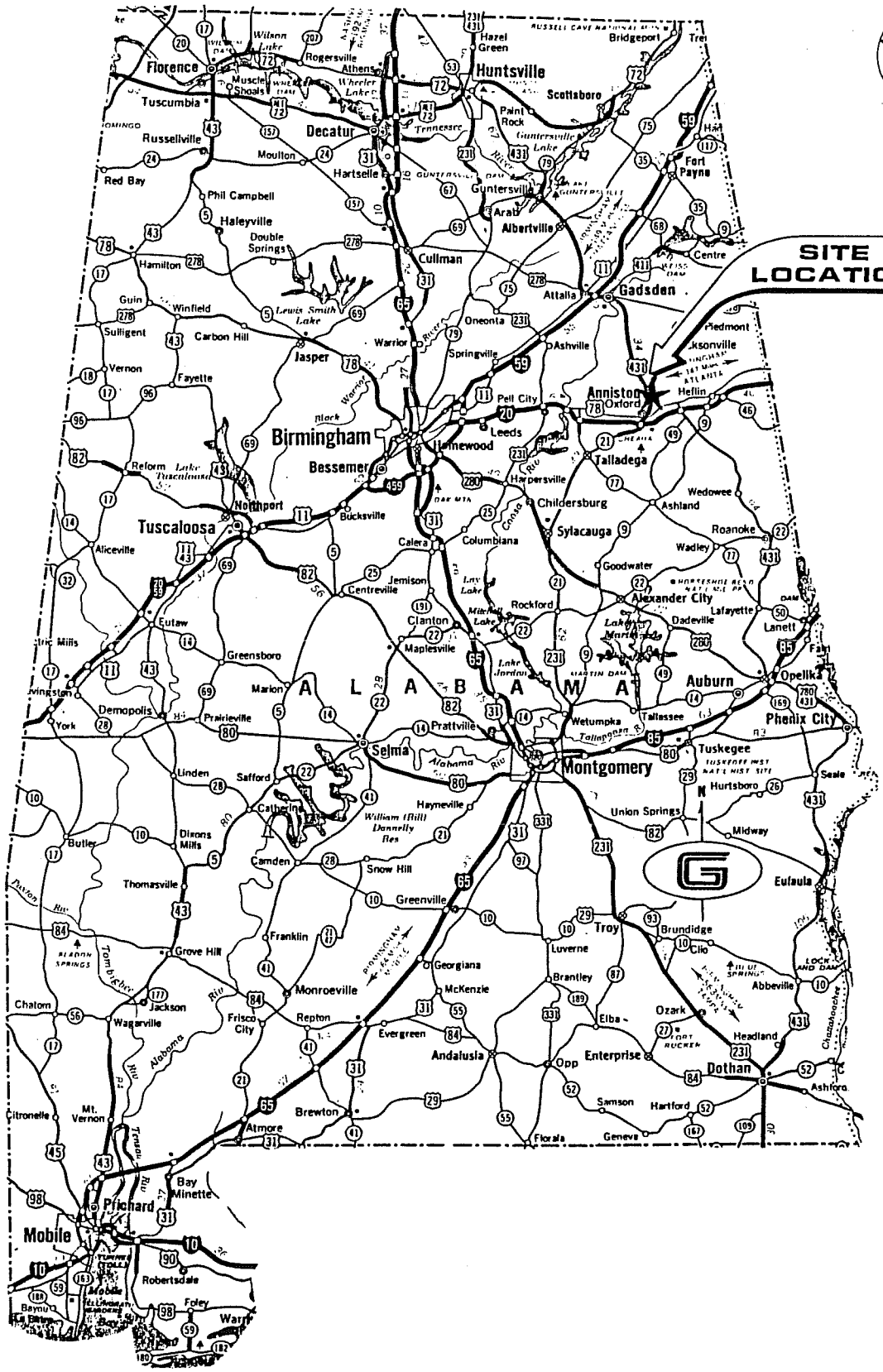
6.1 OLBSI INVESTIGATION

Water level data (Table 1) obtained from the installation of the piezometers indicate that ground water is effectively being captured by the interceptor wells. It appears a cone of influence is being created by the effect of pumping within the interceptor wells. This information is inferred from water level data of the shallow piezometers located midway between the interceptor wells, and their respective observation wells. Since both of these sets of wells are screened at the same interval, one can compare water levels between the two. Water levels in the piezometers were measured to be approximately two feet lower than the observation well, therefore, the ground water in this region will not flow "uphill" towards the observation well, but downgradient into an interceptor well.

Ground-water level measurements were made in nearly all the monitoring wells, production wells, and piezometers on April 18, 1991. A second round of water levels were measured after the installation of the final deep piezometer on April 20, 1991. Additional rounds were taken in May and June and another upon completion of the shallow piezometers and DW-1 in September. Using these data (Table 1), water elevation maps and cross sections were drawn to illustrate the configuration of the ground water under normal operating conditions of the corrective action system. Figure 4 is a water elevation map for October 1, 1991 and depicts the ground water configuration in the vicinity of the OLBSI corrective action system under normal operating conditions. For comparison, Figure 5 is the cross sectional depiction of the ground water configuration and the lithology along the OLBSI corrective action system.

6.2 WMA-II INVESTIGATION

The primary findings of this investigation indicate that the vertical extent of ground-water contamination extends to the bedrock aquifer in the vicinity of WMA-II. Initial analysis, by the Monsanto Environmental Laboratory (MEL), of this ground water detected 21.3 parts per million (ppm) of total parathion (methyl and ethyl) and 28.5 ppm PNP. The well was pumped for approximately eight hours per day (total) for approximately two weeks. another round of analysis was performed at the end of this pumping period and the results indicated that the concentrations of the constituents had decreased. PNP concentrations were 0.6 ppm PNP and total parathion concentrations were 4.2 ppm.



SCALE

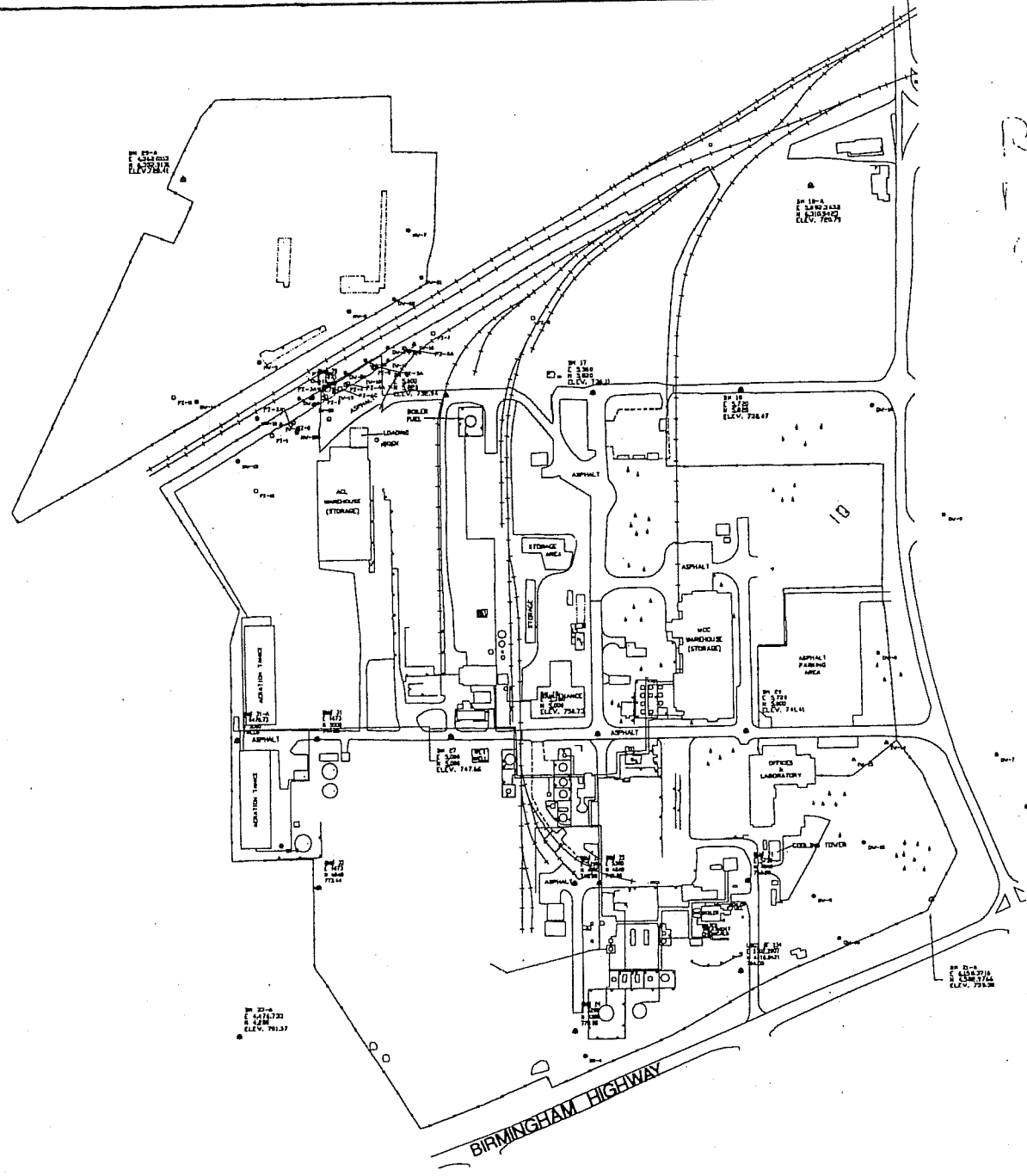
GERAGHTY & MILLER, INC.
Environmental Services

REGIONAL LOCATION MAP

Monsanto Chemical Company Anniston, Alabama

FIGURE

1



Replacement Figure 2 for File Copy Only

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REV. NO.	DATE	DESCRIPTION	BY	APPR.

REV. NO.	DATE	DESCRIPTION	BY	APPR.

SITE LOCATION MAP
NPDES STORM WATER DISCHARGE PERMIT APPLICATION
MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE 2

DRAFTER: BJH | APPROVED: X | C.B. | CHECKED: | DRAWING: MONDIAG4.DWG | FILE NO.: MONSANTO | PRJCT NO.: TF52509 | DWG DATE: 11/4/91

0' 60 120

SCALE: 1" = 60'

PZ-11
MW-14
MW-9
MW-8
MW-7
DW-21
DW-22
DW-18
DW-19
DW-20
DW-23
DW-24
MW-16
IW-21
IW-20
PZ-3
PZ-3A
IW-19
PZ-4B
PZ-4C
PZ-4
PZ-4A
IW-18
PZ-5
PZ-5A
IW-17
PZ-6
PZ-6A
IW-16
PZ-7
PZ-1
PX-2A
PZ-2
DW-1
MW-20A
MW-20B
MW-15
WMA-II
OLBSI
PZ-10
PZ-9
PZ-8

LEGEND

⊙ = PIEZOMETERS
▲ = INTERCEPTOR WELLS
⊕ = OBSERVATION WELLS
◒ = SHALLOW MONITORING WELLS
● = BEDROCK MONITORING WELLS

GERAGHTY & MILLER, INC.
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LOCATION OF PIEZOMETERS AND MONITOR WELLS

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE 3

DWG DATE: 11/4/91 | PRJCT NO.: TF52509 | FILE NO.: MONSANTO | DRAWING: MONDIAG5.DWG | CHECKED: C.B. | APPROVED: X | DRAFTER: BJH

0' 60 120

SCALE: 1" = 60'

PZ-11

737.76
MW-14

MW-9

MW-8
737.12

MW-7
732.13

730.87
DW-21

732.15
DW-22

737

738

739

740

731

732

IW-19

739.17
DW-18

738.43
DW-19

PZ-4B
725.57

DW-20
739.99

739.33
DW-23

738.28
DW-24

740

739

738

737

739.12
PZ-4A

PZ-3A

PZ-3

IW-20

MW-16

IW-21

740.42
PZ-2A

PZ-2

PZ-1

DW-1

738.35

PZ-5

PZ-5A

IW-18

735.81

IW-17

PZ-6A

733.60

IW-16

PZ-7

738

740

MW-15

741

MW-20B
740

MW-20A
741.19

PZ-4C
737.89

PZ-4

OLBSI

WMA-II

PZ-10

PZ-9

PZ-8

LEGEND

⊙ = PIEZOMETERS

▲ = INTERCEPTOR WELLS

⊕ = OBSERVATION WELLS

◒ = SHALLOW MONITORING WELLS

● = BEDROCK MONITORING WELLS

GERAGHTY & MILLER, INC.
Environmental Services

WATER ELEVATION CONTOUR MAP (25' - 35') INTERVAL)
OCTOBER 1, 1991

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
4

DWG DATE: 11/4/91 | PRJCT NO.: TF52509 | FILE NO.: MONSANTO | DRAWING: MONDIAG6.DWG | CHECKED: C.B. | APPROVED: X | DRAFTER: BJH

0' 60 120

SCALE: 1" = 60'

730

735

740

732.96
PZ-11

MW-14

734.05
MW-9

MW-8

MW-7

DW-21

DW-22

DW-18

DW-19

PZ-4

DW-20

DW-23

DW-24

731.58
PZ-3

PZ-3A

PZ-4B

723.59
PZ-4A

PZ-5

719.70
PZ-5A

IW-17
706.66

PZ-6

PZ-6A

714.04
IW-16

713.67
PZ-7

MW-16

IW-21
717.45

IW-20
714.12

PZ-2A

PZ-2
732.52

PZ-1
740.13

DW-1

MW-15

MW-20A

MW-20B

IW-18
711.70

IW-19
711.98

PZ-4C

OLBSI

WMA-II

731.33
PZ-10

PZ-9
741.05

725

730

PZ-8
726.69

LEGEND

⊙ = PIEZOMETERS

▲ = INTERCEPTOR WELLS

⊕ = OBSERVATION WELLS

◒ = SHALLOW MONITORING WELLS

● = BEDROCK MONITORING WELLS

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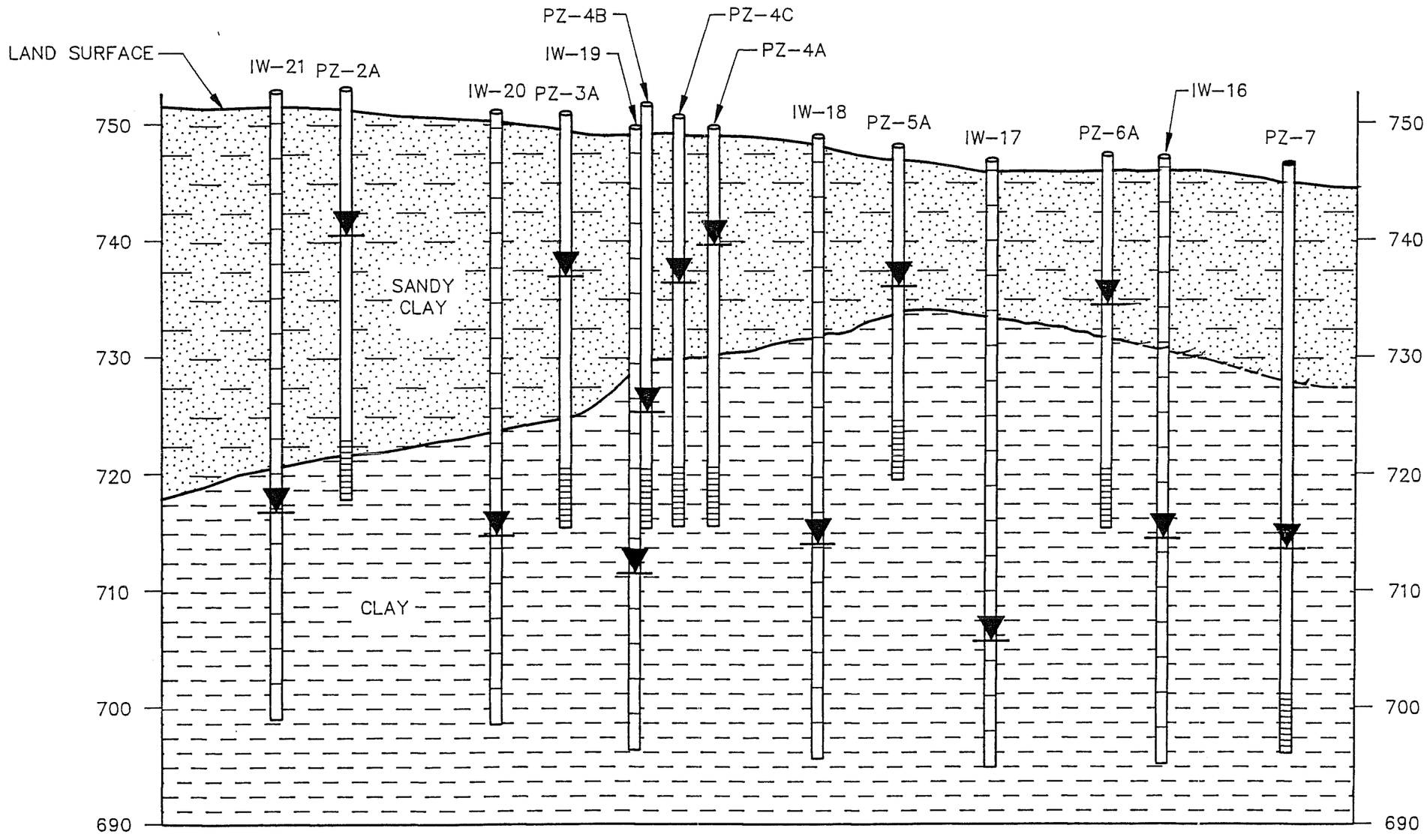
WATER ELEVATION CONTOUR MAP (40' - 50' INTERVAL)
OCTOBER 1, 1991

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
5



LEGEND

WATER LEVEL 10/01/91

APPROX. CLAY INTERFACE

VERT. SCALES 10 0

HOR. 0 50

GERAGHTY & MILLER, INC.
Environmental Services

GEOLOGICAL CROSS-SECTION THROUGH OLBSI INTERCEPTOR WELL SYSTEM

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE 6

DWG DATE: 10-21-91 | PRJCT NO.: TF52509 | FILE NO.: MONSANTO | DRAWING: MTHPROF1 | CHECKED: LH. | APPROVED: P.F. | DRAFTER: JVP/BJH

Table 1. Water Level Data for Monsanto Chemical Company, Anniston, Alabama

Well No.	Measuring Pt. Elevation (ft above mean sea level)	Apr 18, 1991 Depth to Water (ft below M.P.)	Apr 18, 1991 Water Level Elevation (ft. above mean sea level)	Apr 20, 1991 Depth to Water (ft. below M.P.)	Apr 20, 1991 Water Level Elevation (ft. above mean sea level)	May 06, 1991 Depth to Water (ft. below M.P.)	May 06, 1991 Water Level Elevation (ft. above mean sea level
PZ-1	754.78	13.11	741.67	13.84	740.94	---	---
PZ-2	753.42	15.55	737.87	17.28	736.14	---	---
PZ-3	750.81	45.50	705.31	29.93	720.88	---	---
PZ-4	750.39	Dry	---	Dry	---	---	---
PZ-5	748.65	Dry	---	51.00	697.65	---	---
PZ-6	747.07	---	---	44.03	703.04	---	---
PZ-7	746.57	---	---	27.94	718.63	---	---
PZ-8	753.04	---	---	41.85	711.19	---	---
PZ-9	749.60	---	---	---	---	---	---
PZ-10	755.03	---	---	19.62	735.41	---	---
PZ-11	749.86	---	---	8.45	741.41	---	---
PZ-2A	752.77	---	---	---	---	---	---
PZ-3A	750.35	---	---	---	---	---	---
PZ-4A	749.42	---	---	---	---	---	---
PZ-4B	749.92	---	---	---	---	---	---
PZ-4C	749.69	---	---	---	---	---	---
PZ-5A	747.86	---	---	---	---	---	---
PZ-6A	746.9	---	---	---	---	---	---
IW-16	747.14	11.60	735.54	36.90	710.24	30.45	716.69
IW-17	746.86	24.05	722.81	40.75	706.11	39.80	707.06
IW-18	748.90	28.50	720.40	41.85	707.05	41.90	707.00
IW-19	749.63	24.85	724.78	43.40	706.23	38.75	710.88
IW-20	751.02	11.90	739.12	36.85	714.17	44.95	706.07
IW-21	752.80	10.40	742.40	44.55	708.25	44.50	708.30
OW-18	750.27	---	---	---	---	8.90	741.37
OW-19	746.38	---	---	---	---	6.30	740.08
OW-20	745.59	---	---	---	---	4.85	740.74
OW-21	741.82	---	---	---	---	10.50	731.32
OW-22	743.40	---	---	---	---	10.15	733.25
OW-23	744.68	---	---	---	---	4.00	740.68
OW-24	743.68	---	---	---	---	5.20	738.48
MW-7	743.63	---	---	---	---	10.00	733.63
MW-8	745.47	---	---	---	---	7.75	737.72
MW-9	749.90	---	---	---	---	15.00	734.90
MW-14	751.11	---	---	---	---	12.30	738.81
MW-15	752.79	7.85	744.94	7.80	744.99	7.90	744.89
MW-16	752.70	26.15	726.55	25.10	727.60	25.80	726.80
MW-20A	753.09	9.25	743.84	8.95	744.14	8.80	744.29
MW-20B	*	---	---	---	---	---	---
DW-1	*	---	---	---	---	---	---

GERAGHTY & MILLER, INC.

Well No.	Jun 18, 1991 Depth to Water (ft. below M.P.)	Jun 18, 1991 Water Level Elevation (ft. above mean sea level)	Jun 20, 1991 Depth to Water (ft. below M.P.)	Jun 20, 1991 Water Level Elevation (ft. above mean sea level)	Jun 26, 1991 Depth to Water (ft. below M.P.)	Jun 26, 1991 Water Level Elevation (ft. above mean sea level)	Sep 14, 1991 Depth to Water (ft. below M.P.)	Sep 14, 1991 Water Level Elevation (ft. above mean sea level)
PZ-1	13.90	740.88	12.70	742.08	11.55	743.23	13.79	740.99
PZ-2	18.80	734.62	18.80	734.62	18.70	734.72	19.65	733.77
PZ-3	19.00	731.81	18.95	731.86	18.45	732.36	19.78	731.03
PZ-4	25.05	725.34	25.05	725.34	24.90	725.49	26.20	724.19
PZ-5	27.35	721.30	27.40	721.25	27.15	721.50	28.69	719.96
PZ-6	49.00	698.07	49.00	698.07	48.90	698.17	49.83	697.24
PZ-7	32.05	714.52	31.20	715.37	30.20	716.37	32.67	713.90
PZ-8	25.60	727.44	25.35	727.69	23.35	729.69	—	—
PZ-9	8.10	741.50	7.90	741.70	7.45	742.15	—	—
PZ-10	21.25	733.78	21.30	733.73	21.10	733.93	23.51	731.52
PZ-11	13.10	736.76	13.25	736.61	12.70	737.16	—	—
PZ-2A	—	—	—	—	—	—	13.04	739.73
PZ-3A	—	—	—	—	—	—	15.14	735.21
PZ-4A	—	—	—	—	—	—	11.39	738.03
PZ-4B	—	—	—	—	—	—	Dry	—
PZ-4C	—	—	—	—	—	—	33.56	716.13
PZ-5A	—	—	—	—	—	—	17.40	730.46
PZ-6A	—	—	—	—	—	—	12.75	734.15
IW-16	34.00	713.14	—	—	—	—	33.42	713.72
IW-17	41.55	705.31	—	—	—	—	38.90	707.96
IW-18	40.70	708.20	—	—	—	—	35.92	712.98
IW-19	45.00	704.63	—	—	—	—	41.15	708.48
IW-20	43.40	707.62	—	—	—	—	39.35	711.67
IW-21	9.00	743.80	—	—	—	—	29.65	723.15
OW-18	11.15	739.12	—	—	—	—	10.98	739.29
OW-19	7.35	739.03	—	—	—	—	7.94	738.44
OW-20	4.45	741.14	—	—	—	—	5.55	740.04
OW-21	10.05	731.77	—	—	—	—	—	—
OW-22	9.60	733.80	—	—	—	—	—	—
OW-23	4.50	740.18	—	—	—	—	5.64	739.04
OW-24	4.85	738.83	—	—	—	—	5.02	738.66
MW-7	9.45	734.18	—	—	—	—	—	—
MW-8	7.25	738.22	—	—	—	—	—	—
MW-9	13.85	736.05	—	—	—	—	—	—
MW-14	11.50	739.61	—	—	—	—	—	—
MW-15	11.15	741.64	—	—	—	—	11.79	741.00
MW-16	28.15	724.55	—	—	—	—	Dry	—
MW-20A	8.65	744.44	—	—	—	—	15.43	737.66
MW-20B	9.55	—	9.60	—	9.30	—	16.08	—
DW-1	—	—	—	—	—	—	78.88	—

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Well No.	Oct 01, 1991 Depth to Water (ft below M.P.)	Oct 01, 1991 Water Level Elevation (ft. above mean sea level)
PZ-1	14.65	740.13
PZ-2	20.90	732.52
PZ-3	19.25	731.56
PZ-4	26.50	729.89
PZ-5	28.95	719.76
PZ-6	Dry	---
PZ-7	32.90	713.67
PZ-8	26.35	726.69
PZ-9	8.55	741.05
PZ-10	23.70	731.33
PZ-11	16.90	732.96
PZ-2A	12.35	740.42
PZ-3A	14.00	736.35
PZ-4A	10.30	739.12
PZ-4B	24.35	725.57
PZ-4C	11.80	737.89
PZ-5A	12.05	735.81
PZ-6A	13.30	733.60
IW-16	33.10	714.04
IW-17	40.20	706.66
IW-18	35.60	713.30
IW-19	37.65	711.98
IW-20	36.90	714.12
IW-21	35.35	717.45
OW-18	11.10	739.17
OW-19	7.95	738.43
OW-20	5.60	739.99
OW-21	11.45	730.37
OW-22	11.25	732.15
OW-23	5.35	739.33
OW-24	5.40	738.28
MW-7	11.50	732.13
MW-8	8.35	737.12
MW-9	15.85	734.05
MW-14	13.35	737.76
MW-15	11.90	740.89
MW-16	31.10	721.60
MW-20A	11.90	741.19
MW-20B	12.80	---
DW-1	80.35	---

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Table C-1. Piezometer Elevations and Coordinates
Monsanto Chemical Company, Anniston, Alabama

Piezometer I.D.	Ground Elevation	Top of Casing Elevation	Coordinates Northing	Coordinates Easting	Total Depth (bls)	Total Depth Elevation
PZ-1	752.58	754.78	5729.1718	4575.6469	50.00	702.58
PZ-2	751.03	753.42	5759.5410	4627.9706	50.00	701.03
PZ-2A	751.19	752.77	5754.8117	4623.8245	33.00	718.19
PZ-3	748.85	750.81	5819.0191	4700.8297	48.60	700.25
PZ-3A	748.34	750.35	5819.1293	4704.6401	33.00	715.34
PZ-4	747.70	750.39	5849.6967	4755.1013	50.00	697.70
PZ-4A	747.34	749.42	5851.5613	4760.0155	30.00	717.34
PZ-4B	747.98	749.69	5841.6983	4742.6078	33.00	714.98
PZ-4C	747.67	749.92	5832.9713	4730.6866	33.00	714.67
PZ-5	746.18	748.65	5888.3429	4823.2235	50.00	696.18
PZ-5A	745.85	747.86	5889.8288	4827.2129	26.00	719.85
PZ-6	745.34	747.07	5933.0195	4899.1166	50.00	695.34
PZ-6A	745.12	746.90	5931.9308	4901.5340	29.00	716.12
PZ-7	744.61	746.57	5969.4553	4969.9553	50.00	694.61
PZ-8	751.98	753.04	5735.4973	4635.2632	49.90	702.08
PZ-9	747.31	749.60	5715.3862	4829.0808	40.00	707.31
PZ-10	752.65	755.03	5597.6676	4534.4597	50.00	702.65
PZ-11	747.93	749.86	5826.1381	4334.5407	45.00	702.93

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Table C-2. Observation Well Elevations and Coordinates
Monsanto Chemical Company, Anniston, Alabama

Observation Well I.D. (Original)	Ground Elevation	Top of Casing Elevation	Coordinates Northing	Coordinates Easting	Total Depth (bls)	Total Depth Elevation
OW-1 (P-18)	808.16	811.93	3827.9062	5730.0299	31.00	777.16
OW-2		807.15	3928.6240	5750.3499	24.00	
OW-3		802.91	4000.2220	5758.4163	24.00	
OW-4		798.29	4075.5374	5768.7425	27.00	
OW-5 (MW-5)	754.34	756.29	4596.9599	5878.1713	106.00	648.34
OW-6 (MW-4)	771.70	773.88	4804.1091	6390.9203	45.00	726.70
OW-7		783.58	4932.3947	6319.9443	43.00	
OW-8		474.58	5181.9978	6037.9503	24.00	
OW-9		738.12	5509.3130	6203.0171	38.00	
OW-10		736.24	5777.0475	6032.8843	38.00	
OW-11 (P-23)	816.13	819.91	3790.0516	5885.3530	24.00	792.13
OW-12 (P-24)	830.19	834.70	3718.1103	5918.7698	14.00	816.19
OW-13 (P-13)	800.33	802.25	4263.9056	6201.8950	40.00	760.33
OW-14 (P-14)	802.70	806.67	4186.8562	6028.9765	51.00	751.70
OW-15 (CB-86)		763.67	4725.9430	5998.5433	40.00	
OW-16 (CB-87)		777.59	4496.6327	5939.1990	40.00	
OW-17 (CB-88)		806.06	4184.3524	6144.7978	40.00	
OW-18 (MW-17)	746.98	750.27	5817.5676	4641.7994	27.50	719.48
OW-19 (MW-18)	745.60	746.38	5845.9243	4702.4301	32.50	713.10
OW-20 (MW-19)	744.48	745.59	5878.3456	4754.3431	23.00	721.48
OW-21 (CB-80)		741.82	6106.4621	4941.6860	34.00	
OW-22 (CB-81)		743.40	6057.2026	4873.6401	36.00	
OW-23 (CB-83)		744.68	5906.3912	4803.8346	23.00	
OW-24 (CB-84)		743.68	5936.1344	4858.6915	29.00	

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Table C-3. Monitoring Well Elevations and Coordinates
Monsanto Chemical Company, Anniston, Alabama

Monitor Well I.D. (Original)	Ground Elevation	Top of Casing Elevation	Coordinates Northing	Coordinates Easting	Total Depth (bls)	Total Depth Elevation
MW-1	865.21	867.62	3682.4968	6622.9915	60.00	805.21
MW-1A	882.04	883.04	3669.8972	6958.1404	60.00	822.04
MW-1B	879.09	881.49	3690.3044	7005.2612	63.00	816.09
MW-2	773.58	776.34	4719.4542	7243.4779	41.00	732.58
MW-3	787.77	789.73	4530.7312	6827.8764	75.00	712.77
MW-4 (OW-6)	771.70	773.88	4804.1091	6390.9203	45.00	726.70
MW-5 (OW-5)	754.34	756.29	4596.9599	5878.1713	106.00	648.34
MW-6	796.76	799.27	4023.0357	5637.8296	36.00	760.76
MW-7	740.96	743.63	6220.9945	4911.5344	25.00	715.96
MW-8	742.79	745.47	6028.3706	4762.7937	30.00	712.79
MW-9	744.76	749.90	5904.9266	4545.9454	40.00	704.76
MW-11A	782.08	783.74	4656.7563	7057.7087	122.50	659.58
MW-12A	782.12	785.69	4599.0680	6921.9948	124.50	657.62
MW-13A	778.61	781.77	4518.4923	6738.7256	123.50	655.11
MW-14 (B-63)	748.71	751.11	5813.0722	4388.3952	25.00	723.71
MW-15	752.08	752.79	5669.2560	4491.1417	39.00	713.08
MW-16	752.10	752.70	5770.7998	4539.4600	68.00	684.10
(MW-17) OW-18	746.98	750.27	5817.5676	4641.7994	27.50	719.48
(MW-18) OW-19	745.60	746.38	5845.9243	4702.4301	32.50	713.10
(MW-19) OW-20	744.48	745.59	5878.3456	4754.3431	32.50	711.98
MW-20					26.00	
MW-20A	751.00	753.09	5735.6963	4635.7112	24.00	727.00
(MW-20) OW-21		741.82	6106.4621	4941.6860	40.00	
(MW-21) OW22		743.40	6057.2026	4873.6401	40.00	
(MW-23) OW-23		744.68	5906.6912	4803.8346	40.00	
(MW-24) OW-24		743.68	5936.1344	4856.6915	40.00	
BR-1					319.00	
BR-2					420.00	
BR-3					265.00	
BR-4		790.42	4218.1648	5321.6865		
BR-5		768.10	4744.0608	4583.5365		

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Table 1. Water Level Data for Monsanto Chemical Company, Anniston, Alabama

Well No.	Measuring Pt. Elevation (ft above mean sea level)	Apr 18, 1991 Depth to Water (ft below M.P.)	Apr 18, 1991 Water Level Elevation (ft. above mean sea level)	Apr 20, 1991 Depth to Water (ft. below M.P.)	Apr 20, 1991 Water Level Elevation (ft. above mean sea level)	May 06, 1991 Depth to Water (ft. below M.P.)	May 06, 1991 Water Level Elevation (ft. above mean sea level
PZ-1	754.78	13.11	741.67	13.84	740.94	---	---
PZ-2	753.42	15.55	737.87	17.28	736.14	---	---
PZ-3	750.81	45.50	705.31	29.93	720.88	---	---
PZ-4	750.39	Dry	---	Dry	---	---	---
PZ-5	748.65	Dry	---	51.00	697.65	---	---
PZ-6	747.07	---	---	44.03	703.04	---	---
PZ-7	746.57	---	---	27.94	718.63	---	---
PZ-8	753.04	---	---	41.85	711.19	---	---
PZ-9	749.60	---	---	---	---	---	---
PZ-10	755.03	---	---	19.62	735.41	---	---
PZ-11	749.86	---	---	8.45	741.41	---	---
PZ-2A	752.77	---	---	---	---	---	---
PZ-3A	750.35	---	---	---	---	---	---
PZ-4A	749.42	---	---	---	---	---	---
PZ-4B	749.92	---	---	---	---	---	---
PZ-4C	749.69	---	---	---	---	---	---
PZ-5A	747.86	---	---	---	---	---	---
PZ-6A	746.9	---	---	---	---	---	---
IW-16	747.14	11.60	735.54	36.90	710.24	30.45	716.69
IW-17	746.86	24.05	722.81	40.75	706.11	39.80	707.06
IW-18	748.90	28.50	720.40	41.85	707.05	41.90	707.00
IW-19	749.63	24.85	724.78	43.40	706.23	38.75	710.88
IW-20	751.02	11.90	739.12	36.85	714.17	44.95	706.07
IW-21	752.80	10.40	742.40	44.55	708.25	44.50	708.30
OW-18	750.27	---	---	---	---	8.90	741.37
OW-19	746.38	---	---	---	---	6.30	740.08
OW-20	745.59	---	---	---	---	4.85	740.74
OW-21	741.82	---	---	---	---	10.50	731.32
OW-22	743.40	---	---	---	---	10.15	733.25
OW-23	744.68	---	---	---	---	4.00	740.68
OW-24	743.68	---	---	---	---	5.20	738.48
MW-7	743.63	---	---	---	---	10.00	733.63
MW-8	745.47	---	---	---	---	7.75	737.72
MW-9	749.90	---	---	---	---	15.00	734.90
MW-14	751.11	---	---	---	---	12.30	738.81
MW-15	752.79	7.85	744.94	7.80	744.99	7.90	744.89
MW-16	752.70	26.15	726.55	25.10	727.60	25.80	726.90
MW-20A	753.09	9.25	743.84	8.95	744.14	8.80	744.29
MW-20B	*	---	---	---	---	---	---
DW-1	*	---	---	---	---	---	---

Well No.	Jun 18, 1991 Depth to Water (ft. below M.P.)	Jun 18, 1991 Water Level Elevation (ft. above mean sea level)	Jun 20, 1991 Depth to Water (ft. below M.P.)	Jun 20, 1991 Water Level Elevation (ft. above mean sea level)	Jun 26, 1991 Depth to Water (ft. below M.P.)	Jun 26, 1991 Water Level Elevation (ft. above mean sea level)	Sep 14, 1991 Depth to Water (ft. below M.P.)	Sep 14, 1991 Water Level Elevation (ft. above mean sea level)
PZ-1	13.90	740.88	12.70	742.08	11.55	743.23	13.79	740.99
PZ-2	18.80	734.62	18.80	734.62	18.70	734.72	19.65	733.77
PZ-3	19.00	731.81	18.95	731.86	18.45	732.36	19.78	731.03
PZ-4	25.05	725.34	25.05	725.34	24.90	725.49	26.20	724.19
PZ-5	27.35	721.30	27.40	721.25	27.15	721.50	28.69	719.96
PZ-6	49.00	698.07	49.00	698.07	48.90	698.17	49.83	697.24
PZ-7	32.05	714.52	31.20	715.37	30.20	716.37	32.67	713.90
PZ-8	25.60	727.44	25.35	727.69	23.35	729.69	---	---
PZ-9	8.10	741.50	7.90	741.70	7.45	742.15	---	---
PZ-10	21.25	733.78	21.30	733.73	21.10	733.93	23.51	731.52
PZ-11	13.10	736.76	13.25	736.61	12.70	737.16	---	---
PZ-2A	---	---	---	---	---	---	13.04	739.73
PZ-3A	---	---	---	---	---	---	15.14	735.21
PZ-4A	---	---	---	---	---	---	11.39	738.03
PZ-4B	---	---	---	---	---	---	Dry	---
PZ-4C	---	---	---	---	---	---	33.56	716.13
PZ-5A	---	---	---	---	---	---	17.40	730.46
PZ-6A	---	---	---	---	---	---	12.75	734.15
IW-16	34.00	713.14	---	---	---	---	33.42	713.72
IW-17	41.55	705.31	---	---	---	---	38.90	707.96
IW-18	40.70	708.20	---	---	---	---	35.92	712.98
IW-19	45.00	704.63	---	---	---	---	41.15	708.48
IW-20	43.40	707.62	---	---	---	---	39.35	711.67
IW-21	9.00	743.80	---	---	---	---	29.65	723.15
OW-18	11.15	739.12	---	---	---	---	10.98	739.29
OW-19	7.35	739.03	---	---	---	---	7.94	738.44
OW-20	4.45	741.14	---	---	---	---	5.55	740.04
OW-21	10.05	731.77	---	---	---	---	---	---
OW-22	9.60	733.80	---	---	---	---	---	---
OW-23	4.50	740.18	---	---	---	---	5.64	739.04
OW-24	4.85	738.83	---	---	---	---	5.02	738.66
MW-7	9.45	734.18	---	---	---	---	---	---
MW-8	7.25	738.22	---	---	---	---	---	---
MW-9	13.85	736.05	---	---	---	---	---	---
MW-14	11.50	739.61	---	---	---	---	---	---
MW-15	11.15	741.64	---	---	---	---	11.79	741.00
MW-16	28.15	724.55	---	---	---	---	Dry	---
MW-20A	8.65	744.44	---	---	---	---	15.43	737.66
MW-20B	9.55	---	9.60	---	9.30	---	16.08	---
DW-1	---	---	---	---	---	---	78.88	---

Well No.	Oct 01, 1991 Depth to Water (ft below M.P.)	Oct 01, 1991 Water Level Elevation (ft. above mean sea level)
PZ-1	14.65	740.13
PZ-2	20.90	732.52
PZ-3	19.25	731.56
PZ-4	26.50	723.89
PZ-5	28.95	719.70
PZ-6	Dry	—
PZ-7	32.90	713.67
PZ-8	26.35	726.69
PZ-9	8.55	741.05
PZ-10	23.70	731.33
PZ-11	16.90	732.96
PZ-2A	12.35	740.42
PZ-3A	14.00	736.35
PZ-4A	10.30	739.12
PZ-4B	24.35	725.57
PZ-4C	11.80	737.89
PZ-5A	12.05	735.81
PZ-6A	13.30	733.60
IW-16	33.10	714.04
IW-17	40.20	706.66
IW-18	35.60	713.30
IW-19	37.65	711.98
IW-20	36.90	714.12
IW-21	35.35	717.45
OW-18	11.10	739.17
OW-19	7.95	738.43
OW-20	5.60	739.99
OW-21	11.45	730.37
OW-22	11.25	732.15
OW-23	5.35	739.33
OW-24	5.40	738.28
MW-7	11.50	732.13
MW-8	8.35	737.12
MW-9	15.85	734.05
MW-14	13.35	737.76
MW-15	11.90	740.89
MW-16	31.10	721.60
MW-20A	11.90	741.19
MW-20B	12.80	---
DW-1	80.35	---

APPENDIX A

LITHOLOGIC LOGS

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-2

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Reddish brown to tan color. Sand is medium to fine-grained. Subrounded. Limestone fragments are present but not abundant. Sediments are fairly well compacted. Strong odor detected	0 - 30.5	30.5
Clay. Grey, brown and tan color. Clay is hard packed and very compenent. Limestone fragments were noted. Strong odor detected	30.5 - 51	20.5

Geologist: Jason Kirkpatrick
Date Drilled: April 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-2A

