

**ANNISTON WEST END LANDFILL
MONSANTO COMPANY
ANNISTON, ALABAMA**

August 1994

Prepared for:

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Geraghty & Miller, Inc. appreciates the opportunity to work for Monsanto Company at the Anniston, Alabama facility. This report was prepared in conformance with Geraghty & Miller's strict quality assurance/quality control procedures to ensure that the report meets industry standards in terms of the methods used and the information presented. If you have any questions or comments regarding this report, please contact one of the individuals listed below.

Respectfully submitted,

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LIST OF ACRONYMS

°C	degrees Centigrade
bls	below land surface
CFR	Code of Federal Regulations
CoC	Chain of Custody
dBA	decibels
DI	di-ionized
DQOs	Data Quality Objectives
FID	flame ionization detector
HASP	Health and Safety Plan
Kv	kilovolt
LEL	lower explosive limit
mg/Kg	milligrams per kilogram
mg/L	milligram per liter
mL	milliliter
mph	miles per hour
msl	mean sea level
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
OVA	Organic Vapor Analyzer
PCBs	polychlorinated biphenols
PID	photoionization detector
PM	Project Manager
PPE	personal protective equipment
ppm	parts per million
PQLs	Practical Quantitation Limits
PVC	polyvinyl chloride
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
SOP/QAM	Standard Operating Procedures/Quality Assurance Manual
SSO	Site Safety Officer
ug/L	micrograms per liter
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound



1.0 INTRODUCTION

This report describes the scope, objectives, and results of a Site Investigation performed at the Anniston West End Landfill that is part of the Monsanto Company's Anniston, Alabama facility.

1.1 BACKGROUND

The Monsanto Company's chemical manufacturing facility in Anniston, Alabama produces industrial chemicals. Operations at the present plant site began in 1917 with formation of the Southern Manganese Corporation. The company initially manufactured ferro-manganese, ferro-silicon, and ferro-phosphorus, and later phosphoric acid. In 1927, the corporation entered the field of organic chemicals when they first began producing biphenyl, which is still one of the major products produced at the facility. In 1930, Southern Manganese became Swann Chemical Company and in 1935, Swann Chemical Company was purchased by the Monsanto Company.

The Anniston plant is located in Calhoun County, in northeastern Alabama, near the town of Anniston (Figure 1-1). The plant is located approximately one mile west of downtown Anniston along Highway 202. The plant consists of four tracts of property, separated by highways, railroads, and utility right-of-ways. In total, Monsanto owns 530 acres, of which approximately 13 percent is being used for present operations.

The Anniston West End Landfill consists of approximately six acres of landfill located immediately west of the current plant operations (Figure 1-2). This landfill operated from the mid to late 1930's to 1960.



1.2 SCOPE AND OBJECTIVES OF THE SITE INVESTIGATION

The scope of the Site Investigation is to provide the information necessary to evaluate the following, with respect to the landfill area known as the Anniston West End Landfill:

- ▶ the groundwater quality in the uppermost saturated zone immediately downgradient of the landfill;
- ▶ the presence or absence of polychlorinated biphenols (PCBs) in the surficial soils covering the landfill and adjacent to the landfill; and
- ▶ the presence or absence of PCBs in the ditches that are adjacent to the landfill.

The information gathered from this investigation will be used to incorporate a remedial action plan into the plant's RCRA post-closure permit.

1.3 FORMAT OF THE SITE INVESTIGATION WORK PLAN

The Work Plan for the Site Investigation describes the initial evaluation of the site, identifies additional data needs, outlines responsibilities, and establishes schedules for completing the project. Included with the Work Plan are the Sampling and Analysis Plan (SAP) (Section 6.0) and the Health and Safety Plan (HASP) (Section 9.0).



2.0 INITIAL EVALUATION

The object of this evaluation is focused on the landfill area of the plant known as the Anniston West End Landfill.

2.1 DESCRIPTION OF CURRENT CONDITIONS

2.1.1 History of Facility Operations

The Anniston West End Landfill is located immediately west of the Monsanto Anniston Plant Facility. This landfill was originally owned and operated by Monsanto from the mid to late 1930's to 1960. During this period the plant produced a variety of organic chemicals including PCBs and parathion and inorganic chemicals including phosphorus pentasulfide and calcium carbide.

In 1960, Monsanto exchanged this piece of property with the Alabama Power Company for another piece of property immediately south of the landfill. Alabama Power used this land for a utility right-of-way for their Anniston 230 kilovolt (Kv) transmission line. Although the switch yard was not built directly on the landfilled area, an 80 x 140 foot section (approximately) of the northwestern toe of the landfill was removed and/or redistributed on the property by Alabama Power Company to make room for the switch yard foundation. One of the transmission substations leading to the switch yard, however, is located on the crest of the hill immediately adjacent to the landfill area.

Monsanto recently (December 1993) re-acquired the property from Alabama Power following the discovery of a seep in one of the faces of the landfill.



2.1.2 Physical Setting

The Anniston Plant is located in northeastern Alabama in Calhoun County. The Anniston West End Landfill is located directly west of the plant operations area. The landfill covers approximately six acres and is approximately 700 to 800 feet above mean sea level (msl). Mean annual precipitation in the area is 54 inches.

Currently, an Alabama Power Company Substation and an Alabama Power Company Regional Switching Station is located at the southern toe of the landfill. High voltage power lines run across approximately 75% of the estimated landfill area.

The plant is located near the eastern edge of the Alabama Valley and Ridge physiographic province. The topography of the area is characterized by northeastward trending valleys paralleled by ridges and mountains. The valley floors range from an altitude of 500 to 900 feet msl and the ridges range from 1,000 to 2,100 feet msl. Geologic formations in the region have been extensively folded into northeastward trending anticlines and synclines complicated by thrust faults that have a general northeastward-trending strike and a southeastward dip.

The area is underlain by sedimentary and slightly metamorphosed sedimentary rocks ranging in age from Cambrian and 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 this area are deeply weathered and a mantle of residuum (*in situ* decomposed rock) has developed on the outcrops (Scott, *et al*, 1987).



The surface geology of the plant site, as described in previous investigations at several locations, consists of sandy or silty clays and clays with permeabilities of 10^{-7} to 10^{-9} centimeters per second. Below these surficial clays lies a fine-grained dolomitic limestone of the Shady Dolomite formation. Topographically, the Anniston West End Landfill is located along the northern toe of Coldwater Mountain. An unlined drainage ditch from Coldwater Mountain intersects an unlined ditch that lies at the base of the landfill and tracks downslope from the landfill, along the south, west, and northern perimeter.

Hydrogeologic investigations at the plant indicate that groundwater flow in the upper saturated zone of the surficial sediments follows the topography, generally to the north in all areas of the plant.



3.0 WORK PLAN RATIONALE, TASKS, AND DATA QUALITY OBJECTIVES

The work plan addresses the specific tasks designed to generate the data needed to achieve the objectives described in Section 1.2.

3.1 WORK PLAN RATIONALE AND TASKS

The presence of surface soil impacts will be assessed by soil sampling. A semi-viscous material containing primarily PCBs was reportedly discovered on the face of the landfill; therefore, although not generally mobile in the environment, PCBs are the constituent of concern for surficial soil exposure.

The presence of sediment impacts will be assessed by ditch sampling in the drainage ditch that circumvents the south, west, and northern perimeter of the landfill. Again, PCBs are the constituents of concern; however, due to the greater potential for exposure via sediments transported offsite, a composite ditch sample will be analyzed for the USEPA Appendix IX list of analytes. This comprehensive list will be used to screen media that may be transported offsite for other potential contaminants.

The presence of groundwater impacts will be assessed by sampling four downgradient monitoring wells for the United States Environmental Protection Agency's (USEPA) Appendix IX list of analytes. This extensive analyte list will be used to screen the groundwater for potential impacts from the variety of known and unknown material that was placed in the landfill.

The Site Investigation consists of three tasks: work plan preparation; data collection (soil, ditch, and groundwater assessments); and report preparation.



3.2 DATA QUALITY OBJECTIVES

The overall quality assurance objective is to ensure that data of known and acceptable quality are produced. Proper execution of each task will yield consistent results that are representative of the media and the conditions measured. Data Quality Objectives (DQOs) are statements of the level of uncertainty that a decision maker is willing to accept in results derived from environmental sampling. Because the data may also be used to determine the absence of other constituents in groundwater and ditch soils, Level III laboratory data support documentation will be obtained.

To assess whether the data collection effort has met the DQOs established for this project it is necessary to compare both descriptive and numerical Quality Control (QC) information generated during the investigation with the QC criteria established by the level of data. There are six components that comprise the QC criteria: precision, accuracy, sensitivity, completeness, comparability, and representativeness. The Sampling and Analysis Plan contains the quality assurance specifications for samples and sample analytes.



4.0 SCHEDULE AND DELIVERABLES

The tasks described in the work plan will require approximately three months to complete. Task 1, preparation of the work plan was completed in March 1994. The data collection activities commenced in April and was completed in June 1994. Preparation of this report is the culmination of the Site Investigation.



5.0 PROJECT AND DATA MANAGEMENT

This section defines the key project staff and their responsibilities. The Monsanto Project Manager is Mr. Robert T. Jones. Mr. Jones will be responsible for all communications with regulatory agencies interested in this project. Mr. Alan Faust will act as the Project Hydrogeologist for Monsanto. He will provide hydrogeologic and technical input for Monsanto.