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Dark reddish brown but mottled yellow, grey, and black. Sand is medium to fine-grained. Subrounded. Some Limestone clasts as well as very coarse-grained sandstone pebbles. Strong odor detected at 13 feet	0 - 29.5	29.5
Clay. Brownish-red but mottled with yellow and grey clay. Clay is dense, dry, and brittle. Contains some small limestone fragments. Strong odor detected at 34 feet	29.5 - 35	5.5

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-3A

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Light brown but mottled olive green, dark red, and light grey. Black tar-like paste in small gravel lenses at 4 and 8 feet. Black staining with hydrocarbon odor detected	0 - 13	13
Clayey sand. Moderate brown with some dark red, light green. Small sandstone gravel lens with some limestone and coarse-grained sandstone clasts throughout. Sandy lenses at 18 feet with visible staining and slight odor	13 - 24	11
Clay. Mottled colors - brown, red, light grey. Some black staining evident. Clay is dense, dry, and brittle. Fine laminations evident with small angular clasts within laminations	24 - 35	11

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-4A

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Clayey sand. Light brown with some green-black staining. Small lens of reddish-brown sandy clay at 3.5 feet. Black tar-like pebble-size pieces found from 8 to 18 feet	0 - 18.5	18.5
Clay. Mottled colors - orange, red, yellow, light grey, pink, various shades of brown. Clay is dense, dry, and brittle. Fine laminations present. Slight odor detected in areas with black staining.	18.5 - 30	11.5

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-4B

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Moderate brown to reddish brown. Limestone clasts present with some small silty pebbles. Sand becomes fine-grained from 9 to 10 feet. Small lens of sub-rounded coarse-grained sand at 14 feet. Hydrocarbon odor detected in some areas	0 - 19	19
Clay. Light brown with some red, orange, light grey. Clay is dense, dry, and brittle. Small lens of sandy clay at 23 feet. Black staining evident with odor detected	19 - 30	11

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-4C

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Moderate brown but mottled red, orange, yellow. 10% small sandstone and limestone pebbles in upper horizon. Grades into a clayey sand to a sand at 13 feet. Black staining evident with an odor present	0 - 19	19
Clay. Mottled colors - red, orange, yellow, various shades of brown. Some light grey present. Clay is dense, dry, and brittle	19 - 30	11

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-5A

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Moderate brown. Contains limestone, siltstone, and coarse-grained sandstone fragments. Some reddish-orange clay within. Odor detected at 8 feet	0 - 13	13
Clay. Mottled colors - red, orange, light grey. Clay is dense, dry, and brittle	13 - 25	12

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF PIEZOMETER PZ-6A

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Brown. 10% small limestone pebbles, some black staining evident	0 - 14	14
Clay. Mottled colors - red, orange, yellow. Clay is dense, dry, and brittle. Semi-plastic at 19 feet and brittle again at 23 feet with 30% black staining and detectable odor	14 - 28	14
Clay. Brown with black staining, odor present. Clay has semi-plastic consistency. Fine laminations visible with small shaley clasts within laminations	28 - 30	2

Geologist: Chris Bona
Date Drilled: September 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF MONITOR WELL MW-20B

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Brown clay contains less than 5% quartz sand. Sand is very fine-grained and is well rounded. Contains pebble and cobble-size chert and limestone fragments. Fragments are subrounded. Visible indication of water at 7 ft bls . .	0 - 8	8
Sandy clay. Brown. Contains approximately 10% quartz sand. Sand grains are very fine-grained and well rounded. Chert and limestone fragments are present but not as abundant	8 - 12	4
Clay. Orange, brown, and red clay. Subrounded chert and limestone fragments present	12 - 16	4
Sandy clay. Brown clay with less than 5% quartz sand. Sand grains are very fine-grained and well rounded. Contains pebble and cobble-size chert and limestone fragments which are subrounded. At 24 ft bls strong contamination odor detected.	16 - 24	8

Geologist: Joseph Mizerany
Date Drilled: May 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF ABANDONED MONITOR WELL MW-22

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
See lithologic log for MW-20B	0 - 24	24
Sandy clay. Brown clay with less than 5% quartz sand. Sand grains are very fine grained and well rounded. Contains pebble and cobble size chert and limestone fragments which are subrounded. At 24 ft bls strong odor was prevelant and continued until 34 ft bls	24 - 34	10
Clay. Grey, red, and brown; semilithified clay. Clay is dry and appears to be a competent confining layer. No odor detected	34 - 46	12
Sandy clay. Brown sandy clay which contains approximately 10% quartz sand. Sand grains are very fine grained and well rounded. Contains subround chert and limestone fragments. Strong odor detected	46 - 67	21
Clay. Grey, red, and brown clay, semilithified. Clay is dry and appears to be a competent confining layer. No odor detected	67 - 81	14
Sandy clay. Brown sandy clay which contains 15 - 20% quartz sand. Sand is very fine grained and well rounded. Wet. Strong odor detected	81 - 86	5

Geologist: Joseph Mizerany
Date Drilled: May 1991

LITHOLOGIC LOG AND PHYSICAL DESCRIPTION OF MONITOR WELL DW-1

Monsanto Chemical Company
Anniston, Alabama

Description	Depth (ft)	Thickness (ft)
Sandy clay. Moderate brown with some dark yellowish orange at top. Small sandstone and dolomite pebbles present. Some limestone gravel as well as coarse-grained sandstone fragments. Slight odor detected at 23 feet with minor amounts of black staining. Dense clay lenses at 24.5 and 29.5 feet.	0 - 34	34
Clay. Mottled colors. Various shades of brown, red, yellow, orange, yellow-green. Clay is dense, dry, and brittle. Black staining evident from 48 feet with slight detectable odor. Small sandy clay lens at 36 feet	34 - 78	44
Clay. Moderate brown. Dry. Contains 5-10% small sandstone and shale clasts. Thin lenses of soft weathered shale present. Detectable odor observed.	78 - 80	2
Bedrock. Light grey competent limestone.	81 - 96	15

Geologist: Chris Bona
Date Drilled: September 1991

APPENDIX B

PIEZOMETER AND WELL CONSTRUCTION LOGS

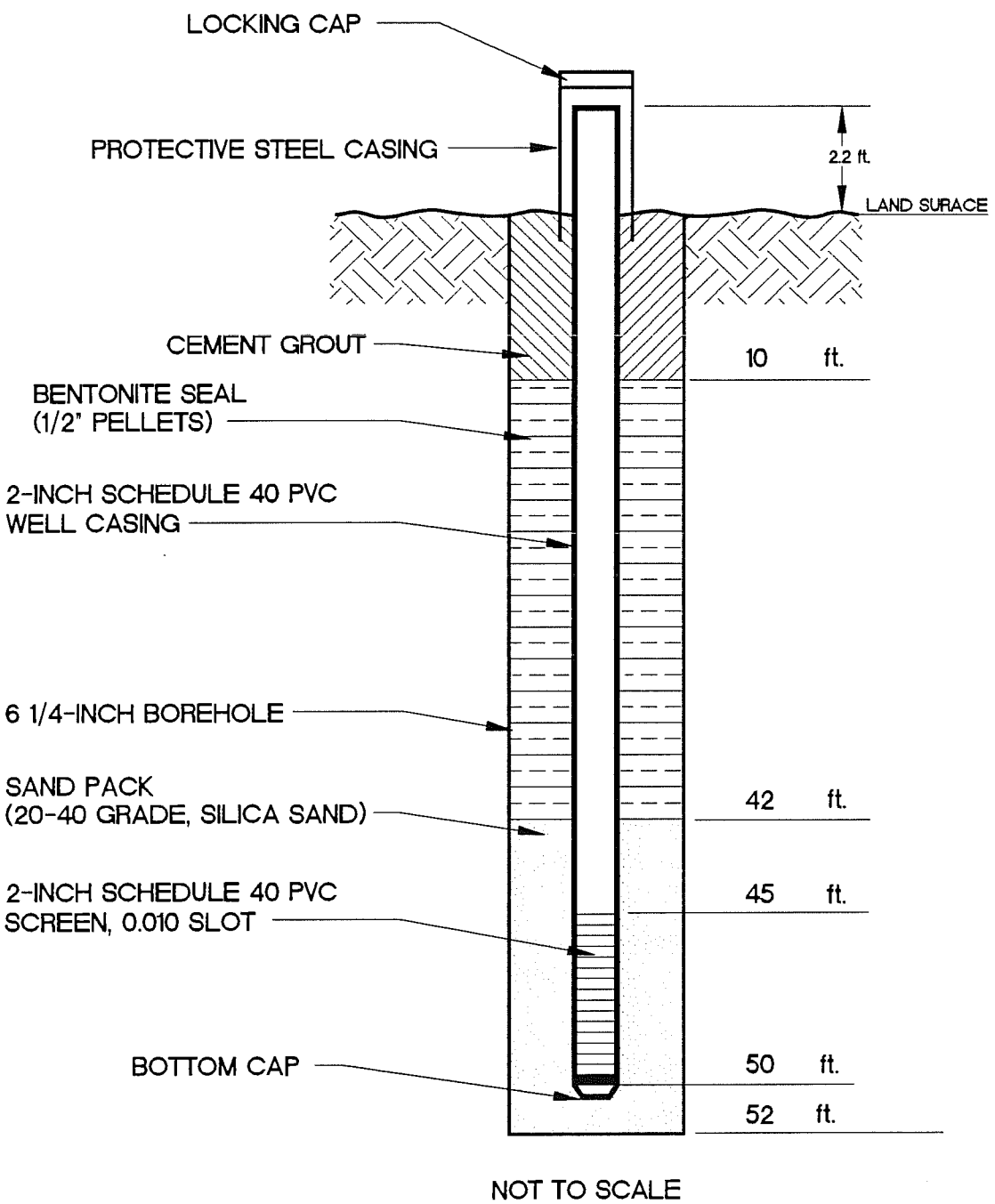
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 1

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	752.58	754.78
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P. / DATE:**
N / A	0	4-16-91	13.84 / 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

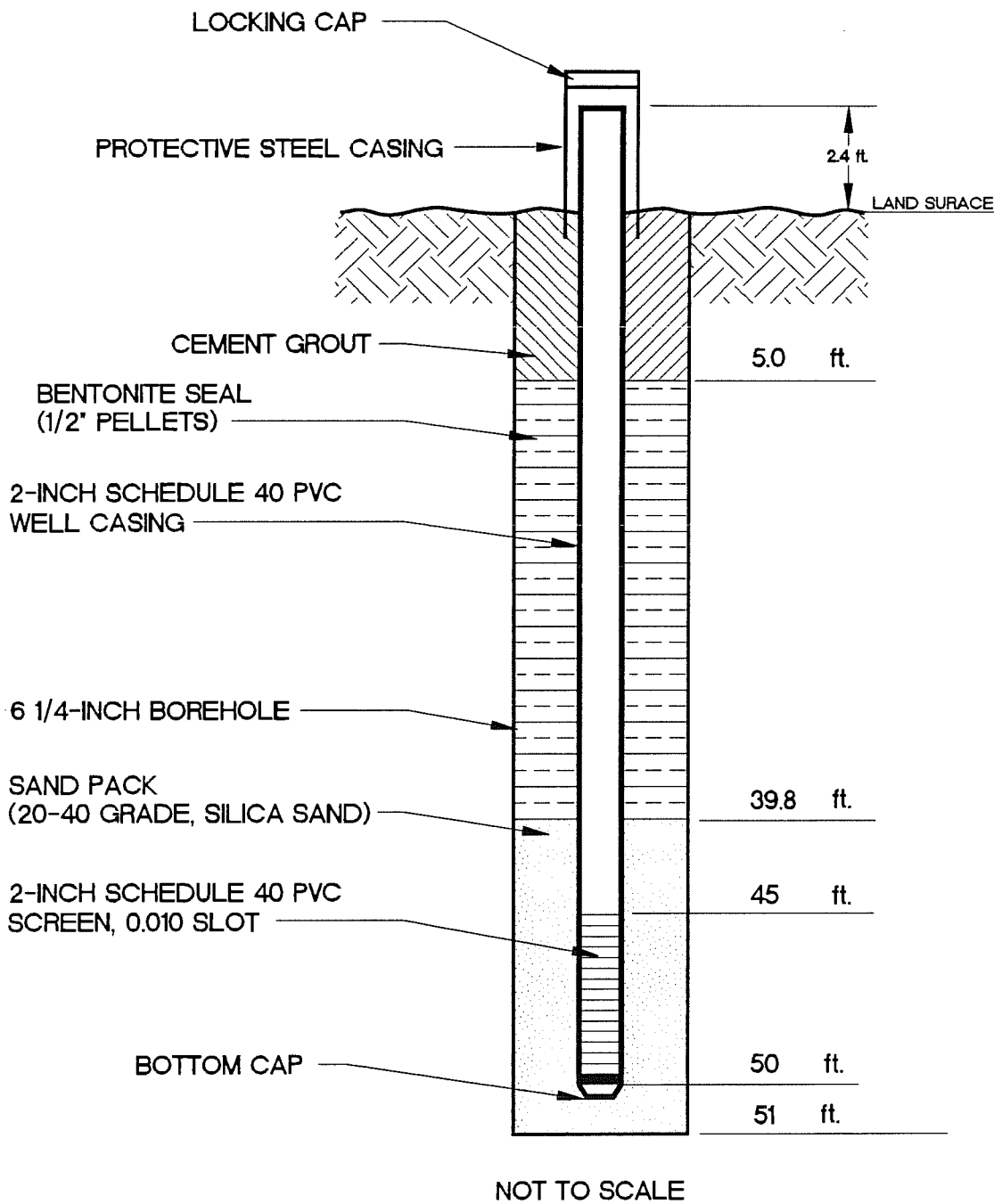
DWG DATE: 10-01-91 | PRJCT NO.: TF525.09 | FILE NO.: MONSANTO | DRAWING: MONSAN10 | CHECKED: 0000 | APPROVED: 0000 | DRAFTER: JVP

GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO.	PZ - 2
PROJECT	T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	751.03	753.42
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 17.28
N / A	0	4-16-91	**DATE:** 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

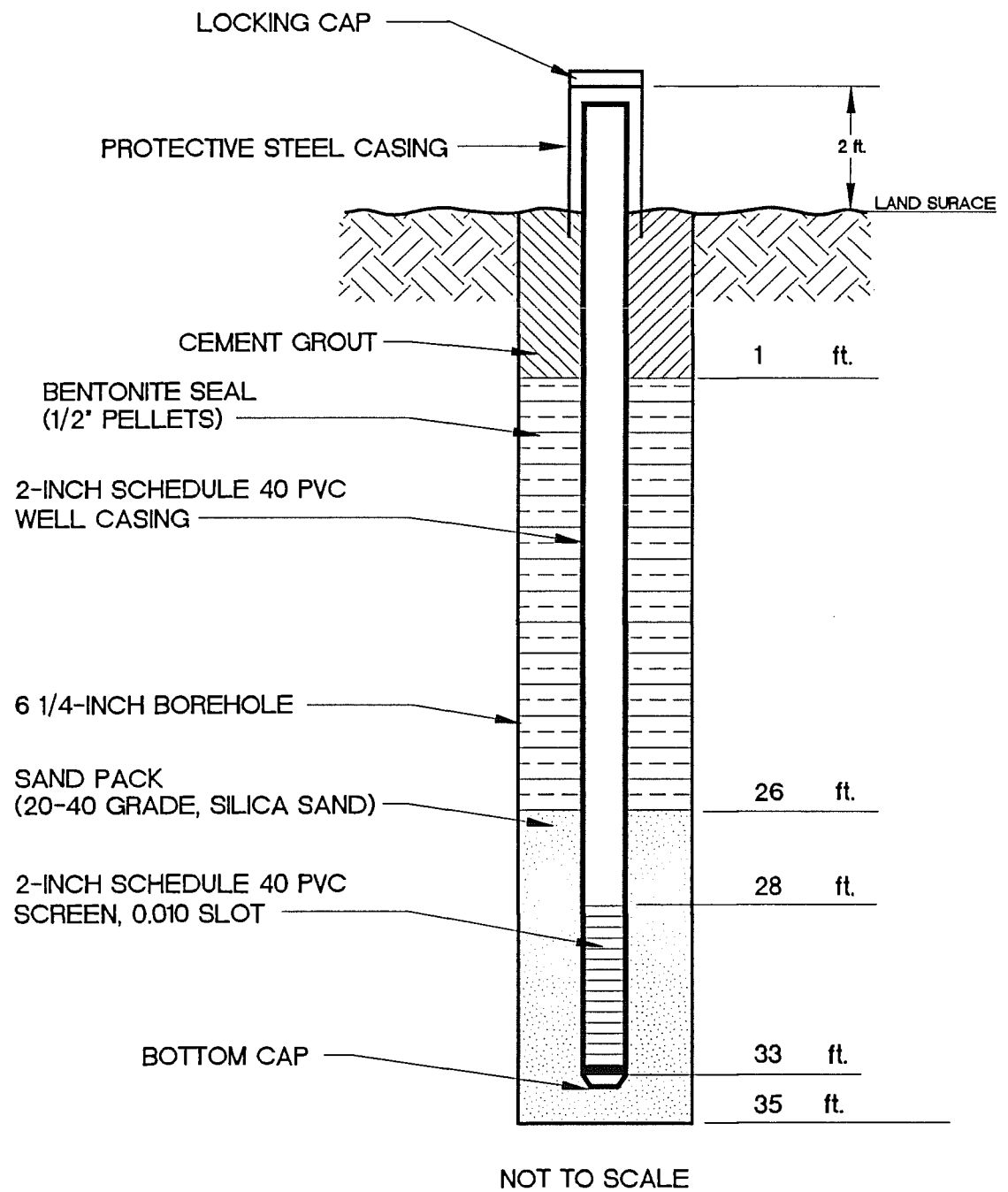
DRAFTER: JVP | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN11 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-02-91

GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO.	PZ-2A
PROJECT	TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	751.19	752.77
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 13.04
Teflon Bailer	~10	9-04-91	**DATE:** 9-14-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: DT/JVP/BJH | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN01 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-15-91

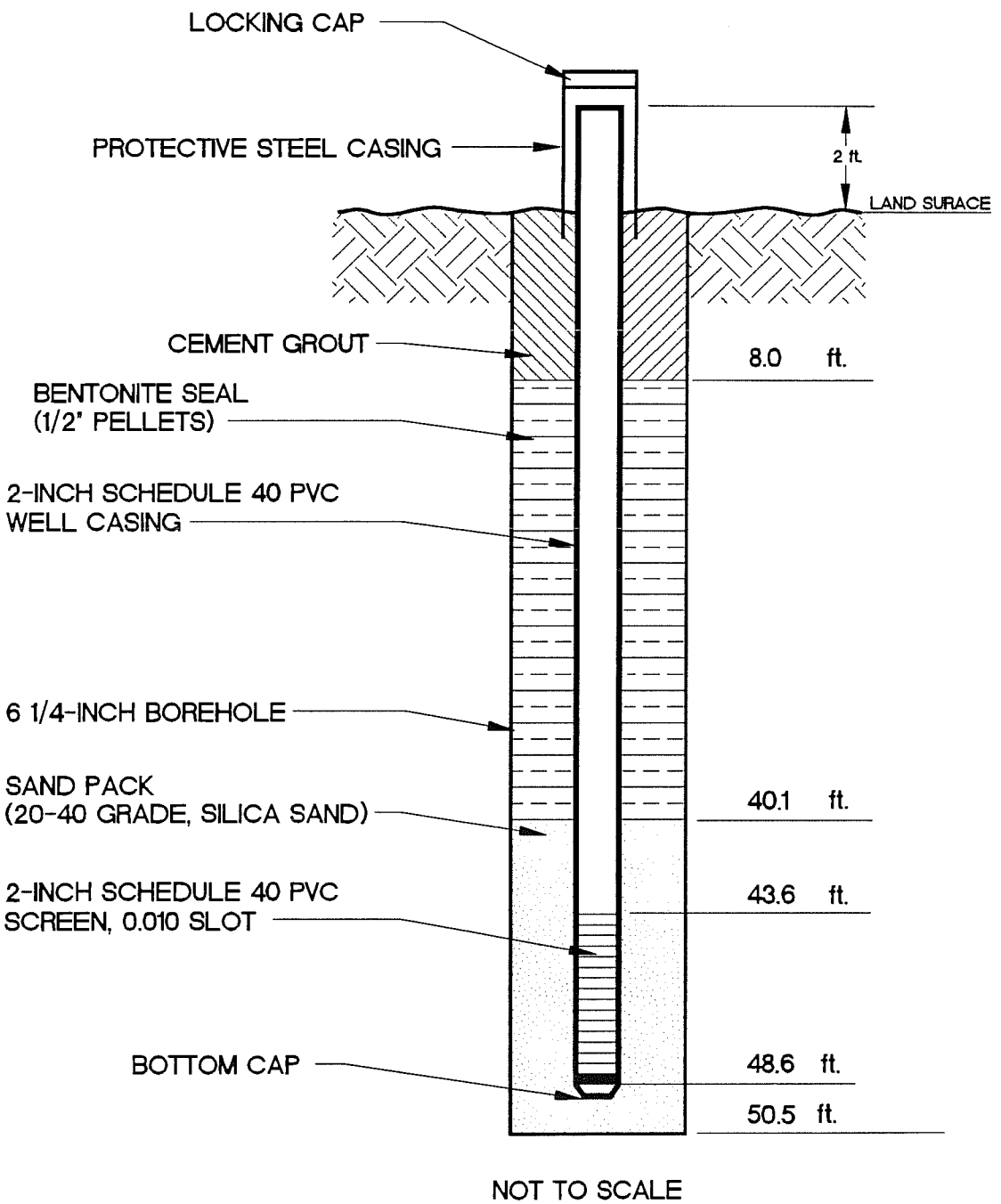
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 3

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	748.85	750.81
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 29.93
N / A	0	4-17-91	**DATE:** 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: JVP | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN12 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-02-91

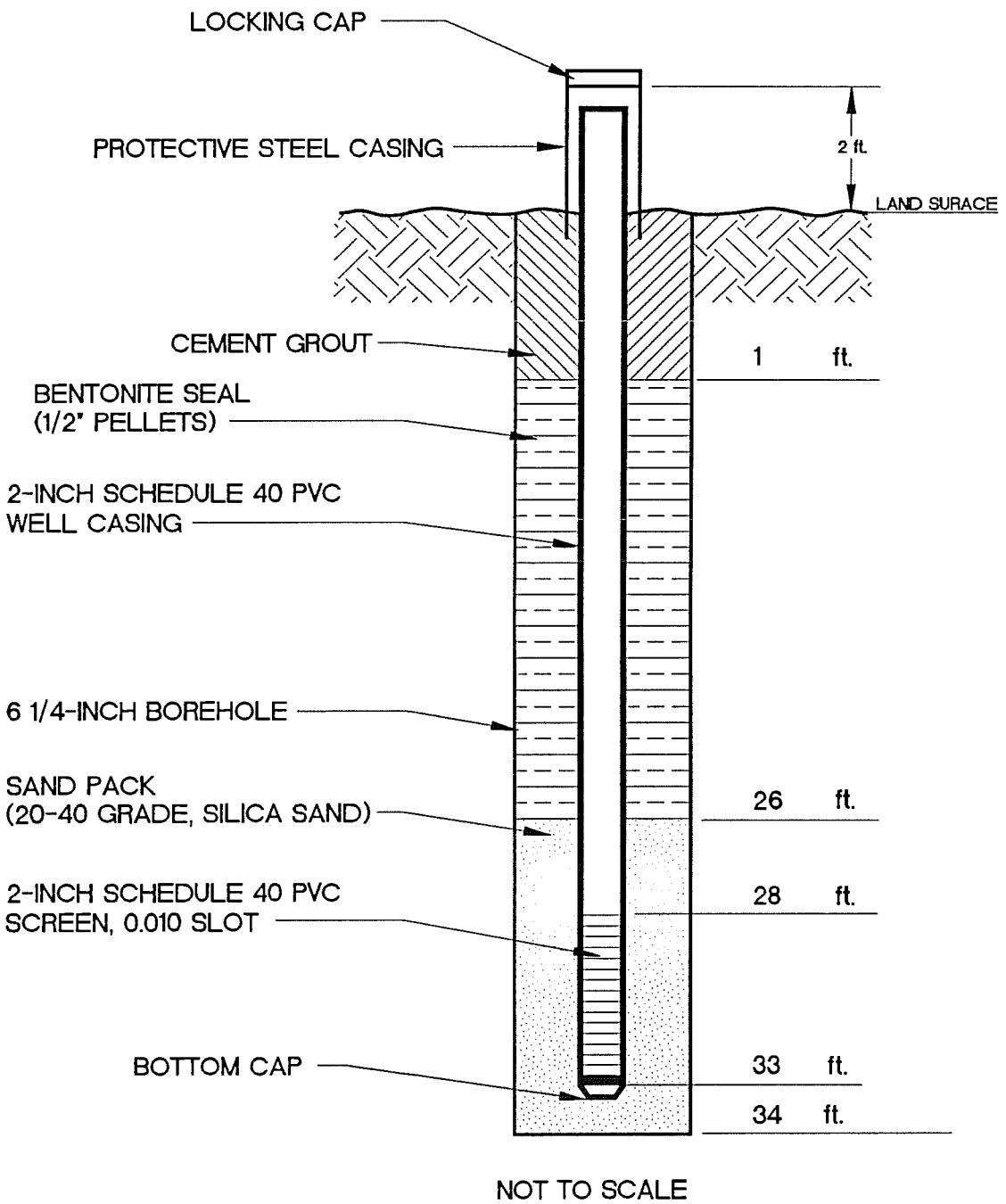
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ-3A

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	748.34	750.35
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 15.14
Teflon Bailer	~10	9-10-91	**DATE:** 9-14-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: DT/JVP/BJH | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN02 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-15-91

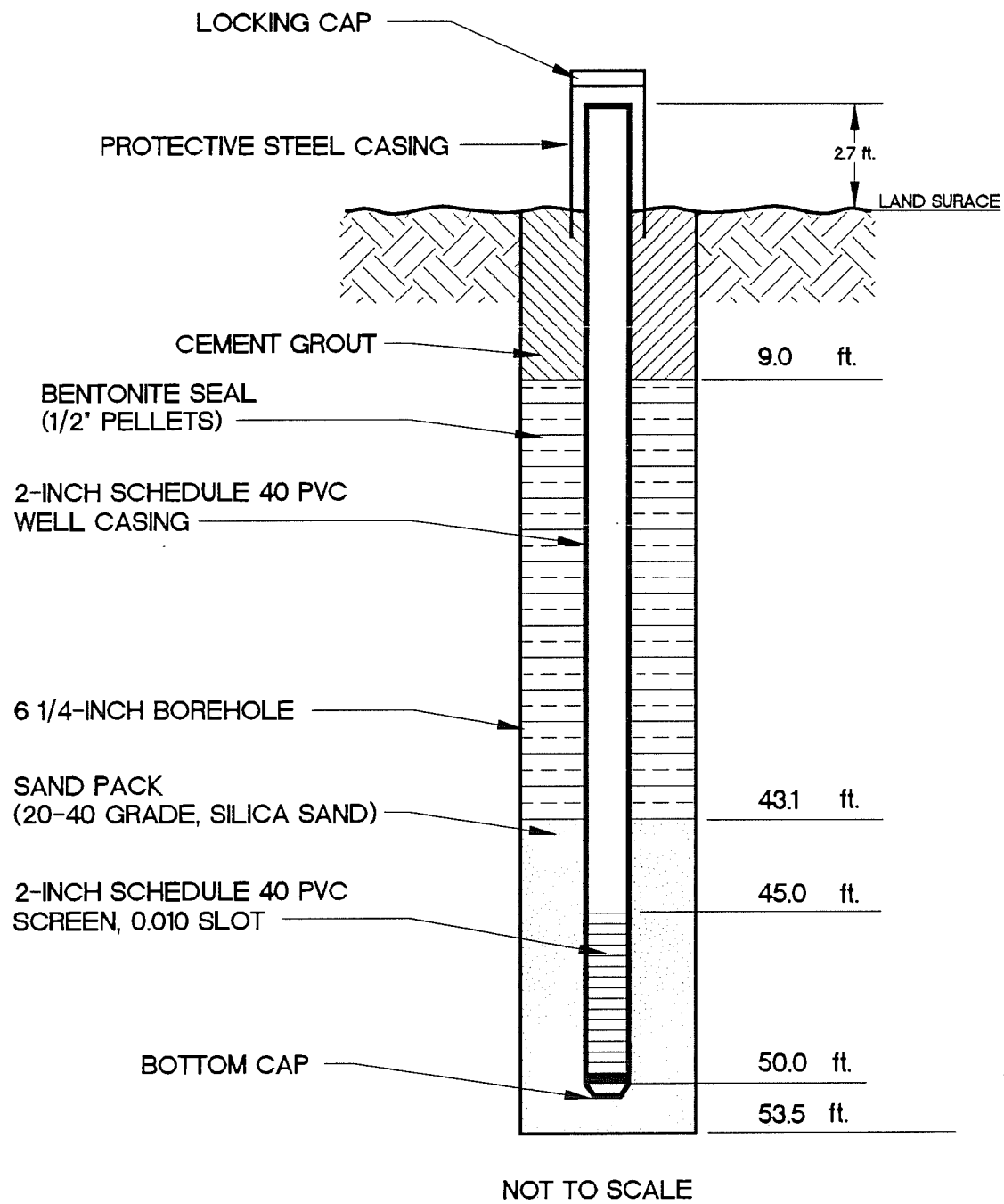
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 4

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	747.70	750.39
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** Dry
N / A	0	4-17-91	DATE: 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: JVP | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN13 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-02-91

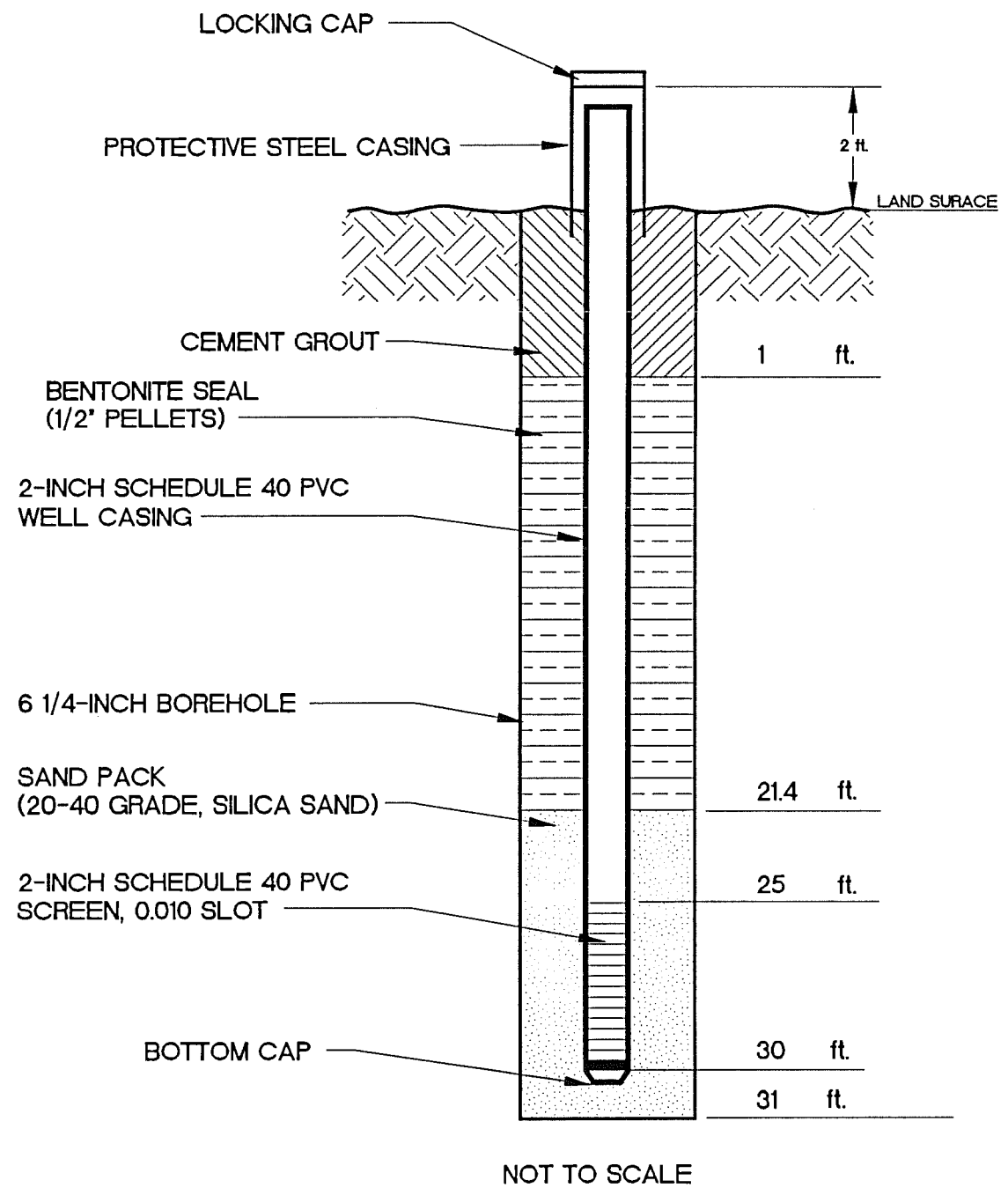
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ-4A

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	747.34	749.42
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 11.39
Teflon Bailer	~10	9-10-91	**DATE:** 9-14-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DWG DATE: 10-15-91 | PRJCT NO.: TF525.09 | FILE NO.: MONSANTO | DRAWING: MONSAN03 | CHECKED: 0000 | APPROVED: 0000 | DRAFTER: DT/JVP/BJH

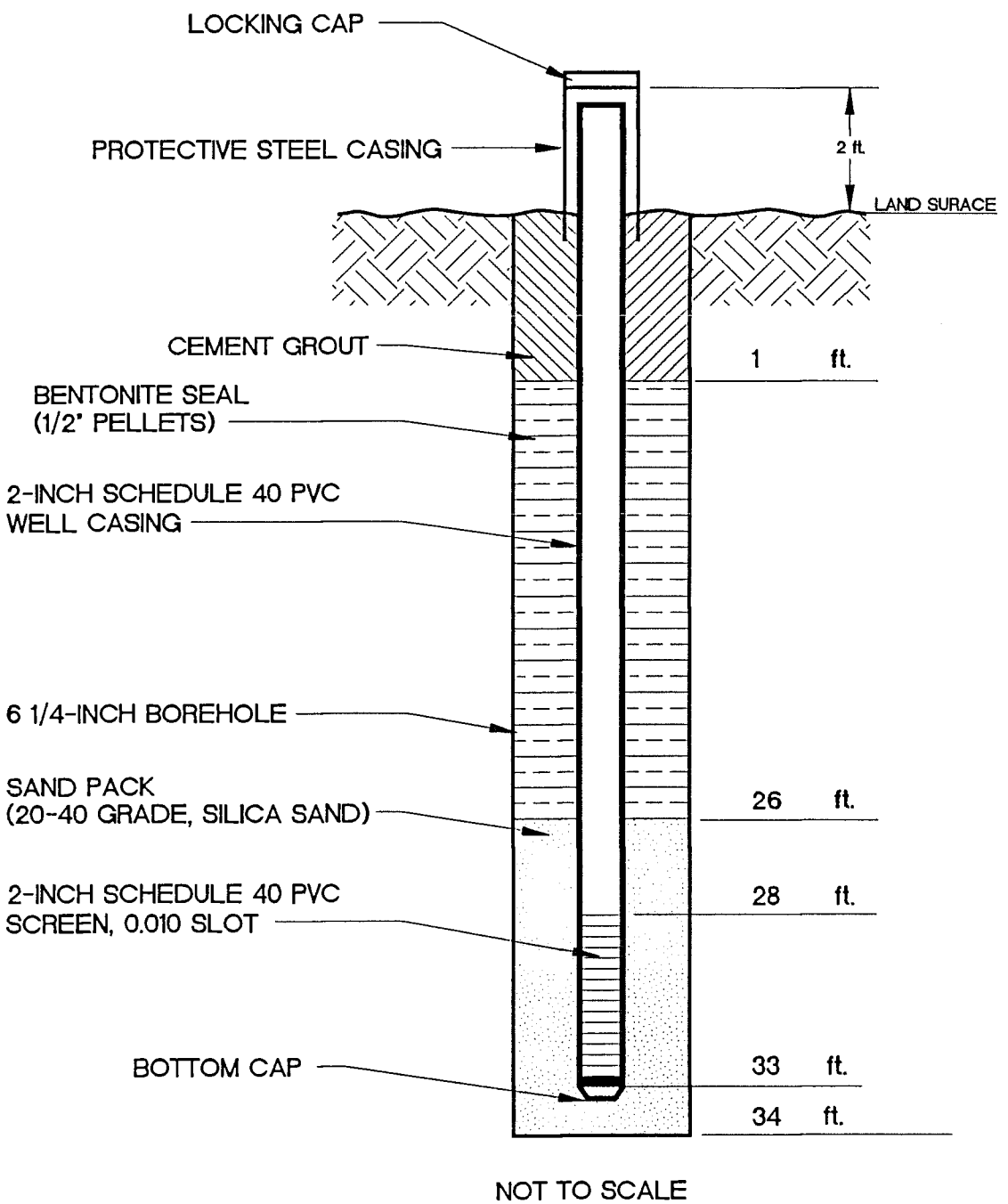
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ-4B

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	747.67	749.69
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** DRY
N / A	0	9-12-91	**DATE:** 9-14-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: DT/JVP/BJH | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN06 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-15-91

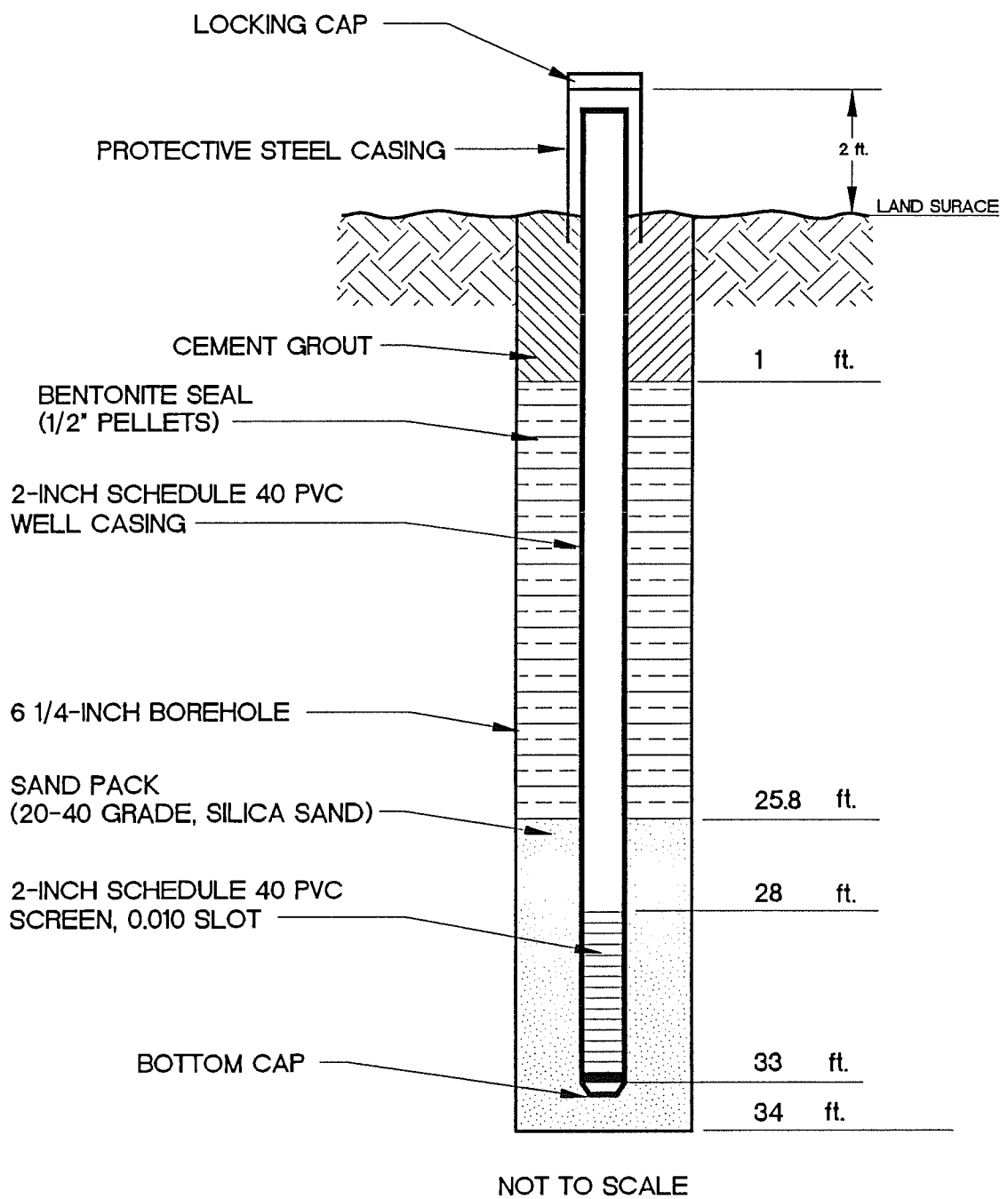
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ-4C

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	747.98	749.92
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P. / DATE:**
N / A	0	9-12-91	33.56 / 9-14-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: DT/JVP/BJH | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN07 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-15-91