Mr. Peter L. Palmer will be the Project Officer for Geraghty & Miller. Mr. Palmer will oversee the overall quality of the project and will serve as a technical advisor for site strategies. Ms. Leslie L. Herd will be the Project Manager for Geraghty & Miller. Ms. Herd will be responsible for the day-to-day project activities, assigning staff and subcontractors to implement the work plan, scheduling, and cost control. Other project personnel and their responsibilities are described in the Sampling and Analysis Plan (Section 6.0).



6.0 SAMPLING AND ANALYSIS PLAN

6.1 PROJECT ORGANIZATION AND RESPONSIBILITIES

The sampling and analysis organization is structured to provide project management, technical assistance, and quality assurance/quality control (QA/QC) throughout the duration of the project. The following paragraphs describe key Geraghty & Miller personnel and summarize each individual's responsibilities. An organization chart is provided in Figure 6-1.

Project Officer. The Project Officer is Mr. Peter Palmer. Mr. Palmer is responsible for senior review of project documents and for the overall implementation of the project. As an officer of the firm, Mr. Palmer has the authority to commit the necessary resources to ensure timely completion of all defined tasks.

Project Manager. The Project Manager is Ms. Leslie Herd. Ms. Herd is responsible for the day-to-day project activities, assigning staff and subcontractors to implement the Work Plan, scheduling, and cost control. As Project Manager, Ms. Herd is also responsible for ensuring adherence to the Work Plan.

Project Hydrogeologists. Mr. Ken Miklos and Mr. Jason Kirkpatrick are the Project Hydrogeologists. Mr. Miklos' duties include, but are not limited to, selecting a drilling contractor, overseeing drilling, reviewing drilling contractor invoices, reviewing and evaluating site hydrogeology and geology data, and preparing reports. Mr. Kirkpatrick's duties include conducting sampling activities, reviewing and evaluating the analytical data and preparing reports.

Project Quality Assurance Officer. Ms. Cynthia Lee is the Project Quality Assurance (QA) Officer and provides technical assistance and quality assurance oversight for the Site



Investigation activities. Her responsibilities include, but are not limited to, reviewing the sampling standard operating procedures with the field personnel, reviewing and validating the laboratory analytical data and field documents, and ensuring that the sampling and analysis plan is followed.

6.2 RECORDKEEPING

Written records and documentation will be generated by Geraghty & Miller to support all Site Investigation activities. This information will include the records of all drilling and sampling operations, the site condition records of the locations investigated, and the response actions taken.

The specific documentation forms that will be completed by Geraghty & Miller include the following:

- ▶ daily logs,
- ▶ location sketches,
- ▶ sample/core logs (drilling logs/lithology logs),
- ▶ monitoring well construction logs,
- ▶ soil/ditch sampling logs and water sampling logs,
- ▶ chain-of-custody forms,
- ▶ internal correspondence, and
- ▶ field document and analytical data validation forms.

Field records will be completed at the time of sample collection and will be signed or initialled, and dated by the sample collector(s). Copies of all relevant field records are included in Appendix A.



6.3 SAMPLING OBJECTIVES

Soil, ditch, and groundwater samples from selected locations will be collected and analyzed to determine the following:

- ▶ the presence or absence of PCBs in the surficial soils covering and adjacent to the landfill;
- ▶ the presence or absence of PCBs and Appendix IX constituents in the ditches that are adjacent to the landfill;
- ▶ and the presence or absence of Appendix IX constituents in groundwater from the uppermost saturated zone immediately downgradient of the landfill.

6.3.1 Soil Assessment

The soil quality assessment consists of two areas of concern: the suspected landfill surface (top and faces) and the surrounding land surface downgradient of the landfill. Figure 6-2 depicts the demarcation between these two areas. The focus of the investigation is on evaluating the potential constituent exposure risks and constituent migration; therefore, the delineation will include only surficial soils.

6.3.1.1 Landfill Surface Soil

The suspected landfill surface -- the top and the faces of the landfill as depicted on Figure 6-2 -- has been divided into quarters (Figure 6-3). Each of these quarters has been further subdivided into nine equi-areal subsections. Surficial soil samples collected from each of these nine subsections will be composited and the resulting four composite samples analyzed to quantify the concentrations of PCBs in the surficial soils on the landfill surface.

The area within the Alabama Power Substation will be sampled separately. Four surface soil samples will be collected and will be composited into one sample for analysis of PCBs.

6.3.1.2 Adjacent Area Surface Soil

The surrounding land surface, as depicted on Figure 6-2, has been divided into four equi-areal sections (Figure 6-3). Each of these sections has been further subdivided into nine equi-areal subsections. Surficial soil samples collected from each of the nine subsections will be composited and the resulting four composite samples analyzed to quantify the concentrations of PCBs in the surrounding surficial soils.

6.3.2 Ditch Assessment

The ditch quality assessment will focus on the soils in the drainage ditch that circumvents the south, west, and northern portions of the landfill. Samples will be analyzed to evaluate whether the ditch has been impacted from surface transport from the landfill or from construction activities associated with the installation of the Alabama Power Switchyard partially located in an area formerly occupied by the landfill. An upgradient ditch sample will be collected from the point where the drainage ditch from Coldwater Mountain empties into the drainage ditch surrounding the landfill.

6.3.3 Groundwater Assessment

The groundwater quality assessment is intended to provide information on the groundwater in the uppermost saturated zone of the unconsolidated material and to provide additional information on the site geology.



6.3.3.1 Background Location

The background location selected for analyte comparison is monitoring well MW-1B. This monitoring well currently serves as the background well for the Resource Conservation and Recovery Act (RCRA) compliance monitoring and corrective action monitoring systems at the Monsanto Anniston facility.

6.3.3.2 Downgradient Locations

Four downgradient monitoring wells will be installed (Figure 6-3). Groundwater samples from each of these wells will be analyzed for the complete list of Appendix IX constituents to determine if the groundwater in the uppermost saturated zone has been impacted by the landfill.

6.3.3.3 Groundwater Hydrology

The site groundwater hydrology will be assessed using information provided by the four new monitoring wells, as well as that provided by existing monitoring wells located throughout the facility. Water-level measurements will be used to determine the direction of groundwater flow.

6.4 SAMPLE LOCATION, FREQUENCY AND SAMPLE DESIGNATION

The locations and number of samples to be collected are described in this section. The system for labeling samples also is described.

6.4.1 Soil Assessment

Surficial soil samples will be collected from selected locations on the landfill surface and the downslope area of the landfill and composited for laboratory analysis.

6.4.1.1 Landfill Surface Soil

The landfill has been divided into four quadrants. Nine surface soil samples will be collected from each quadrant and will be composited into one sample for laboratory analysis. In addition to the four composite samples from each quadrant, a composite sample will be collected from the Alabama Power Substation located on the crest of the hill adjacent to the landfill.

The soil samples will be identified by a quadrant identifier (LF1 through LF4 "Landfill" and SS "Substation") and a subsection identifier (A through I). For example, the soil sample taken from landfill quadrant 1 and from subsection C, as depicted on Figure 6-3, will be identified as boring "LF1-C". Upon mixing of the entire sample subsets (A through I), the resulting composite sample submitted to the laboratory will be designated by the quadrant identifier only. For example, the composite soil sample for quadrant 1 will be identified as "LF1".

In addition to the proposed surface soil sampling program, a representative sample will be taken of any exposed tar-like material found. These types of samples will be designated as surface tar samples, "ST-#".

In accordance with industry standards, QC samples also will be collected. These include a field duplicate of one of the four composite soil samples and one equipment blank. The composite sample to be submitted to the laboratory in duplicate will be



arbitrarily chosen by the field sampling team, with the duplicate designated by a "9" preceding the quadrant identifier. For example, if the composited soil sample from quadrant 1 is selected for duplication, the second sample taken from the quadrant 1 soil composite will be identified as "LF91".

The equipment blank (EB-1) will be collected following one of the field decontamination procedures between quadrant sampling. This sample will be used to verify the adequacy of field decontamination of sampling equipment.

6.4.1.2 Adjacent Area Surface Soil

The adjacent area downslope of the landfill has been divided into four areas. Nine surface soil samples will be collected from each area and will be composited into a single sample for laboratory analysis.

The soil samples will be identified by a section identifier (AA1 through AA4 "Adjacent Area") and a subsection identifier (A through I). For example, the soil sample taken from adjacent area 2 and from subsection E will be identified as boring "AA2-E". Upon mixing of the entire sample subsets (A through I), the sample submitted to the laboratory will be designated by the section identifier only. For example, the composite soil sample for section 3 would be identified as "AA3". As the sampling equipment and collection procedures are identical to those used for sampling the landfill surface, the duplicate sample collection procedure described in Section 4.1.1 above also will be applicable to soil samples collected from these areas.



6.4.2 Ditch Assessment

Nine ditch samples (SED-1 through SED-9) will be collected from the drainage ditch downslope of the landfill on the northeastern perimeter. Eight locations will be sampled, and the ninth sample will be a composite sample from the eight locations, as shown on Figure 6-3. One upgradient ditch also will be collected from the drainage ditch upslope of the landfill on the southeastern perimeter.

One duplicate ditch sample will be collected from the composite sample and will be identified as "SED-99". One equipment blank (EB-3) will also be collected.

6.4.3 Groundwater Assessment

The background monitoring well MW-1B is located in an area that has not been affected by the landfill. The four proposed monitoring wells are located immediately downgradient of the landfill toe. The monitoring wells will be identified by a unique location identifier (WEL, "W"est "E"nd "L"andfill) and a sequential number (1 through 4) as shown in Figure 6-3.

One duplicate groundwater sample from one of the newly installed monitoring wells and one equipment blank (EB-2) will be collected and analyzed for the complete list of Appendix IX constituents. One trip blank (TB-1) will also be submitted, for analysis of volatile organic compounds only.