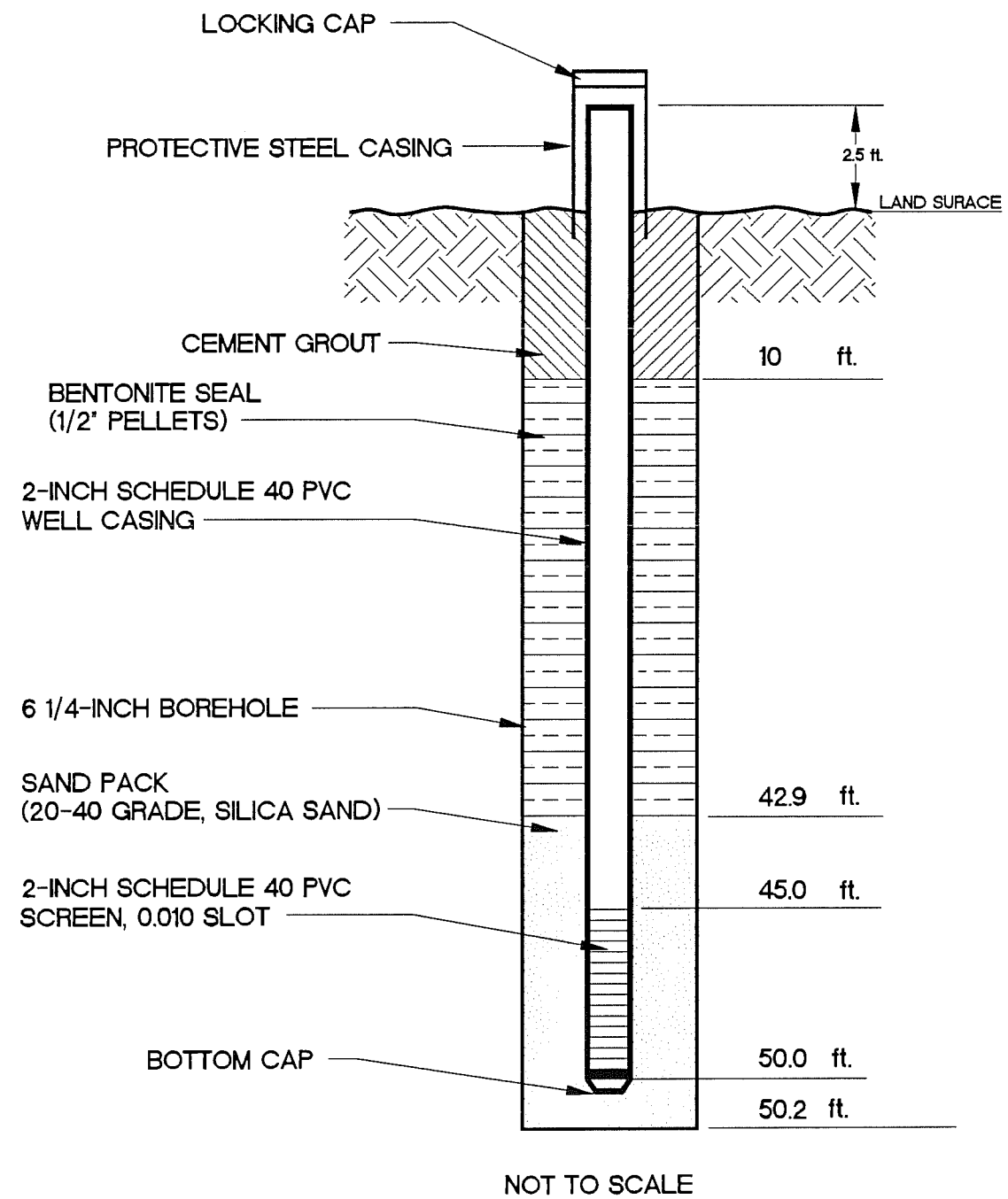
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 5

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	746.18	748.65
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 51.00
N / A	0	4-17-91	**DATE:** 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: JVP | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN14 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-02-91

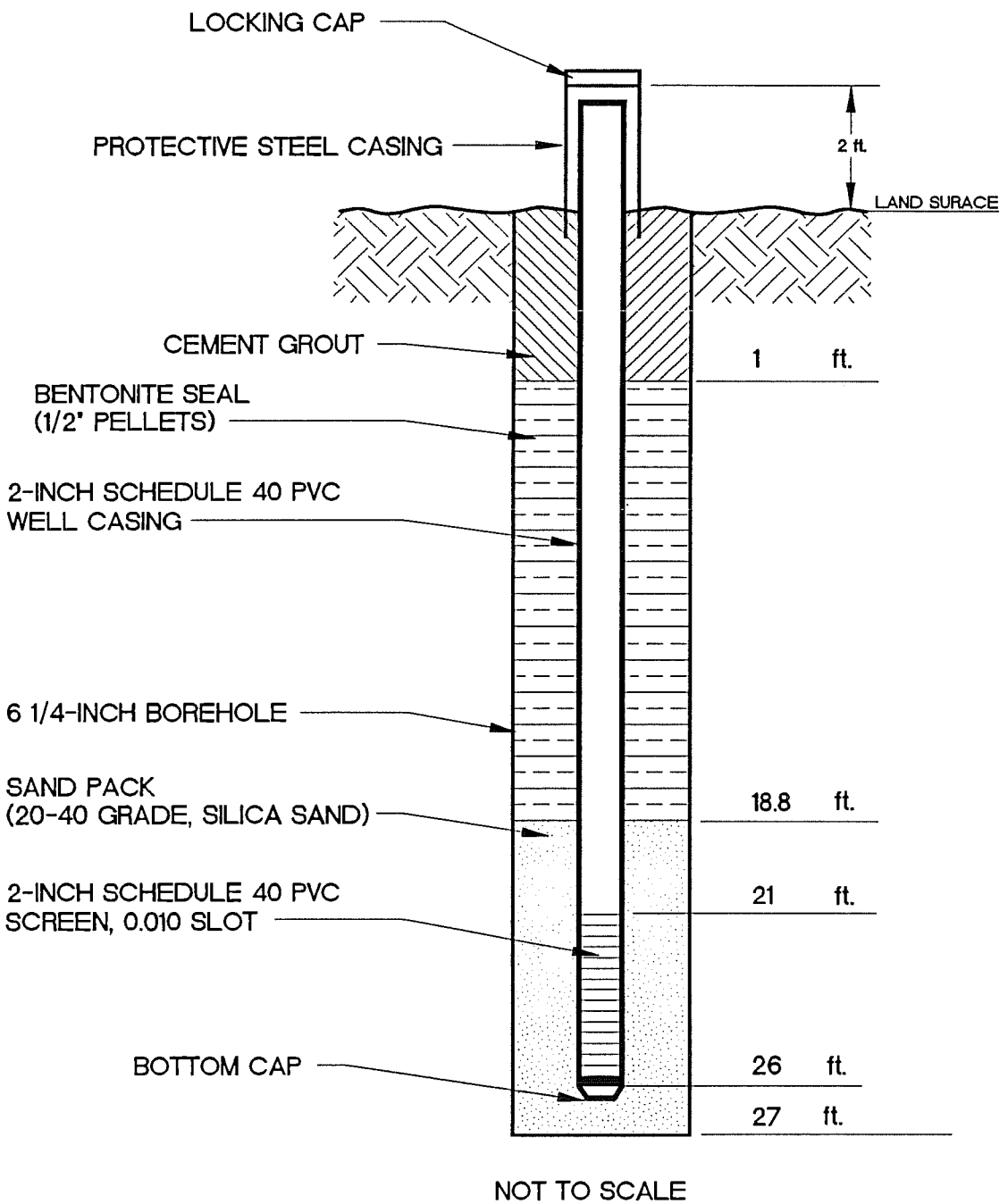
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ-5A

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	745.85	747.86
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 17.40
Teflon Bailer	~7	9-11-91	**DATE:** 9-14-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DWG DATE: 10-15-91 | PRJCT NO.: TF525.09 | FILE NO.: MONSANTO | DRAWING: MONSAN04 | CHECKED: 0000 | APPROVED: 0000 | DRAFTER: DT/JVP/BJH

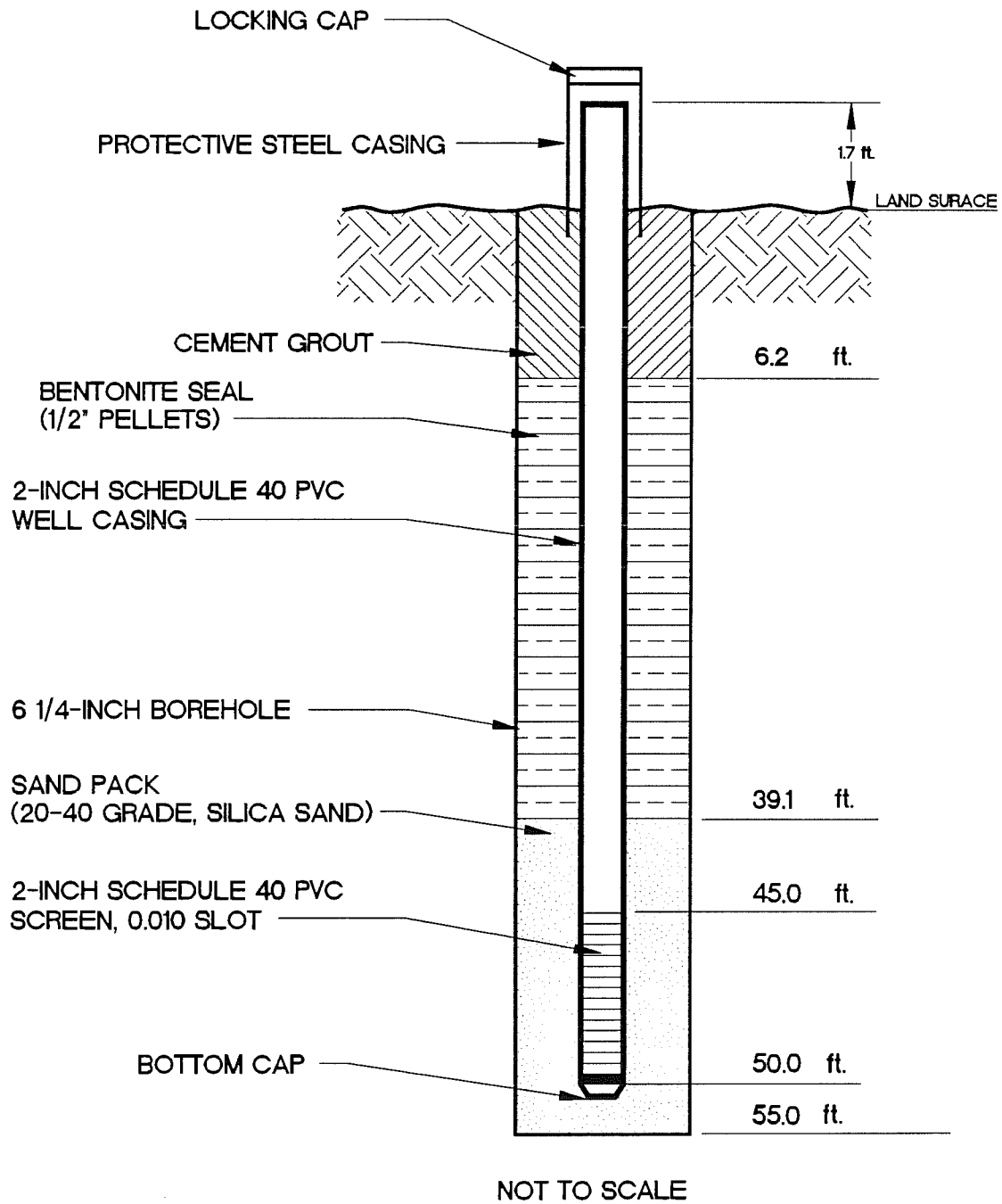
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 6

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	745.34	747.07
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 44.03
N / A	0	4-18-91	**DATE:** 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: JVP | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN15 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-01-91

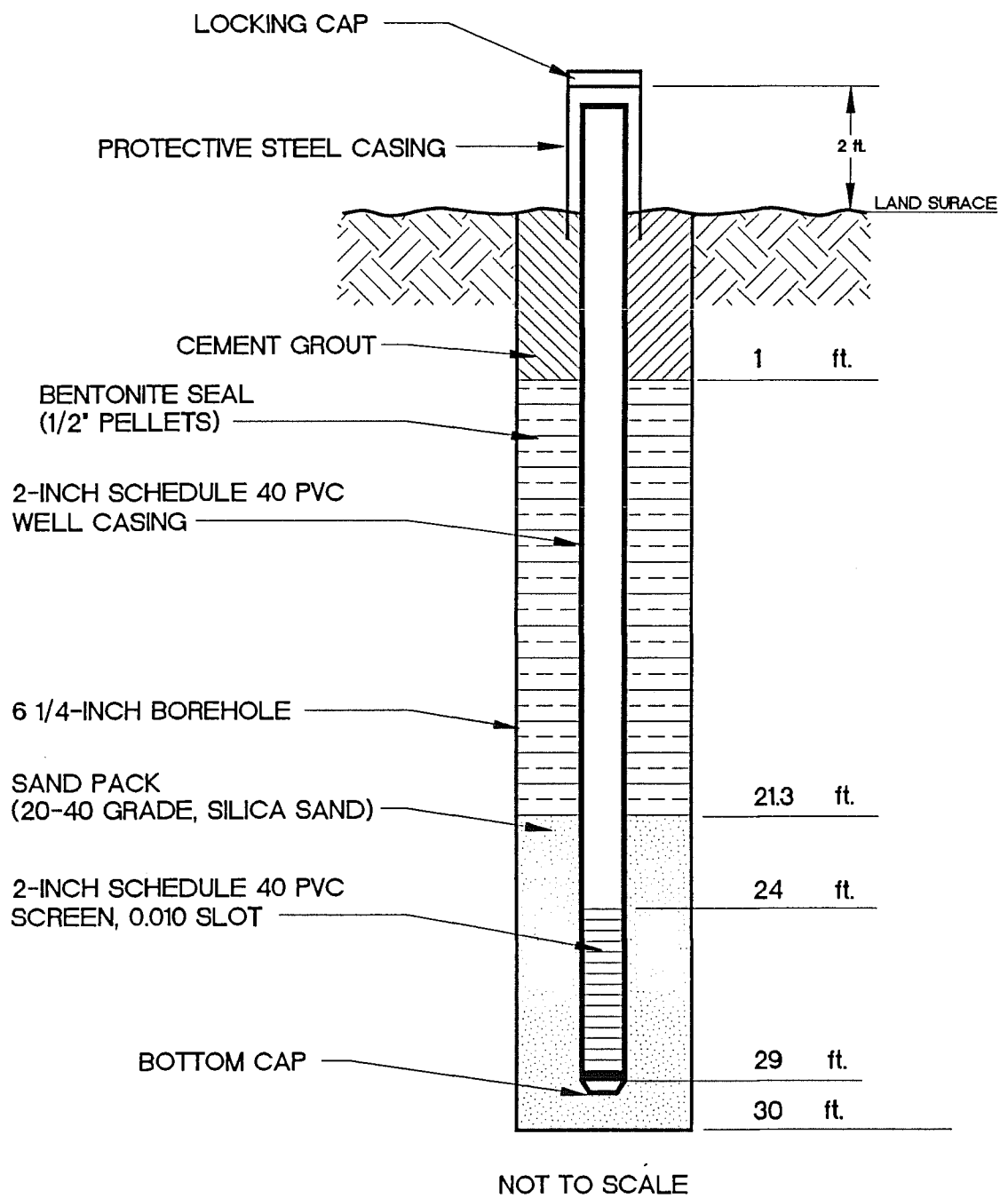
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ-6A

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	745.12	746.90
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 12.75
Teflon Bailer	~5	9-11-91	**DATE:** 9-14-91



NOT TO SCALE

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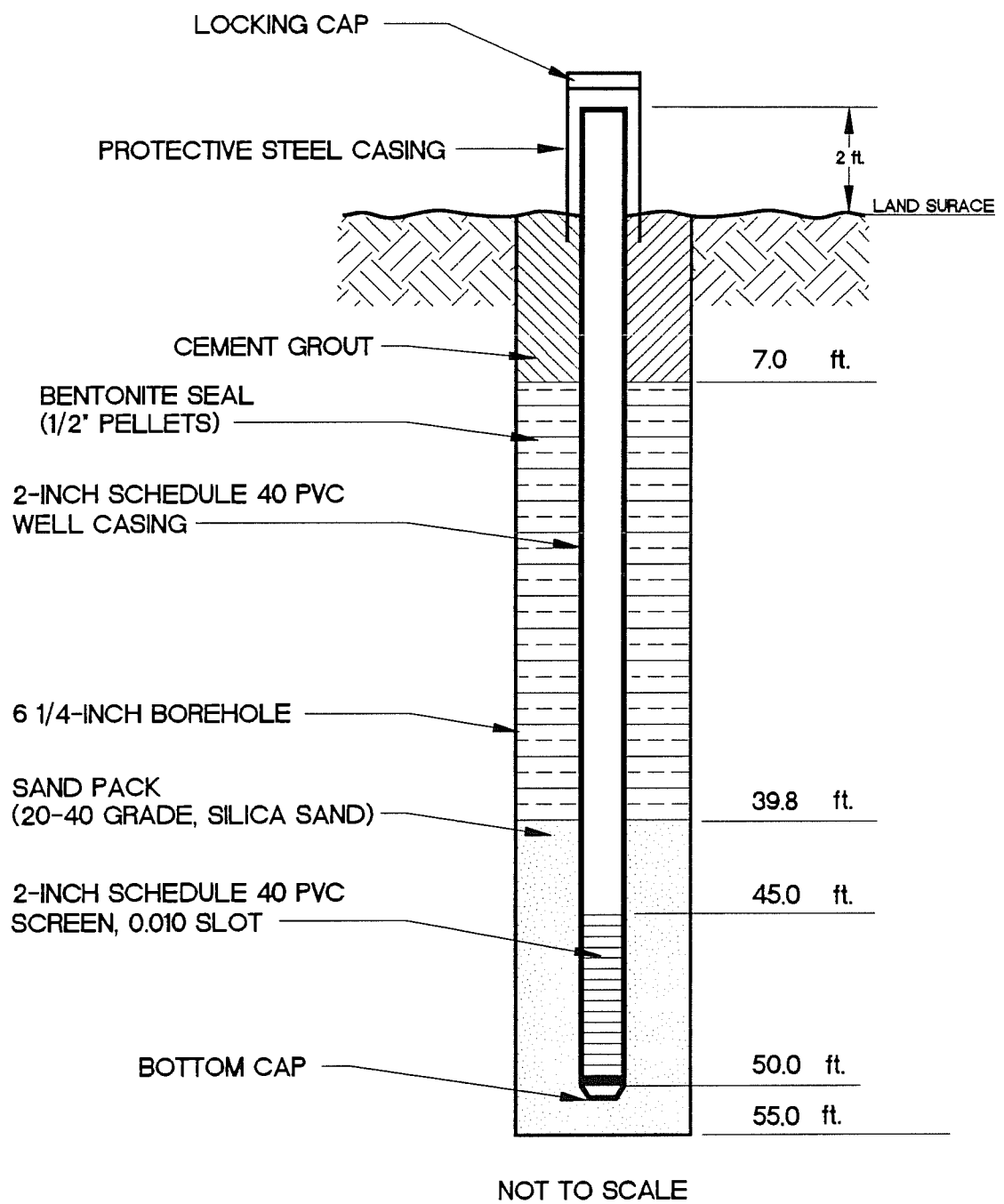
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 7

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	744.61	746.57
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 27.94
N / A	0	4-18-91	DATE: 4-20-91



NOT TO SCALE

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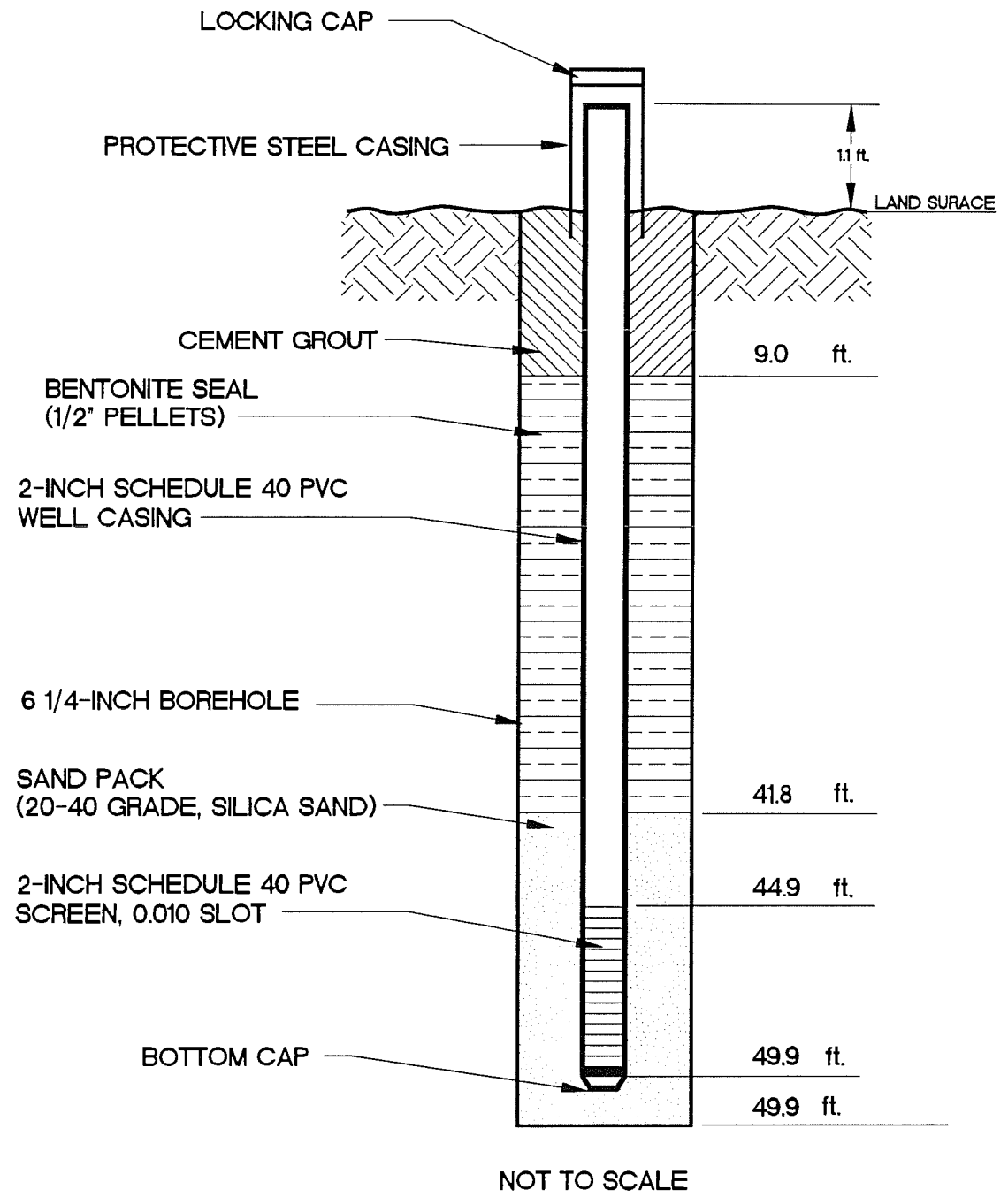
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 8

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	751.98	753.04
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 41.85
N / A	0	4-18-91	**DATE:** 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

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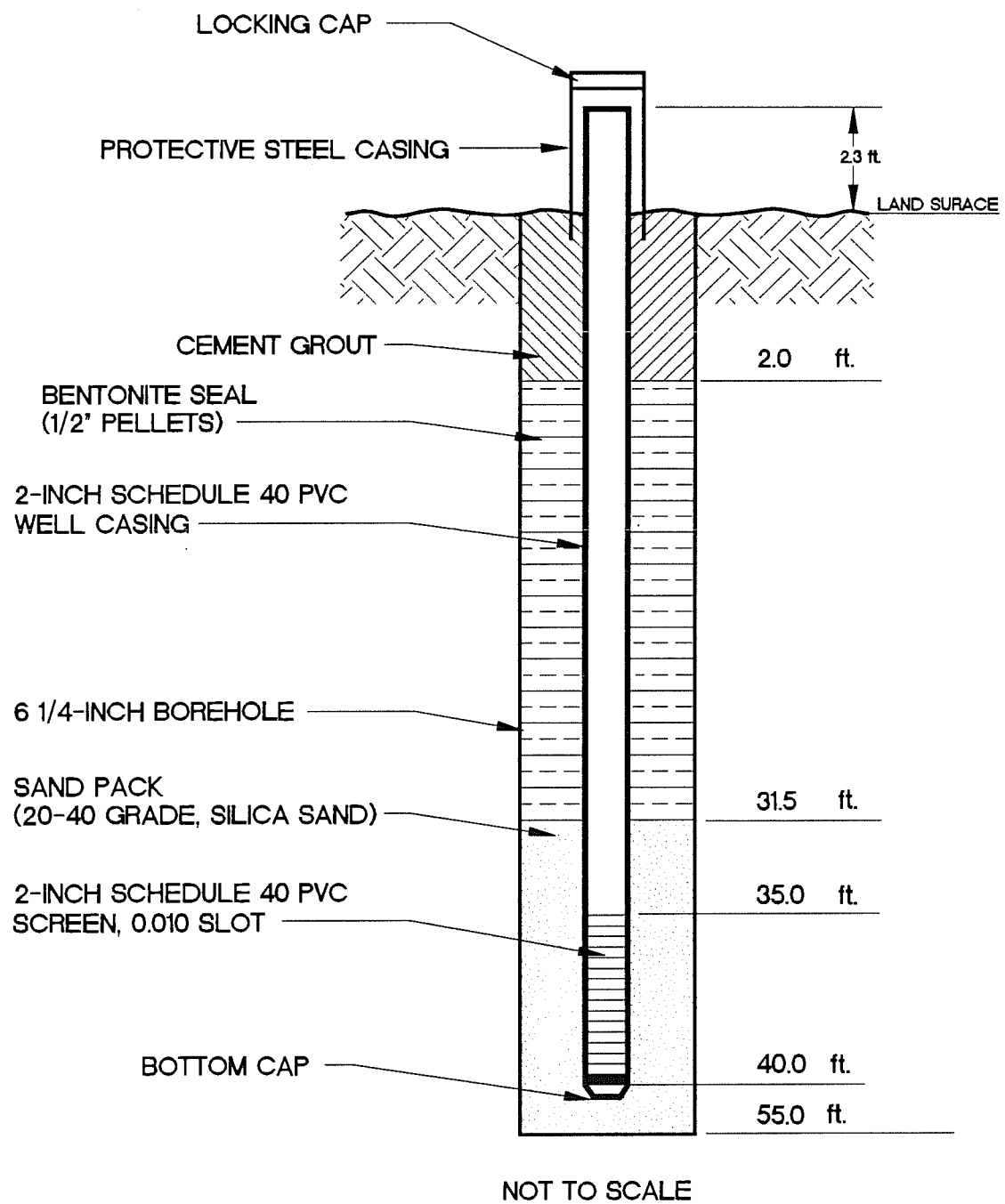
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 9

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	747.31	749.60
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P. – DATE:**
N / A	0	4-19-91	4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

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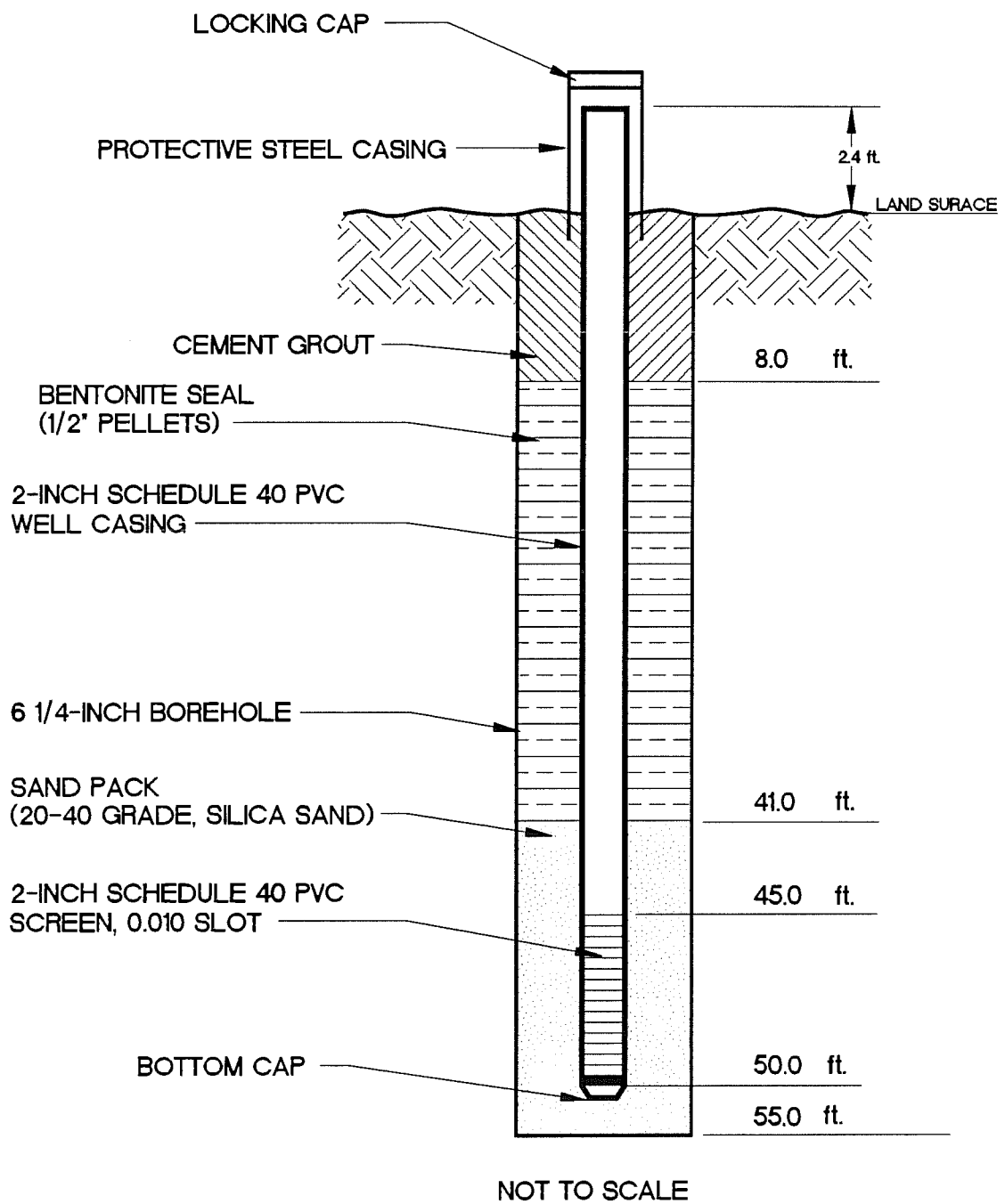
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 10

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	752.65	755.03
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 19.62
N / A	0	4-19-91	DATE: 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

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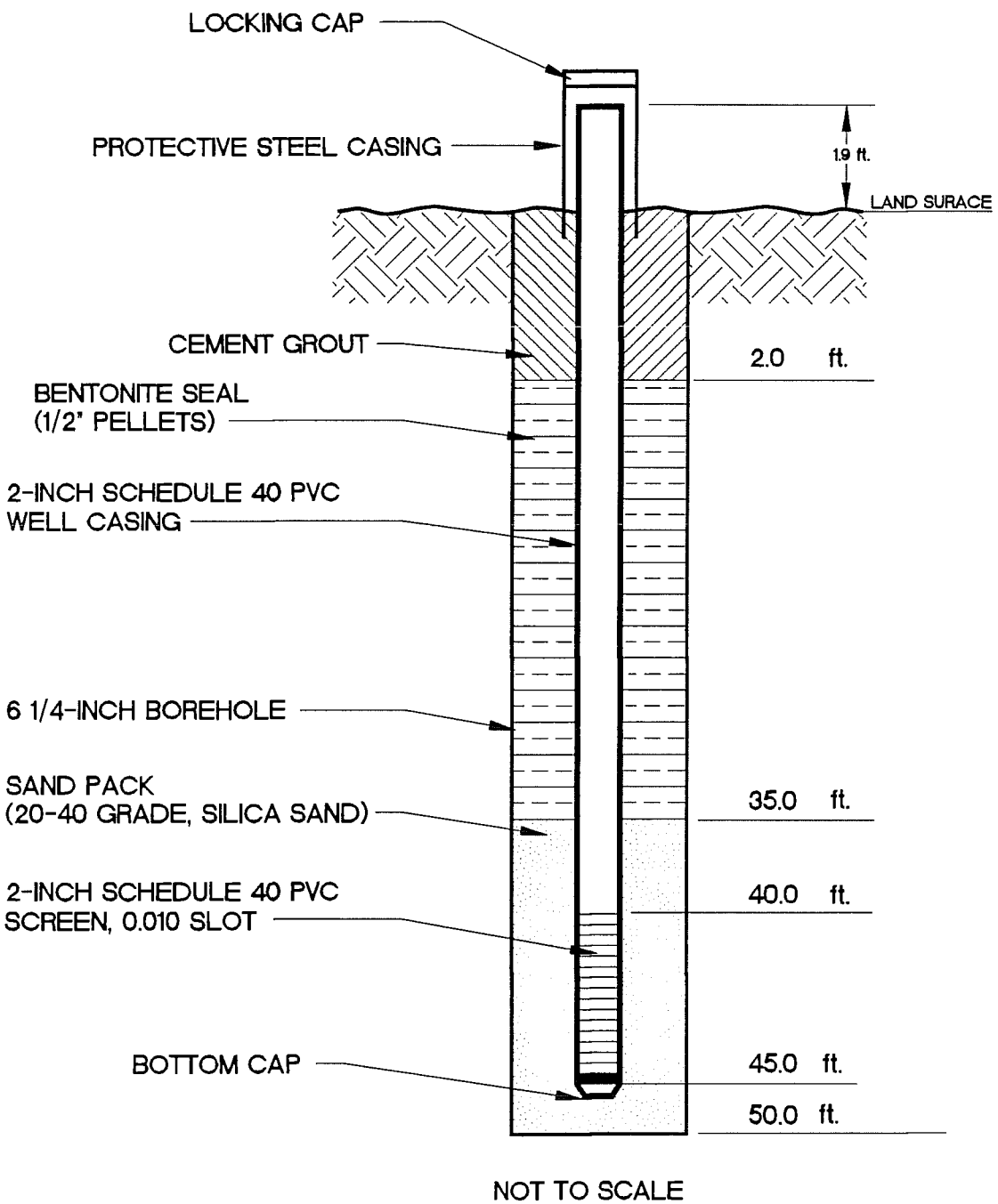
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. PZ - 11

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto	747.93	749.86
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Jason Kirkpatrick	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P. 8.45**
N / A	0	4-20-91	DATE: 4-20-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DRAFTER: JVP | APPROVED: 0000 | CHECKED: 0000 | DRAWING: MONSAN20 | FILE NO.: MONSANTO | PRJCT NO.: TF525.09 | DWG DATE: 10-02-91

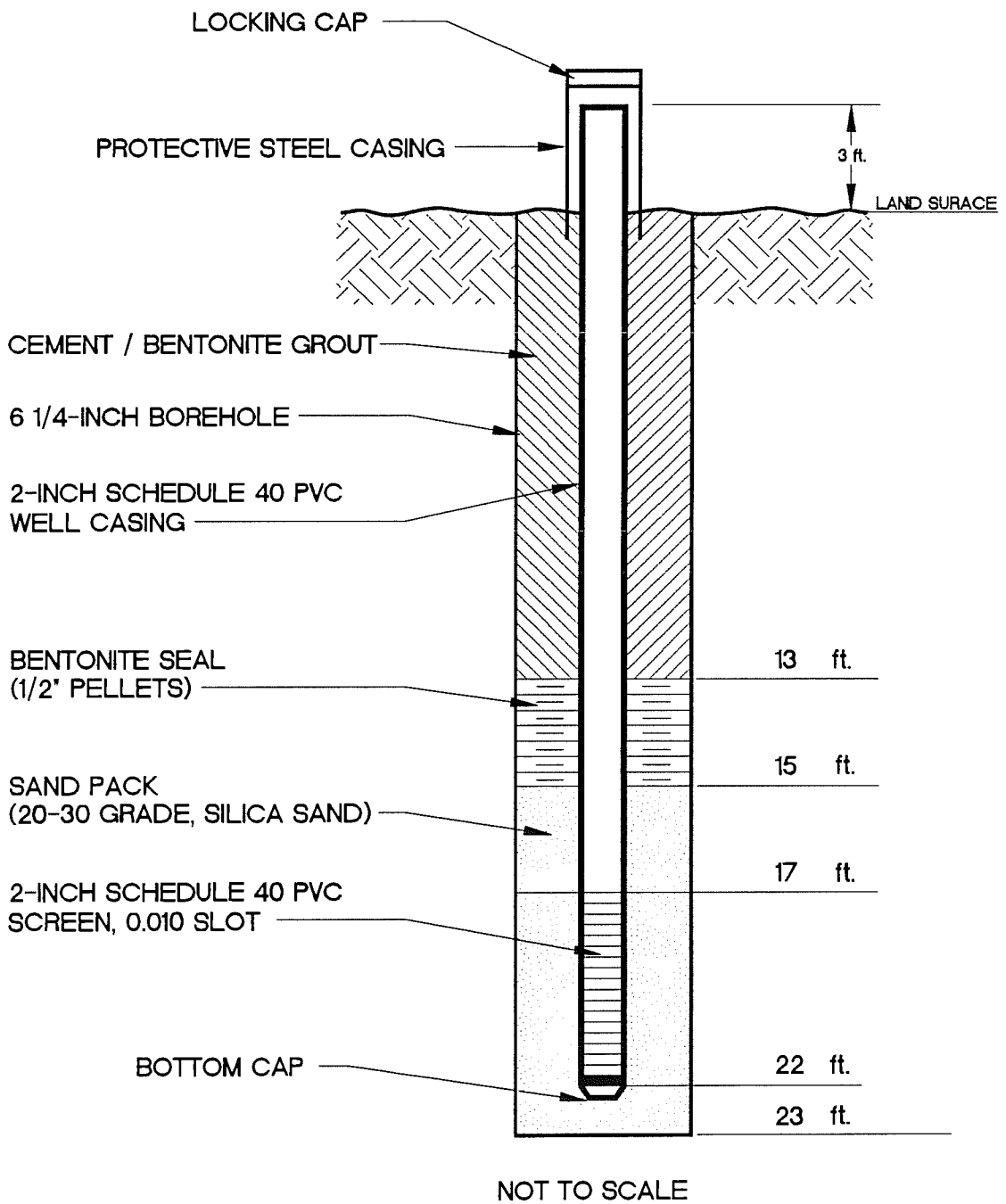
GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION DIAGRAM

WELL NO. MW-20B

PROJECT TF52509

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto		
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Joe Mizerany	Graves Service Co. Inc.	Hollow Stem Auger	Ron Flanigan
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 8.56
Teflon Bailer	~10	5-06-91	**DATE:** 5-06-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

DWG DATE: 10-01-91 | PRJCT NO.: TF525.09 | FILE NO.: MONSANTO | DRAWING: MONSAN09 | CHECKED: 0000 | APPROVED: 0000 | DRAFTER: JVP

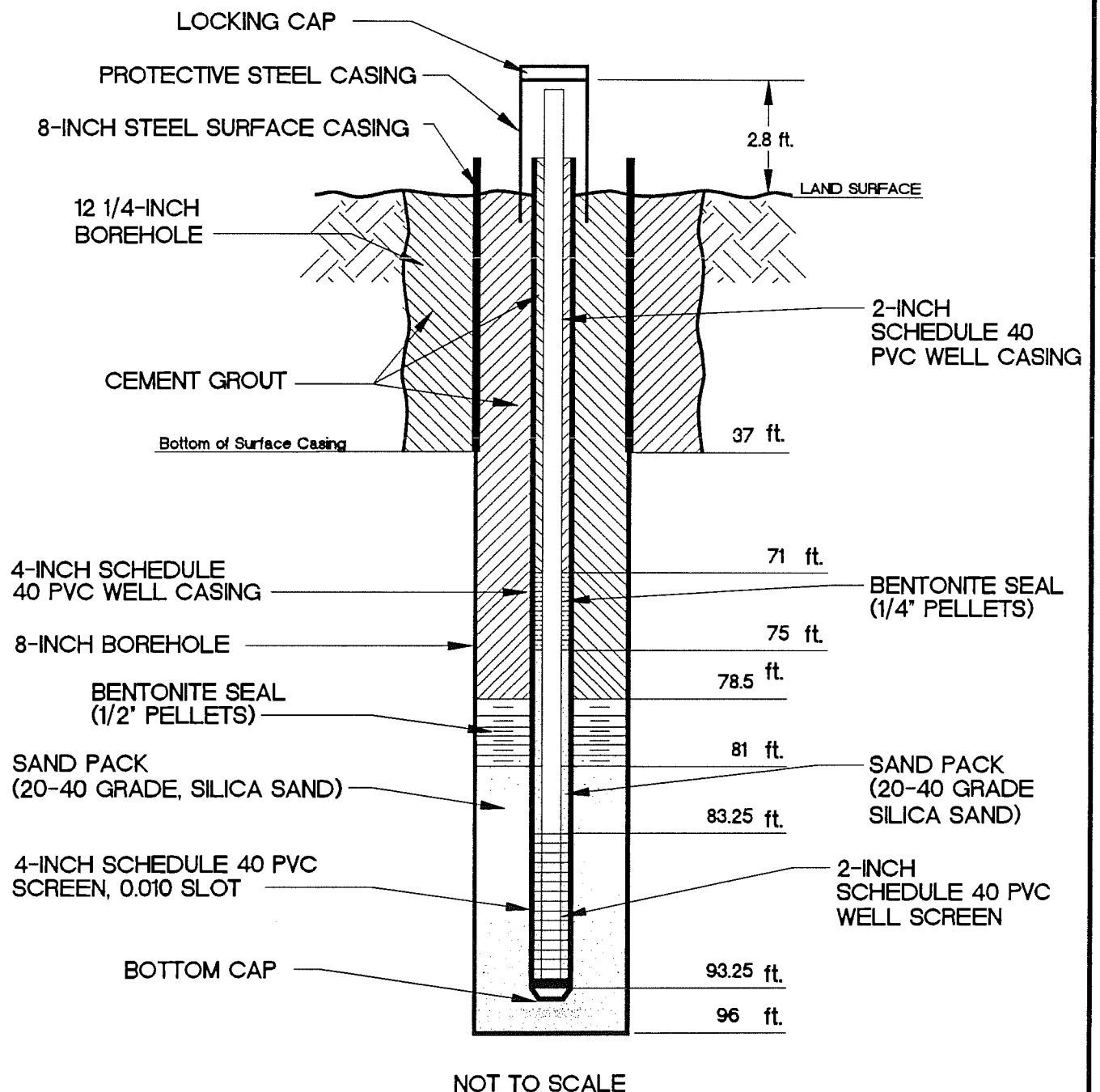
GERAGHTY & MILLER, INC.
Environmental Services