The duplicate groundwater sample will be arbitrarily chosen by the field sampling team and will be designated by a "9" preceding the numerical identifier. For example, if monitoring well WEL-1 is selected for collection of duplicate samples, the duplicate sample from this well will be identified as "WEL-91".



6.5 SAMPLING EQUIPMENT AND PROCEDURES

This section describes the equipment and procedures that will be used to collect samples. The equipment cleaning procedures and recordkeeping requirements are also presented. Sampling for soil, ditch, and groundwater will be accomplished in accordance with protocols described in Section 4.0 of the USEPA Region IV Standard Operating Procedures/Quality Assurance Manual (SOP/QAM).

6.5.1 Soil Assessment

Surface soil samples will be collected with a stainless steel hand auger. The stainless steel bucket will be advanced to a depth of six inches below the land surface and the soil from the bucket deposited into a stainless steel bowl. The soil samples from all nine subsection locations within each quadrant will be collected in the stainless steel bowl. After all nine of the subsection soils have been placed in the mixing bowl, the soils will be thoroughly mixed to be as homogeneous as possible. A representative subsample of the homogeneous soil mixture will be placed in appropriately labeled sample bottles. Each of the four composite samples collected in this manner will be kept cool (4° C) until shipment to the laboratory. Sample collection data will be recorded on Soil Sampling Logs and in the field log book.

The sampling equipment (hand auger, mixing bowl, and mixing spoon/trowel) will be decontaminated between quadrants. A phosphate-free laboratory grade detergent such as Micro^R will be used to clean the equipment, followed by a potable water rinse, a pesticide-grade isopropanol rinse, and finally an organic-free water rinse.



6.5.2 Ditch Assessment

Ditch samples will be collected using a stainless steel spoon or stainless steel scoop. The soils from each of the nine unique sampling locations will be placed in a stainless steel bowl and will be thoroughly mixed prior to filling the sample jars for PCBs analysis. For the composite sample, a measured portion of the homogenized soils from each of the eight downslope sample locations will be retained in a separate stainless steel bowl for mixing and composite sample collection. This composite sample will be submitted for analysis for the USEPA Appendix IX constituent list. The sample aliquots for Appendix IX volatile organic compound (VOC) analyses will be collected prior to mixing and filling the jars for PCB analyses. These aliquots will be composited in the laboratory prior to analysis. The ten samples, field duplicate, and equipment blank will be kept cool (4° C) until shipment to the laboratory. Sample collection data will be recorded on Sampling Logs and in the field log book.

The sampling equipment (mixing bowl, and mixing spoon/scoop) will be decontaminated between sample locations. A phosphate-free laboratory grade detergent such as Micro^R will be used to clean the equipment, followed by a potable water rinse, a pesticide-grade isopropanol rinse, and finally an organic-free water rinse.

6.5.3 Groundwater Assessment

6.5.3.1 Monitoring Well Installation

Four shallow monitoring wells will be installed in boreholes advanced by a hollow-stem auger drill rig. Split-spoon soil samples will be collected continuously throughout the length of the borehole for lithologic description purposes. The boreholes will be advanced to the depth of the uppermost saturated zone within the residuum. Based on previous



investigations at the facility, these wells will be approximately 30 feet deep. All drill cuttings from the investigation will be staged onsite on visquene for characterization and disposal in accordance with industry standards.

The monitoring wells will be constructed of two-inch inside-diameter Schedule 40 polyvinyl chloride (PVC) casing and 0.010-inch slotted Schedule 40 PVC screen. The 10-foot screen will be set to intercept the uppermost water bearing zone.

A sand pack will be used to fill the annular space between the borehole and the well and will act as a filter to keep fine-grained materials from clogging the well screen. This filter pack will extend from the bottom of the borehole to a level two feet above the top of the screened interval. A two-foot, fine-grained sand pack will then be added on top of the filter pack to provide a low-permeability seal between the screened interval and the overlying material. Finally, the remainder of the annular space will be filled with a Portland cement/bentonite grout mixture. A "stick-up" protective steel casing and pad will be installed around each monitoring well.

After all of the monitoring wells have been installed and the grout has been allowed to set for a minimum of 24 hours, the wells will be developed using a surge block and by pumping with a centrifugal pump. All of the development water will be containerized in 55-gallon drums and will be discharged to the onsite wastewater treatment plant.

6.5.3.2 Monitoring Well Sampling

The four newly installed monitoring wells (WEL-1 through WEL-4) and the designated background well (MW-1B) will be sampled no sooner than 24 hours after installation. The well caps will be removed, allowing the well to reach equilibrium with the atmosphere. The static water level and the total sounded depth of the well will be



measured prior to purging and sampling well water. Measurements will be made with an electronic water-level indicator and will be referenced to the survey point (top of well casing).

After water-level measurements have been taken, each well will be purged to remove standing water. Purging will be accomplished by pumping, with the pump intake hose placed at the top of the water column. As the water level drops, the intake hose will be lowered so that the water column in the casing is completely and efficiently removed. A volume equal to five times the calculated standing well-water volume will be removed from the well. If the wells are purged to dryness and do not recharge within eight hours, samples may be taken once the water level has recovered sufficiently to fill the necessary sample containers.

After purging is complete, water samples will be collected with either a TeflonTM bailer (required for samples for VOCs or peristaltic pump (PCBs and all other Appendix IX constituents excluding VOCs). Purging and sample collection data will be recorded on the Water Sampling Logs and in the field log book.

The sampling equipment (bailers and pumps) will be decontaminated between sample locations. A phosphate-free laboratory grade detergent such as Micro^R will be used to clean the equipment, followed by a potable water rinse, a pesticide-grade isopropanol rinse, and, finally, an organic-free water rinse.



6.6 FIELD ANALYSES AND SAMPLE HANDLING AND CUSTODY

6.6.1 Field Analyses

Soil samples will be collected from each of the four monitoring well boreholes for field screening for organic vapors using an Organic Vapor Analyzer (OVA). Following a rapid lithologic description of the sample, the soil will be transferred to a soil jar. After the soil vapors have equilibrated in the jar, the headspace in the jar will be analyzed for organic vapors with the OVA. The OVA will be calibrated daily and as needed in accordance with the manufacturer's instructions. The headspace and the OVA calibration data will be recorded on the appropriate field forms and in the field log book.

Field measurements of pH, temperature, and specific conductance will be conducted on groundwater during all monitoring well development, purging and sampling activities. The pH and specific conductivity meters will be calibrated daily prior to use and the calibrations confirmed throughout each day, in accordance with the manufacturer's specifications. These field parameters will be recorded on the appropriate well development, purge and sampling forms.

6.6.2 Sample Handling and Custody

All sample containers will be cleaned in the laboratory prior to shipment to the field. Ditch subsamples to be submitted for VOCs analysis will be collected in 125 milliliter (mL) amber glass bottles and filled to capacity (no headspace). Soil and ditch subsamples collected for all other organics analyses will be placed in wide-mouth glass bottles with Teflon^R-lined caps. Ditch subsamples for inorganics analyses will be collected in polyethylene bottles fitted with Teflon^R-lined caps.



Each groundwater and aqueous QC sample (the equipment blank and the groundwater field duplicate) for VOCs analysis will be collected from the Teflon^R bailer into two 40-mL glass vials pre-preserved with hydrochloric acid and fitted with Teflon^R septa caps. After being filled, each sealed vial should be inverted and gently tapped to verify the absence of bubbles.

Aqueous QC samples (equipment blanks) for semivolatile organic constituents and metal analyses collected in association with the soil/ditch samples will be placed in amber glass and polyethylene bottles, respectively, and fitted with Teflon^R caps. Groundwater and aqueous QC samples for metals analyses will be collected in polyethylene bottles pre-preserved with nitric acid. The pH of each sample so collected will be confirmed in the field and, if necessary, additional nitric acid preservative will be added. Any groundwater samples requiring additional nitric acid preservative will be noted as such on the chain-of-custody (COC), and the laboratory will be requested to analyze the corresponding subsample for VOCs within the seven-day holding time for unpreserved samples.

Sample labels will be affixed to all sample containers. Notations on the labels will be made in waterproof, indelible ink and will include the sample identification number, project number, matrix, sample type, analysis required, preservatives, and the date and time of collection. Chain-of-custody forms will also be completed as a vehicle for transfer of the samples to the analytical laboratory.

Samples collected in the field will remain at all times in the presence of a project representative until they are analyzed in the field or shipped to the analytical laboratory. Custody seals will be placed on the cooler to ensure the integrity of the samples during shipment and prevent potential tampering. To ensure that analytical holding times are not exceeded, samples will be shipped via overnight carrier on the day of collection. Airbills will be considered valid addenda to COC forms.



6.7 LABORATORY ANALYSES

All soil, ditch, and aqueous samples will be analyzed by Savannah Laboratories and Environmental Services, Inc., of Savannah, Georgia, in accordance with USEPA-approved methodologies. Because of the number of analytes and variety of methods included in the Appendix IX list and the potential for one or more of these analytes to be detected, the level of reporting will be Geraghty & Miller Level III. However, only Level II deliverables will be validated unless the analytical or validation findings suggest that review of the Level III deliverables is warranted. A copy of the laboratory deliverables comprising Level II is provided in Appendix B.

A summary of the number and type of each field and QC sample to be collected and the corresponding analytical methods requested are presented in Table 6-1 and discussed in the following paragraphs. Analytes comprising the Appendix IX list of constituents are presented in Table 6-2.