PIEZOMETER CONSTRUCTION DIAGRAM

WELL NO. D W - 1

PROJECT T F 5 2 5 0 9

LOCATION	FACILITY	SURFACE ELEVATION	MEASURING POINT ELEVATION
Anniston, Alabama	Monsanto		
GEOLOGIST	**DRILLING CONTRACTOR**	**DRILLING METHOD**	**DRILLER**
Chris Bona	Graves Service Co. Inc.	Hollow Stem Auger	Dwight Pruit
DEVELOPMENT METHOD	**GALLONS EVACUATED**	**DATE WELL COMPLETED**	**STATIC DEPTH TO WATER FEET BELOW M.P.** 78.88
Air From Drill Rig	~150	9-09-91	**DATE:** 9-16-91



NOT TO SCALE

ALL MEASUREMENTS IN ft. BELOW LAND SURFACE

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APPENDIX C

SURVEYORS DATA

Table C-1. Piezometer Elevations and Coordinates
Monsanto Chemical Company, Anniston, Alabama

Piezometer I.D.	Ground Elevation	Top of Casing Elevation	Coordinates		Total Depth (bls)	Total Depth Elevation
			Northing	Easting		
PZ-1	752.58	754.78	5729.1718	4575.6469	50.00	702.58
PZ-2	751.03	753.42	5759.5410	4627.9706	50.00	701.03
PZ-2A	751.19	752.77	5754.8117	4623.8245	33.00	718.19
PZ-3	748.85	750.81	5819.0191	4700.8297	48.60	700.25
PZ-3A	748.34	750.35	5819.1293	4704.6401	33.00	715.34
PZ-4	747.70	750.39	5849.6967	4755.1013	50.00	697.70
PZ-4A	747.34	749.42	5851.5613	4760.0155	30.00	717.34
PZ-4B	747.98	749.69	5841.6983	4742.6078	33.00	714.98
PZ-4C	747.67	749.92	5832.9713	4730.6866	33.00	714.67
PZ-5	746.18	748.65	5888.3429	4823.2235	50.00	696.18
PZ-5A	745.85	747.86	5889.8288	4827.2129	26.00	719.85
PZ-6	745.34	747.07	5933.0195	4899.1166	50.00	695.34
PZ-6A	745.12	746.90	5931.9308	4901.5340	29.00	716.12
PZ-7	744.61	746.57	5969.4553	4969.9553	50.00	694.61
PZ-8	751.98	753.04	5735.4973	4635.2632	49.90	702.08
PZ-9	747.31	749.60	5715.3862	4829.0808	40.00	707.31
PZ-10	752.65	755.03	5597.6676	4534.4597	50.00	702.65
PZ-11	747.93	749.86	5826.1381	4334.5407	45.00	702.93

Table C-2. Observation Well Elevations and Coordinates
Monsanto Chemical Company, Anniston, Alabama

Observation Well I.D. (Original)	Ground Elevation	Top of Casing Elevation	Coordinates Northing	Coordinates Easting	Total Depth (bls)	Total Depth Elevation
OW-1 (P-18)	808.16	811.93	3827.9062	5730.0299	31.00	777.16
OW-2		807.15	3928.6240	5750.3499	24.00	
OW-3		802.91	4000.2220	5758.4163	24.00	
OW-4		798.29	4075.5374	5768.7425	27.00	
OW-5 (MW-5)	754.34	756.29	4596.9599	5878.1713	106.00	648.34
OW-6 (MW-4)	771.70	773.88	4804.1091	6390.9203	45.00	726.70
OW-7		783.58	4932.3947	6319.9443	43.00	
OW-8		474.58	5181.9978	6037.9503	24.00	
OW-9		738.12	5509.3130	6203.0171	38.00	
OW-10		736.24	5777.0475	6032.8843	38.00	
OW-11 (P-23)	816.13	819.91	3790.0516	5885.3530	24.00	792.13
OW-12 (P-24)	830.19	834.70	3718.1103	5918.7698	14.00	816.19
OW-13 (P-13)	800.33	802.25	4263.9056	6201.8950	40.00	760.33
OW-14 (P-14)	802.70	806.67	4186.8562	6028.9765	51.00	751.70
OW-15 (CB-86)		763.67	4725.9430	5998.5433	40.00	
OW-16 (CB-87)		777.59	4496.0327	5939.1990	40.00	
OW-17 (CB-88)		806.06	4184.3524	6144.7978	40.00	
OW-18 (MW-17)	746.98	750.27	5817.5676	4641.7994	27.50	719.48
OW-19 (MW-18)	745.60	746.38	5845.9243	4702.4301	32.50	713.10
OW-20 (MW-19)	744.48	745.59	5878.3456	4754.3431	23.00	721.48
OW-21 (CB-80)		741.82	6106.4621	4941.6860	34.00	
OW-22 (CB-81)		743.40	6057.2026	4873.6401	36.00	
OW-23 (CB-83)		744.68	5906.3912	4803.8346	23.00	
OW-24 (CB-84)		743.68	5936.1344	4858.6915	29.00	

Table C-3. Monitoring Well Elevations and Coordinates
Monsanto Chemical Company, Anniston, Alabama

Monitor Well I.D. (Original)	Ground Elevation	Top of Casing Elevation	Coordinates Northing	Coordinates Easting	Total Depth (bls)	Total Depth Elevation
MW-1	865.21	867.62	3682.4968	6622.9915	60.00	805.21
MW-1A	882.04	883.04	3669.8972	6958.1404	60.00	822.04
MW-1B	879.09	881.49	3690.3044	7005.2612	63.00	816.09
MW-2	773.58	776.34	4719.4542	7243.4779	41.00	732.58
MW-3	787.77	789.73	4530.7312	6827.8764	75.00	712.77
MW-4 (OW-6)	771.70	773.88	4804.1091	6390.9203	45.00	726.70
MW-5 (OW-5)	754.34	756.29	4596.9599	5878.1713	106.00	648.34
MW-6	796.76	799.27	4023.0357	5637.8296	36.00	760.76
MW-7	740.96	743.63	6220.9945	4911.5344	25.00	715.96
MW-8	742.79	745.47	6028.3706	4762.7937	30.00	712.79
MW-9	744.76	749.90	5904.9266	4545.9454	40.00	704.76
MW-11A	782.08	783.74	4656.7563	7057.7087	122.50	659.58
MW-12A	782.12	785.69	4599.0680	6921.9948	124.50	657.62
MW-13A	778.61	781.77	4518.4923	6738.7256	123.50	655.11
MW-14 (B-63)	748.71	751.11	5813.0722	4388.9952	25.00	723.71
MW-15	752.08	752.79	5669.2560	4491.1417	39.00	713.08
MW-16	752.10	752.70	5770.7998	4539.4600	68.00	684.10
(MW-17) OW-18	746.98	750.27	5817.5676	4641.7994	27.50	719.48
(MW-18) OW-19	745.60	746.38	5845.9243	4702.4301	32.50	713.10
(MW-19) OW-20	744.48	745.59	5878.3456	4754.3431	32.50	711.98
MW-20					26.00	
MW-20A	751.00	753.09	5735.6963	4635.7112	24.00	727.00
(MW-20) OW-21		741.82	6106.4621	4941.6860	40.00	
(MW-21) OW22		743.40	6057.2026	4873.6401	40.00	
(MW-23) OW-23		744.68	5906.3912	4803.8346	40.00	
(MW-24) OW-24		743.68	5936.1344	4856.6915	40.00	
BR-1					319.00	
BR-2					420.00	
BR-3					265.00	
BR-4		790.42	4218.1648	5321.6865		
BR-5		768.10	4744.0608	4583.5365		

GERAGHTY
& MILLER, INC.
Environmental Services

Ground Water *Engineering* *Hydrocarbon* *Remediation* *Education*

March 25, 1992

Mr. Robert Jones
Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201

Re: Cone Penetrometer Testing Program

Dear Mr. Jones:

As discussed during our telephone conversation on March 24, 1992, Cone Penetrometer Testing (CPT) at the Monsanto, Anniston facility is expected to commence April 8, 1992. Drilling activities associated with the CPT program will begin April 6, 1992.

Approximately 32 boreholes at approximately 15 CPT locations will be drilled down to 15 feet below land surface to ensure that no subsurface obstacles interfere with the CPT program. It is anticipated that Garrison Construction Company, Inc. will again be used for the drilling activities. The drilling program is expected to be completed in two working days.

As previously stated, the CPT program is expected to commence on Wednesday, April 8, 1992 and will begin in the field area located north of the railroad tracks. We anticipate that two CPT boreholes will be installed at each location. The first borehole will include the cone testing equipment used to verify depth to bedrock and general lithology. Upon removing the CPT equipment, the borehole will be grouted from bottom to land surface using a neat cement grout. The second borehole will be used to install the piezometer. It is expected that piezometers will be installed at each CPT location instead of the ten locations discussed during our March 10th meeting.

As you may recall, we had originally decided to obtain ground-water samples at each CPT location using an in-situ "BAT" sampler. At the March 10th meeting we considered installing piezometers at approximately ten locations in conjunction with "BAT" sampling. The reason for the installation of the ten piezometers was so that Monsanto could sample the piezometers for confirmation of the presence of constituents at a later date. The piezometers could also be used as extra points for obtaining additional ground-water elevations and for a dye trace study, if conducted. Subsequent to the March 10th meeting, discussions between Monsanto and Geraghty & Miller personnel indicated that piezometers should be installed at each CPT location and in-situ "BAT" sampling would not be conducted. Reasons for installing the additional six piezometers include consistency in ground-water sampling, cost savings (one less borehole to install where the "BAT" sampler was to have been used) and reduced risk of down hole contamination associated with the extra borehole.

Each of the sixteen piezometers will be "pushed in" using the CPT rig hydraulics and will be sampled immediately. The piezometers will later be developed using a hand bailer and re-sampled for confirmation of the presence of constituents of concern, if present. The CPT program is expected to be completed by April 17, 1992.

14497 North Dale Mabry, Suite 115 • Tampa, Florida 33618 • P.O. Box 273630 • Tampa, Florida 33688-3630
(813) 961-1921 • FAX (813) 961-2599

As we discussed earlier, a different CPT contractor (Fugro Geosciences, Inc.) is being considered for the program. This decision has not been made lightly. After numerous telephone conversations with Fugro personnel, Geraghty & Miller feels that Fugro is a better candidate for the job due to Fugro's past and current experience on similar Monsanto projects.

I have enclosed five revised copies each of Figures 2 and 3 of the Geraghty & Miller report entitled "Refraction Seismic Study For Bedrock Investigation In The Vicinity Of The Former Parathion Production Unit". Additionally, I have enclosed one site map each of the Plant Site, Surface Impoundment, and Western and Northern Landfill Areas. As explained earlier, these three maps are not computer-generated at this time; however, computer bases for these base maps can be constructed for future reports. If there are any changes that I have made that are incorrect or if additional changes are necessary, please feel free to call me.

I will keep in touch with you as the details of the CPT program are finalized.

Respectfully,

GERAGHTY & MILLER, INC.

Kenneth Miklos
Staff Scientist

KM/hld

REFRACTION SEISMIC STUDY
FOR
BEDROCK INVESTIGATION
IN THE VICINITY OF THE
FORMER PARATHION PRODUCTION UNIT

MONSANTO CHEMICAL COMPANY
Anniston, Alabama

March 1992

Prepared for

Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama

Prepared by:

Geraghty & Miller, Inc.
14497 North Dale Mabry Highway, Suite 115
Tampa, Florida 33618

Geraghty & Miller Project No. TF52516

REFRACTION SEISMIC STUDY
FOR
BEDROCK INVESTIGATION IN THE VICINITY OF THE FORMER PARATHION PRODUCTION UNIT

March 9, 1992

Geraghty & Miller appreciates the opportunity to work for Monsanto Chemical Company at the Anniston, Alabama facility. If you have any questions or comments concerning this report, please contact one of the individuals listed below.

Respectfully submitted,

Kenneth Miklos
Staff Scientist

Leslie L. Herd
Project Scientist II

Peter L. Palmer, P.E.
Vice President

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2. Refraction Seismic Survey Map

3. Refraction Seismic Contour Map

APPENDIX

A. Refraction Seismic Survey Line Graphs

1.0 INTRODUCTION

The recent investigation of the bedrock aquifer in the vicinity of Waste Management Area II detected constituents of concern (parathion and paranitrophenol) in the upper bedrock aquifer (Geraghty & Miller, 1991). This report summarizes the investigation and findings of a Refraction Seismic Survey conducted at the Monsanto, Anniston facility (Figure 1). The survey was conducted to locate anomalies and undulations in the bedrock interface that may act as preferential pathways for ground-water contaminants.

1.1 BACKGROUND

An investigation of the ground-water quality in the upper bedrock aquifer and the ground-water quality of the uppermost saturated zone in the vicinity of Waste Management Area II (WMA-II) was conducted in response to concerns from the Alabama Department of Environmental Management (ADEM). An upper bedrock aquifer monitoring well was installed immediately down gradient of WMA-II and parathion and paranitrophenol (PNP) were detected in the ground water.

WMA-II, as listed in the RCRA permit, is a former lined surface impoundment that received acidic wastewater from the parathion intermediates operation from 1979 to 1987. This surface impoundment was taken out of service in 1987 and was closed as per an approved RCRA Closure Plan. Ground-water monitoring was implemented in 1986 as part of the RCRA permitting activities. WMA-II is located in the northwest portion of the Facility.

1.2 PREVIOUS INVESTIGATIONS

Parathion and PNP were detected in the ground water in the upper bedrock aquifer during the recent shallow bedrock aquifer investigation. Potential sources for parathion and PNP are confined to the northwest portion of the Facility where the parathion production unit, two associated surface impoundments (WMA-II and the Old Limestone Bed Surface Impoundment [OLBSI]), and a former lagoon were located.

The production unit was taken out of service in 1986 and was dismantled in 1987. The buildings and pipelines were removed and the area was regraded with natural clay material and topped with limestone gravel. The potential sources of parathion and PNP within this area were removed during dismantlement operations.

WMA-II, was a RCRA-regulated surface impoundment that was closed according to Closure Plan included in the Facilities approved RCRA permit. Clean closure was not attempted, however, the contents of the impoundment and the liner were removed and three feet of the clay base was excavated. The area was backfilled with natural clay materials and a RCRA-approved cap was installed that consisted of a drainage layer overlain by a geotextile fabric, and finally a top soil layer seeded with three grass types. This cap is designed to minimize leaching of residual source materials to the underlying unconsolidated zone.

The OLBSI, was not regulated by RCRA; however, this unit is listed as a solid waste management unit on the Facility RCRA permit. The OLBSI was an asphalt lined surface impoundment that received acidic wastewater from the parathion intermediates operation from approximately 1962 to 1980. In 1985 the impoundment was taken out of service and the asphalt liner and liquids from the impoundment were removed. The clay base was excavated approximately four to five feet below the base of the asphalt liner. Clean closure was not achieved and the excavated impoundment was backfilled with a clay with permeabilities less than or equal to the base subsoils. An asphalt cap was re-installed over the backfilled clay to provide additional protection from infiltration and to minimize the leaching of residual source materials into the underlying unconsolidated zone.

A former lagoon lined with a treated tar-paper like material, was located in the same vicinity as the WMA-II surface impoundment. The lagoon was installed in 1964 and was used until 1965. Due to liner failure, the lagoon was taken out of service; however, it was not closed until 1976. During this interim period (1965 to 1976), the lagoon collected storm-water runoff and was used intermittently as a storage lagoon for solids from the wastewater treatment operation. In 1967 when the lagoon was closed, the solids/sludges and the liner material were removed and the lagoon was backfilled with natural clays.

In summary, the constituents of concern detected at WMA-II could have come from a variety of sources including the WMA-II surface impoundment, the OLBSI, the former lagoon, or the former parathion production unit. This report discusses the findings of a geophysical survey conducted at the Monsanto facility as part of a phased study to delineate the constituents of concern in the ground water.

2.0 SCOPE OF WORK

The geologic materials in the unconsolidated zone (residuum) consist of silty clays and fine to coarse-grained sandy clays. Ground water moves preferentially through the sandy clay areas in this unconsolidated zone. The migration pathway of constituents to the bedrock is not known precisely due to the discontinuous nature of the residuum, however, it is believed that the more permeable lenses are the migratory pathways through the unconsolidated zone. To a lesser extent fractures in the clay residuum may also provide a pathway for the transportation of materials down to the bedrock. Because constituents of concern have been detected in the upper bedrock aquifer, a geophysical survey utilizing refraction seismic techniques was conducted to help define the top of bedrock within the area of study. The geophysical survey is part of a multi-phase investigation using direct and indirect techniques to delineate constituents of concern in the bedrock.

2.1 GEOPHYSICAL INVESTIGATION

The geophysical survey was completed in two separate stages. The first stage began on January 21, 1992 and was completed on January 25, 1992, the second stage began on February 13, 1992 and was completed on February 19, 1992.

The purpose of the geophysical survey field program was to locate subsurface refractors using a geophysical technique called refraction seismic surveying. Refractors are lenses, layers or formations that are characterized as having high velocities (more dense) in an otherwise low velocity (less dense) section. For the purposes of the field study, the top of the bedrock (interface) is the primary refractor being investigated. Past investigations have indicated that a sandy clay (typically low velocity) formation exists between the land surface and the bedrock interface; therefore high velocities found during the seismic study may indicate the presence of the refractor (bedrock interface) being investigated.

The refraction seismic study was performed by inducing an energy wave, with explosives, into the ground and measuring the length of time necessary for the energy waves to bounce off the refractor back to the surface where the energy waves are picked up and recorded using a series of surface mounted geophones. The recorded data aid was interpreted to determine the configuration of the refractor (bedrock interface).

The seismic source used during the first stage of the investigation consisted of black powder explosives. The black powder (500 grain) was contained in a metal casing about the size of an eight-gauge shell casing. The casing was then encompassed inside a six-inch long, thick-walled plastic container. A detonator cap was screwed on top of the container. The detonator cap was detonated electronically which in turn detonated the black powder. The explosive power of each black powder container was equivalent to a 1/8-pound stick of dynamite.

The explosives used during the second stage of the study consisted of a powder and liquid mixture known commercially as kinepak. This type of explosive is not designed to detonate until the powder and liquid are thoroughly mixed. The mixture was contained in an eight-inch tall plastic container with a plastic screw-on cap. A detonator, in this case a three-inch long, 1/4-inch diameter metal canister filled with black powder, was attached to the side of the kinepak explosive. The detonator cap was detonated electronically which in turn set off the kinepak. Each stick of kinepak was equal to a 1/3-pound stick of dynamite.

2.1.1 Geophysical survey: Stage One Investigation

The first stage of the geophysical survey was conducted by first visiting the area of investigation and determining which areas were best suited (lack of building structures) for conducting the survey. A total of three geophysical "lines" were surveyed. Each geophysical line was approximately 900 feet in length and was comprised of three sections. One section of the line, known as the geophone spread, was approximately 500 feet in length. Twenty four geophones, used to pick up energy waves emitted from the energy source, were placed at strategic intervals along the geophone spread. This data was then transmitted back to the field computer through a line that connects the geophones to the field computer. The other two sections of the survey line consist of "off-end" shots located on either end of the geophone section. The off-end shots were placed approximately two hundred feet from each end of the geophone section of the run. "Shot" holes (used to hold the explosives) were also placed in strategic intervals along the entire survey line. Each survey line consisted of six shot holes. The shot holes were hand augered down to approximately three feet below land surface. Approximately one-half pound of explosives were placed into each shot hole and the remaining open hole was packed with native fill material. Upon tamping the shot hole, a burlap bag (filled with dirt and tied shut) was placed over the hole. A battery powered detonator was used to detonate the explosives at each particular shot

hole. A blasting line connected the detonator to the field computer. The blasting line sends a signal back to the field computer when the blasting sequence is activated.

The results of the initial stage one field investigation indicated the presence of loosely compacted fill material within the area of investigation. The loose fill material caused the energy produced by the energy source to dissipate before penetrating down far enough below land surface to locate a refractor, if present. It was determined that an additional amount of explosives, placed below the loose fill material, would be necessary for obtaining reportable seismic data.

2.1.2 Geophysical Survey: Stage Two Investigation

A licensed and certified blasting company (Garrison Construction Company, Inc.) from Gardendale, Alabama was subcontracted by Geraghty & Miller to perform blasting services in conjunction with the stage two geophysical investigation. Stage two of the geophysical survey began by meeting with Monsanto personnel to determine locations of underground utilities. A total of six geophysical lines were surveyed during the investigation (Figure 2). Geophysical lines surveyed during stage two of the investigation consisted of longer lines than the stage one geophysical lines because additional explosives were used at greater depths. The seismic energy released from the source was capable of locating potential refractors at greater depths and could transmit this energy over greater distances. During stage two of the geophysical survey, the geophone spread at each survey line location was increased to 600 feet in length. Additionally, the off-end shot distances were also increased. Approximately eight shot holes were drilled along each survey line. Each hole was advanced down to approximately 12 feet below land surface. The drill rig used during the survey was a track-mounted, air driven, diesel powered rig equipped to perform air rotary drilling. Upon reaching the desired depth at each shot location, approximately two pounds of explosives (Kinepak) was lowered into the borehole. The remaining borehole annulus was filled with native soil and tamped. As with stage one of the investigation, twenty four geophones were placed in strategic intervals along the geophone section of the survey line, and the geophones and detonator were connected to separate lines that were in turn connected to the field computer.

Presented in Appendix A are graphs of computer generated refraction seismic data for each of the six seismic lines.

2.1.3 Findings

The following are findings of the geophysical survey investigation:

- Variations in bedrock (refractor) velocities occurred within the area of study. The bedrock velocities ranged from 6,000 feet/second along run number two located north of the railroad tracks to 14,500 feet/second along run number six located east of the ACL warehouse (Figure 2). Generally, the higher the velocity, the more dense the refractor. Weathering of the bedrock surface, however, will produce a lower velocity refractor than an unweathered bedrock surface. The velocities determined from the seismic investigation indicate that the refractors may range from weathered to competent limestone. The investigation also indicated that the area north of the railroad tracks (open field) may be more weathered than the area south of the railroad tracks (plant area).

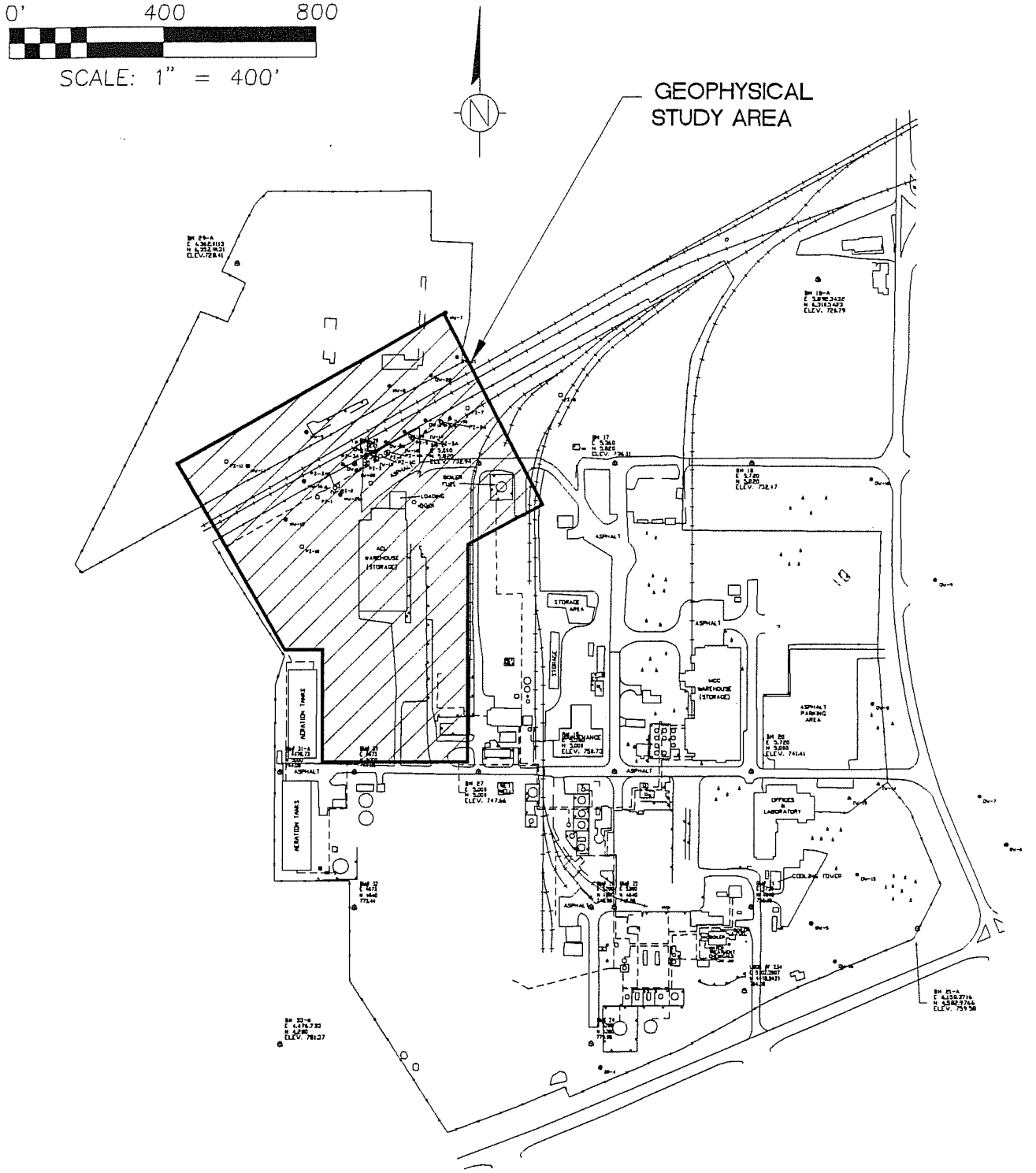
- The bedrock topography undulates within the area of study, a probable result of various weathering patterns along the bedrock interface. The bedrock interface is inferred to range between 70 and 120 feet below land surface. Within the area of study, bedrock "lows" are interpreted to occur south of the railroad tracks in a lineament running east-west approximately 100 to 300 feet south of the railroad tracks, and just east of the northern aeration tank. Based on interpretation of the cross-sectional data, a contour map of the bedrock topography has been prepared and is shown in Figure 3.

- The apparent depth-to-bedrock indicated in the refraction seismic study correlates with one on-site well identified as DW-1. The refraction seismic survey performed near DW-1 indicated that the bedrock interface was located between 90 and 95 feet below land surface. The lithologic log from DW-1 indicated that the depth to bedrock at that location is approximately 81 feet below land surface.

- Fill material, consisting of loosely packed sandy clays and various construction debris (concrete and asphalt fragments, rope, metal, etc) was encountered during most of the drilling associated with the geophysical survey. The area located just east of the northern-most aeration tank contained the most vertically extensive fill

material. This area also contained the most loosely compacted fill material encountered during the survey.

- Voids were encountered during seismic testing performed along seismic line number six, located east of the warehouse building. The voids appear just below the concrete/asphalt pavement that was at one time used as part of a loading station for one of the Monsanto railroad spurs and probably resulted from settling of the fill material.



DWG DATE: 3-6-92 | PRJCT NO.: TF52509 | FILE NO.: MONSTE-Z | DRAWING: X | CHECKED: X | APPROVED: X | DRAFTER: P.M.B.

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GEOPHYSICAL STUDY AREA

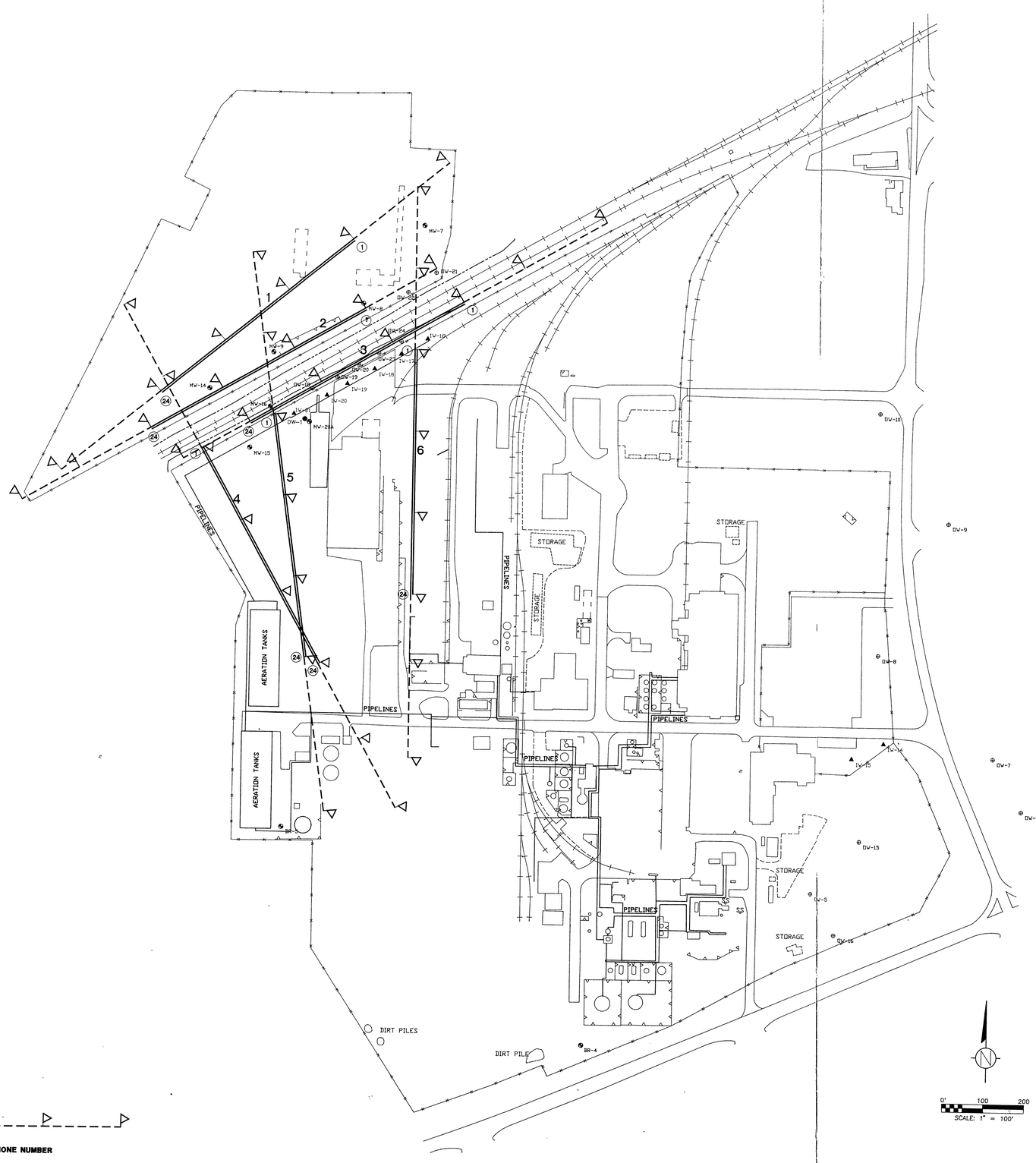
NPDES STORM WATER DISCHARGE PERMIT APPLICATION

MONSANTO CHEMICAL COMPANY

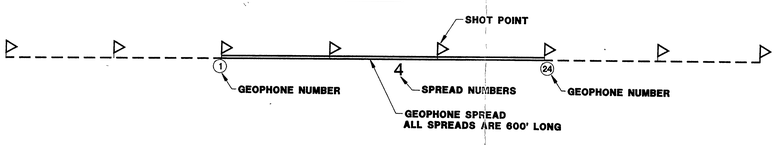
ANNISTON, ALABAMA

FIGURE

1



LEGEND



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REFRACTION SEISMIC SURVEY

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE 2

LEGEND

100 — TOP OF BEDROCK (REFRACTOR) CONTOUR, CONTOUR INTERVAL 10 FEET

▲ PROPOSED CONE PENETROMETER TEST LOCATION

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APPROVED BY	DATE:
LAST REVISION BY AWG	DATE: 3-25-92

REV NO	DATE	DESCRIPTION	BY	APPR.	REV NO	DATE	DESCRIPTION	BY	APPR

TOP OF BEDROCK (REFRACTOR) CONTOUR MAP

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE 3

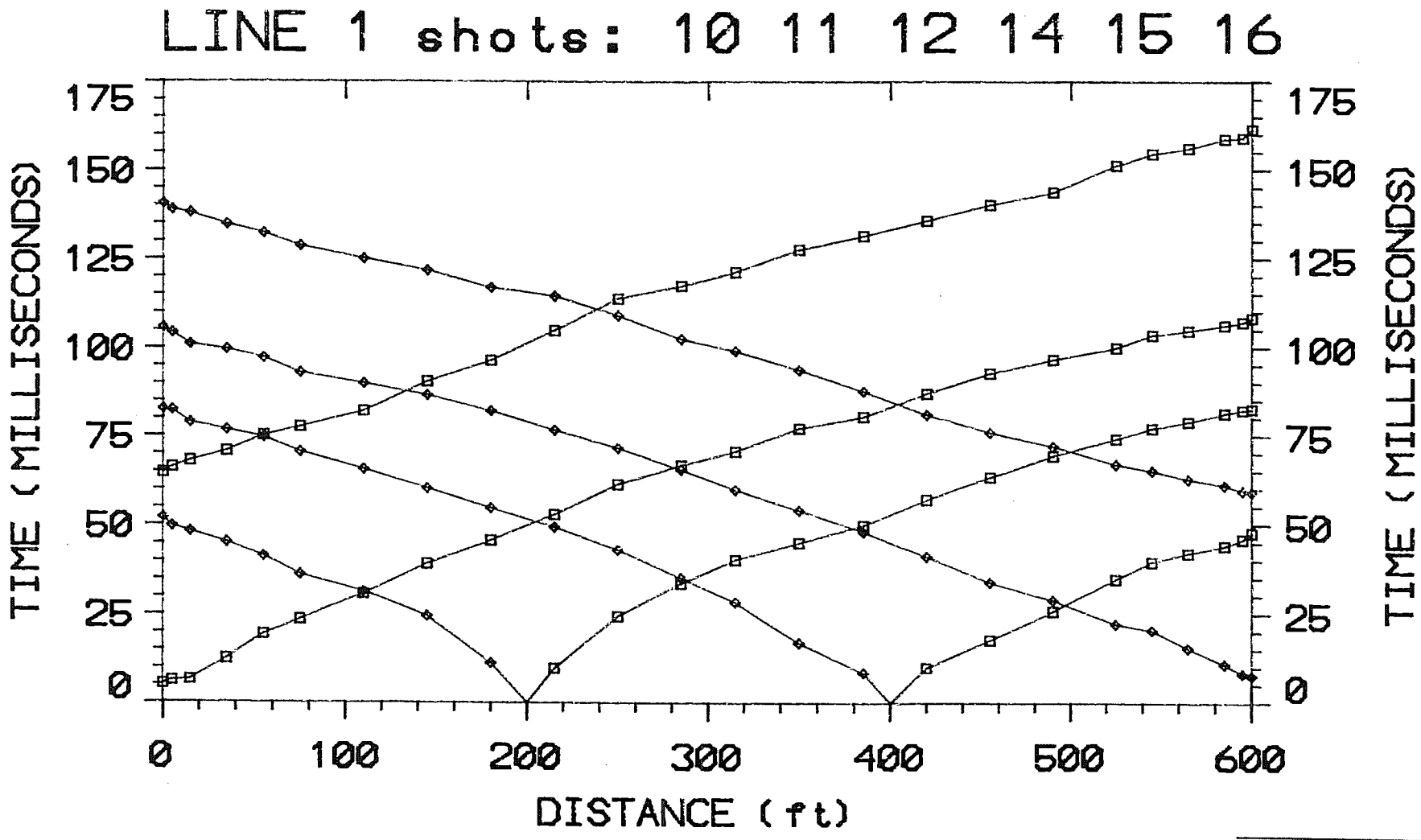

FIGURE 1A

GEOPHYSICAL SURVEY	
TIME VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

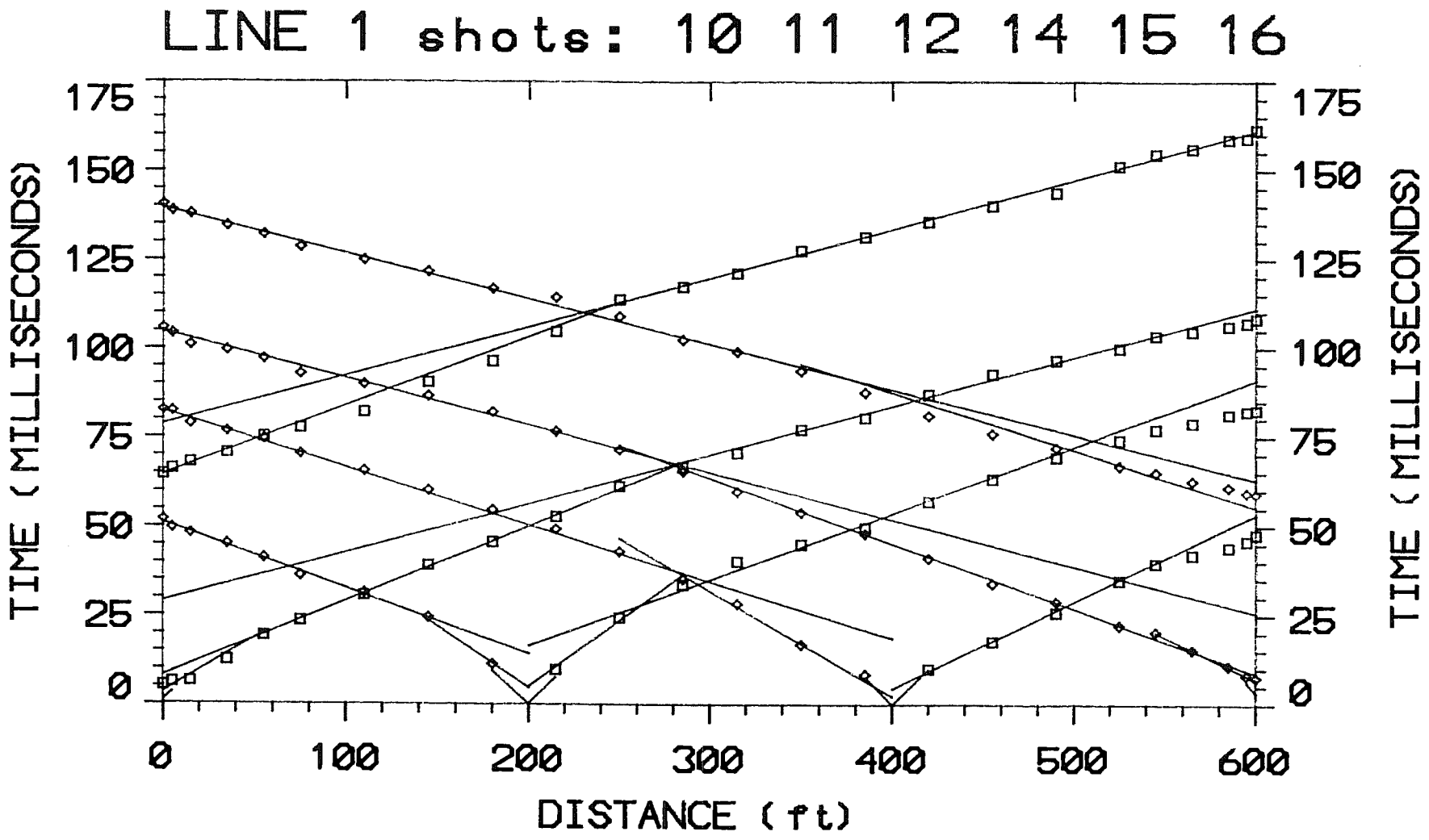

FIGURE 1B

GEOPHYSICAL SURVEY
REFRACTOR ASSIGNMENTS
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

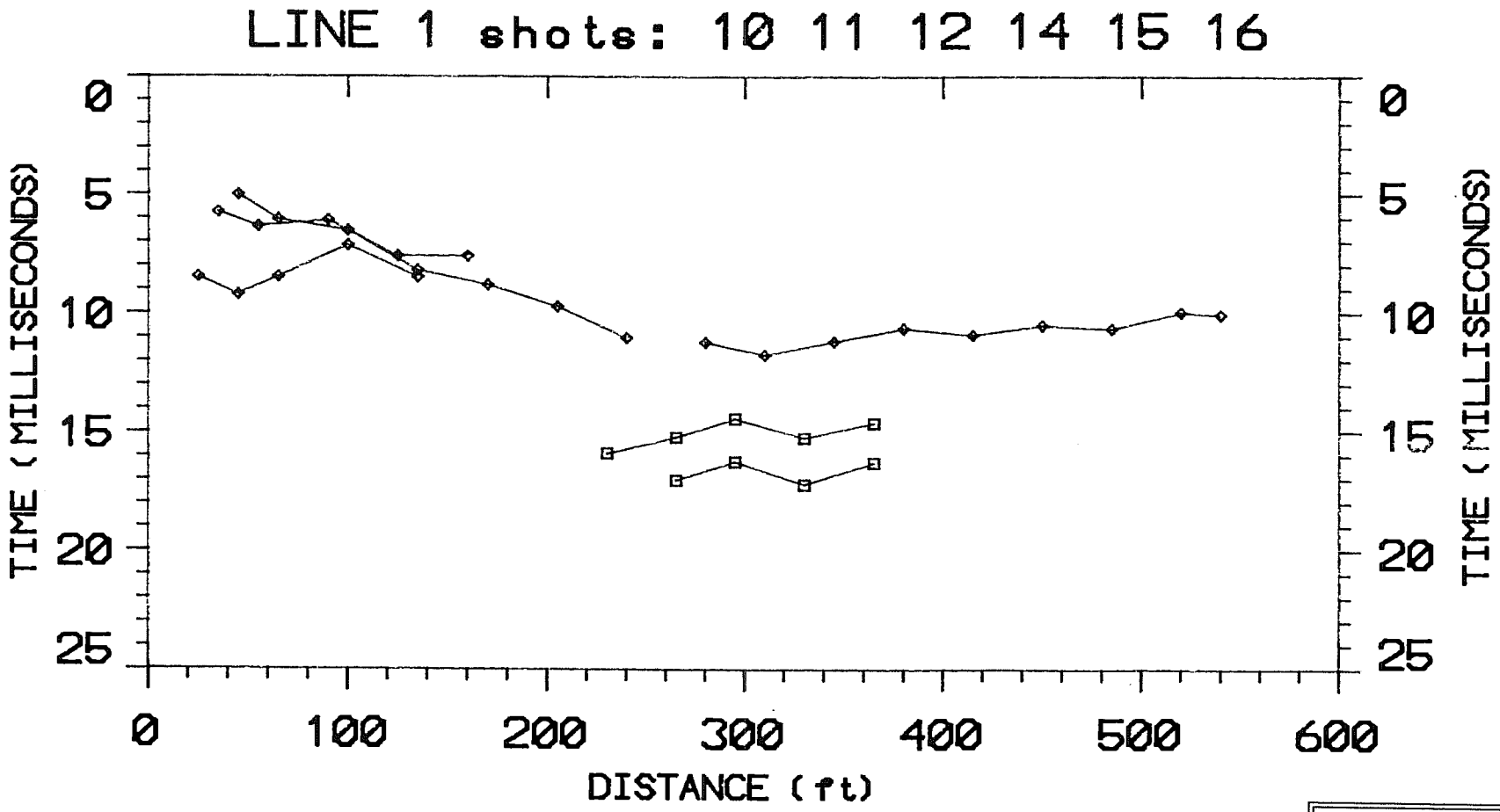

FIGURE 1C

GEOPHYSICAL SURVEY	
TIME DEPTH VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC.

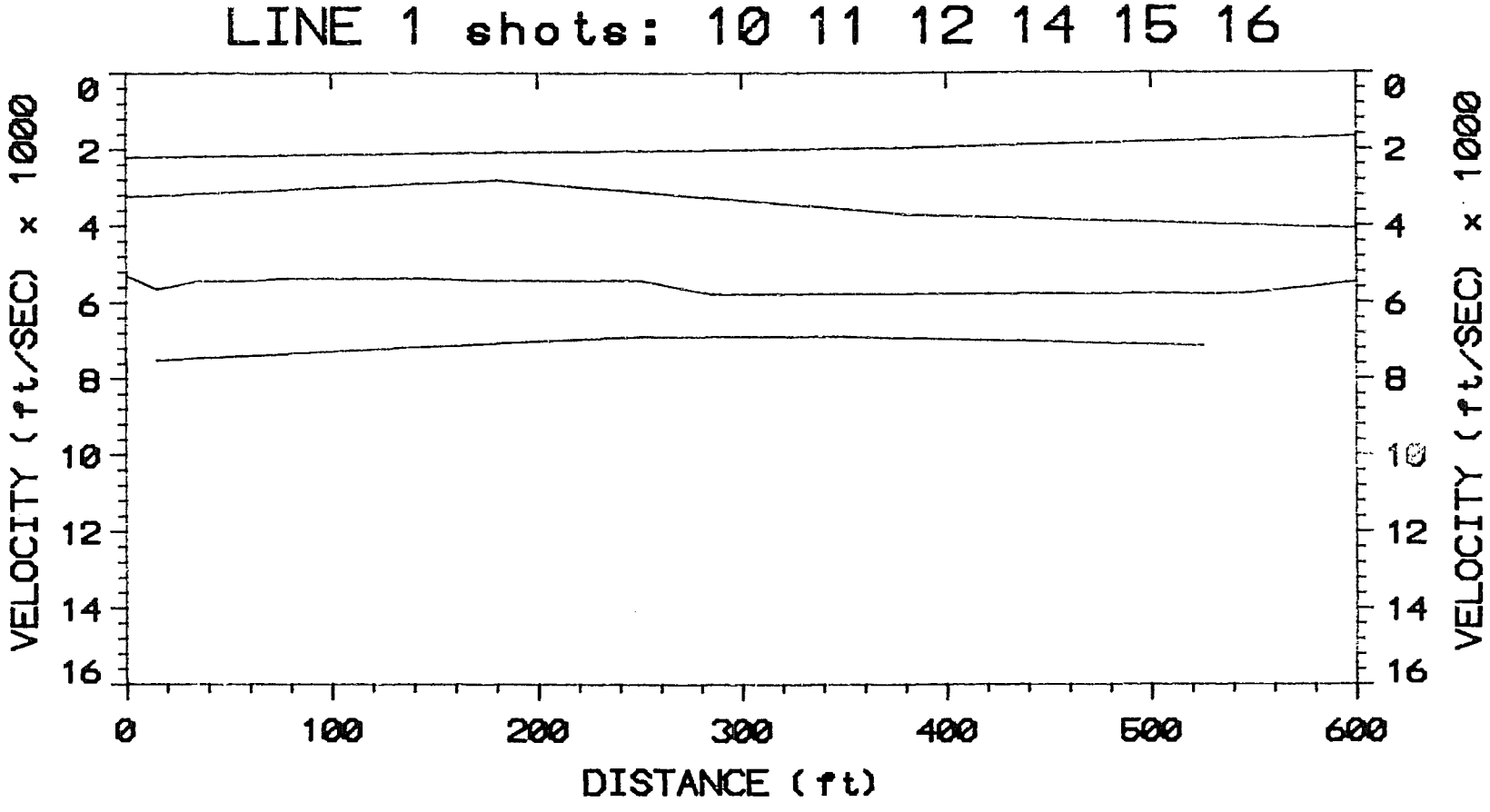

FIGURE 1D

GEOPHYSICAL SURVEY
VELOCITY VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY: GERAGHTY & MILLER, INC.

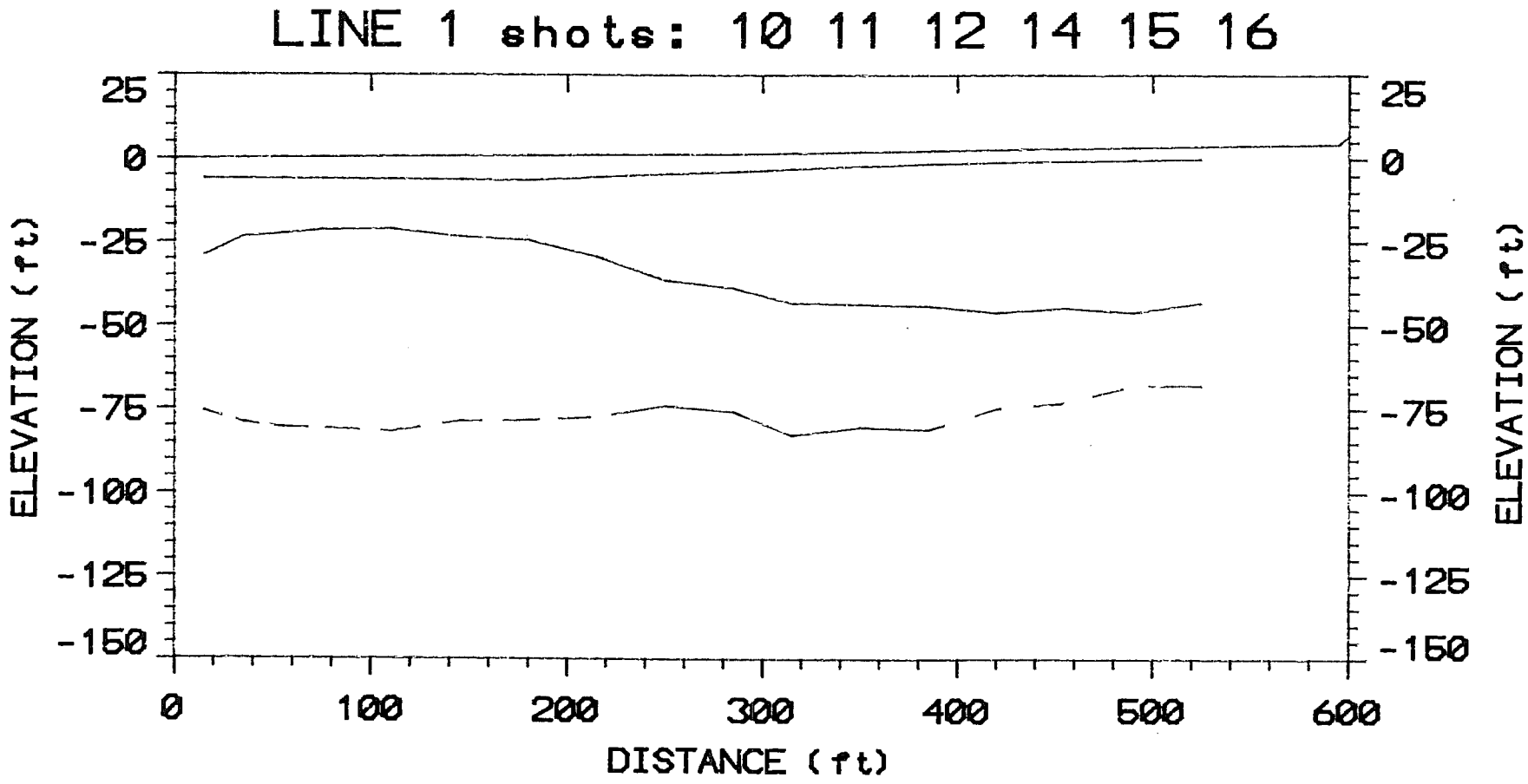

FIGURE 1E

GEOPHYSICAL SURVEY

DEPTH VS DISTANCE

FOR: MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

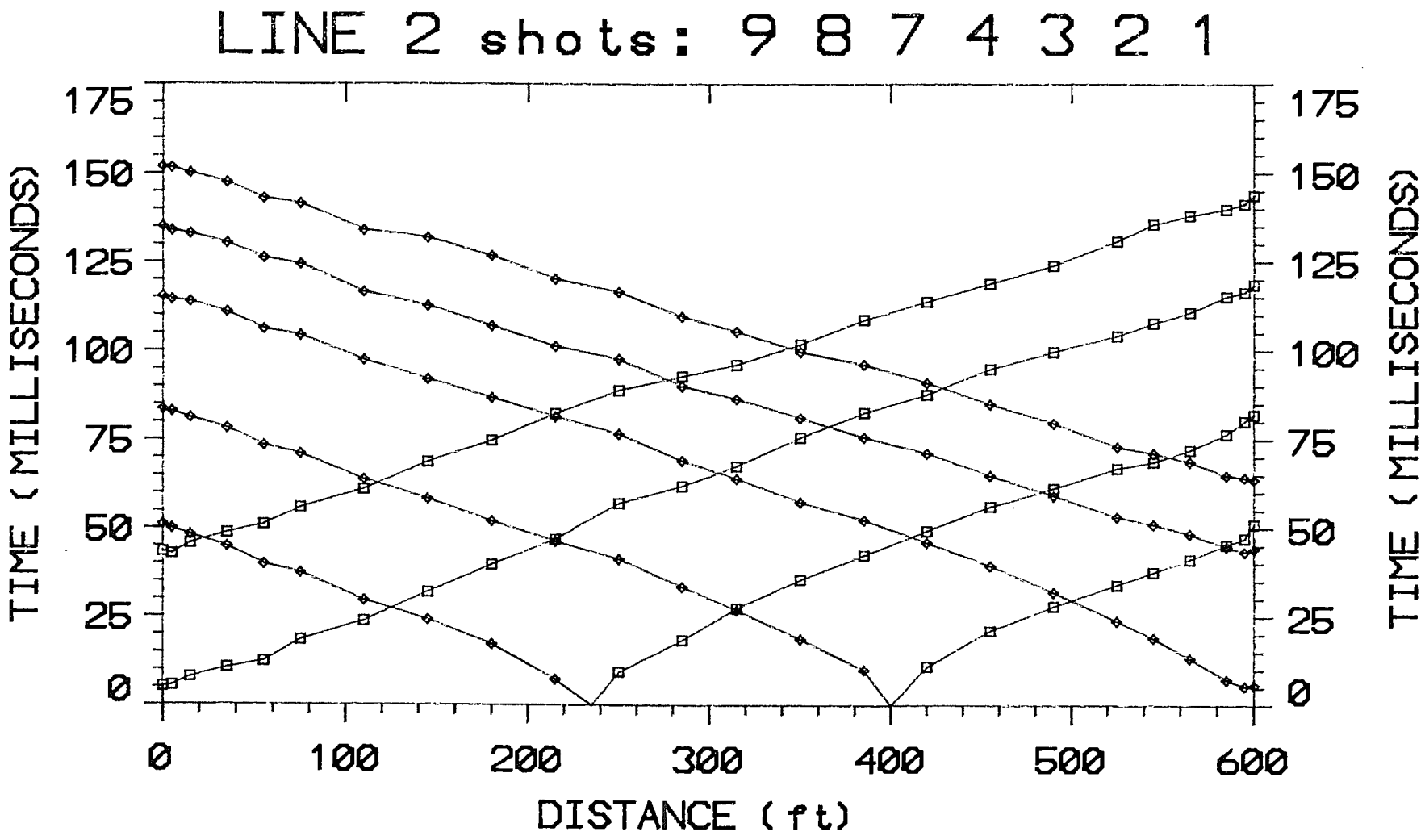

FIGURE 2A

GEOPHYSICAL SURVEY
TIME VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

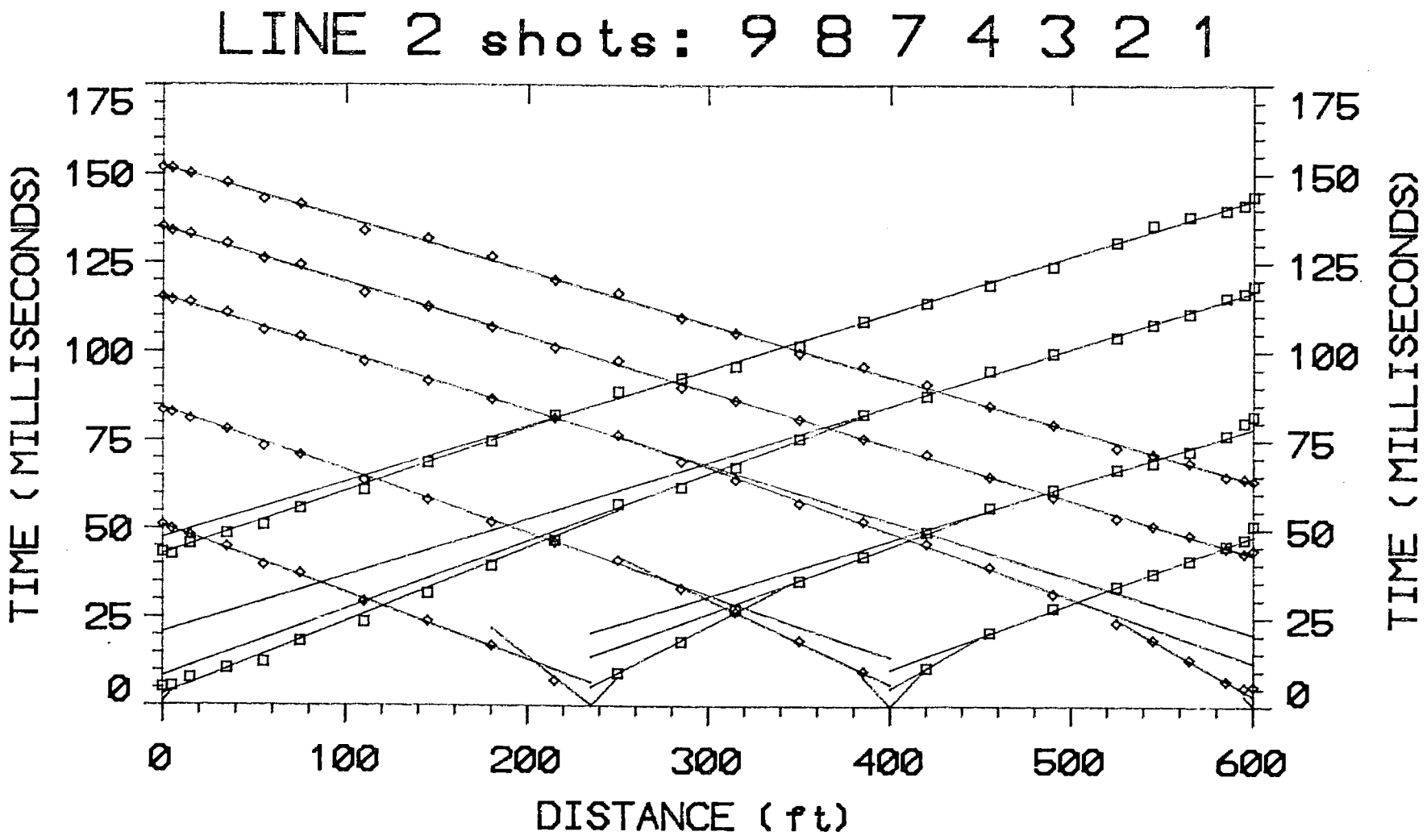

FIGURE 2E

GEOPHYSICAL SURVEY
REFRACTOR ASSIGNMENTS
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY: GERAGHTY & MILLER, INC.

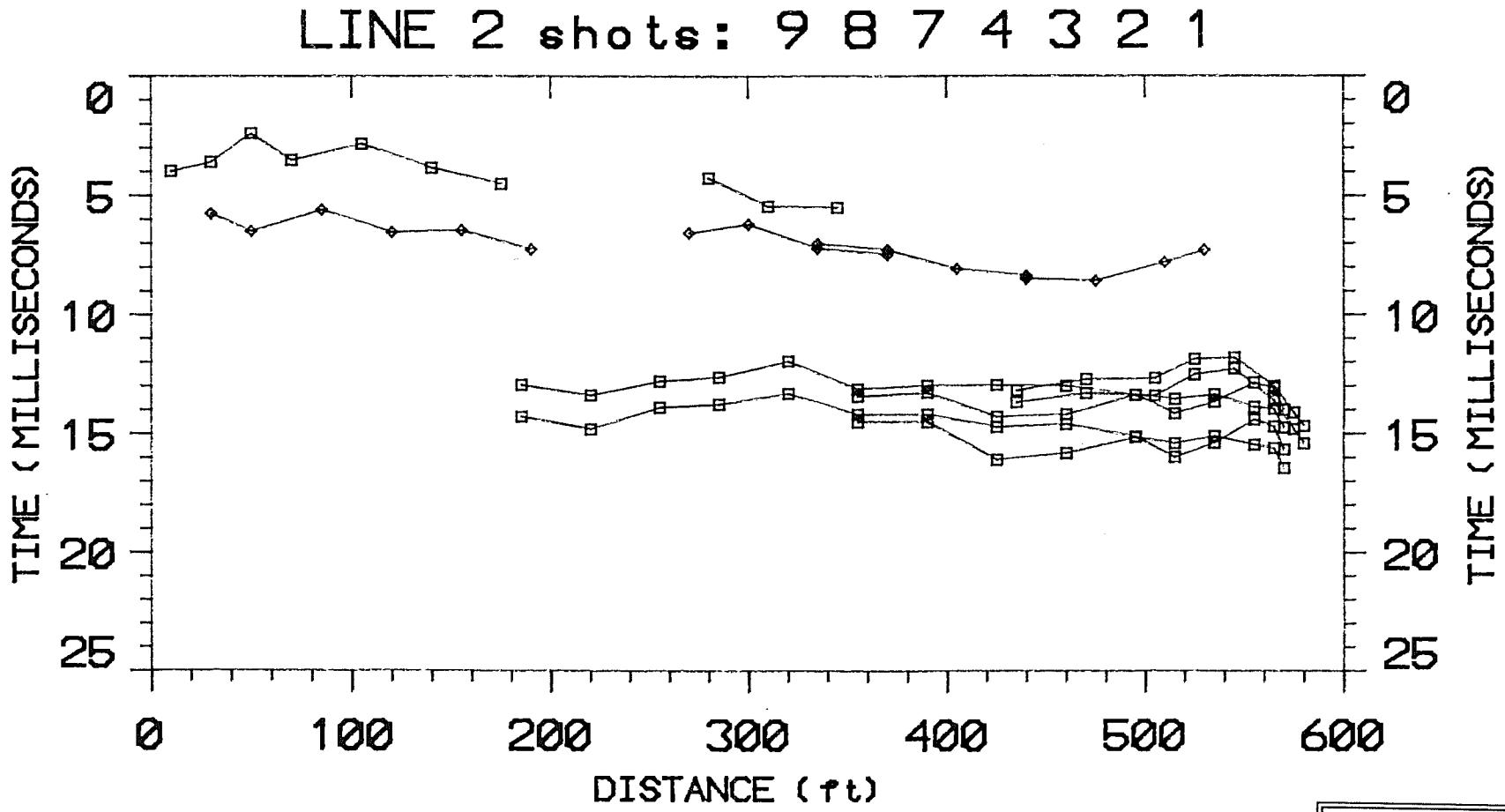

FIGURE 2

GEOPHYSICAL SURVEY	
TIME DEPTH VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC

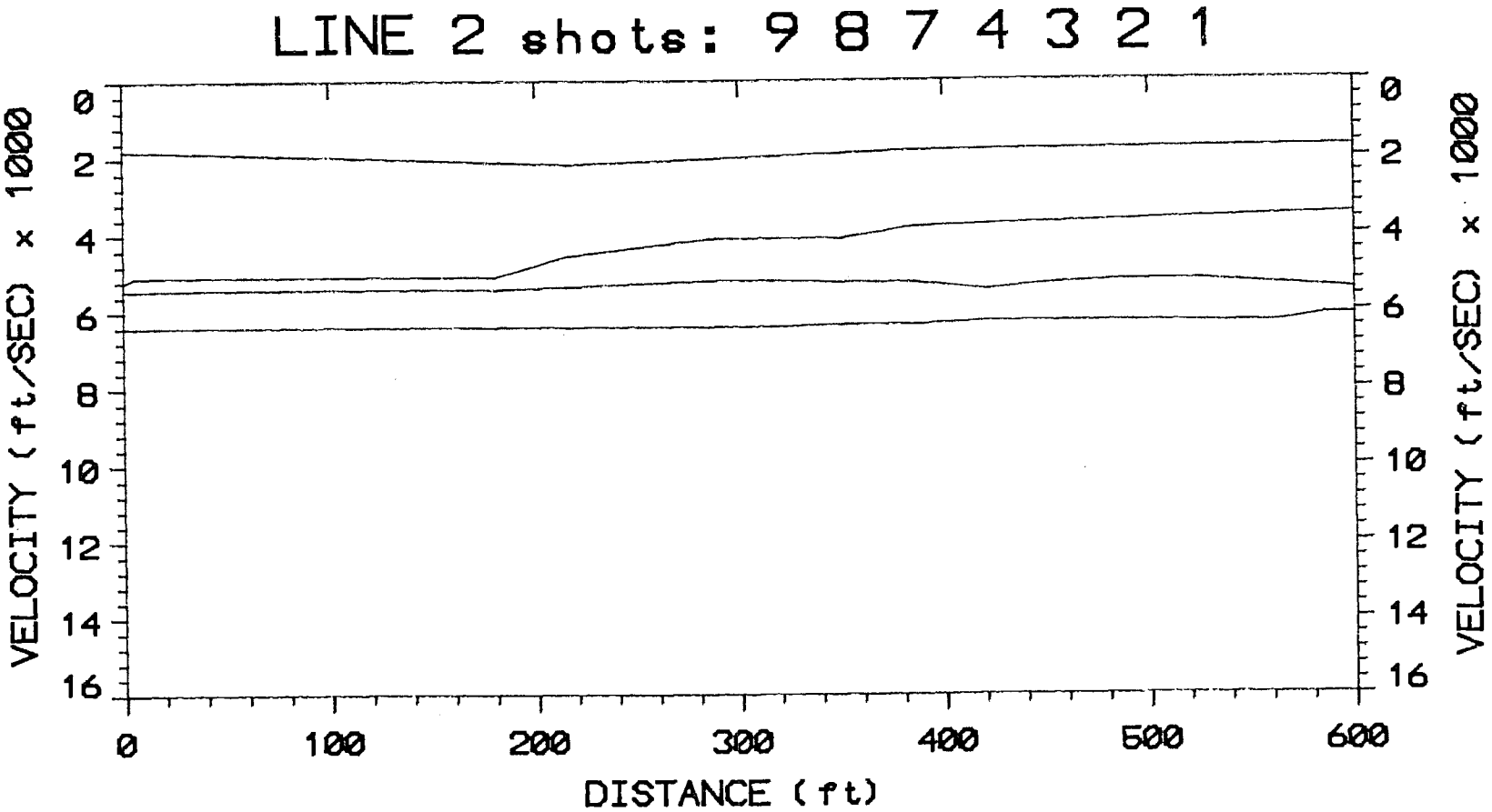

FIGURE 2D

GEOPHYSICAL SURVEY
VELOCITY VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY: GERAGHTY & MILLER, INC.

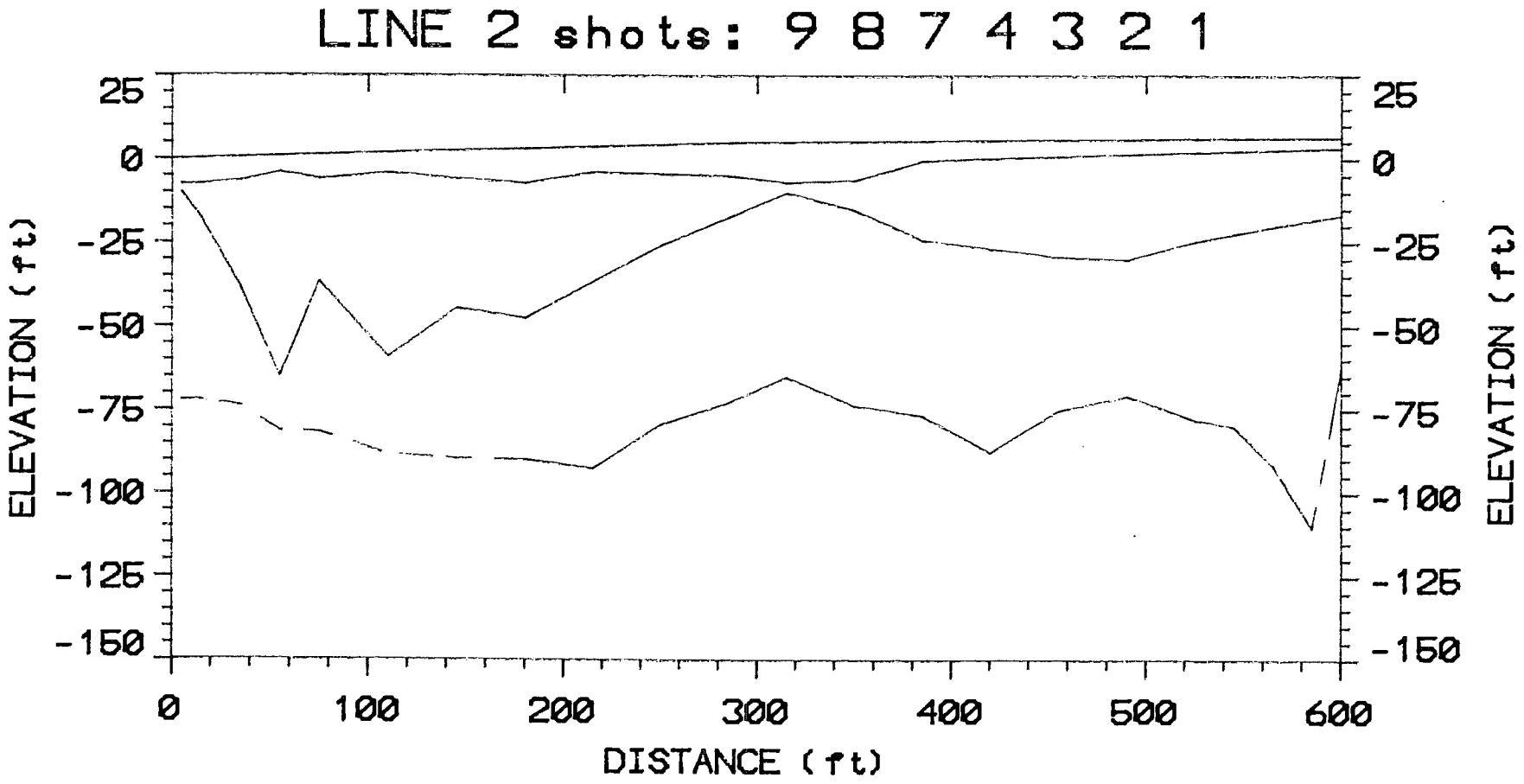

FIGURE 2E

GEOPHYSICAL SURVEY
DEPTH VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

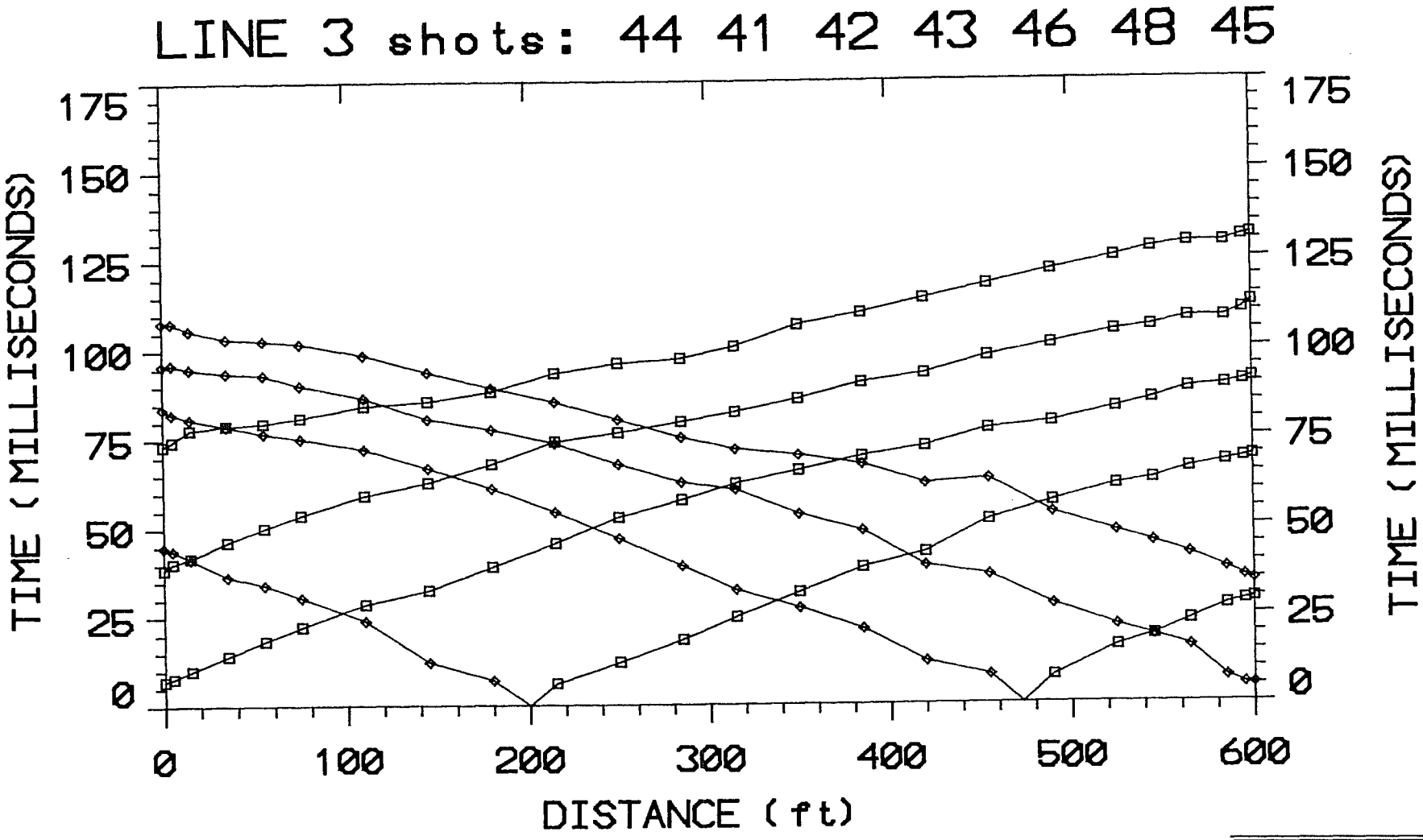

FIGURE 3.

GEOPHYSICAL SURVEY

TIME VS DISTANCE

FOR: MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

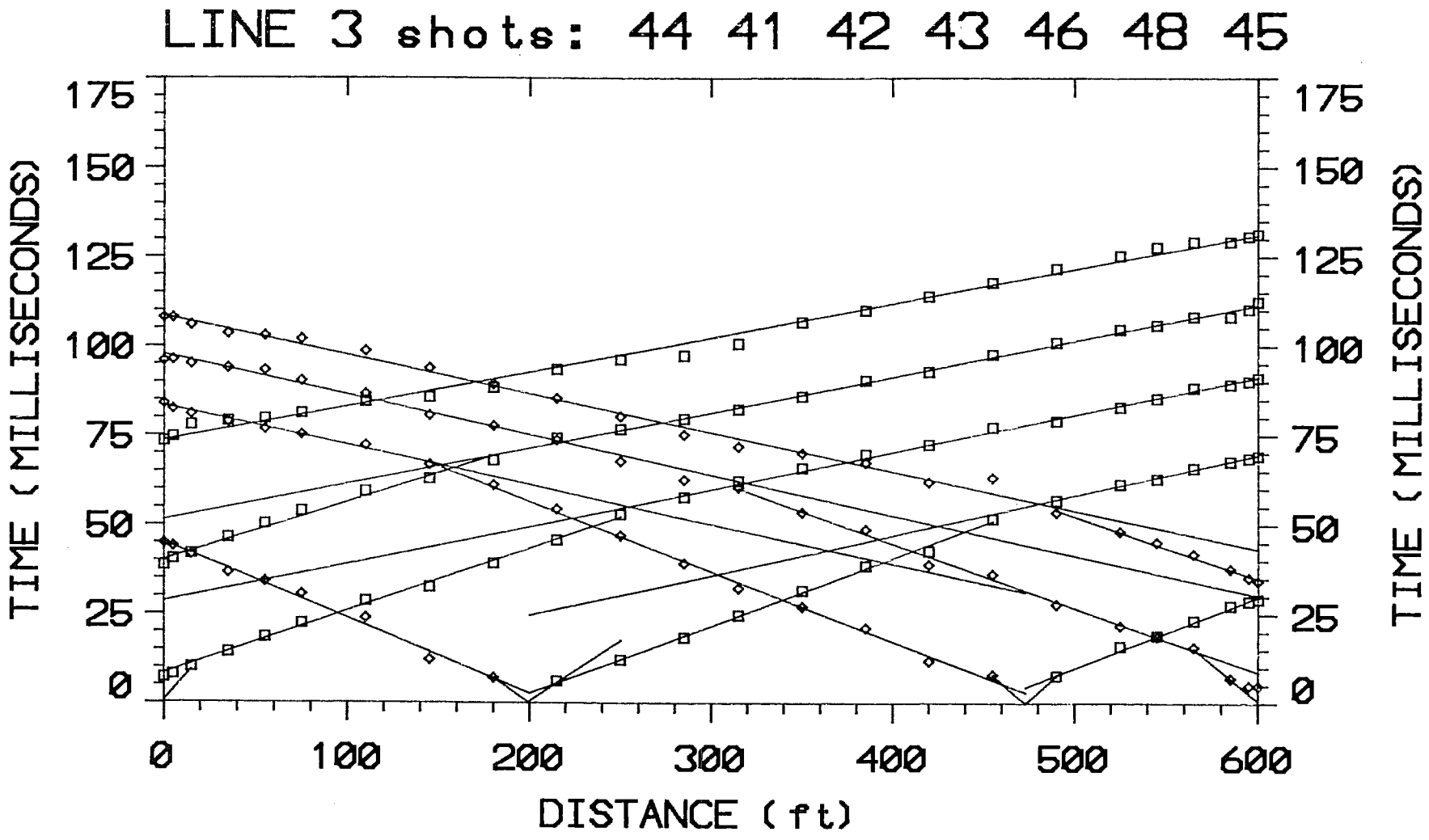

FIGURE 3B

GEOPHYSICAL SURVEY

REFRACTOR ASSIGNMENTS

FOR: MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

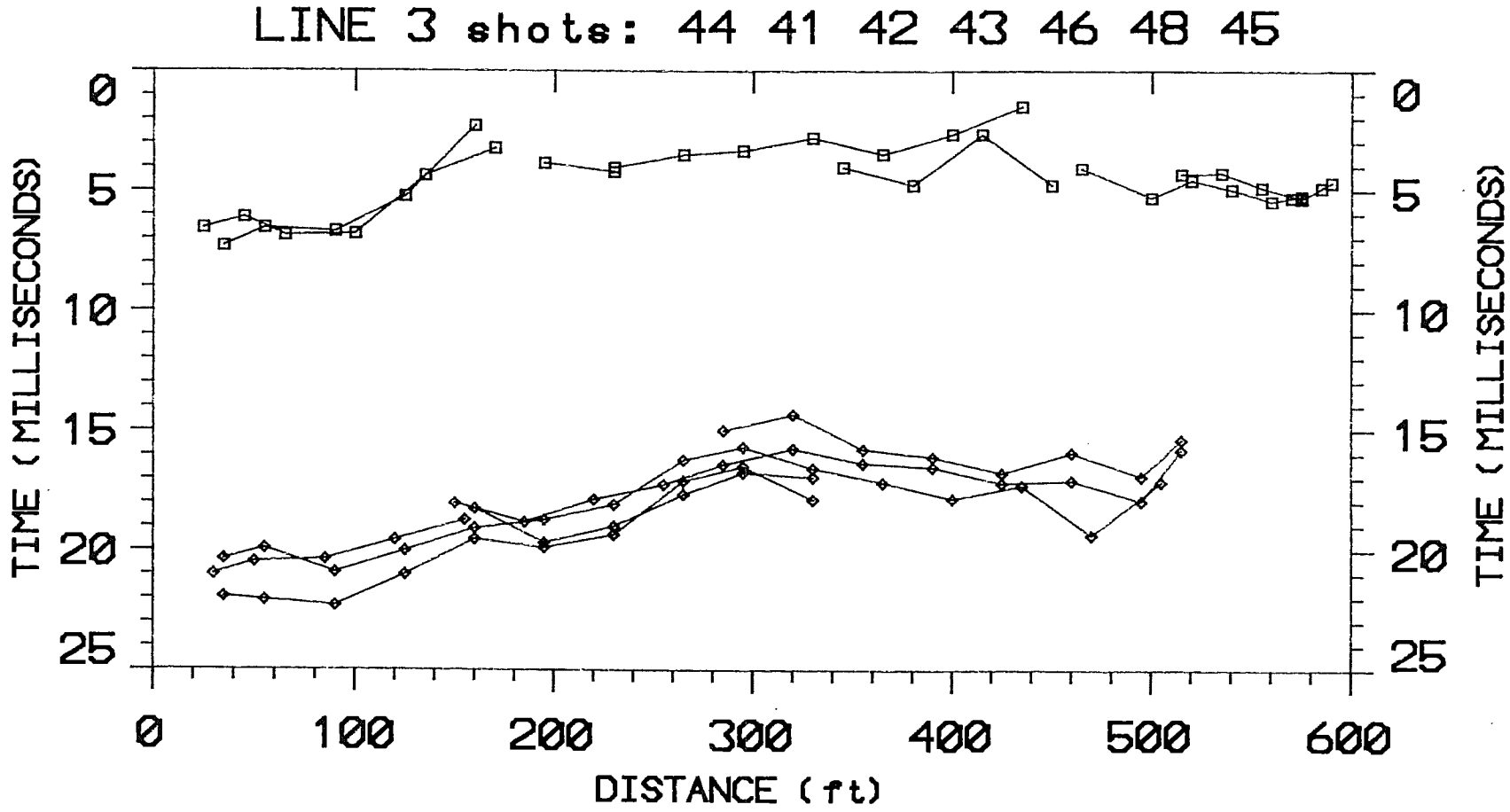

FIGURE 3C

GEOPHYSICAL SURVEY
TIME DEPTH VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