6.7.1 Soil Samples

The nine field samples (LF-1 through LF-4, SS-1, and AA-1 through AA-4), the duplicate sample, and the equipment blank will be analyzed for PCBs using USEPA Method 8080. Any surface tar samples ("ST-#") will also be analyzed for PCBs using USEPA Method 8080.

6.7.2 Ditch Samples

The nine location-specific ditch samples (SED-1 through SED-9) also will be analyzed for PCBs. The composite ditch sample (SED-10), the duplicate sample (SED-910), and the equipment blank will be analyzed for the complete USEPA Appendix IX list of



constituents. Table 6-2 identifies the Appendix IX analytes and the requisite USEPA methods. Accuracy, precision, and detection limit data for each analyte and for each matrix are also provided in this table.

6.7.3 Groundwater Samples

The five groundwater samples (WEL-1 through WEL-4 and MW-1B), the duplicate sample, and the equipment blank will be sampled for the USEPA Appendix IX list of constituents. Table 6-2 lists the Appendix IX analytes and the corresponding analytical methods. In accordance with industry standards, the trip blank will be analyzed for the Appendix IX VOCs only, using USEPA Method 8240.

6.8 DATA VALIDATION, REDUCTION, AND REPORTING

Upon the conclusion of the field investigation, the project QA officer will begin validating the field data. The validation procedure will begin with organizing and inspecting all field records, resolving discrepancies, reviewing the drilling and sampling location information, and verifying the accuracy of sample collection dates and COC records. The validation of field data will also include a review of the instrument calibration logs and the sample and quality control data resulting from field measurements.

While validating the field data, the project quality assurance officer will remain in contact with the analytical laboratory to ensure that analyses are proceeding on schedule. Upon receipt of the laboratory data, the quality assurance officer will quickly review each analytical data package for completeness, oversee the tabulation of the sample results, and begin validating the data.



The validation of laboratory data will be performed by applying, where applicable, the "National Functional Guidelines for Organic Data Review", USEPA, December 1990 and revised June 1991, the "National Functional Guidelines for Evaluating Inorganics Analyses", July 1, 1988, and the precision and accuracy data included in Savannah's Quality Assurance Manual for the analytical methods employed.

The validation process will include a review of laboratory narratives, COC forms, sample and field QC analytical results, parameters, methods of analysis, practical quantitation limits (PQLs), and sample collection, preparation, and analysis dates. Validation will also include an evaluation of laboratory method blank data, surrogate recoveries, laboratory control sample recoveries, and matrix spike and duplicate recoveries and relative percent differences.

A copy of the field and analytical data validation checklist which will be completed for each data package is included in Appendix C. Individual sample results will be classified as quantitative, qualitative, or unusable after the validation of all field and laboratory data has been completed. This information will be communicated to the Project Manager in a technical memorandum prepared by the project QA Officer.



7.0 HEALTH AND SAFETY PLAN

The Health and Safety Plan (HASP) was prepared by Geraghty & Miller, Inc. and was used by Geraghty & Miller employees that performed work at the Anniston West End Landfill site located in Anniston, Alabama. A site location map is shown in Figure 1-1. The purpose of this plan is to provide for the safety of workers involved in field activities at the site.

This plan was prepared based upon requirements in the Code of Federal Regulations, Title 29, Part 1910 (29 CFR 1910) pertaining to hazardous-waste site activities, guidelines contained in the National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and USEPA manual entitled Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (October 1985).

7.1 HEALTH AND SAFETY RESPONSIBILITY

The Geraghty & Miller Policy Statement (Appendix D) regarding health and safety outlines our commitment to provide employees guidance in controlling and reducing work related exposures. Health and safety responsibilities at the Anniston West End Landfill Site will follow a specific chain of command during all site activities. A description of key personnel and their responsibilities are listed below.

7.1.1 Project Health and Safety Officer

The project health and safety officer is the primary author of this Site Safety Plan and will oversee its proper implementation during field activities. Mr. Kevin J. Ormsby, a Certified Occupational Health & Safety Technologist, is the designated project health and



safety officer for this project responsible for supporting the field manager in health and safety issues.

7.1.2 Site Safety Officer

Geraghty & Miller's field manager will also be designated as the site safety officer (SSO) for each work task. The designated SSO will be Mr. Ken Miklos, who will be responsible for all aspects of health and safety on the job site. A list of specific responsibilities follows:

- Selects personal protective equipment (PPE) required for specific site activities.
- Inspects and ensures proper use and operation of PPE.
- Provides fit testing of respiratory protection devices.
- Controls entry and exit to the site.
- Ensures adherence to the HASP.
- Monitors the workers for signs of exposure.
- Monitors on-site hazards and conditions (air monitoring).
- Implements emergency procedures and proper decontamination.
- Defines work zones.
- Conducts "tailgate" health and safety meetings.
- Coordinates site activities and provides status reports to the project manager.
- Manages site activities.

The SSO will be responsible for stopping or starting work based on site conditions and/or emergency events. The SSO will take any additional measures necessary to provide a safe working environment. The SSO will report to the project manager regarding work status, emergency events, and guidance in health and safety matters.



7.1.3 Project Manager

The project manager (PM) will be responsible for project completion and will have ultimate control of site activities. The PM will prepare and direct all scopes of work, compile and coordinate the work team, choose the SSO, evaluate site conditions, and report to the project officer. The designated PM will be Ms. Leslie Herd of Geraghty & Miller.

7.1.4 Project Officer

The project officer will be responsible for defining project objectives, approving scopes of work, and determining the ultimate chain of command. The designated project officer will be Mr. Peter L. Palmer of Geraghty & Miller.

7.1.5 Subcontractors

The Occupational Safety and Health Administration requires that all employers develop and implement a written safety plan. Therefore, all subcontractors (e.g. drillers) will be required to develop a health and safety plan that is at least as stringent as this plan. If contractors choose to mirror the provisions of this plan, they may do so at their own risk. All subcontractors involved in site activities will designate a supervisor to coordinate with the SSO and the PM. The supervisor will be responsible for work crew safety in accordance with the HASP.

7.2 SITE DESCRIPTION/BACKGROUND

Geraghty & Miller will complete various field investigation tasks including borehole drilling; monitoring well installation; and groundwater, ditch, and soil sampling at the Anniston West End Landfill Site in Anniston, Alabama.



The Anniston West End Landfill is located immediately west of the Monsanto Anniston Plant Facility (Figure 1-1). This landfill was owned and operated by Monsanto from the mid to late 1930's to 1960. During this period, the plant produced a variety of organic chemicals including PCBs, parathion, pentachlorophenol, and inorganic chemicals including phosphorous pentasulfide and calcium carbide. Wastes from the onsite laboratory also were potentially landfilled here.

7.3 PLANNED FIELD ACTIVITIES

The objectives of the Site Investigation is to provide the information necessary to evaluate the following with respect to the landfill area known as the Anniston West End Landfill:

- The groundwater quality in the uppermost saturated zone immediately downgradient of the landfill;
- The presence or absence of PCB's in the surficial soils covering the landfill and adjacent to the landfill; and
- The presence or absence of PCB's in the ditches that are adjacent to the landfill.

Geraghty & Miller will perform a variety of field activities as described in the Sampling and Analysis Plan. These activities include the following:

- Drilling of soil borings;
- Installation of monitoring wells;
- Groundwater sampling;



- Soil sampling; and
- Ditch sampling.

These activities focus on evaluating the presence or absence of landfill constituents in soil, ditches, and groundwater. Refer to the Sampling and Analysis Plan for site-specific sampling and investigation procedures.

7.4 HAZARD EVALUATION

The following physical and chemical hazard evaluation is based upon a review of available site-specific information and upon available information regarding the toxicity and physical properties of the known chemicals of concern.

7.4.1 Physical Hazards

Physical hazards exist at the site because heavy equipment will be utilized and work will be conducted outdoors. In most cases, common sense should rule to prevent accidents; however, the specific items listed below should be given constant attention.

7.4.1.1 Utilities

Prior to commencing any ground-intrusive work (e.g., drilling) underground utilities must be located and marked. This includes inquiry to public utility companies (e.g., water, sewer, telephone, natural gas). Care must also be taken for aboveground utility cables and structures.



7.4.1.2 Machinery

During activities involving heavy equipment (e.g. drilling rigs, etc.) care should be taken to avoid falling or flying objects and being caught between moving and idle pieces of machinery. Hard hats, safety glasses, and steel-toed boots will be worn by all personnel working in close proximity to such equipment. Ear plugs will be provided when heavy equipment is used and noise levels exceed 80 decibels (dBA). Subcontractors will be required to provide all of their own safety equipment.

7.4.1.3 Traffic

Care should be taken to exclude unauthorized personnel from the work area.

7.4.1.4 Weather

It is recognized that hazards may result from adverse weather. A decision to discontinue drilling or other activity because of severe or threatening weather conditions (e.g., lightning, strong wind, heavy rain, very hot temperatures) will be made by the SSO. As appropriate, field activities should be conducted during early morning or late evening hours to reduce the risk of thermal stress.

7.4.1.5 Heat Stress

Heat stress is usually caused by a number of factors such as meteorological conditions, PPE, work load, and individual characteristics of site personnel. In order to minimize the potential for heat stress to occur, appropriate actions must be taken to prevent the onset of heat stress. Water for potable use will be made available during all site



activities. Frequent rest periods should be taken in shaded areas to minimize fatigue and exposure to hot temperatures.

The SSO should monitor personnel for any signs of heat stress. These signs may include any of the following: impaired performance, loss of coordination, skin eruptions (red face or rashes) nausea, headaches, and cramps. If these signs are observed, the worker should be relieved of duties and made to rest until he/she can adequately recover, or administered appropriate medical attention as needed.

7.4.2 Chemical Hazards

Because the Anniston West End Landfill reportedly contains PCB's and a variety of other chemicals, there is a potential for workers to be exposed to chemical hazards. The likely pathways for exposure to these constituents are via inhalation of vapors and/or dermal contact with contaminated material. Other likely pathways for exposure are inhalation of contaminant-laden dust or soil. Accidental ingestion of chemicals could also occur if personal hygiene is inadequate. Table 7-1 lists known exposure limits and action levels for constituents anticipated to be found at the site. Appendix E presents toxicological data for these anticipated site constituents.

7.4.2.1 Exposure Via Ingestion

Chemical exposure via ingestion will be mitigated through the use of the personal hygiene practices listed below:

- Eating, drinking, and/or smoking will be prohibited in the work area.
- All workers must wash hands and face prior to and after consuming food, beverages, and/or smoking.



7.4.2.2 Exposure Via Dermal Contact

Chemical exposure via dermal contact will be mitigated through the use of PPE and common sense when handling liquids or solids within the work zone. The level of protection required will be as needed to prevent dermal contact. All workers will wear Level D PPE (e.g. hard hat, latex gloves, safety glasses, and steel-toed boots). Additionally all workers will wear outer nitrile gloves while handling soil and/or groundwater at the site. If a splash hazard exists, eye and face protection (e.g., face shield), a chemical-resistant suit or apron, and chemical resistant boots will be worn in addition to standard Level D PPE. Care should be taken not to touch unprotected portions of the skin (particularly eyes, nose, or mouth) when handling liquids or solids within the work area.

7.4.2.3 Exposure Via Inhalation

Chemical exposure via inhalation will be mitigated through the use of air monitoring for organic vapors, evaluation of wind velocity, and common sense. Personal protective equipment will be utilized as necessary (based on specific action levels) to prevent chemical exposure in excess of the exposure limits listed in Table 7-1.

When possible, personnel should be situated upwind of activity when working at the site. Boreholes and monitoring wells should be allowed to vent for one to two minutes prior to investigative activities to allow any vapors or gases to dissipate. Liquids and solids should never be smelled to confirm the presence or absence of chemicals.

The SSO will continuously screen the site for dusty conditions to prevent inhalation of chemicals in particulate form (e.g. PCB's or chemical residues on soil grains). If dusty conditions are observed, all workers will wear NIOSH-approved respiratory protection



designed for dusts. Extremely dusty conditions may require dust suppression via water mist or spray prior to returning to work.

7.5 AIR MONITORING

Air monitoring procedures for chemical vapors and fugitive dust are presented in this section.

7.5.1 Monitoring For Chemical Vapors

Based on instrumental air monitoring results in the worker's breathing zone using a photoionization detector (PID) or flame ionization detector (FID), the following OSHA Levels of Protection will apply:

PID readings of 0 to 5 parts per million (ppm) above background	Level D
PID readings of >5 ppm but <50 ppm above background	Level C
PID readings of >50 ppm above background	Evacuate immediately

Prior to beginning field activities, up-wind monitoring will be conducted to determine a background (ambient) air quality value. A PID or FID will be used to take air monitoring readings in the breathing zone during site activities. When breathing zone readings indicate that a worker is being exposed to a sustained level (more than 5 minutes duration) of 5 ppm above the ambient air level, colorimetric detector tubes will be used to determine if benzene is present at concentrations greater than 1 ppm. If benzene is detected at any concentration, personnel will exit the work area until levels decrease. The SSO will evaluate the situation and make recommendations for ceasing work or upgrading to Level C PPE.



An explosimeter will be used to determine the percentage of the lower explosive limit (LEL) that has been attained at the site. Whenever 20% of the LEL is attained, operations will cease until levels decrease.

Because of the variety of chemicals reportedly at the landfill, extreme caution will be used in interpreting the real time air monitoring data.

The level of protection required for each particular work task will be based upon the results of the air monitoring and action levels. All employees at the site shall be provided with and required to wear the appropriate level of PPE as designated by the SSO. When using Level C PPE, the buddy system must be used; at least two personnel must conduct the work. If PPE more stringent than Level D is required, work should be discontinued pending further evaluation of site conditions. The SSO will be responsible for stopping work and notifying the site workers of any changes in PPE requirements. This information shall be transmitted to each worker at the site verbally, and documented in the field log book.

7.5.2 Monitoring For Fugitive Dust

Air monitoring for fugitive dust at the site may be conducted with either a hand-held wind meter or visually. This is necessary because constituent-laden dust may become airborne and inhaled or ingested by workers at the site. If dusty conditions are observed all workers will wear NIOSH-approved dust masks. Wind velocity readings will be taken upon arrival at the site and every hour thereafter. Dust masks should be changed frequently and should not be removed until dusty conditions do not exist or the indicated wind speed is below 5 miles per hour (mph) for at least 30 minutes.

7.6 PERSONAL PROTECTIVE EQUIPMENT

The level of protection required for a particular work task is based upon the results of the air monitoring and action levels. A description of the minimum requirements for Levels C and D are provided below. If PPE more stringent than Level D is required, work should be discontinued pending further evaluation of site conditions. When using Level C PPE, the buddy system must be used; at least two personnel must conduct the work.

LEVEL D

Equipment

- Hard hat
- Safety glasses
- Gloves
- Safety boots/shoes
- Gloves (Inner Latex)
- Outer (Nitrile)
- Hearing Protection (Option)
- Tyvek Coveralls

Protection Provided

- Skin protection
- No respiratory protection

LEVEL C

Equipment

- Full-face, air-purifying, respirator with appropriate canister
- Inner and outer chemical-resistant gloves
- Chemical-resistant safety boots and covers
- Hard hat
- Polycoated Tyvek Coveralls
- Hearing Protection (optional)

Protection Provided

- Skin Protection
- Respiratory Protection



7.7 SITE CONTROL

The work site will be divided into three separate zones to control access and to prevent the spread of impacted media (Figure 7-1). At times this may require the use of signs, barricades and flagging. Site control measures will be determined prior to starting work each day and documented on field logs. A description of each work zone is shown below:

1. Exclusion Zone: This is the area where the primary work is occurring. Only the necessary number of workers should be permitted to be in the zone. A minimum of two workers is required when site conditions indicate the need for a buddy system.
2. Contamination Reduction Zone: This is the zone next to the Exclusion Zone where the decontamination station, replacement equipment, and supplies should be located.
3. Clean Zone: This area is used primarily for field command purposes. Equipment and supply deliveries, all workers entering or exiting, and all visitors to the site should be screened through this area.

7.8 DECONTAMINATION

All workers will decontaminate equipment and wash their hands and face prior to leaving the site. Disposable articles should be properly disposed in accordance with all applicable Federal, State, and Local rules and regulations, or left in the work area for future disposal. Diagrams of the general work area, outline for Level D decontamination, outline for Level C decontamination are presented in Figures 7-2 and 7-3, respectively.



7.9 SAFE WORK PRACTICES

Workers responsible for conducting the planned site activities (Section 7.3) must be familiar with and should have on-site access to this HASP. All on-site employees will have documented 40 hours of initial health and safety training, annual refresher training, and medical monitoring. The Geraghty & Miller Hazard Communication Program and Respiratory Protection Program are presented as Appendices F and G, respectively.

A daily "tailgate" health and safety meeting will be conducted by the SSO prior to starting work to discuss work tasks and hazards as well as emergency procedures. The "tailgate" meeting will be documented on the form found in Appendix H. In event of an injury or illness caused by work at the site, the OSHA 101 form found in Appendix I should be completed and submitted to the SSO. Additionally, any unsafe work practices or conditions noted by workers at the site should be reported to the SSO using the Safety and Health Complaint Form found in Appendix J. The SSO should then stop work until the problem can be addressed or corrected.

7.10 EMERGENCY PROCEDURES

A plan for emergency situations has been developed to address immediate responses to existing or imminent hazards or problems. The SSO is responsible for investigating all emergency situations. Work will only resume after the cause of the accident or hazard has been identified and corrective actions taken. If the emergency situation requires police, fire, and/or emergency medical or rescue personnel, the telephone numbers listed in Table 7-2 should be utilized to contact the appropriate emergency personnel. Caution should be used if dialing "911" from a portable or cellular telephone, as the communications system for these types of telephones frequently connects calls placed to "911" to other cities and/or



states. If mobile or cellular telephones are used, the seven digit emergency numbers should be used.

7.10.1 Emergency Telephone Numbers

Telephone numbers for fire department, ambulance, police, and medical facilities are shown in Table 7-2. In the event of an emergency, the Project Manager should be notified as soon as possible.

7.10.2 Emergency Route to Hospital

Figure 7-4 is a map showing the location of the hospital. From the main plant entrance take a left on the service road to Highway 202. Take a left on 202 and proceed approximately five miles into Anniston where the hospital is located.

7.10.3 Personnel Injury in the Exclusion Zone

Upon notification of an injury in the exclusion zone, the designated emergency signal will be sounded. All site personnel will assemble at the decontamination line. The rescue team will enter the exclusion zone (if required) to remove the injured person to the hotline. The SSO will evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the support zone. The onsite personnel will initiate the appropriate first aid, and contact should be made for an ambulance and with the designated medical facility (if required). No person(s) will reenter the exclusion zone until the cause of the injury or symptoms is determined.



7.10.4 Personnel Injury in the Support Zone

Upon notification of an injury in the support zone, the SSO will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of site personnel, operations may continue, with the onsite personnel initiating the appropriate first aid and necessary follow-up as stated above in Section 11.3. If the injury increases risk to others, the designated emergency signal will be sounded and all site personnel will move to the decontamination line for further instructions. Activities on site will stop until the added risk is removed or minimized.