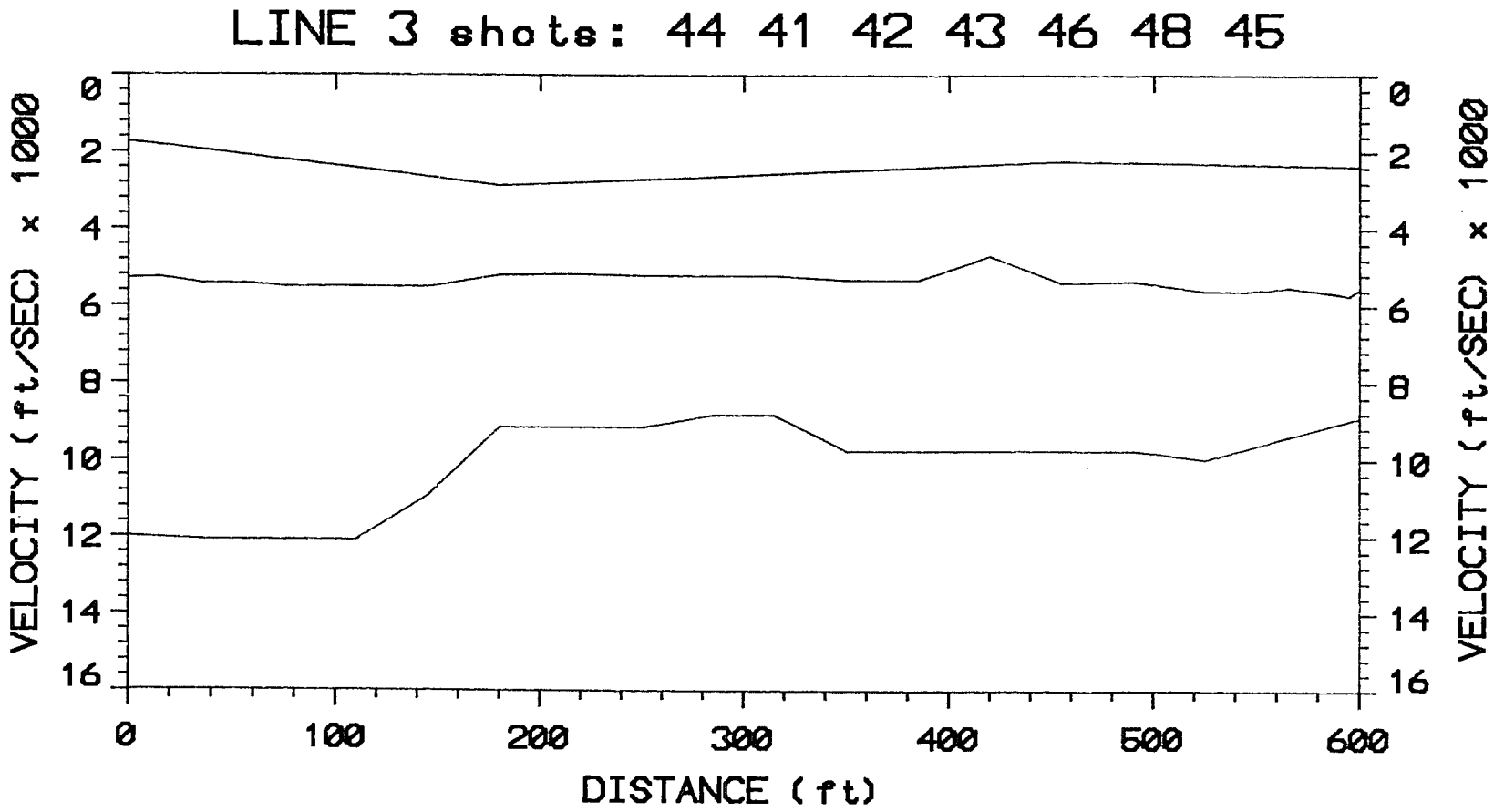

FIGURE 3D

GEOPHYSICAL SURVEY
VELOCITY VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

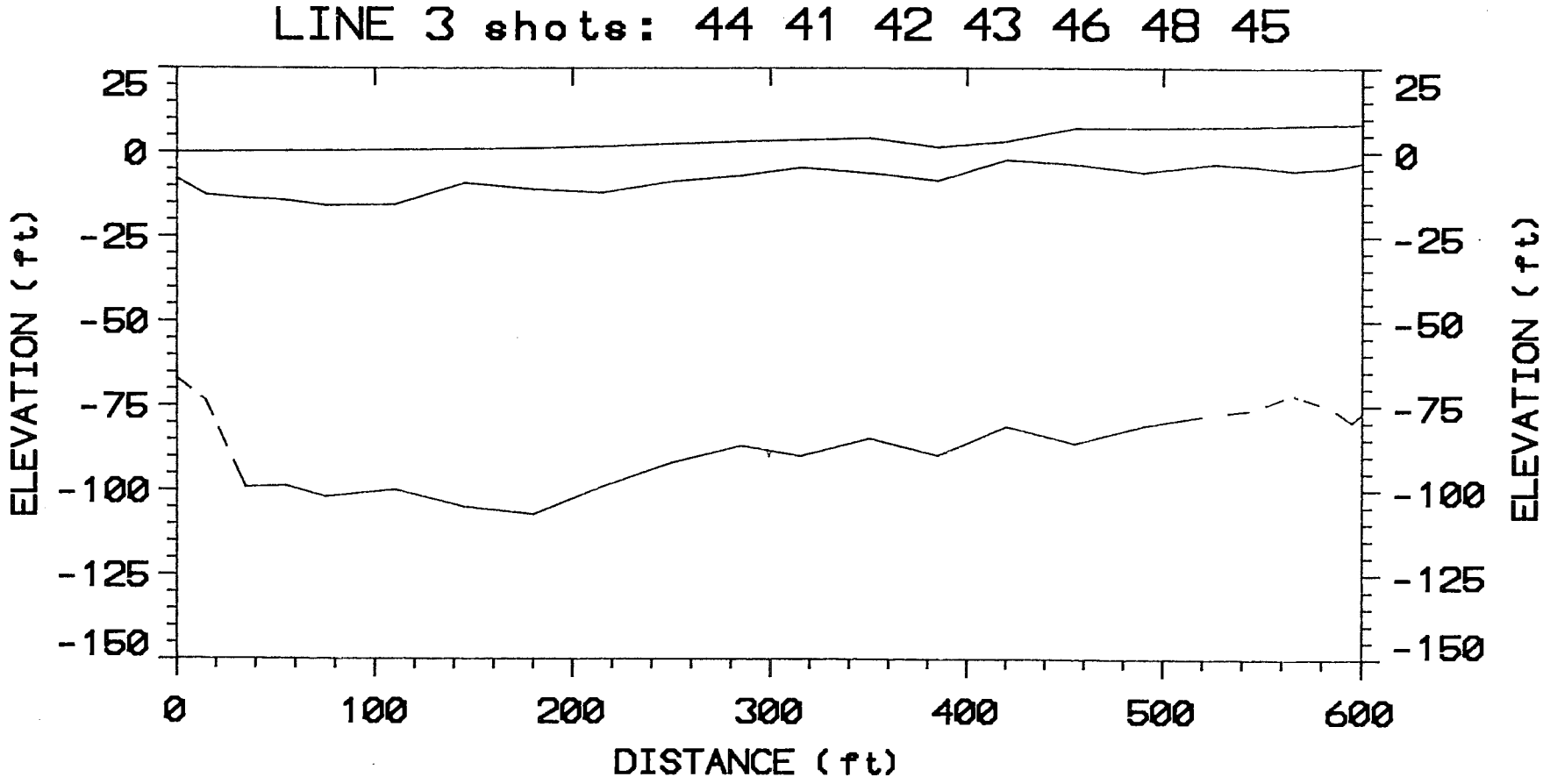

FIGURE 3E

GEOPHYSICAL SURVEY	
DEPTH VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC. GEOPHYSICAL GROUP

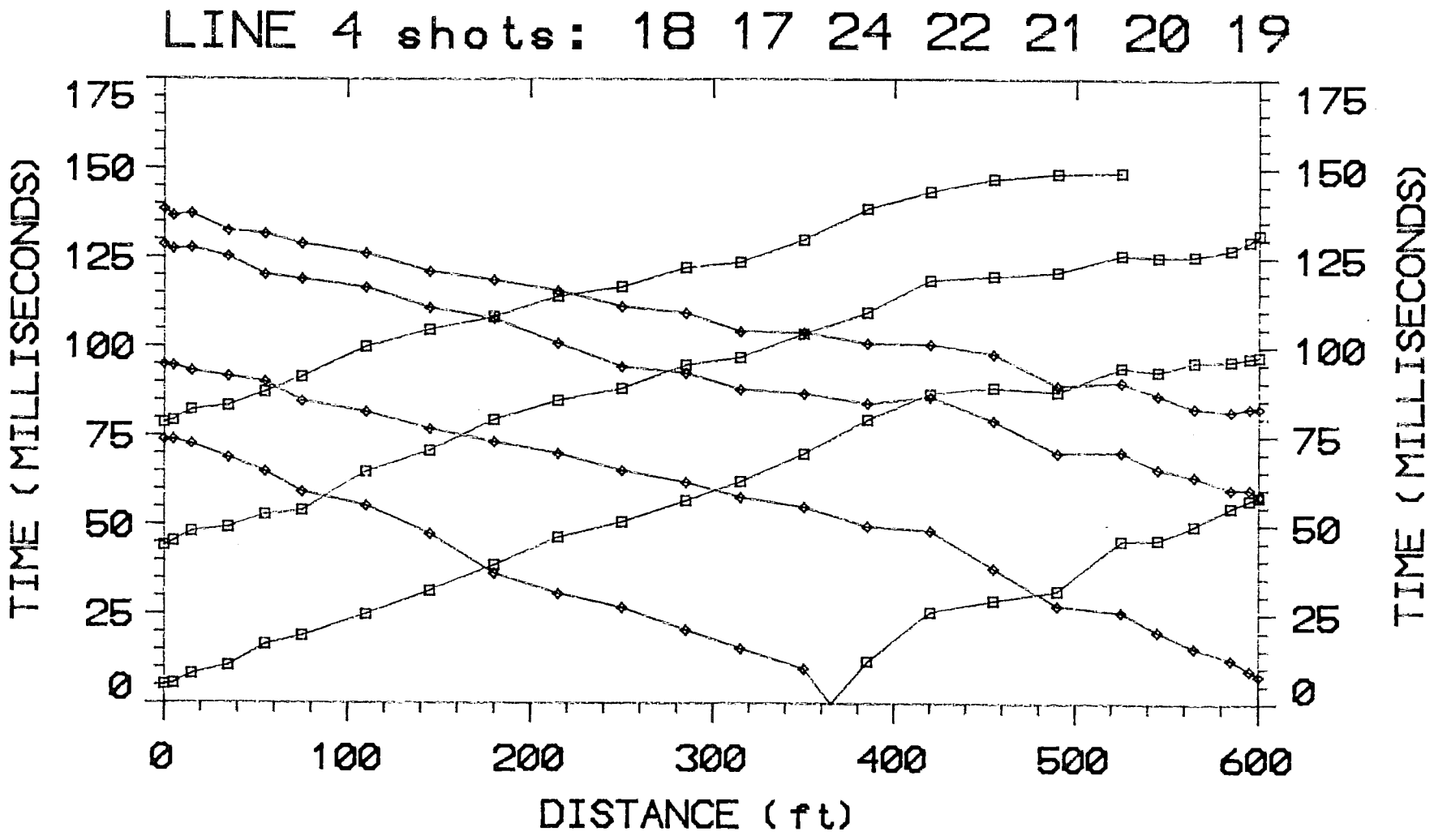

FIGURE 4A

GEOPHYSICAL SURVEY	
TIME VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC. GEOPHYSICAL GROUP

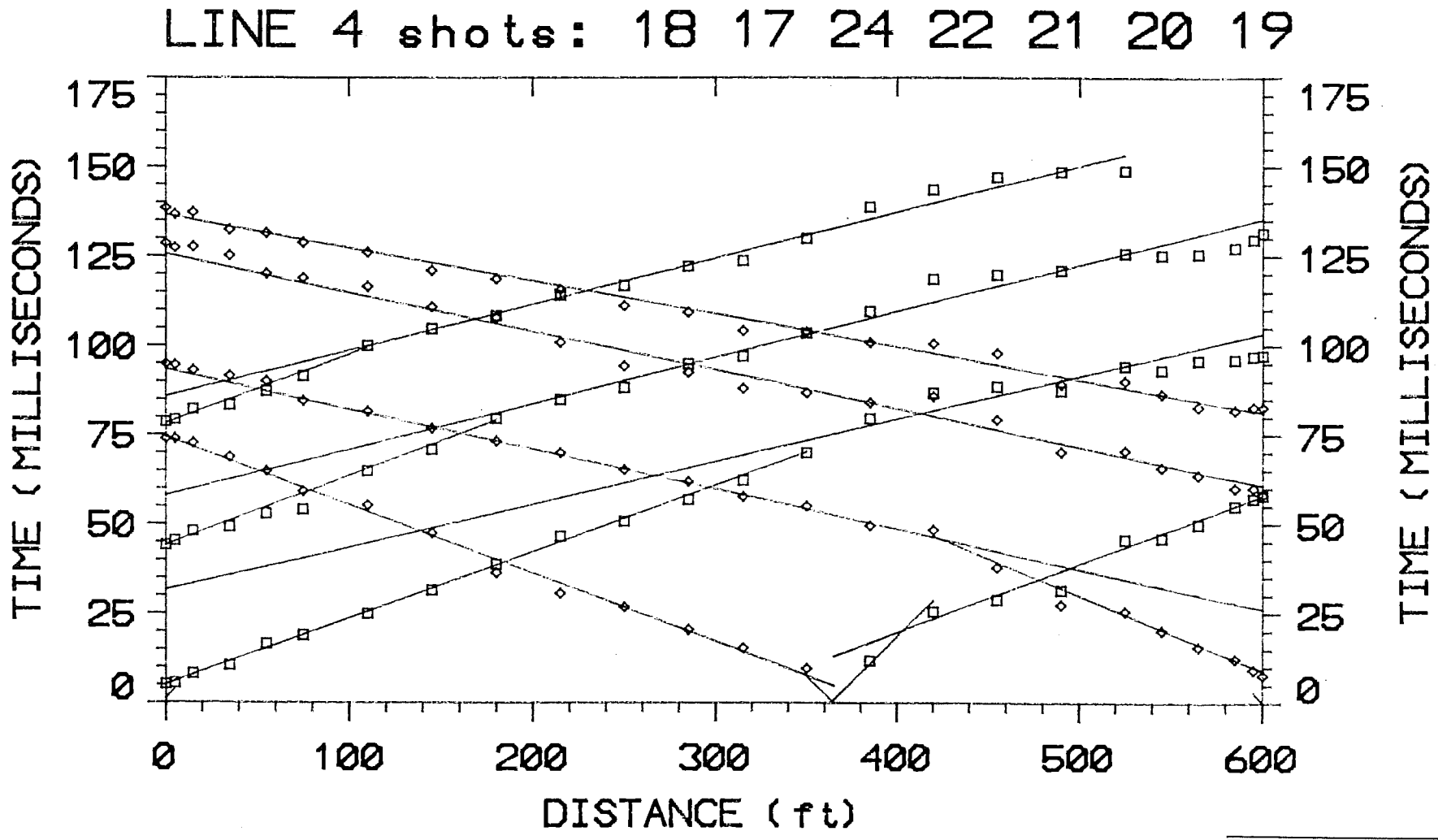

FIGURE 4B

GEOPHYSICAL SURVEY	
REFRACTOR ASSIGNMENTS	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC. GEOPHYSICAL GROUP

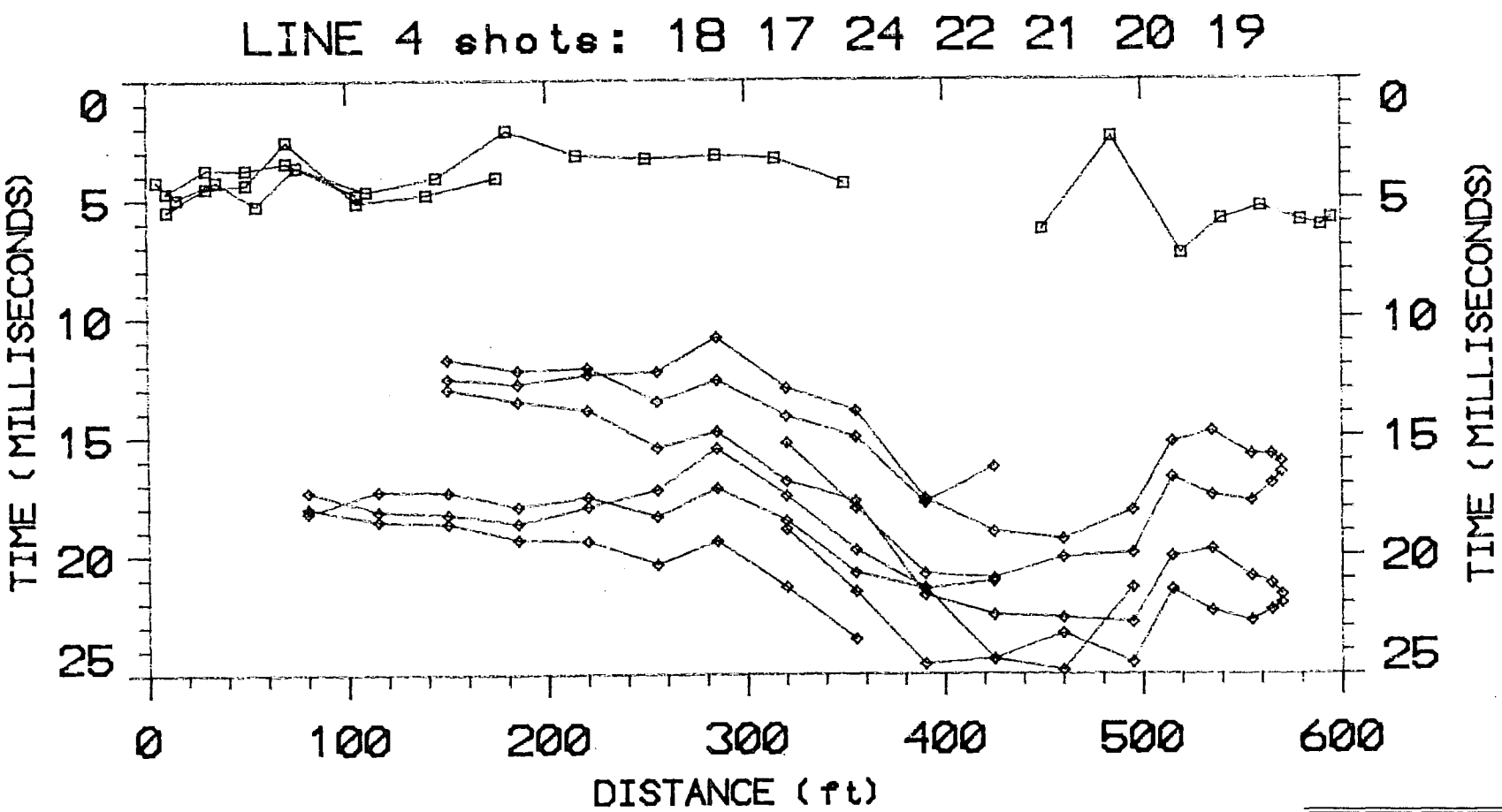

FIGURE 4C

GEOPHYSICAL SURVEY	
TIME DEPTH VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC. GEOPHYSICAL GROUP

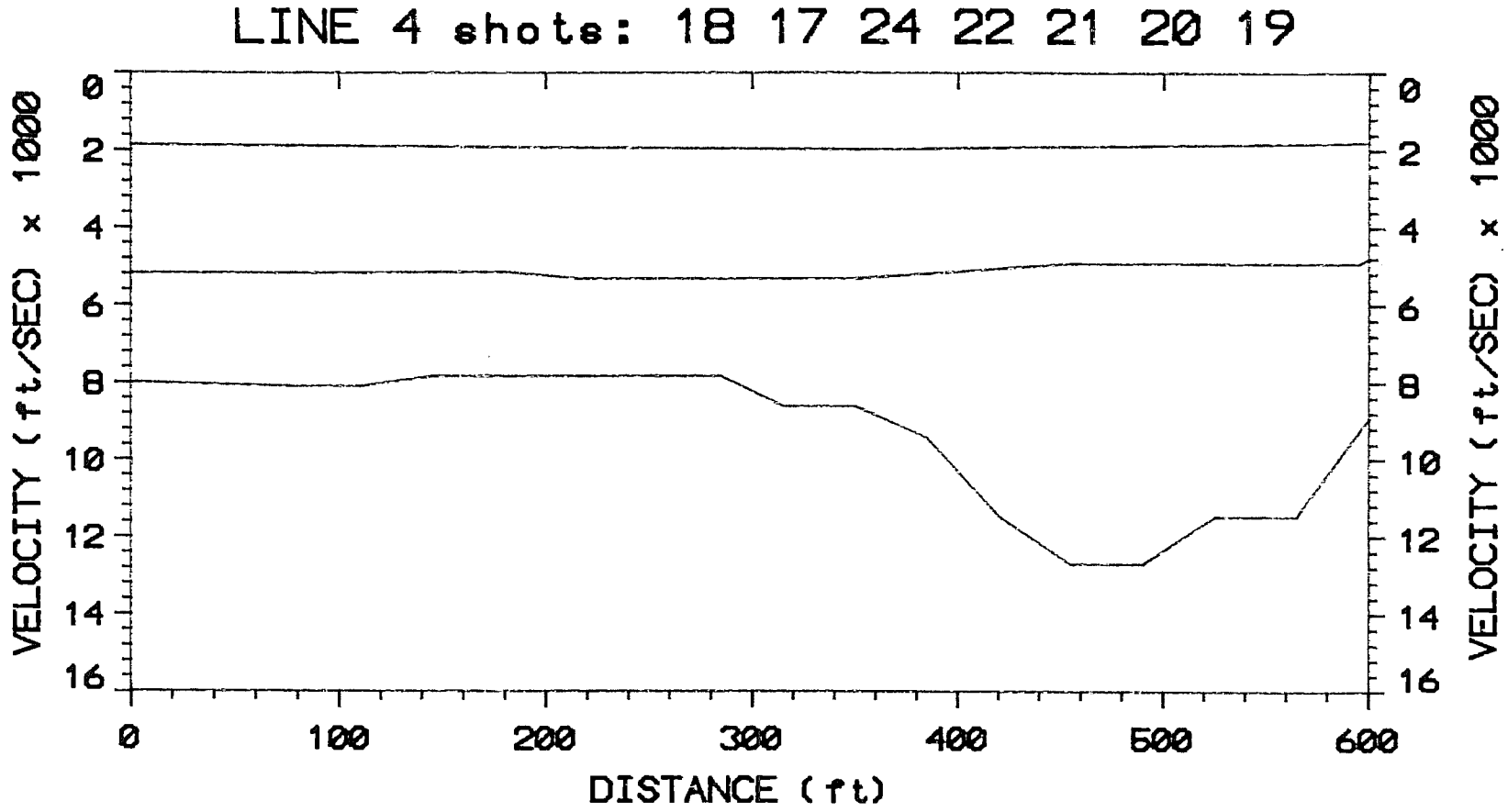

FIGURE 4D

GEOPHYSICAL SURVEY	
VELOCITY VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC. GEOPHYSICAL GROUP

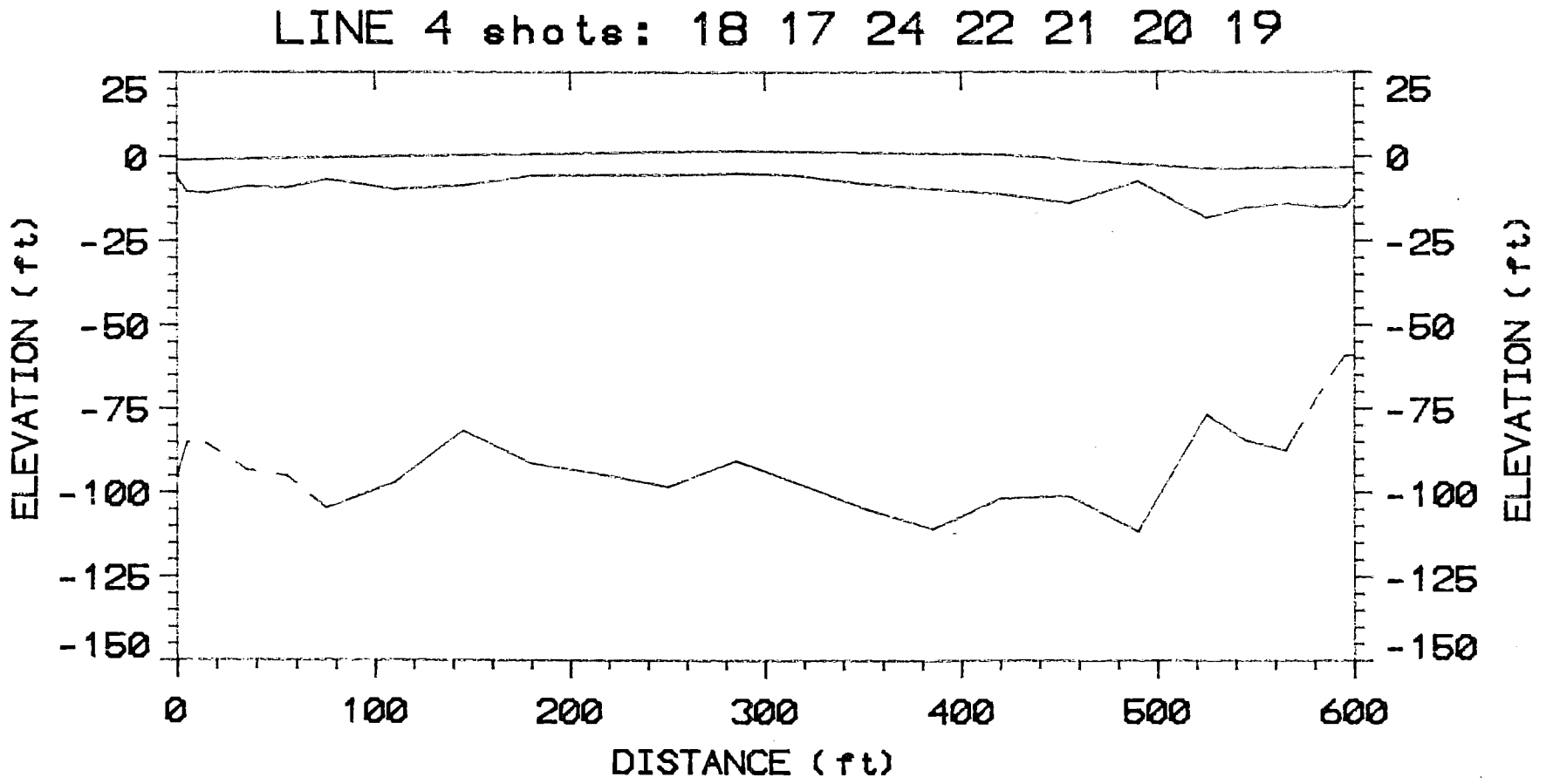

FIGURE 4

GEOPHYSICAL SURVEY	
DEPTH VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC.

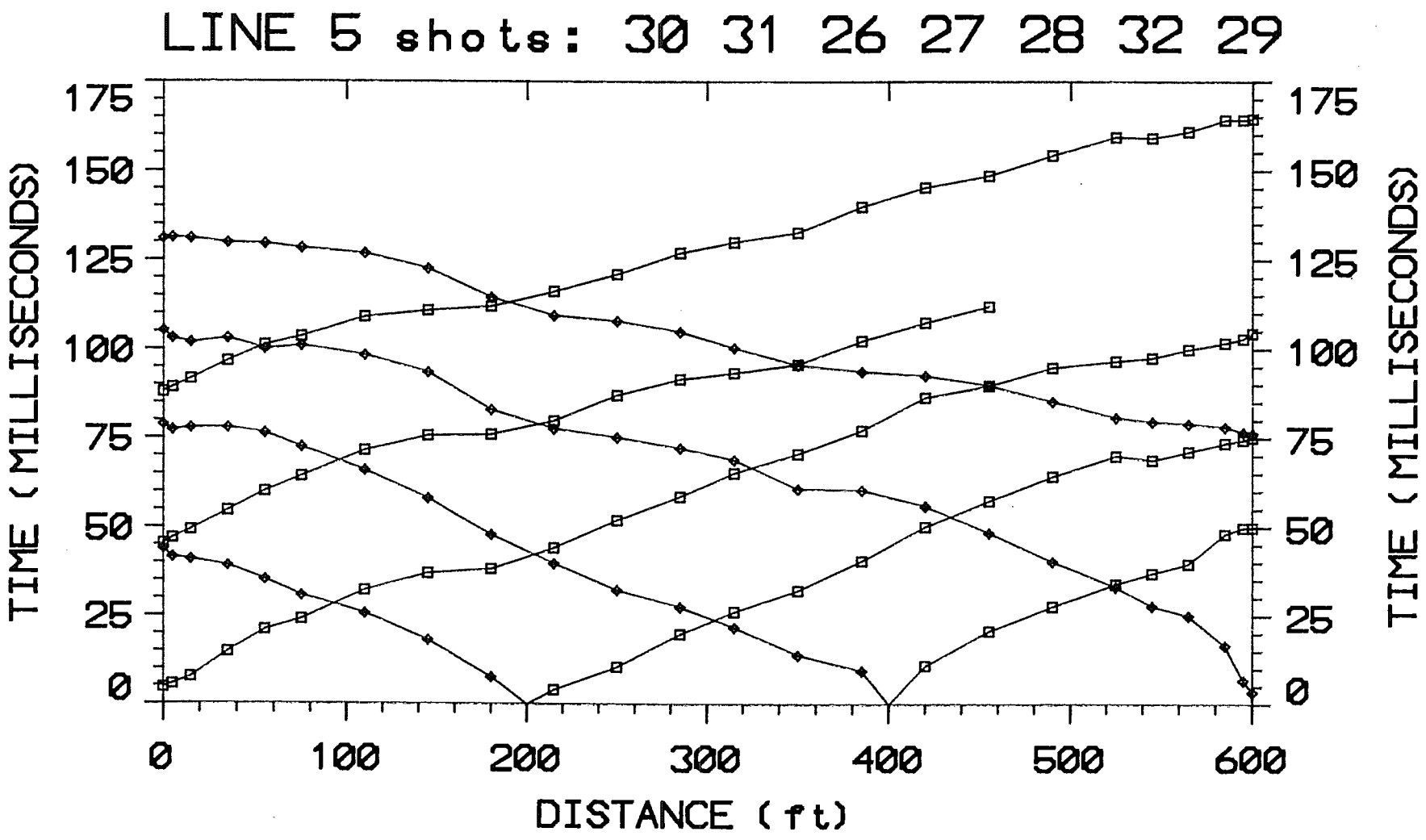

FIGURE 5A

GEOPHYSICAL SURVEY
TIME VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

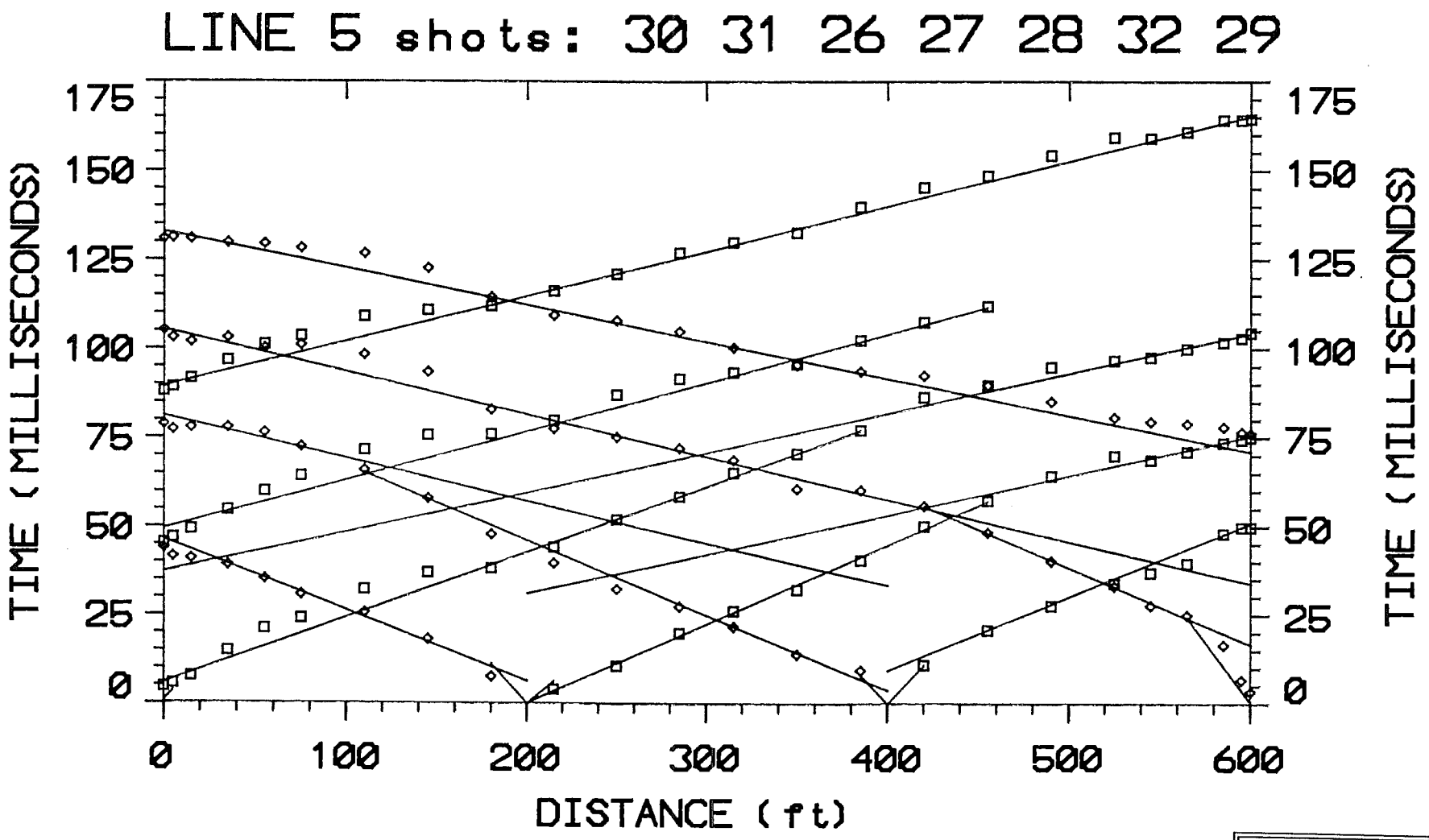

FIGURE 5B

GEOPHYSICAL SURVEY
REFRACTOR ASSIGNMENTS
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY: GERAGHTY & MILLER, INC.