7.10.5 Fire/Explosion

Upon notification of a fire or explosion on the site, the designated emergency signal will be sounded and all site personnel will move to the decontamination line (unless that is the location of the fire/explosion). The fire department will be alerted, and all personnel moved to a safe distance from the involved area.

7.10.6 Personal Protective Equipment Failure

If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy will immediately leave the exclusion zone. Reentry will not be permitted until the equipment has been repaired or replaced.

7.10.7 Other Equipment Failure

If any other equipment on site fails to operate properly, the SSO will be notified and then determine the effect of the failure on continuing operations at the site. If the failure



affects the safety of personnel or prevents completion of the work plan tasks, all personnel will leave the exclusion zone until the situation is evaluated and appropriate actions taken.



8.0 SITE INVESTIGATION AT THE WEST END LANDFILL

8.1 SCOPE OF WORK

The scope of the Site Investigation was to address contamination related to the disposal of biphenol-contaminated wastes and other debris into the Anniston West End Landfill. The Site Investigation evaluated the following:

- ▶ the groundwater quality in the uppermost saturated zone immediately downgradient of the landfill;
- ▶ the presence or absence of PCBs in the surficial soils covering the landfill and adjacent to the landfill; and
- ▶ the presence or absence of PCBs in the ditch soils that are adjacent to the landfill.

8.2 SHALLOW SURFACE SOIL SAMPLING

During the Site Investigation, ten surface soil samples (LF-1 through LF-4, AA-1 through AA-4, ST-1 and Sub-1) were collected in April 1994 across the Anniston West End Landfill and the adjacent areas. The suspected landfill surface (the top and the faces of the landfill as depicted on Figure 1-2) was divided into quarters (Figure 8-1). Each of these quarters was further subdivided into nine equi-areal subsections. Surficial soil samples were collected from each of these nine subsections and were composited. The resulting four composite samples (LF-1 through LF-4) were submitted to Savannah Laboratory for analysis to quantify the concentrations of PCBs in the surficial soils on the landfill surface in each quadrant.

The surrounding/adjacent land surface (as depicted on Figure 1-2) was also divided into four equi-areal sections (Figure 8-1). As with the landfill, each section was further



subdivided into nine equi-areal subsections. Surficial soil samples collected from each of the nine subsections were composited and the resulting four composite samples (AA-1 through AA-4) also were analyzed to quantify the concentrations of PCBs on the surface of the surrounding land.

Surface soil samples were collected within the area of the Alabama Power Substation. Four surface soil samples were collected and composited into a single sample (Sub-1) for analysis of PCBs. Sample ST-1 was a composite sample of surface tar found sporadically across the face of the landfill surface.

At each quadrant the surface soil samples from all nine equi-area subsections were scooped from the land surface using a stainless steel spoon and placed in a stainless steel bowl. The soil from all nine subsections was then composited by thoroughly mixing the whole mass, then dividing it into quarters and mixing each quarter, and finally remixing all the soil. The soil was then scooped from the stainless steel bowl and placed in a 500 mL widemouth glass sample jar. The sample was placed in a cooler on ice immediately after collection. An additional sample jar was filled for Landfill Quadrant 1 (labeled LF-91) as a QA/QC sample (duplicate sample).

The stainless steel bowl and spoon were thoroughly decontaminated as described in Geraghty & Millers Comprehensive Quality Assurance Project Plan (QAPP) between sampling each quadrant. Decontamination procedures involved a microsoap and di-ionized (DI) water scrub, isopropanol alcohol rinse and a final DI water rinse. To confirm that the soil sampling decontamination procedures were thorough, an equipment blank was collected. The equipment blank was collected by pouring DI water over the decontaminated stainless steel bowl and spoon and into the appropriate water sampling bottles.



During a second phase of work, 20 shallow soil samples were collected from 10 locations along the fence that borders the western edge of the landfill property. At each location (Figure 8-1) a soil sample was collected from the land surface and from 12 inches below land surface (bls). At each location the surface soil samples were collected by scooping soil from 0 to 1 inches below the land surface. These surface soil samples were labeled with an "A" to designate the sampling interval, for example the shallow surface soil sample at fence line location #3 was labeled as FL-3A. The soil samples were collected using a decontaminated stainless steel spoon and placed directly into the sample jar. The 12-inch bls soil samples were collected by first augering a borehole down to approximately 11 inches bls using a decontaminated stainless steel hand auger. Then the auger was removed from the hole and decontaminated again to avoid cross contamination with the material from 0 to 11 inches bls. Using the decontaminated auger the last two inches were then augered and removed from the borehole. The bottom inch of material (from 11 to 12 inches bls) was then removed from the auger and placed directly into the sample jar. The 12-inch bls soil samples were labeled with a "B" modifier (Example FL-3B).

At each location the soil column from 0 to 12 inches bls was placed on plastic and photographed. The samples were placed on ice immediately following collection. The stainless steel spoon and hand auger were decontaminated in accordance with Geraghty & Miller's QAPP as described above; however, no equipment blanks were collected.

The eleven composite surface soil samples (LF1 through LF4, AA1 through AA4, LF91, SUB-1, and ST-1) and the equipment blank were submitted to Savannah Laboratory for analysis of PCBs by USEPA Method 8080. The additional twenty fence line soil samples (FL-1A through FL-10A and FL-1B through FL-10B) were also submitted to Savannah Laboratories; however, initially only the surface soil samples, those designated with the "A" modifier, were analyzed for PCBs by USEPA Method 8080. The 12-inch bls soil samples, those designated with the "B" modifier, were analyzed only if the associated surface sample



detected concentrations of PCBs. Field descriptions of the soils are given in the soil sampling logs presented in Appendix K. The laboratory data for both soil sampling events are presented in Appendix L.

8.3 DITCH SAMPLING

The Site Investigation also included collection of ten ditch samples (SED-1 through SED-7, SED-8A, SED-8B and SED-9) from the drainage ditch that circumvents the southern, western, and northern portion of the landfill. These samples were collected to evaluate the extent, if any, of impacted soils due to erosion of soils from the landfill surface. All the ditch samples were collected from the loose sands and silts which are the bed of the ephemeral stream that occupies the drainage ditch. The ditch samples were collected from locations where it appeared the water had pooled and soil transported from the site would have settled out. At the time of sampling no moving water was present in the drainage ditch.

Ditch sample SED-1 was collected from an upgradient location at the point where the drainage ditch from Coldwater Mountain empties into the drainage ditch surrounding the landfill. The remaining nine samples were collected from locations downslope from the Anniston West End Landfill. Ditch samples SED-2 through SED-7, SED-8A and SED-8B were collected equidistance from each other starting with SED-2 located at the point where the northern-most end of the concrete drainage ditch terminates (Figure 8-1).

At each sampling location the sample was scooped from the stream bed using a stainless steel spoon and placed in a stainless steel bowl. The sample was mixed as described above and placed in the appropriate sampling jar. Ditch samples SED-1 through SED-7, SED-8A, and SED-8B were submitted to Savannah Laboratory for analysis for PCB's by EPA Method 8080. Sample SED-9 was a composite sample collected from all the



downslope locations (SED-2 through SED-7, SED-8A, and SED-8B). SED-9 was submitted for analysis of Appendix IX constituents. The SED-9 sample fractions for analysis of VOCs were collected at each location and placed directly into a laboratory container for VOCs. The individual VOC samples were submitted for compositing by the laboratory as part of the Appendix IX composite sample (SED-9).

The sampling equipment was decontaminated between each sampling location as described above. To confirm that decontamination procedures were thorough an equipment blank was collected during the ditch sampling event. The ditch sampling logs are found in Appendix M and the laboratory results are presented in Appendix L.

8.4 GROUNDWATER SAMPLING

Four monitoring wells were installed in April 1994 (WEL-1 through WEL-4) to evaluate the groundwater quality in the uppermost saturated zone downslope from the Anniston West End Landfill. The purpose of the monitoring wells was to assist in characterizing the geology and defining the direction of groundwater flow.

The monitoring wells were installed by the hollow stem auger method. The borehole was drilled its total depth using a hollow stem auger, the monitoring well screen and casing were then inserted inside the hollow stem auger. Pre-cleaned 20/30 grade silica sand was then placed into the borehole as the augers were slowly withdrawn forming a solid sand pack around the well screen. The sand was brought to approximately two feet above the top of the screen and capped with a two foot bentonite seal. The remaining annular space was fill with neat cement grout to the land surface. Each monitoring well was developed using a centrifugal pump until pH, specific conductance, and temperature were stable and the development water was relatively sediment-free. All the drilling equipment and well materials were thoroughly decontaminated using a steam generating, high pressure washer.



The locations of the newly installed monitoring wells are shown in Figure 8-1. Monitoring well construction details for the four newly installed monitoring wells are summarized in Table 8-1. Field lithology logs and well construction details for the newly installed monitoring wells are presented in Appendix N.

Groundwater samples were collected on May 4, 1994 from the four newly installed downgradient monitoring wells as well as background monitoring well MW-1B located in an area that has not been affected by the landfill. The groundwater samples were submitted to Savannah Laboratory for analysis of Appendix IX constituents. The water sampling logs are included in Appendix O and the laboratory data is included in Appendix L. Monitoring well WEL-3 was resampled on June 21, 1994 by Monsanto personnel and was analyzed for total and dissolved PCBs by USEPA Method 8080.

Water levels in all of the newly installed monitoring wells were measured prior to sampling (Table 8.2). Figure 8-2 depicts the potentiometric surface on May 4, 1994. As indicated in previous hydrogeologic investigations at the facility, the groundwater flow in the uppermost saturated sediments follows the topography.



9.0 RESULTS OF SITE INVESTIGATION

9.1 RESULTS OF SAMPLING

During the Site Investigation, constituents were detected in the shallow surface soils, ditch soils, and groundwater samples collected within the Anniston West End Landfill and the areas immediately adjacent to the landfill. Tables 9-1 through 9-5 present a summary of the constituents that were detected in the landfill and adjacent surface soil, in the fence line soils, in the ditch soils, and in the groundwater samples.

The following sections are a discussion of the analytical results. The constituents are discussed relative to the media in which they are detected.

9.1.1 Soil Samples

PCB-1260 and 1254 were detected in all but one (Sub-1) surface soil sample at concentrations ranging from 14 to 790 milligrams per kilogram (mg/kg) and 4 to 850 mg/kg, respectively (Table 4-1). PCB-1248 was detected in surface soil samples AA-1, AA-2, AA-92 (duplicate of AA-2) AA-3, LF-1, LF-91 (duplicate of LF-1), and LF-3 at concentration of 42, 300, 260, 4, 68, 84, and 130 mg/kg, respectively. No other PCBs isomers were detected in any of the shallow surface soil samples.

A composite sample of the surface tar (ST-1) found across the landfill surface was collected and submitted for analysis of PCBs. PCB concentrations in surface tar sample ST-1 were higher than the surface soil samples. Concentrations of PCB-1254 and 1260 were detected at 17,000 and 16,000 mg/kg, respectively.



The ten surface soil samples (FL-1A through FL-10A) collected along the western fence line were also submitted for analysis of PCBs. Of the six standard PCB isomers analyzed, only three (PCB-1248, 1254 and 1260) were detected (Table 4-2). PCBs were below detection limits in two of the surface soils samples (FL-6A and FL-7A). Concentrations of PCBs in the remaining eight samples ranged from 2.9 to 8.9 mg/kg for PCB-1248, 3.2 to 21 mg/kg for PCB-1254, and 1.6 to 90 mg/kg for PCB-1260. At the eight locations where PCBs were detected the associated "deeper" samples also were submitted for analysis of PCBs. PCBs were not detected in any of the eight "deeper" (12 inch bls) samples.

9.1.2 Ditch Samples

PCBs were detected in all but two of the ditch samples (SED-1 and SED-4) (Table 4-3). PCB-1248 and 1260 were detected at concentrations ranging from 10 mg/kg to 88 mg/kg and 14 mg/kg to 300 mg/kg, respectively. PCB-1254 was detected in ditch samples SED-2, SED-3, SED-5, SED-95 (duplicate of SED-5) SED-6, SED-7, SED-8A, and SED-8B at concentrations of 120, 120, 12, 17, 88, 25, 28, and 31 mg/kg. No other PCB isomers were detected in the ditch samples.

The Appendix IX composite sample (SED-9) and its duplicate (SED-99) did not contain concentrations of VOCs. In sample SED-9 nine semivolatile constituents were detected at concentrations between the PQL and the Method Detection Limit and are therefore considered estimated values. The total concentration of semivolatiles in samples SED-9 and SED-99 was 1.04 mg/kg and 0.39 mg/kg, respectively.



9.1.3 Groundwater Samples

Groundwater samples collected in May 1994 were analyzed for the USEPA Appendix IX list of constituents and only two PCBs were detected in one monitoring well, WEL-3 (Table 9-4). PCB-1248 and 1254 were detected in the groundwater samples from monitoring wells WEL-3 and WEL-93 (Duplicate of WEL-3) at concentrations of 4.0 and 2.8 micrograms per liter (ug/L) and 3.0 and 1.8 ug/L, respectively (Table 9-4). Although groundwater samples from WEL-4 contained concentrations of three semivolatiles (bis-(2-Ethylhexyl)phthalate, Di-n-butylphthalate, and Diethylphthalate) the concentrations reported were between the PQL and the Method Detection Limit and are thereby considered estimated values.

Barium was detected in all the groundwater samples except background monitoring well MW-1B, at concentrations ranging from 0.036 to 1.1 milligram per liter (mg/L). Zinc was detected in three groundwater samples (WEL-3, WEL-4, and WEL-93) at concentrations of 0.023, 0.83, and 0.031 mg/L. Concentrations of six metals (beryllium, chromium, cobalt, copper, nickel and vanadium) were detected in monitoring well WEL-4.

The groundwater sample collected from monitoring well WEL-3 in June 1994 was analyzed for PCBs only. No PCBs were detected in this sample.

9.2 NATURE AND EXTENT OF CONTAMINATION

PCBs were detected in the surface soils throughout the landfill and adjacent area quadrants. The highest concentrations of PCBs were detected in Adjacent Area Quadrant 2 and Landfill Quadrants 1 and 3 (Figure 9-1). It is unlikely that the elevated concentrations of PCBs in Adjacent Area 1 and 2 are the result of contaminant migration since any surface soils washed off the landfill surface during storm events would be



intercepted by the drainage ditch that divides the landfill and the adjacent area. A potential source of the contamination in these areas may be the result of construction activities associated with the installation of the Alabama Power Company Switchyard. Both the landfill and the adjacent area are well vegetated reducing the chance of wind blown contamination. The surface tar sample (ST-1) contained the highest concentrations of PCBs. The surface soil samples were collected from the top inch of soil therefore it is uncertain how deep the soil is impacted with PCBs.

PCBs were detected in the additional discrete (not composite) surface soil samples collected along the western fence line. Although debris (glass, tires, china, etc.), black soil and gravel were noted in some of the surface soil samples there was no correlation between detected PCBs and noted debris, however, the PCB concentrations were lower than the levels detected in the interior of the site. PCB impacts appear to be limited to the surface soils only. In the eight "deeper" fenceline samples, collected from 12 inches bls, PCBs were not detected. The results from the "deeper" soil sampling reveal non-PCB impacted soil along the fenceline, suggesting that the extent of PCB impacts across the site are limited to the surface soils only.

PCBs were also detected in most of the ditch samples from the drainage ditch that divides the landfill from the adjacent areas (Figure 9-2). Overall the PCB concentrations were higher at the locations closest to the landfill (SED-2 and SED-3) and generally decreased downslope from the landfill. Ditch sample SED-4 was below detection limits for PCBs.



10.0 CONCLUSIONS

PCBs are present in surficial soils throughout the site. Elevated concentrations of PCBs in the surface tar sample suggest that the surface tar may be a potential source of PCBs. The highest concentrations of PCBs were from composite samples collected on the landfill surface and in the areas immediately adjacent to the landfill. The groundwater does not appear to be impacted by PCBs.



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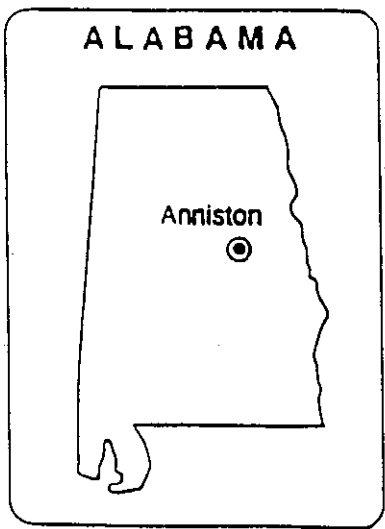
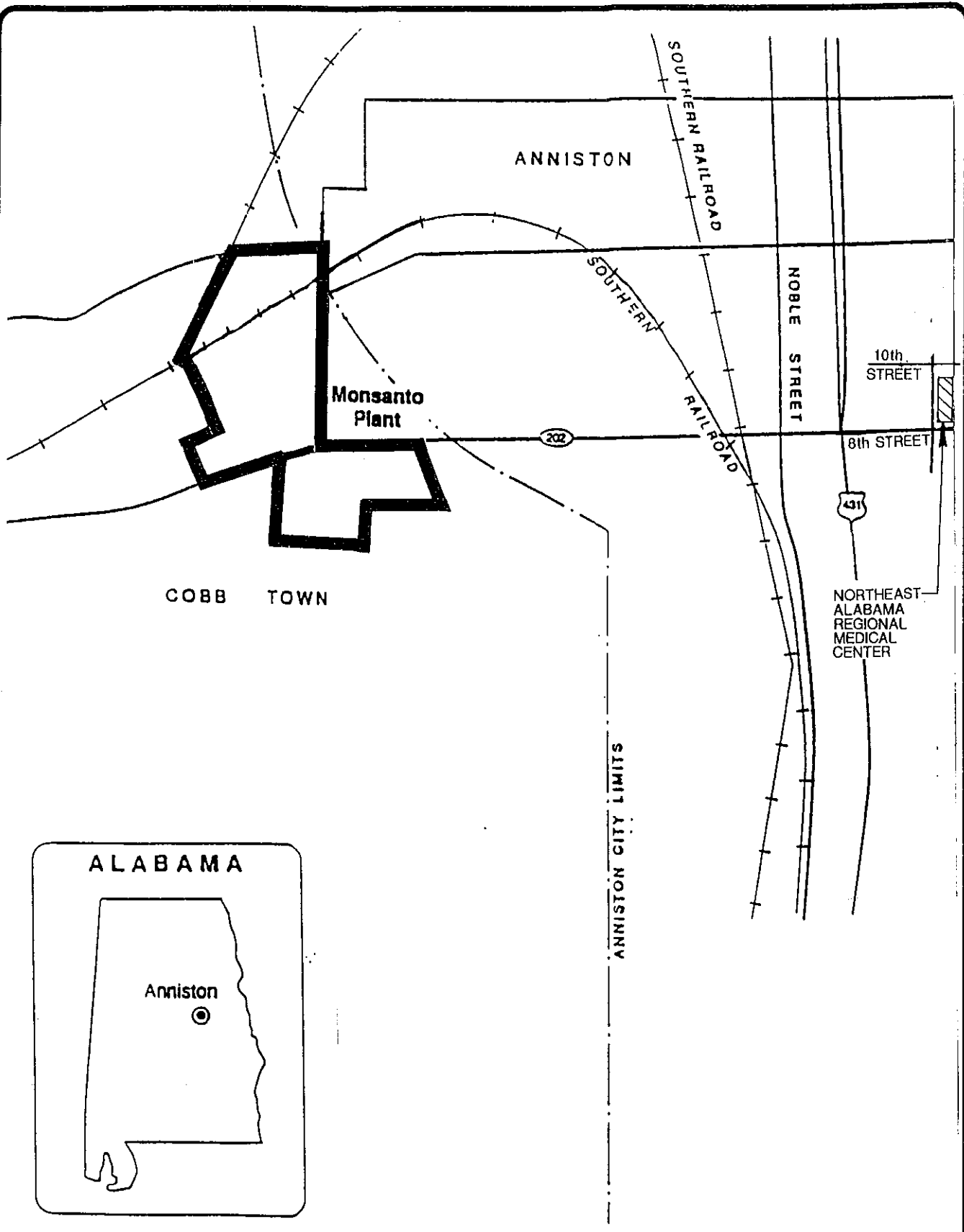
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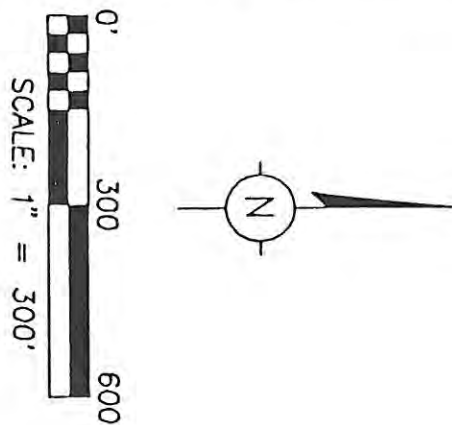