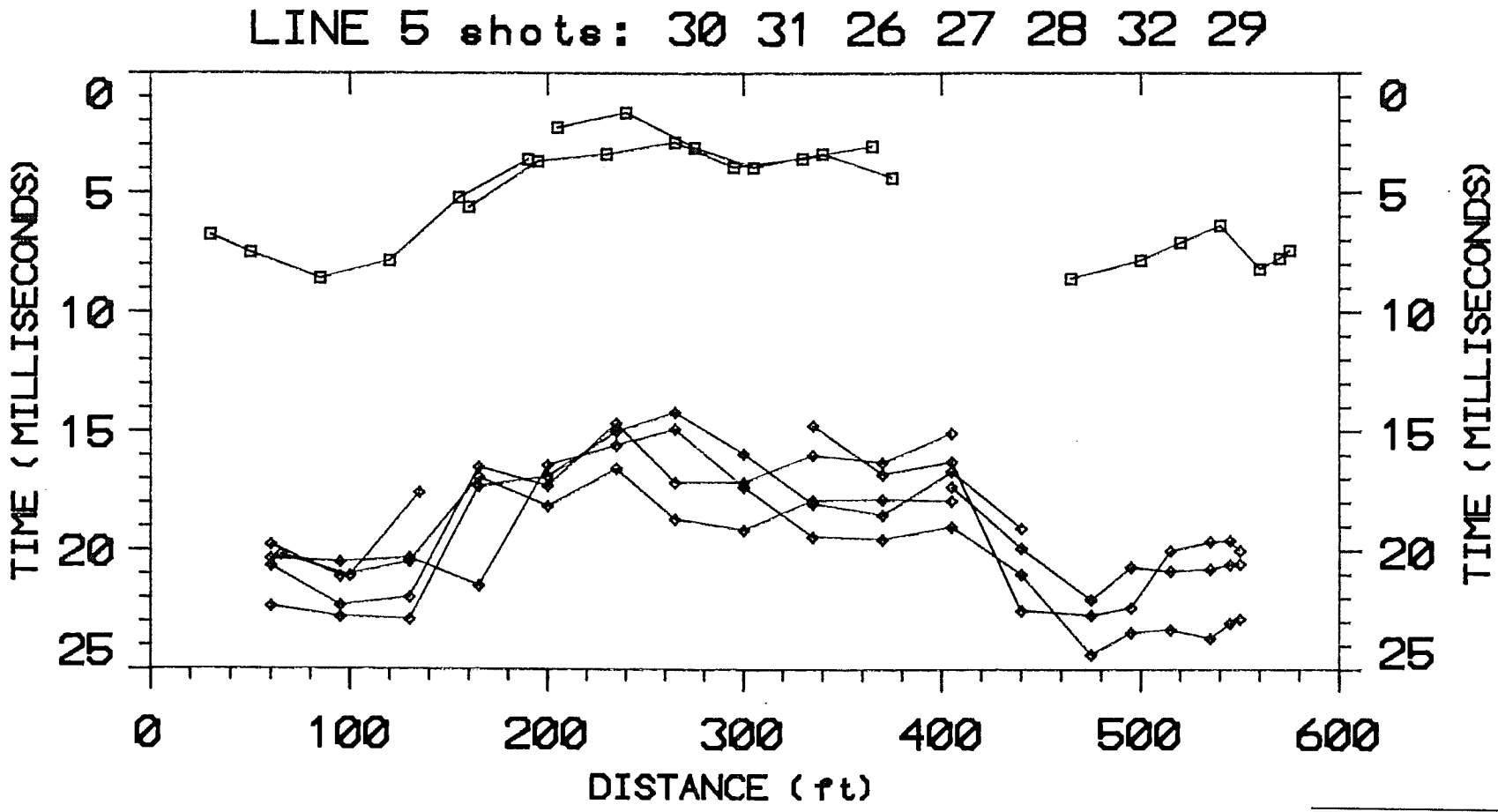

FIGURE 5C

GEOPHYSICAL SURVEY
TIME DEPTH VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

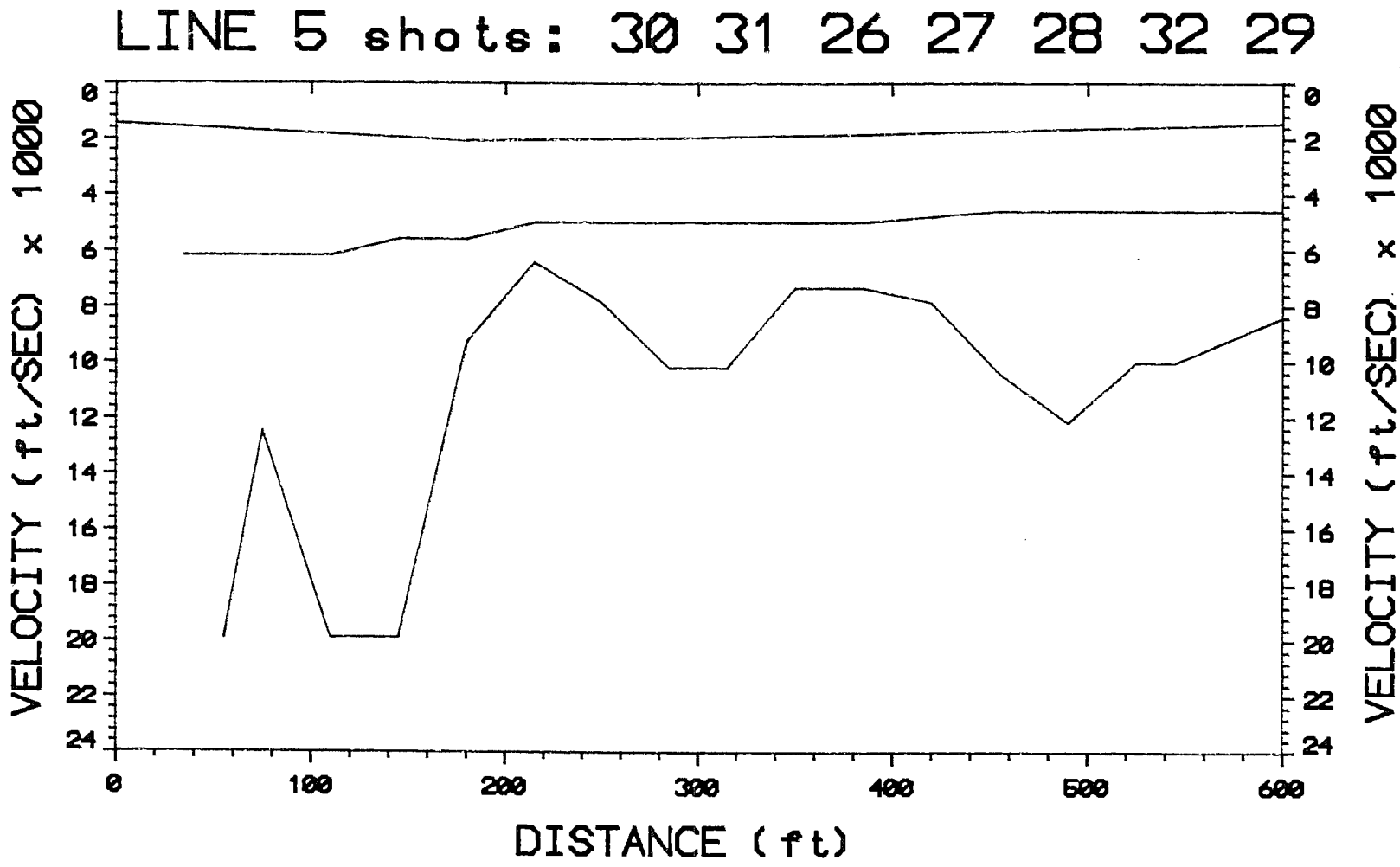

FIGURE 5D

GEOPHYSICAL SURVEY
VELOCITY VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

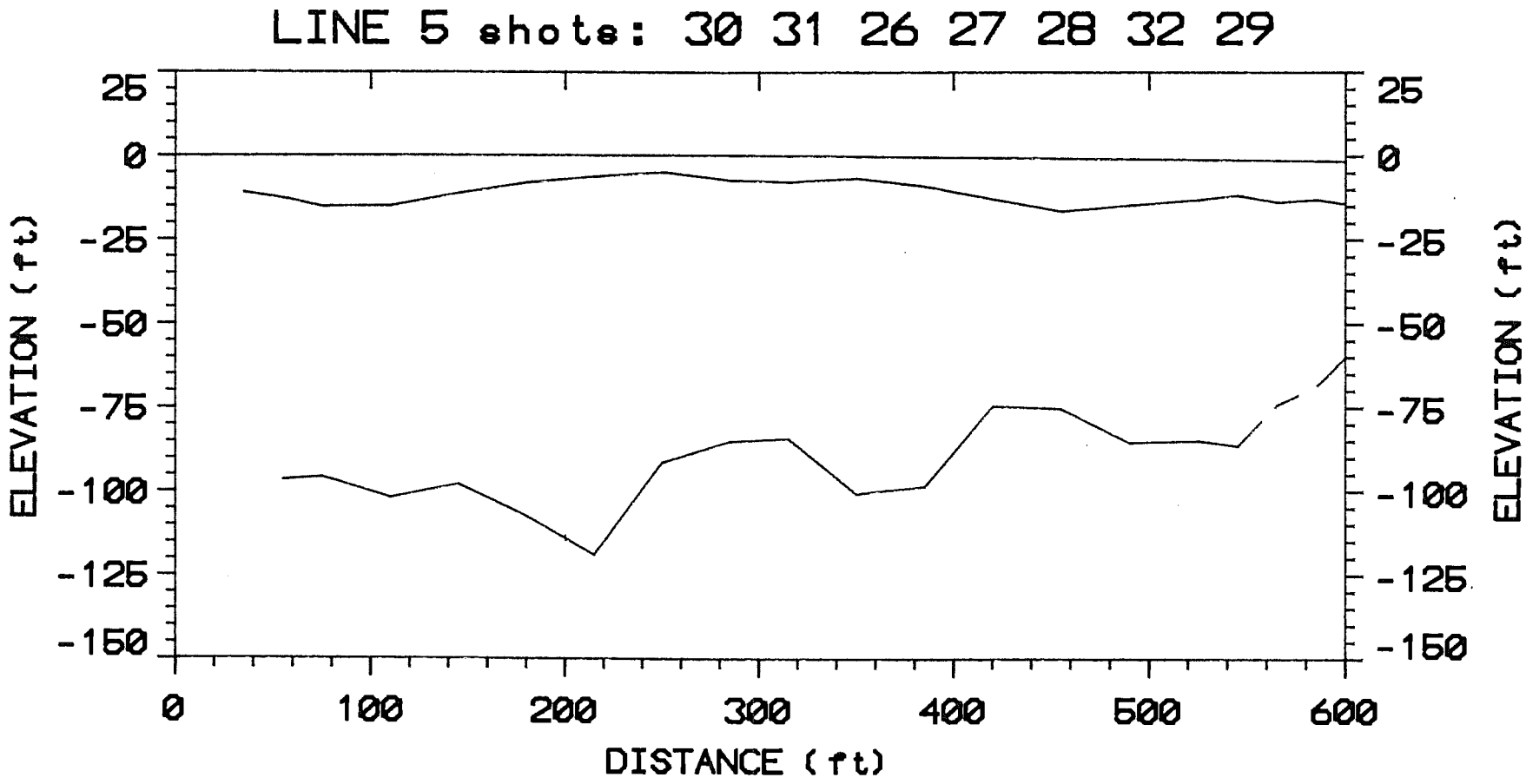

FIGURE 5E

GEOPHYSICAL SURVEY	
DEPTH VS DISTANCE	
FOR:	MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:	GERAGHTY & MILLER, INC.

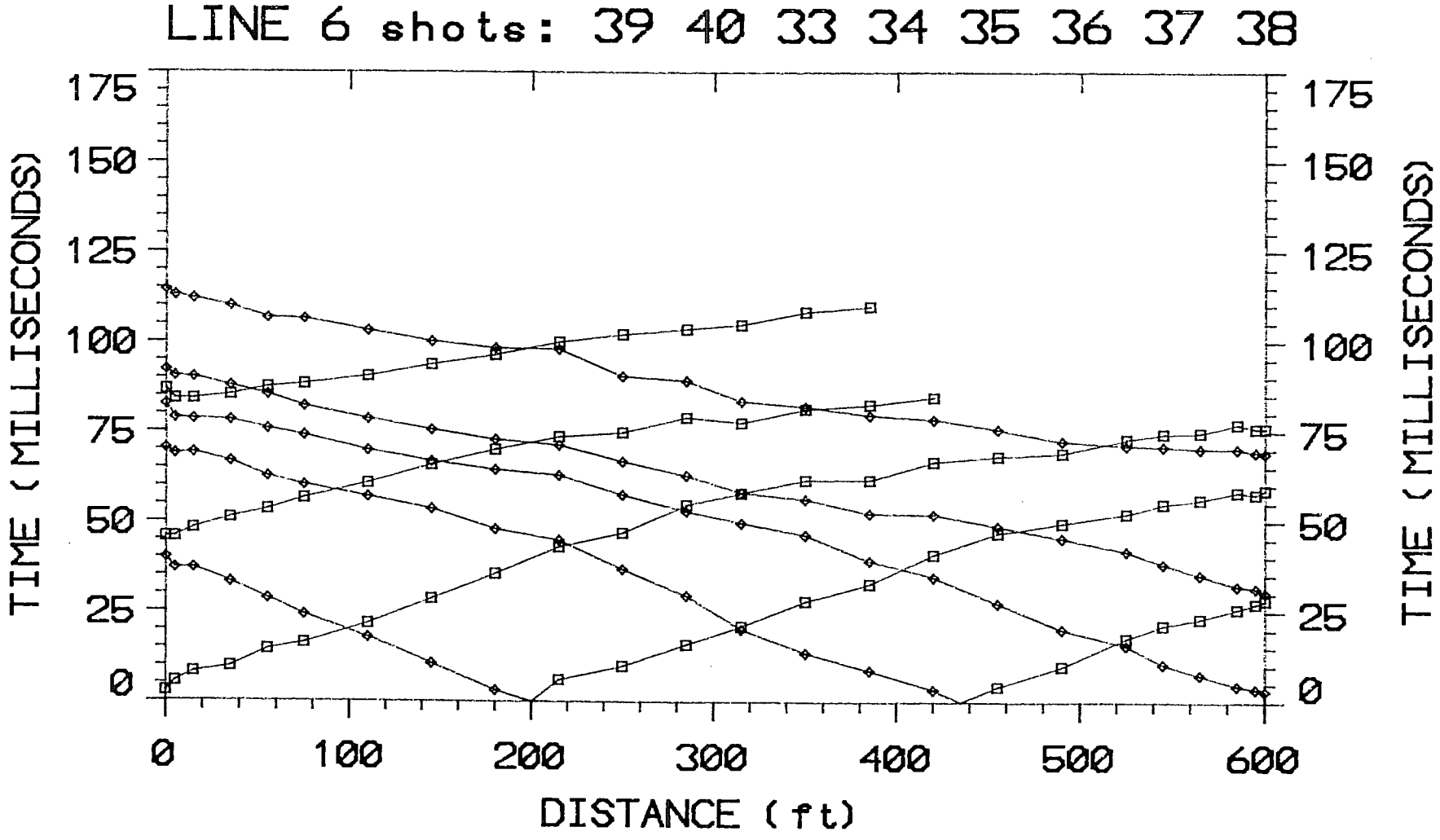

FIGURE 6

GEOPHYSICAL SURVEY

TIME VS DISTANCE

FOR: MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

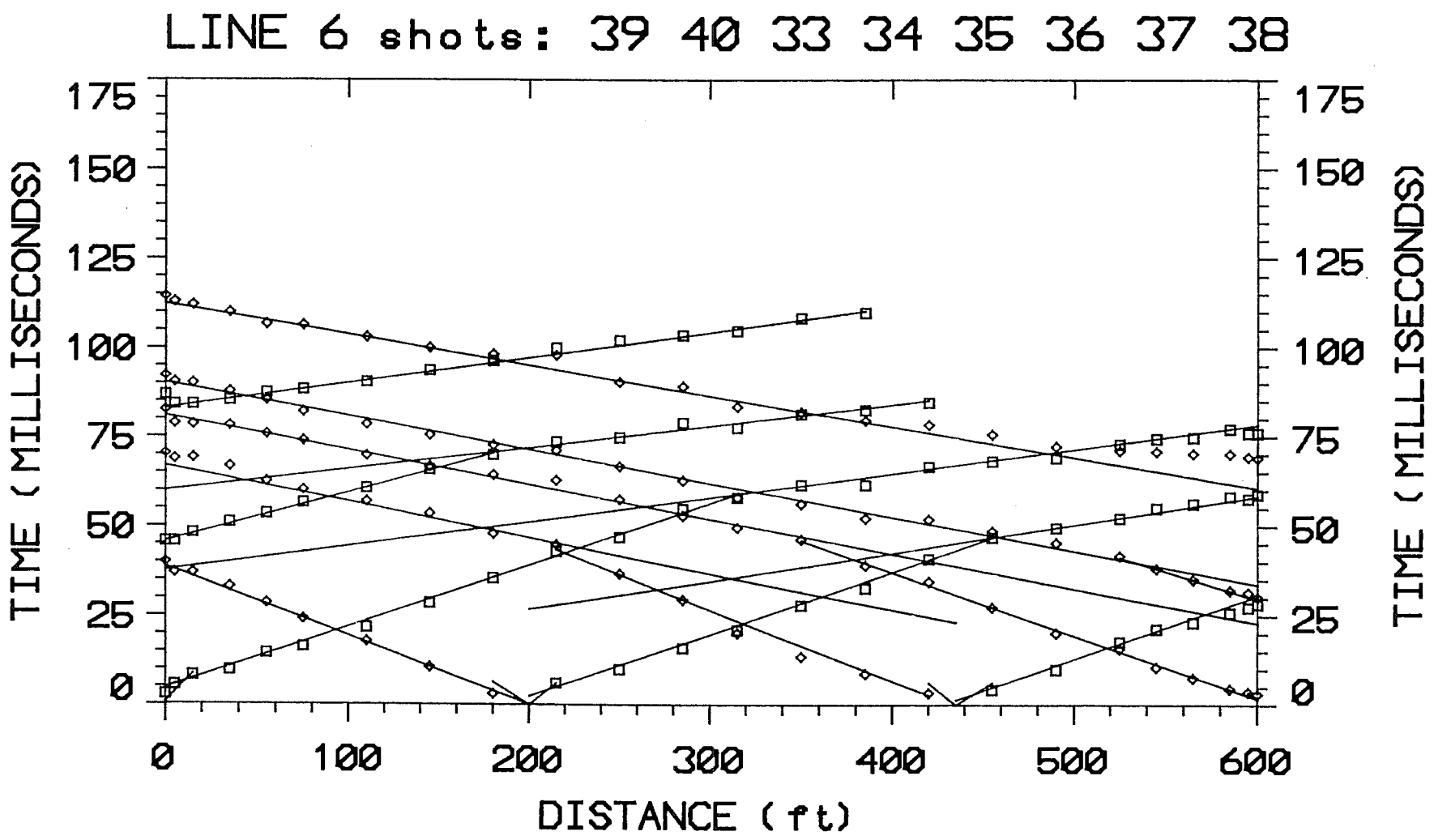

FIGURE 6

GEOPHYSICAL SURVEY
REFRACTOR ASSIGNMENTS
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

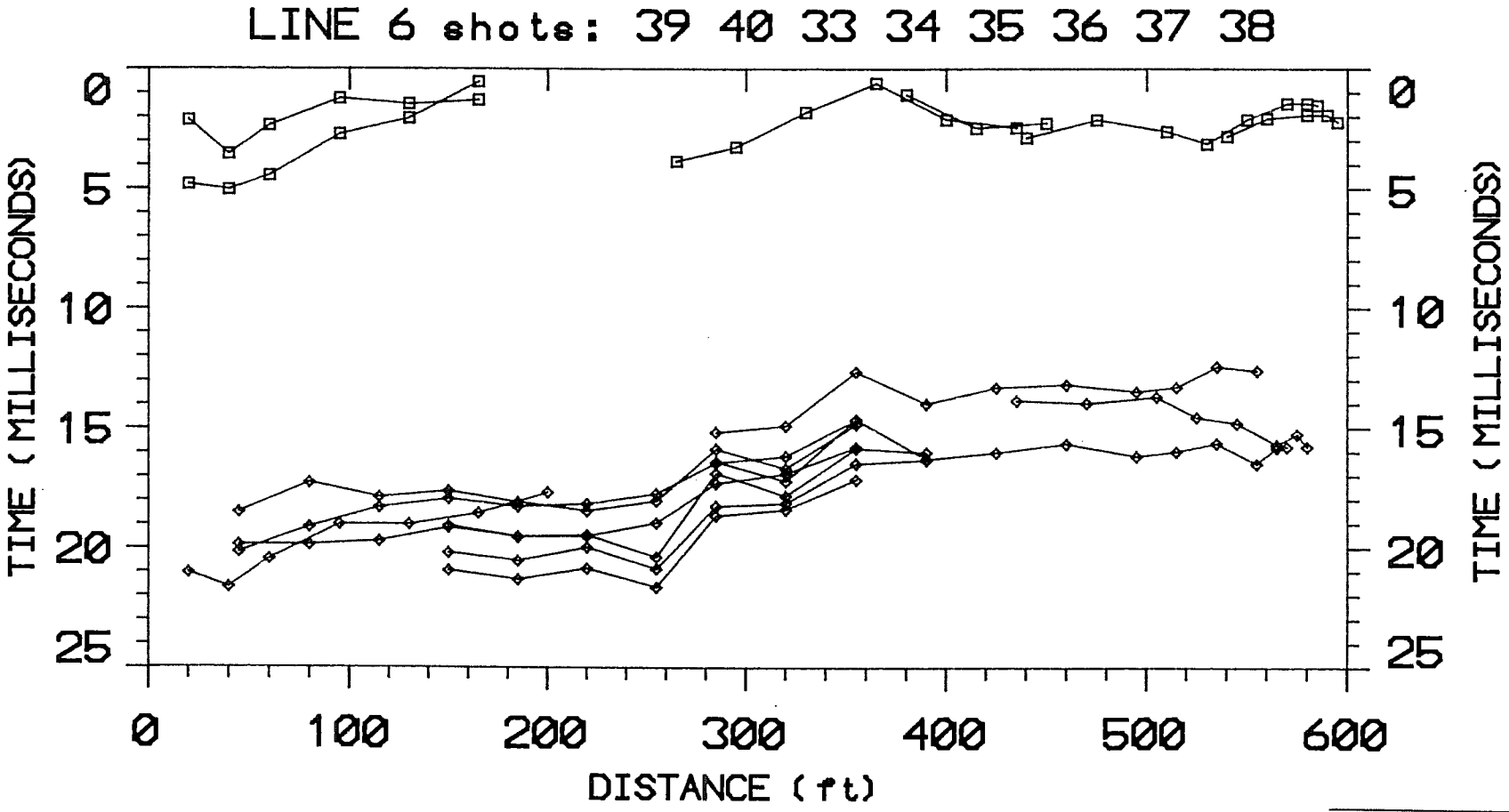

FIGURE 6

GEOPHYSICAL SURVEY

TIME DEPTH VS DISTANCE

FOR: MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

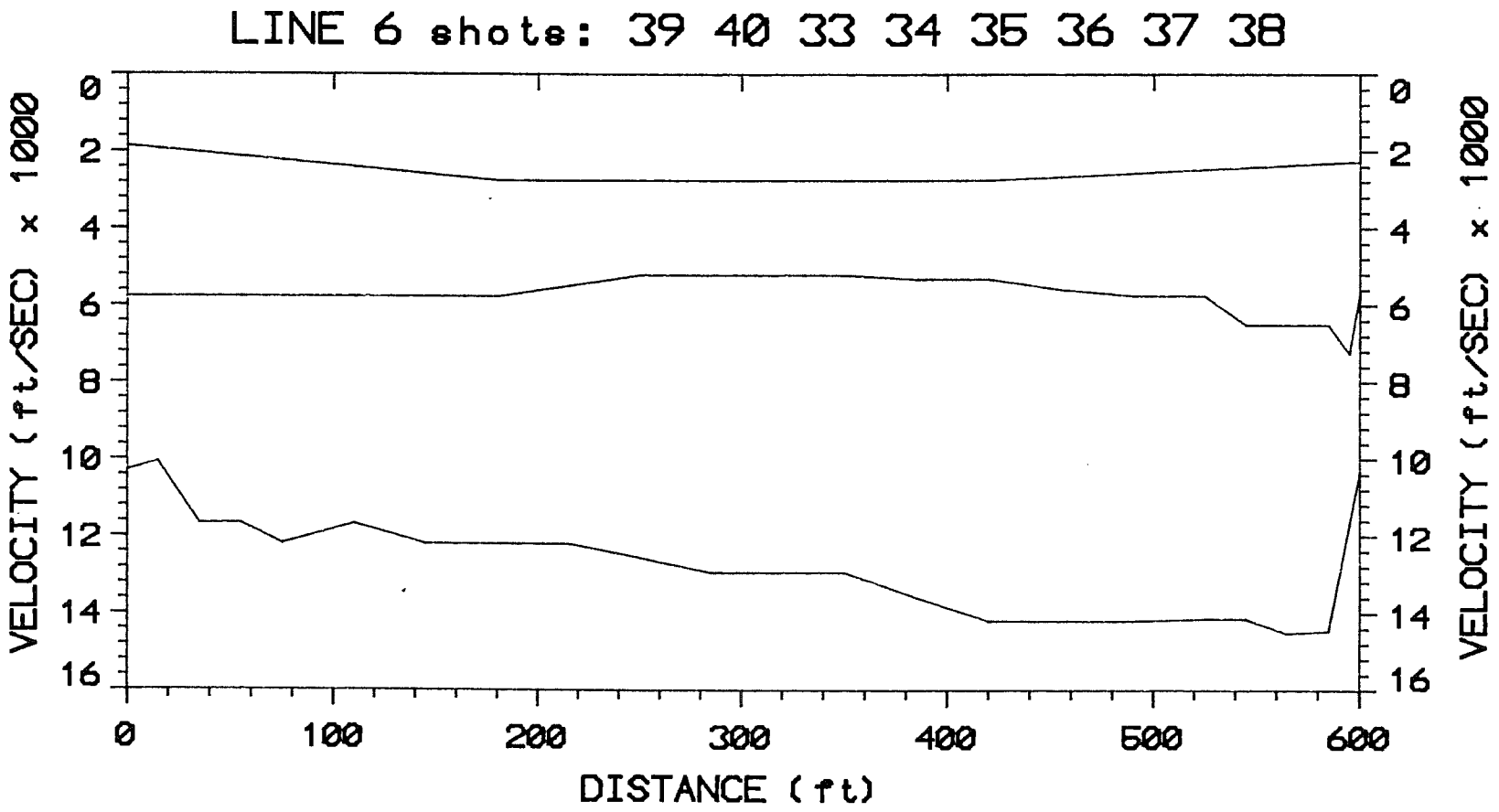

FIGURE 6

GEOPHYSICAL SURVEY
VELOCITY VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA
BY:

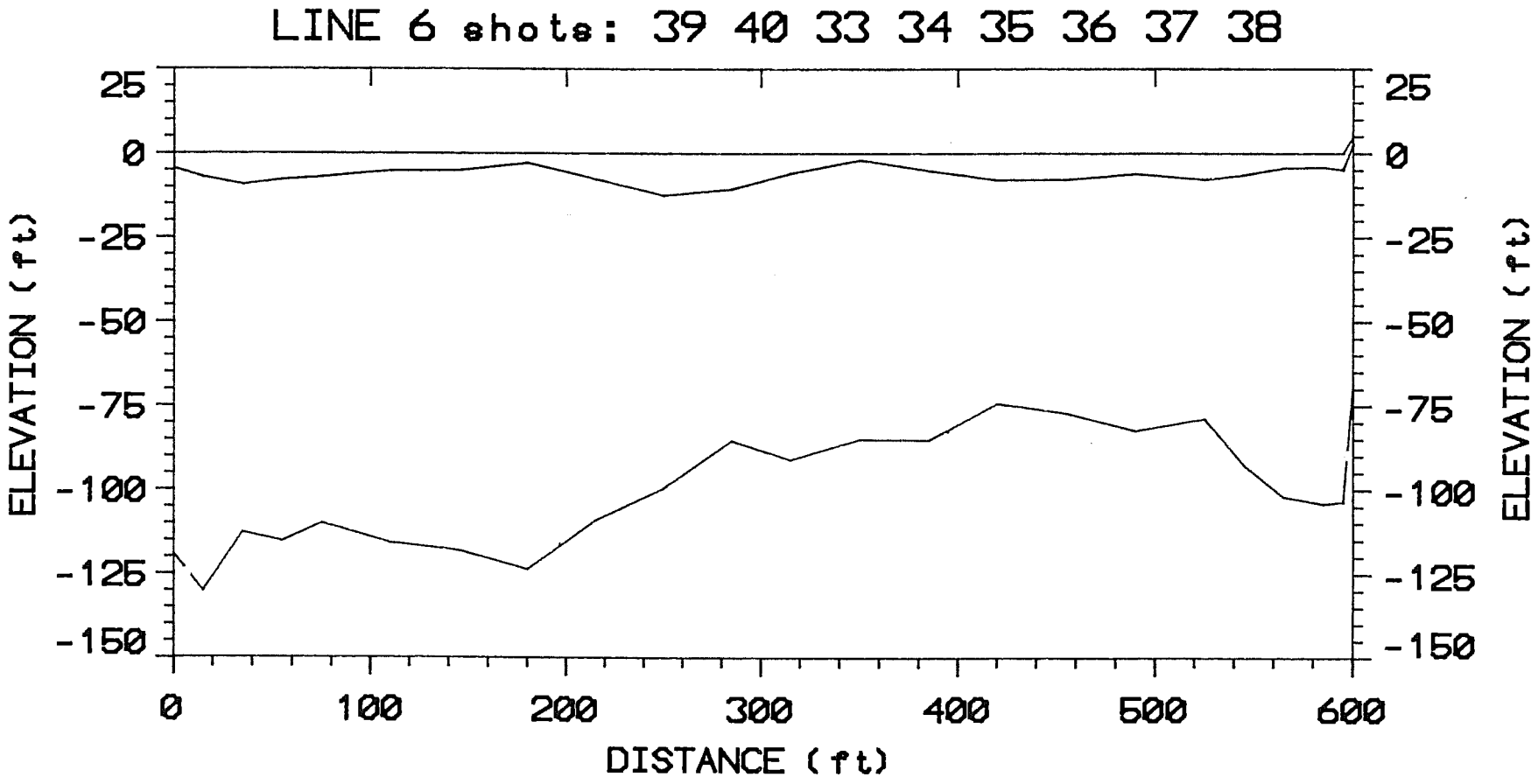

FIGURE 6

GEOPHYSICAL SURVEY
DEPTH VS DISTANCE
FOR: MONSANTO CHEMICAL COMPANY ANNISTON, ALABAMA

PHASE I: GEOPHYSICAL BEDROCK INVESTIGATION IN THE VICINITY OF THE FORMER PARATHION PRODUCTION UNIT

MONSANTO CHEMICAL COMPANY
Anniston, Alabama

May 1992

Prepared for

Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama

Prepared by:

Geraghty & Miller, Inc.
14497 North Dale Mabry Highway, Suite 115
Tampa, Florida 33618

Geraghty & Miller Project No. TF525.17

Monsanto

FROM
(NAME-LOCATION-PHONE) Robert T. Jones - Anniston - 1060 - Ext. 492

DATE: May 28, 1992 cc: M. E. Pugh

SUBJ: Phase I: Geophysical Bedrock Investigation in the Vicinity of the Former Parathion Production Unit

TO: A. G. Faust - F2WJ
J. P. Hyland - G4WT
C. W. Keffer - N3F

Attached you will find the final Phase I report from Geraghty & Miller. Please destroy the draft report that you currently have.

If you have any questions, please give me a call at MONNET 621-8492.

Robert

Robert Jones

Attachment

PHASE I: GEOPHYSICAL BEDROCK INVESTIGATION IN THE VICINITY OF THE FORMER PARATHION PRODUCTION UNIT

May 22, 1992

Geraghty & Miller, Inc. is submitting this report to Monsanto Chemical Company for work performed in conjunction with the Parathion Production Unit at Monsanto Chemical Company in Anniston, Alabama. The report was prepared in conformance with Geraghty & Miller's strict quality assurance/quality control procedures to ensure that the report meets the highest standards in terms of the methods used and the information presented. If you have any questions or comments concerning this report, please contact one of the individuals listed below.

Respectfully submitted,

Kenneth Miklos
Project Scientist

Leslie L. Herd
Senior Scientist

Peter L. Palmer, P.E.
Vice President

F:\PROJ\TF525\RPT\CPT-RPT.W51

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1.0 INTRODUCTION

A 1991 investigation of the bedrock aquifer in the vicinity of Waste Management Area II (WMA-II) at the Monsanto, Anniston facility, detected constituents of concern [parathion and paranitrophenol (PNP)] in the upper bedrock aquifer (Geraghty & Miller, 1991). A map indicating the location of each of the monitoring wells, observation wells, and piezometers within the area of study is depicted in Figure 1.

Based on the findings of the upper bedrock investigation, additional investigations were designed to delineate the bedrock surface, the direction of ground-water flow and the horizontal and vertical extent of the constituents in ground water in the bedrock. These subsequent investigations have been scheduled for completion in a phased sequence.

The first phase of the bedrock investigation included two separate geophysical studies to delineate the bedrock surface. The first geophysical study was a refraction seismic survey conducted by Geraghty & Miller personnel in March, 1992. The refraction seismic survey was used as a first-effort approach to help define the top of bedrock within the area of study. The investigation rationale was based on the hypothesis that the constituents of concern would migrate along the bedrock surface as a preferred migration pathway.

The bedrock surface identified in the refraction seismic survey was used as a basis for the second geophysical study. The second geophysical study was a Cone Penetrometer Test (CPT) program conducted by Geraghty & Miller personnel in April 1992. The CPT program was designed to confirm anomalies and undulations, delineated in the seismic survey, of the bedrock interface that may act as preferential pathways for constituent migration, and to determine the horizontal direction of flow in the upper bedrock aquifer. This report summarizes the findings of the previous investigations and discusses the

procedures and findings of the recent refraction seismic survey and CPT program. Figure 2 identifies the geophysical study area.

1.1 BACKGROUND

WMA-II, as listed in the RCRA permit, is a former lined surface impoundment that received acidic wastewater from the parathion intermediates operation from 1979 to 1987. This surface impoundment was taken out of service in 1987 and was closed as per an approved RCRA Closure Plan. Ground-water monitoring was implemented in 1986 as part of the RCRA permitting activities. WMA-II is located in the northwest portion of the Facility.

1.2 PREVIOUS INVESTIGATIONS

The Alabama Department of Environmental Management (ADEM) approached Monsanto personnel with concerns regarding the ground-water quality of the uppermost saturated zone and the vertical delineation of ground-water quality in the vicinity of WMA-II. These concerns were raised during review of the semi-annual determination of ground-water flow report (October 1990).

1.2.1 1991 WMA-II Saturated Zone/Shallow Bedrock Investigation

An investigation of the ground-water quality in the uppermost saturated zone and the bedrock aquifer was completed in October 1991 in the vicinity of WMA-II (Geraghty & Miller, 1991). The object of the field investigation was to determine the vertical extent of contamination as indicated by the presence of the characteristic odor associated with the presence of organophosphate compounds. The presence or absence of this odor in the soil

samples was used as a gross indicator of constituent contamination within the saturated zone and the upper bedrock aquifer. The uppermost saturated zone was characterized in this same manner during the installation of three down-gradient RCRA monitoring wells in 1986. The monitoring well boreholes (MW-20, MW-15 and MW-16) were extended from the ground surface to a zone that did not exhibit the characteristic odor associated with the constituents of concern.

Due to intermittent detections of constituents of concern in one of the down-gradient monitoring wells (MW-20A, which replaced MW-20), Monsanto began additional evaluations that included the installation of an upper bedrock aquifer monitoring well (DW-1). This monitoring well was installed immediately down gradient of WMA-II. A second shallow monitoring well (MW-20B) was installed adjacent to existing monitoring well MW-20A.

Parathion and PNP were detected in the ground water in the upper bedrock aquifer during this shallow bedrock aquifer investigation. Review of the potential known sources for parathion and PNP indicated that they are confined to the northwest portion of the Facility where the parathion production unit, two associated surface impoundments (WMA-II and the Old Limestone Bed Surface Impoundment [OLBSI]), and a former lagoon were located.

1.2.2 Potential Source Evaluation

The parathion production unit was taken out of service in 1986 and was dismantled in 1987. The buildings and pipelines were removed and the area was regraded with natural clay material and topped with limestone gravel. The potential sources of parathion and PNP within this area were believed to be removed during dismantlement operations.

WMA-II, was a RCRA-regulated surface impoundment that was closed according to the Closure Plan included in the Facility approved RCRA permit. Clean closure was not attempted; however, the contents of the impoundment and the liner were removed and three feet of the clay base was excavated. The area was backfilled with natural clay materials and a RCRA-approved cap was installed that consisted of a drainage layer overlain by a geotextile fabric, and finally a top soil layer seeded with three grass types. This cap is designed to minimize leaching of residual source materials to the underlying unconsolidated zone.

The OLBSI was not regulated by RCRA; however, this unit is listed as a solid waste management unit on the Facility RCRA permit. The OLBSI was an asphalt lined surface impoundment that received acidic wastewater from the parathion intermediates operation from approximately 1962 to 1980. In 1985 the impoundment was taken out of service and the asphalt liner and liquids from the impoundment were removed. The clay base was excavated approximately four to five feet below the base of the asphalt liner. Clean closure was not achieved and the excavated impoundment was backfilled with a clay with permeabilities less than or equal to the base subsoils. An asphalt cap was re-installed over the backfilled clay to provide additional protection from infiltration and to minimize the leaching of residual source materials into the underlying unconsolidated zone.

A former lagoon lined with a treated tar-paper like material, was located in the same vicinity as the WMA-II surface impoundment. The lagoon was installed in 1964 and was used until 1965. Although the lagoon was taken out of service in 1965, it was not closed until 1976. During this interim period (1965 to 1976), the lagoon collected storm-water runoff and was used intermittently as a storage lagoon for solids from the wastewater treatment operation. In 1976 when the lagoon was closed, the solids/sludges and the liner material were removed and the lagoon was backfilled with natural clays.

In summary, the constituents of concern detected at WMA-II could have come from a variety of sources including the WMA-II surface impoundment, the OLBSI, the former lagoon, or the former parathion production unit. The ongoing investigation was designed to ascertain the extent of the constituents of concern in the bedrock aquifer from any of these source.

2.0 SCOPE OF WORK

The geologic materials in the unconsolidated zone (residuum) consist of silty clays and fine to coarse-grained sandy clays. Ground water moves preferentially through the sandy clay areas in this unconsolidated zone. The migration pathway of constituents to the bedrock is not known precisely due to the discontinuous sandy clay zones within the residuum; however, it is believed that the more permeable lenses are the migratory pathways through the unconsolidated zone. To a lesser extent fractures in the clay residuum may also provide a pathway for the migrating contaminated ground water to the bedrock.

A refraction seismic survey was conducted at the Facility as a first-effort approach to help define the top of bedrock within the area of study. Based on the findings of the refraction seismic survey, a CPT program was performed to better define the bedrock topography and to determine the ground-water flow direction at the bedrock interface. The refraction seismic survey and CPT program are part of a multi-phase investigation using direct and indirect techniques to define the topography of the bedrock surface.

2.1 REFRACTION SEISMIC SURVEY

2.1.1 Refraction Seismic Survey Techniques

The refraction seismic survey was completed in two separate stages. The first stage began on January 21, 1992 and was completed on January 25, 1992; the second stage began on February 13, 1992 and was completed on February 19, 1992.

The purpose of the geophysical survey field program was to locate subsurface refractors using a geophysical technique called refraction seismic surveying. Refractors are lenses, layers or formations that are characterized as having high velocities (more dense) in

an otherwise low velocity (less dense) section. For the purposes of the field study, the top of the bedrock (interface) is the primary refractor being investigated. Past investigations have indicated that a sandy clay (typically low velocity) formation exists between the land surface and the bedrock interface; therefore high velocities found during the seismic survey may indicate the presence of the refractor (bedrock interface) being investigated.

The refraction seismic survey was performed by inducing an energy wave, with explosives, into the ground and measuring the length of time necessary for the energy waves to bounce off the refractor back to the surface where the energy waves are picked up and recorded using a series of surface mounted geophones. The recorded data aid was interpreted to determine the configuration of the refractor (bedrock interface).

The seismic source used during the first stage of the investigation consisted of black powder explosives. The black powder (500 grain) was contained in a metal casing about the size of an eight-gauge shell casing. The casing was then encompassed inside a six-inch long, thick-walled plastic container. A detonator cap was screwed on top of the container. The detonator cap was detonated electronically which in turn detonated the black powder. The explosive power of each black powder container was equivalent to a 1/8-pound stick of dynamite.

The explosives used during the second stage of the survey consisted of a powder and liquid mixture known commercially as kinepak. This type of explosive is not designed to detonate until the powder and liquid are thoroughly mixed. The mixture was contained in an eight-inch tall plastic container with a plastic screw-on cap. A detonator, in this case a three-inch long, 1/4-inch diameter metal canister filled with black powder, was attached to the side of the kinepak explosive. The detonator cap was detonated electronically which in turn set off the kinepak. Each stick of kinepak was equal to a 1/3-pound stick of dynamite.

2.1.2 Refraction Seismic Survey Field Program

2.1.2.1 Field Program: Stage One Investigation

The first stage of the refraction seismic survey was conducted by visiting the area of investigation and determining which areas were best suited (lack of building structures) for conducting the survey. A total of three geophysical "lines" were surveyed. Each geophysical line was approximately 900 feet in length and was comprised of three sections. One section of the line, known as the geophone spread, was approximately 500 feet in length. Twenty four geophones, used to pick up energy waves emitted from the energy source, were placed at strategic intervals along the geophone spread. This data was then transmitted back to the field computer through a line that connects the geophones to the field computer. The other two sections of the survey line consist of "off-end" shots located on either end of the geophone section. The off-end shots were placed approximately two hundred feet from each end of the geophone section of the run. "Shot" holes (used to hold the explosives) were also placed in strategic intervals along the entire survey line. Each survey line consisted of six shot holes. The shot holes were hand augered down to approximately three feet below land surface. Approximately one-half pound of explosives were placed into each shot hole and the remaining open hole was packed with native fill material. Upon tamping the shot hole, a burlap bag (filled with dirt and tied shut) was placed over the hole. A battery powered detonator was used to detonate the explosives at each particular shot hole. A blasting line connected the detonator to the field computer. The blasting line sends a signal back to the field computer when the blasting sequence is activated.

The results of the initial stage one field investigation indicated the presence of loosely compacted fill material within the area of investigation. The loose fill material caused the energy produced by the energy source to dissipate before penetrating down far

enough below land surface to locate a refractor, if present. It was determined that an additional amount of explosives, placed below the loose fill material, would be necessary for obtaining reportable seismic data.

2.1.2.2 Field Program: Stage Two Investigation

A licensed and certified blasting company (Garrison Construction Company, Inc.) from Gardendale, Alabama was subcontracted by Geraghty & Miller to perform blasting services in conjunction with the stage two seismic investigation. Stage two of the seismic survey began by meeting with Monsanto personnel to determine locations of underground utilities. A total of six geophysical lines were surveyed during the investigation (Figure 3). Geophysical lines surveyed during stage two of the investigation consisted of longer lines than the stage one geophysical lines because additional explosives were used at greater depths. The seismic energy released from the source was capable of locating potential refractors at greater depths and could transmit this energy over greater distances. During stage two of the seismic survey, the geophone spread at each survey line location was increased to 600 feet in length. Additionally, the off-end shot distances were also increased. Approximately eight shot holes were drilled along each survey line. Each hole was advanced down to approximately 12 feet below land surface. The drill rig used during the survey was a track-mounted, air driven, diesel powered rig equipped to perform air rotary drilling. Upon reaching the desired depth at each shot location, approximately two pounds of explosives (Kinepak) was lowered into the borehole. The remaining borehole annulus was filled with native soil and tamped. As with stage one of the investigation, twenty four geophones were placed in strategic intervals along the geophone section of the survey line, and the geophones and detonator were connected to separate lines that were in turn connected to the field computer.

Presented in Appendix A are graphs of computer generated refraction seismic data for each of the six seismic lines.

2.1.3 Findings

The following are findings of the seismic survey investigation:

- Variations in bedrock (refractor) velocities occurred within the area of study. The bedrock velocities ranged from 6,000 feet/second along run number two located north of the railroad tracks to 14,500 feet/second along run number six located east of the ACL warehouse (Figure 3). Generally, the higher the velocity, the more dense the refractor. Weathering of the bedrock surface, however, will produce a lower velocity refractor than an unweathered bedrock surface. The velocities determined from the seismic investigation indicate that the refractors may range from weathered to competent limestone. The investigation also indicated that the area north of the railroad tracks (open field) may be more weathered than the area south of the railroad tracks (plant area).

- The bedrock topography undulates within the area of study, a probable result of various weathering patterns along the bedrock interface. The bedrock interface is inferred to range between 70 and 120 feet below land surface. Within the area of study, bedrock "lows" are interpreted to occur south of the railroad tracks in a lineament running east-west approximately 100 to 300 feet south of the railroad tracks, and just east of the northern aeration tank. Based on interpretation of the cross-sectional data, a contour map of the bedrock topography has been prepared and is shown in Figure 4.

- Fill material, consisting of loosely packed sandy clays and various construction debris (concrete and asphalt fragments, rope, metal, etc) was encountered during most of the drilling associated with the seismic survey. The area located just east of the northern-most aeration tank contained the most vertically extensive fill material. This area also contained the most loosely compacted fill material encountered during the survey.

- Voids were encountered during seismic testing performed along seismic line number six, located east of the warehouse building. The voids appear just below the concrete/asphalt pavement that was at one time used as part of a loading station for one of the Monsanto railroad spurs and probably resulted from settling of the fill material.

2.2 CPT PROGRAM

2.2.1 Cone Penetrometer Testing Program Techniques

The CPT program was initiated on April 8, 1992 and completed on April 14, 1992. The CPT rig used during the geophysical study consisted of an all-terrain, truck mounted unit consisting of an air-conditioned van body, hydraulic thrusting and leveling system and an on-board computer designed to accumulate, store and process data. The sounding and leveling system are controlled hydraulically. The cylinders which push and retrieve the cone penetrometer are positioned within the van body such that the full weight of the vehicle can be used. The maximum penetration capacity of the CPT rig is 44,000 pounds, or 22 tons. An on-board gauge indicates the total hydraulic pressure, in tons per square inch, exerted on the cone penetrometer system during the sounding.

The on-board computer system consists of a central processing unit, a printer and a plotter. The operator begins the cone penetrometer sounding hydraulically after first establishing a baseline reading to ensure system integrity. Pressure on the cone tip is measured continuously and is plotted on a strip chart recorder. During the CPT sounding, the computer obtains readings transmitted from the cone tip every 2 centimeters, thereby providing a nearly continuous profile. Additionally, the cone tip is capable of providing the computer information about local (sleeve) friction and inclination. Upon the completion of the CPT, the results of the sounding are graphed for immediate reporting by an on-board plotter.

The cone penetrometer is advanced using the CPT rig's hydraulic ram to drive the stainless-steel penetrometer, which is attached to thick-walled sections of steel rod, down to the bedrock interface. For the purposes of this study, the top of the bedrock interface was identified using the following CPT rig characteristics:

- When the hydraulic pressure exerted on the cone penetrometer equipment exceeded what the operator felt was either the safe operating limits of the CPT rig, or the design limits of the cone penetrometer. This was generally determined to be 18 tons of downward force with little or no continued downward movement of the cone penetrometer equipment.

- When the tip resistance (indicated continuously as tons per square inch on the chart recorder during CPT soundings) greatly exceeded local (sleeve) friction. High tip resistance and low local (sleeve) friction indicates to the operator that the tip of the penetrometer is no longer moving downward through the formation and total refusal has occurred.

CPT soundings were stopped prematurely if during the sounding the inclinometer indicated that the penetrometer may have deflected off a subsurface object (large rock fragment or highly resistent formation). Continued downward movement of the cone penetrometer and steel rods would eventually cause equipment failure, generally in the breakage of the CPT rods and the subsequent loss of the attached cone penetrometer.

2.2.2 CPT Field Program

The CPT field program consisted of the following field activities:

- **Pre-drilled boreholes** to protect the cone penetrometer from hitting any subsurface debris;
- **Cone Penetrometer Tests** to determine the top of bedrock and to obtain a lithologic profile at each specific location;
- **CPT and piezometer borehole abandonment** by filling each borehole from bottom to land surface using a neat grout.

A local driller (Garrison Construction Company, Inc.) was subcontracted to drill down to approximately 13 feet below land surface at locations where CPTs were to be conducted. The drill rig used during this portion of the study was a track-mounted, air driven, diesel powered rig equipped to perform air rotary drilling. The drilling was performed to minimize the chances of the cone penetrometer coming into contact with subsurface debris.

Representatives from the Alabama Department of Environmental Management (ADEM) and the Environmental Protection Agency (EPA) were on site as guests of Monsanto to observe a portion of the CPT field study.

CPTs were conducted at 17 locations within the study area (Figure 5). A bedrock contour map is presented as Figure 6. Charts produced by the on-board plotter at the completion of each CPT sounding are presented in Appendix B. Total depth for each of the CPT's are presented in Table 1. Upon the completion of each CPT sounding, the borehole was abandoned using a neat cement grout from total depth to land surface.

An attempt was made to install a piezometer at CPT location CPT-3. The CPT rig was not capable of pushing the larger diameter, thick-walled, steel rods down past the very dense sandy clay formation located approximately 45 feet below land surface (bls). Based on similar dense, sandy clay formations found at other CPT locations, piezometers were not installed during the CPT study.

An effort was made to evaluate the water quality at selected CPT locations by installing stainless steel push-in samplers to the bedrock interface. Quantitative analytical results could not be reached due to slow infiltration of ground water into the samplers, limited sample quantity from each location and poor sample quality (high solids content).

A sounding at location CPT-6 was abandoned due to a subsurface obstruction or a very dense formation at 29.5 feet bls. Numerous attempts were made to move to another nearby location to perform the CPT and each was unsuccessful.

2.2.3 Findings

The following are findings of the CPT program:

- Seventeen CPTs were performed at the facility. A review of the CPT sounding charts indicate the presence of a weathered zone located just above the bedrock.

- The CPT program confirmed that a bedrock topographic low apparently transects the property in a south-west to north-east direction (Figure 6). The deepest depth-to-bedrock sounding [137 below land surface (feet bls)] occurred at location CPT-8 along the north-east boundary of the study area. The CPT sounding that indicated the most shallow depth to bedrock (47 feet bls) occurred at location CPT-16, located along the southern border of the study area.

3.0 SUMMARY AND RECOMMENDATIONS

3.1 SUMMARY

Both geophysical studies (seismic refraction and CPT) indicate the presence of an apparent bedrock "low" transecting the property in a south-west to north-east direction. Although the ground-water flow direction at this bedrock interface has not been evaluated, ground water is believed to flow along the interface toward the local bedrock low; therefore, the bedrock topography within the study area is believed to be the predominate feature affecting the direction of ground-water flow at the bedrock interface. However, because piezometers could not be installed during the geophysical studies as anticipated, ground-water flow direction at the bedrock interface could not be confirmed.

Information regarding the bedrock interface from bedrock wells DW-1, located immediately north of WMA-II, and BR-4, located upgradient of the area of investigation, was evaluated with the geophysical information. All sources of bedrock information were integrated into a composite map depicting the current interpretation of the bedrock interface (Figure 7)

3.2 RECOMMENDATIONS

Geraghty & Miller recommends the installation of shallow and intermediate bedrock piezometers to determine the direction of ground-water flow and horizontal and vertical hydraulic gradients in the upper bedrock aquifer. A ground-water sample will be collected from each piezometer to determine the presence or absence of constituents of concern. It is anticipated that the shallow bedrock piezometers will be installed to a depth approximately 25 feet below the bedrock interface. The intermediate bedrock piezometers

will be installed to a depth at least 50 feet deeper than the shallow bedrock piezometers, or until a second water-bearing zone is encountered.

The shallow bedrock piezometers will be constructed by first installing a steel surface casing down into the bedrock. The surface casing will be seated into the bedrock and will be grouted in place using a neat cement grout. After allowing the grout to cure, a borehole will be advanced down inside the casing to approximately 25 feet below the bedrock interface or until a water-bearing zone is encountered. Upon reaching the desired depth, a 2-inch diameter PVC piezometer casing attached to 15 feet of 2-inch diameter PVC piezometer screen will be installed down inside the borehole annulus. A sand pack will be used to minimize the migration of fine-grained sediments from entering the piezometer screen. A bentonite seal will be placed above the sandpack to protect the sand pack from the grout used to seal in the piezometer casing.

The intermediate bedrock piezometers will be constructed using two protective steel casings. The first casing (surface) will be constructed and installed similar to the shallow bedrock piezometer surface casings. A borehole will then be advanced down inside the surface casing to a depth approximately 25 feet deeper than the total depth of the paired shallow bedrock piezometer, or to the next-deeper water-bearing zone. The second surface casing will be installed down inside the borehole annulus and grouted in place. After allowing the grout to cure, a borehole will be advanced down through the protective casings to a depth approximately 25 feet below the secondary protective casing or until a second water-bearing zone is encountered. Except for additional piezometer casing and materials, intermediate bedrock piezometers will be installed and constructed in a similar manner as the shallow bedrock piezometers.

The piezometers will be constructed so that they may be utilized as part of a monitoring well network once the data from the piezometer installations is evaluated.

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TABLES

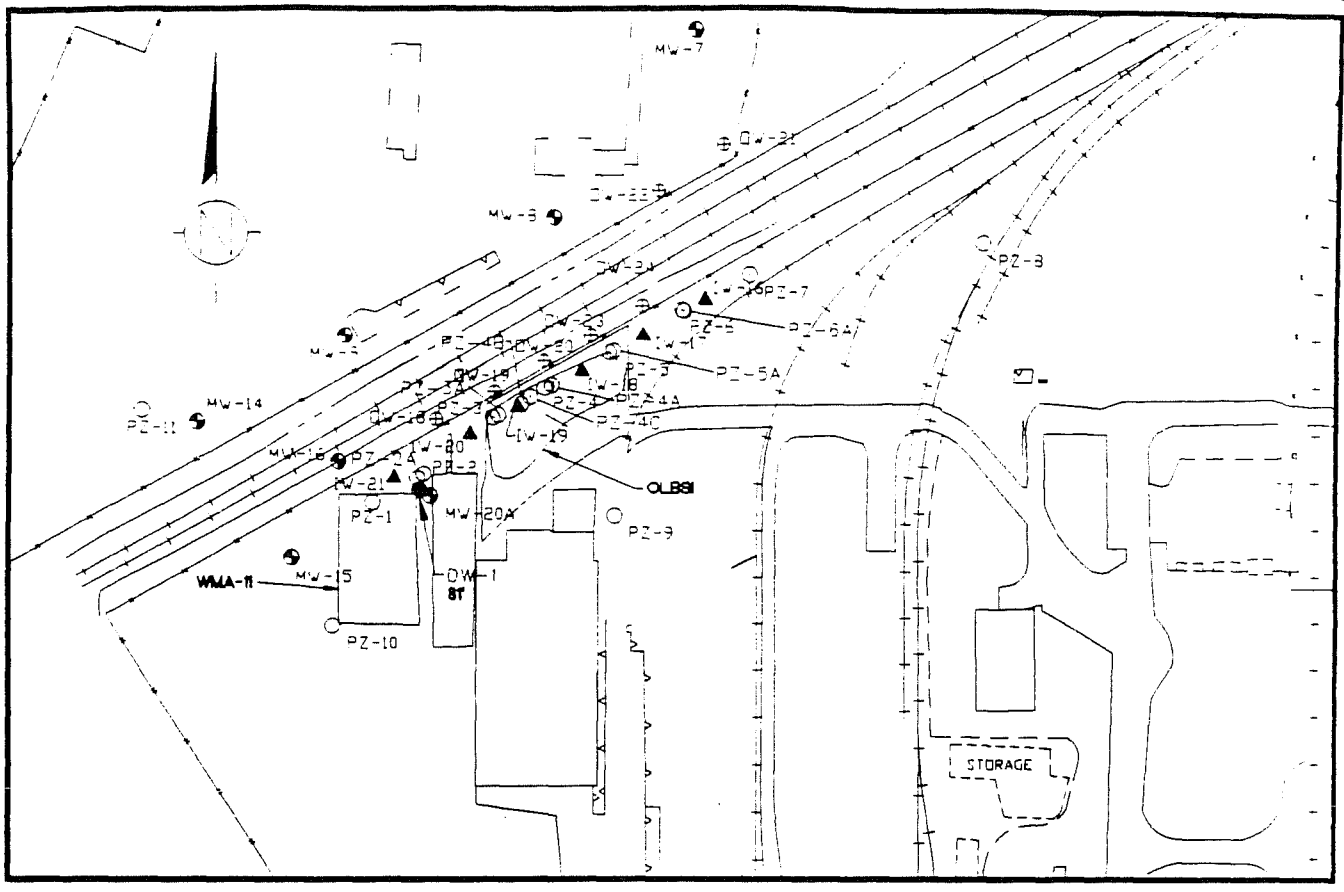
Table 1.
Depth to Bedrock [1/]
Cone Penetrometer Test Study
Monsanto Chemical Company
Anniston, Alabama

CPT No.	Depth to Bedrock	Date Completed
1	100	4/8/92
2	122	4/9/92
3	65	4/9/92
4	87	4/8/92
5	97	4/13/92
6	29.5 [2/]	4/11/92
7	91.5	4/12/92
8	137+ [3/]	4/11/92
9	110	4/9/92
10	67.5	4/10/92
11	69.5	4/13/92
12	123	4/10/92
13	67	4/11/92
14	57	4/11/92
15	62	4/11/92
16	47	4/13/92
17	106	4/14/92

1/ Feet below land surface.
2/ Abandoned CPT due to subsurface debris.
3/ Ran out of CPT rods. Rig gauges indicated near top of bedrock.

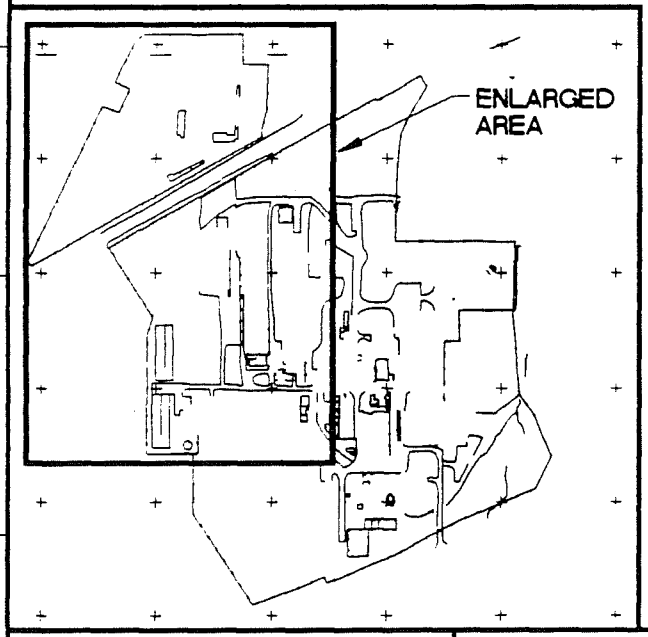
F:\PROJ\TF525\RPT\CPT-RPT.W51

FIGURES



0' 200 400

SCALE: 1" = 200'



LEGEND:

▲ IW-14	INTERCEPTOR WELL
⊕ DW-9	OBSERVATION WELL
⊙ PZ-11	PIEZOMETER
● DW-1	DEEP MONITOR WELL
◉ BR-5	BEDROCK MONITOR WELL

GERAGHTY & MILLER, INC.
Environmental Services

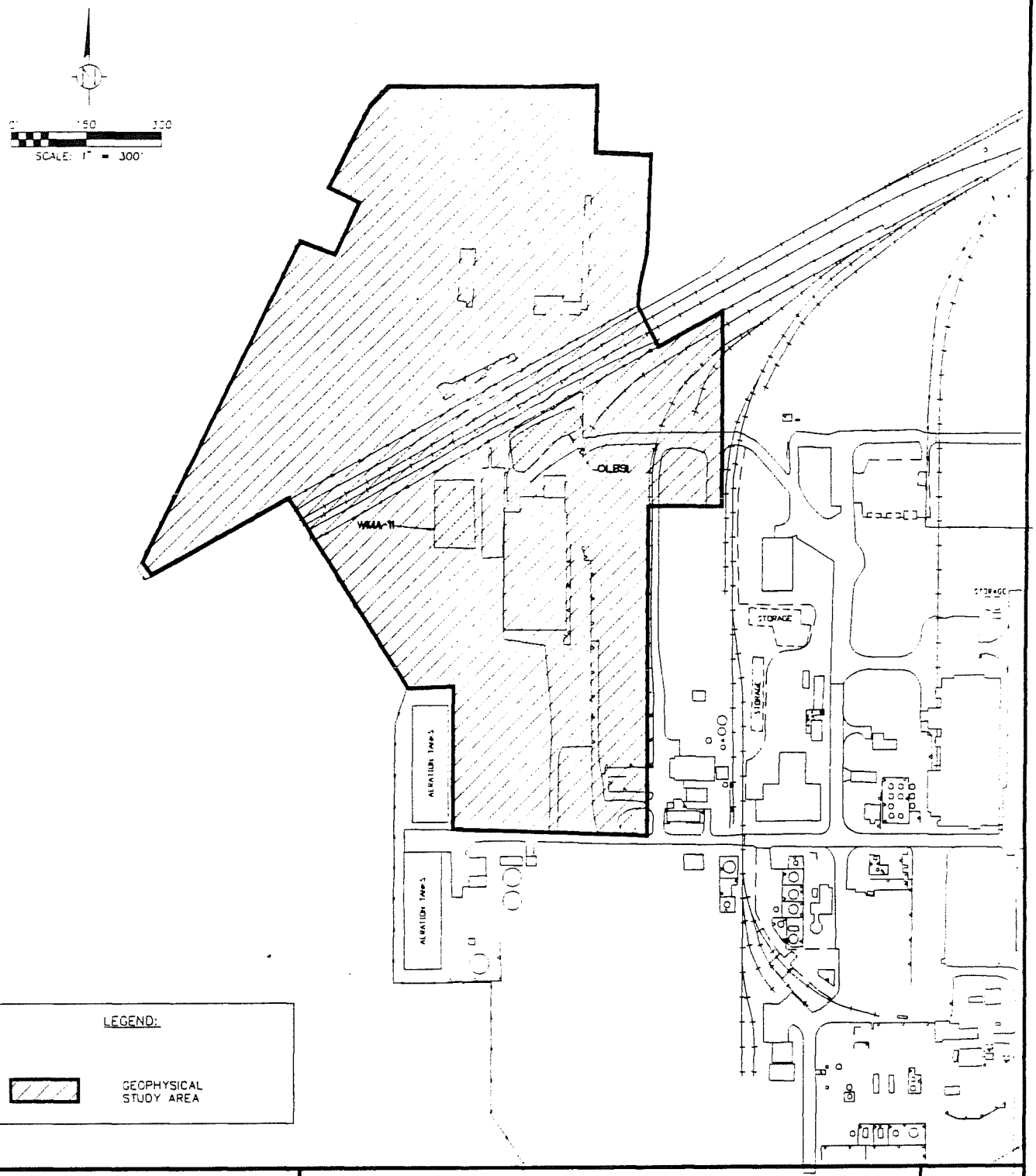
SITE PLAN

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

1

DWG DATE: 5-22-92 | PROJ NO. 1F52517 | FILE NO. MONTBS A | DRAWING MONSANTO | CHECKED K.M | APPROVED [illegible] | DRAWN AWG

DWG DATE 5/13/92 | PROJ NO TE52517 | FILE NO MONTHR-3 | DRAWING X | CHECKED PP | APPROVED KM | DRAWN BY MH



GERAGHTY & MILLER, INC.
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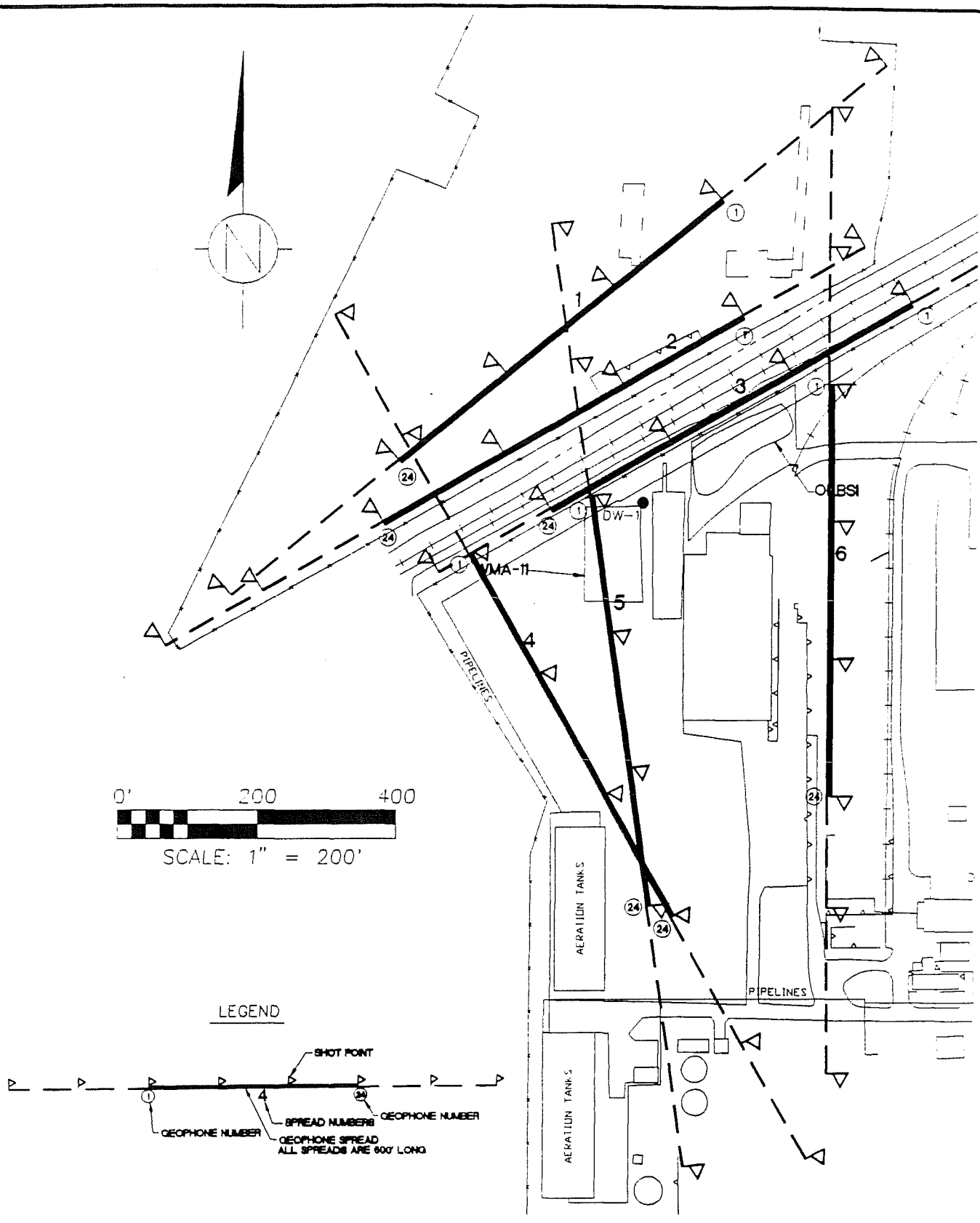
GEOPHYSICAL STUDY AREA

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
2

DWG DATE: 5-22-92 | PROJECT NO.: 1F52517 | FILE NO.: MONTB6-A | DRAWING: MONSANTO | CHECKED: KM | APPROVED: LLH | DRAFTER: AWG



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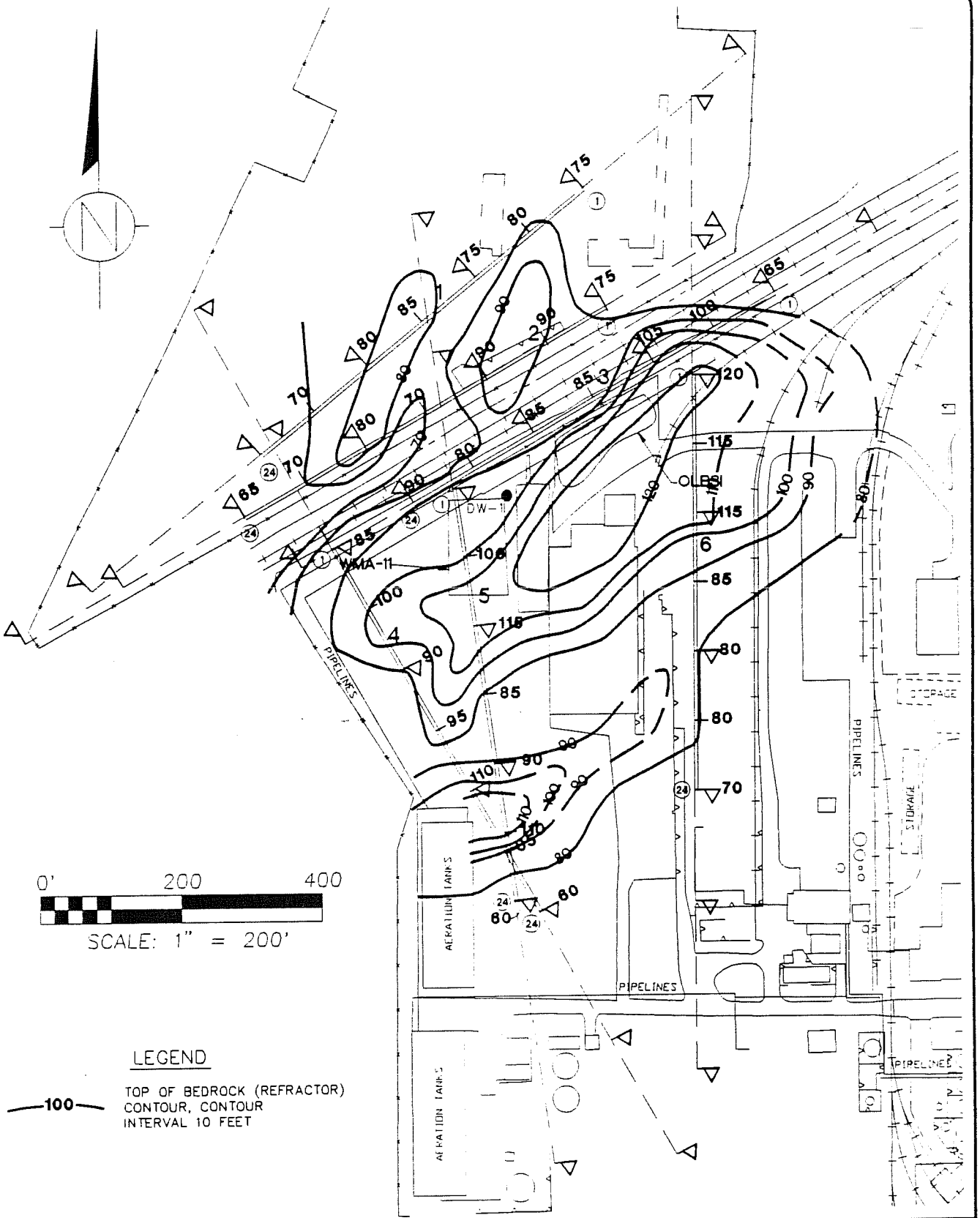
REFRACTION SEISMIC SURVEY MAP

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
3



DRAFTER: AWG | APPROVED: LLH | CHECKED: KM | DRAWING: MONSANTO | FILE NO: MONTB6-A | PROJCT NO: TF52517 | DWG DATE: 5-22-92

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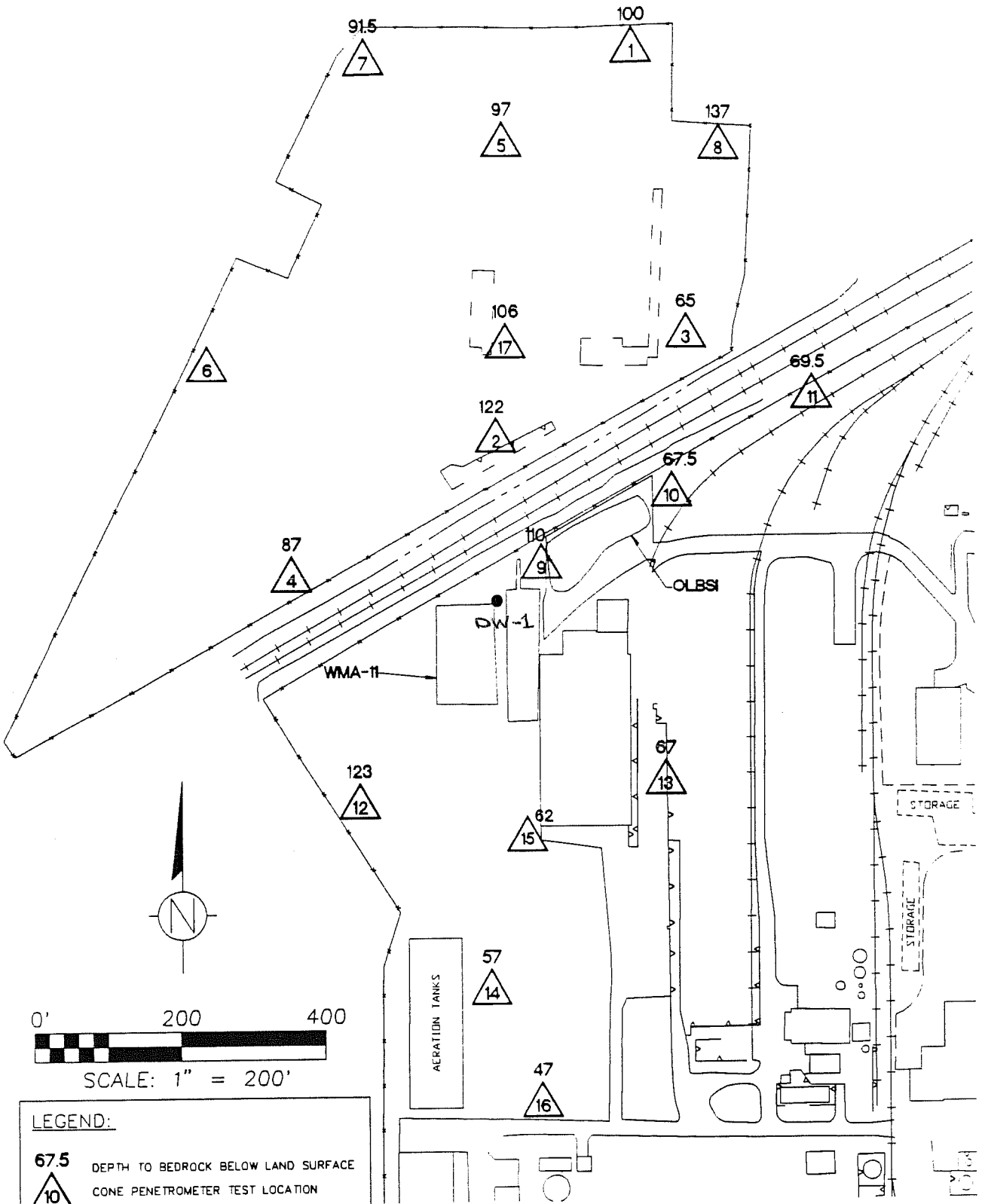
INFERRED TOP BEDROCK CONTOUR MAP REFRACTION SEISMIC SURVEY

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
4



DRAFTER: BJH/P.M.B | APPROVED: PP | CHECKED: KM | DRAWING: X | FILE NO MONTB2-A | PROJCT NO.: TF52517 | DWG DATE: 5/22/92

GERAGHTY & MILLER, INC.
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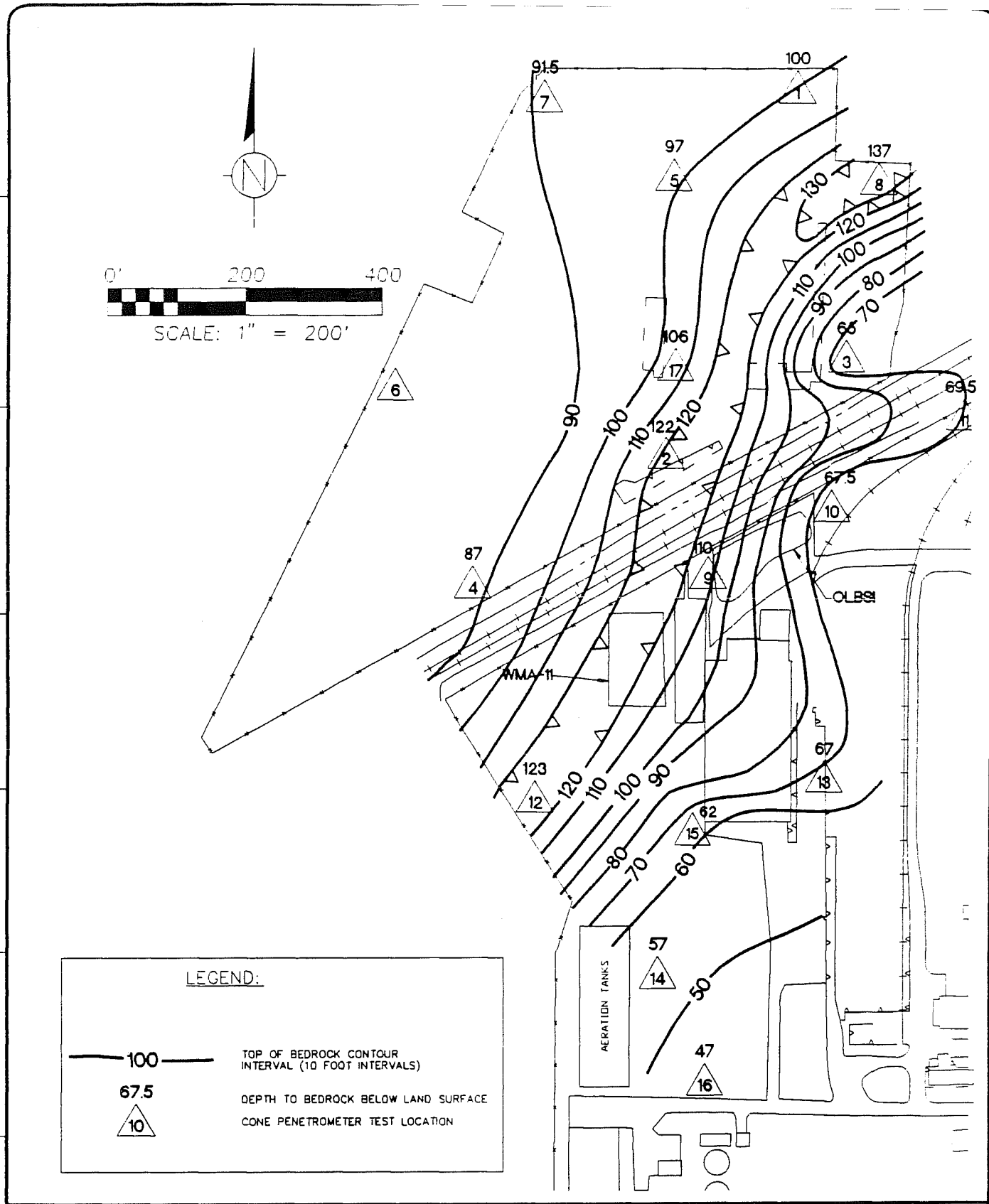
CPT LOCATION MAP

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
5



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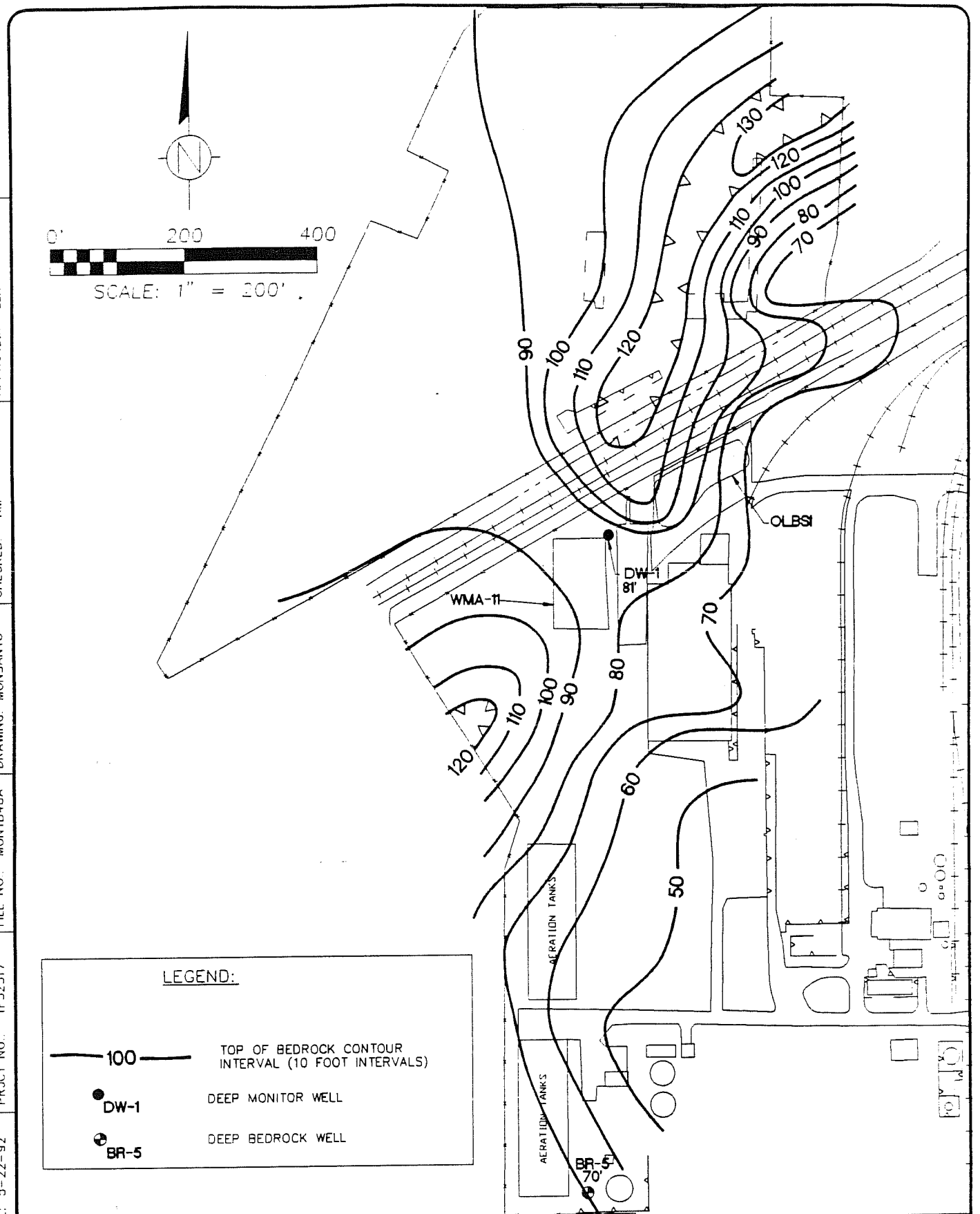
INFERRED TOP OF BEDROCK CONTOUR MAP CPT PROGRAM

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
6

DWG DATE: 5-22-92 | PRJCT NO: TF52517 | FILE NO: MONTB2-B | DRAWING: MONSANTO | CHECKED: KM | APPROVED: LLH | DRAFTER: AWG



DWG DATE: 5-22-92 | PRJCT NO.: TF52517 | FILE NO.: MONTB4BA | DRAWING: MONSANTO | CHECKED: KM | APPROVED: LLH | DRAFTER: AWG

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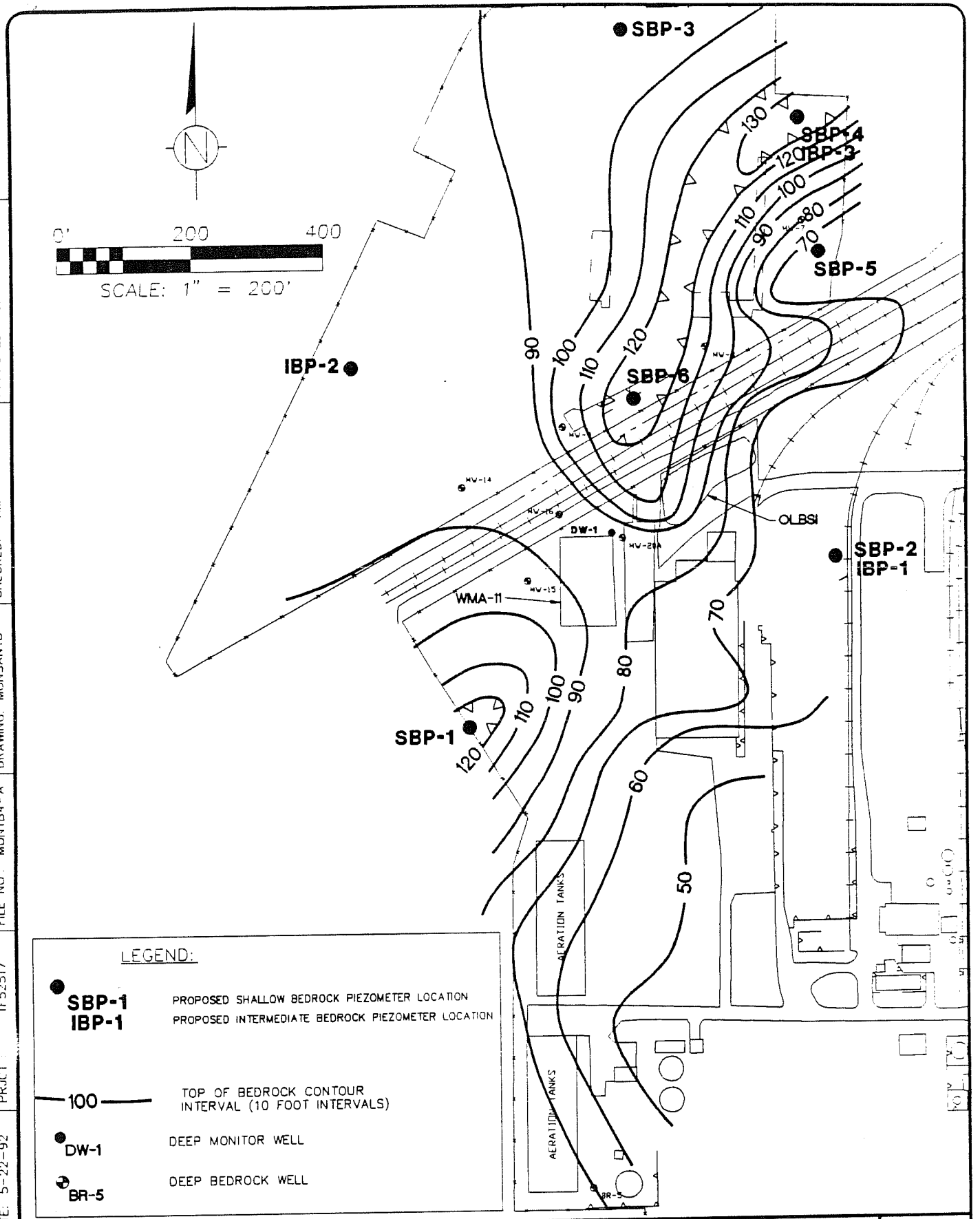
COMPOSITE TOP OF BEDROCK

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE
7



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PROPOSED BEDROCK PIEZOMETER LOCATIONS

MONSANTO CHEMICAL COMPANY
ANNISTON, ALABAMA

FIGURE 8