SITE LOCATION MAP

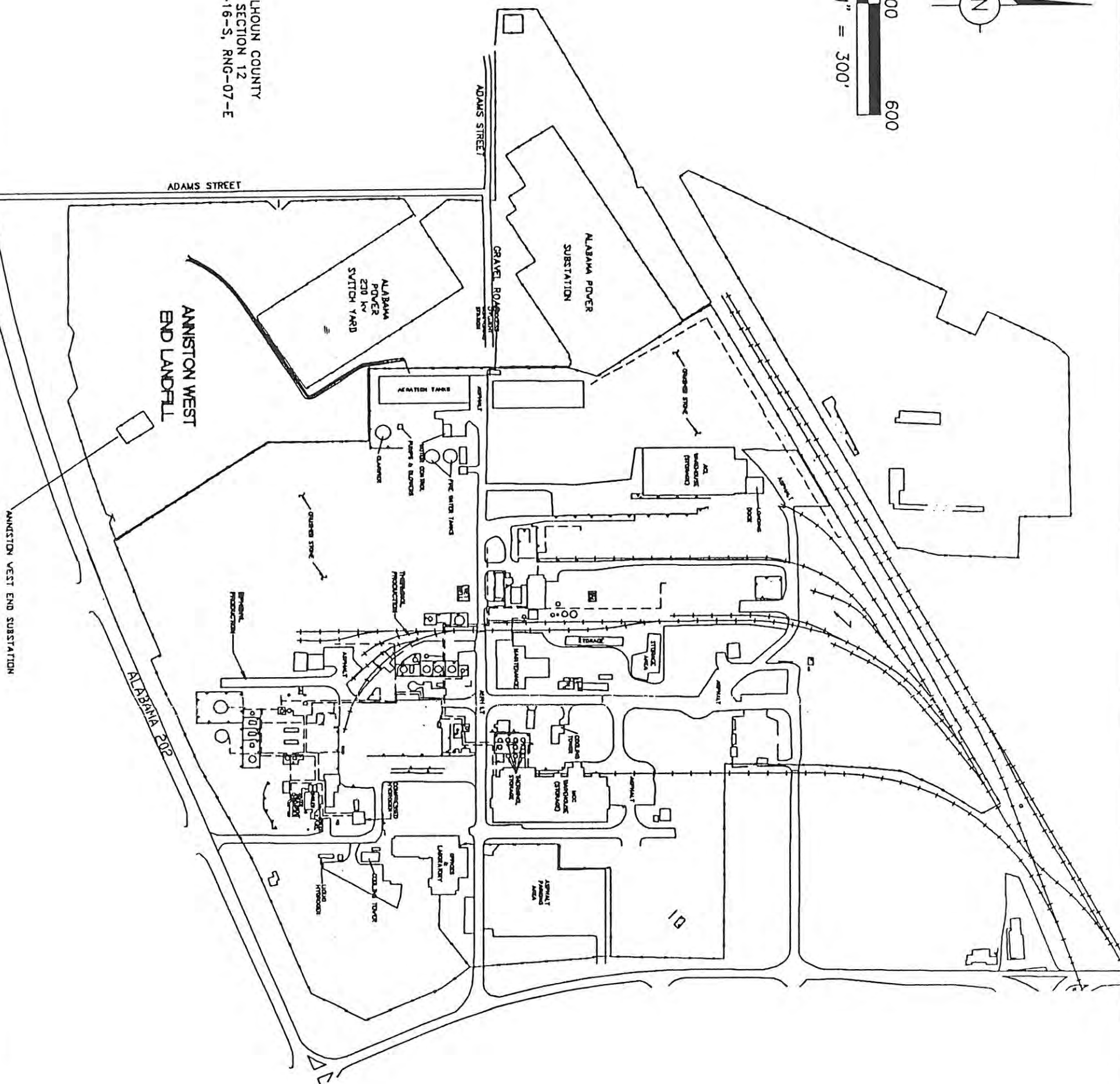
ANNISTON WEST END LANDFILL
MONSANTO COMPANY
ANNISTON, ALABAMA

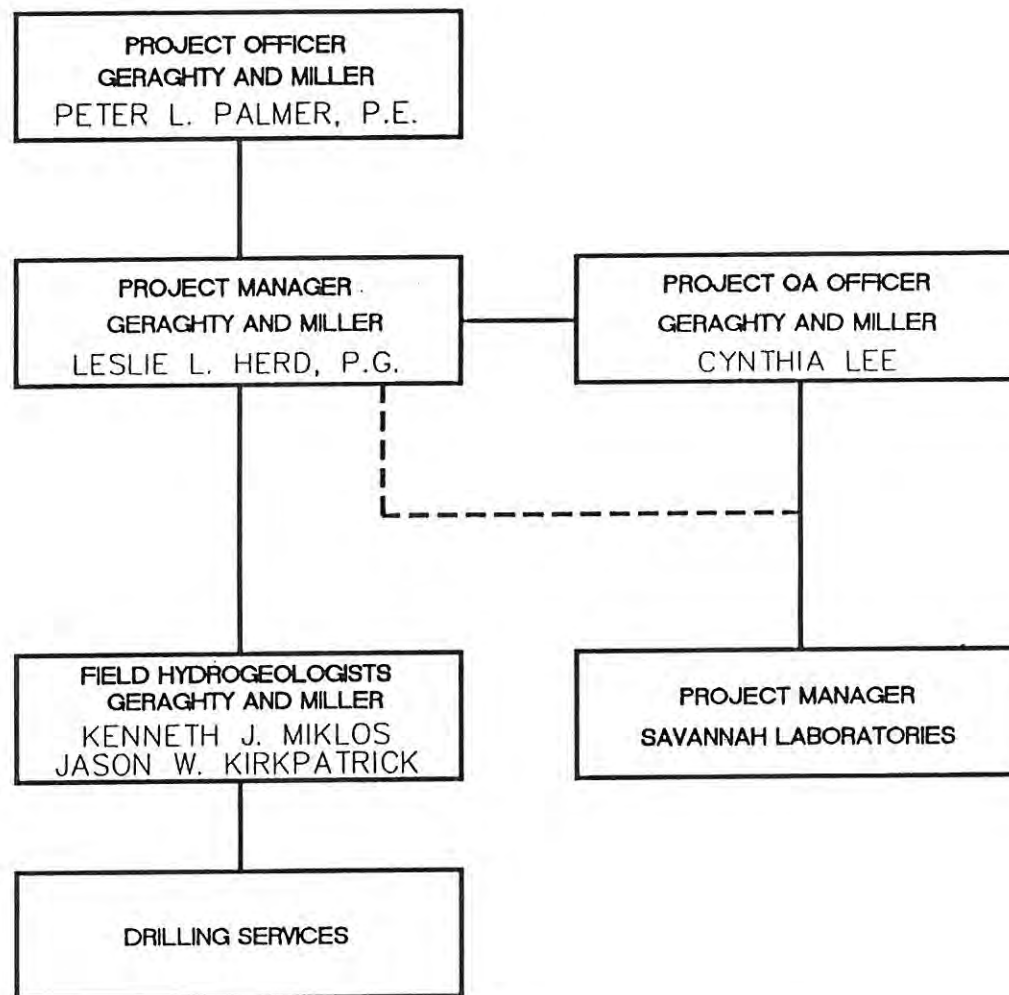
FIGURE

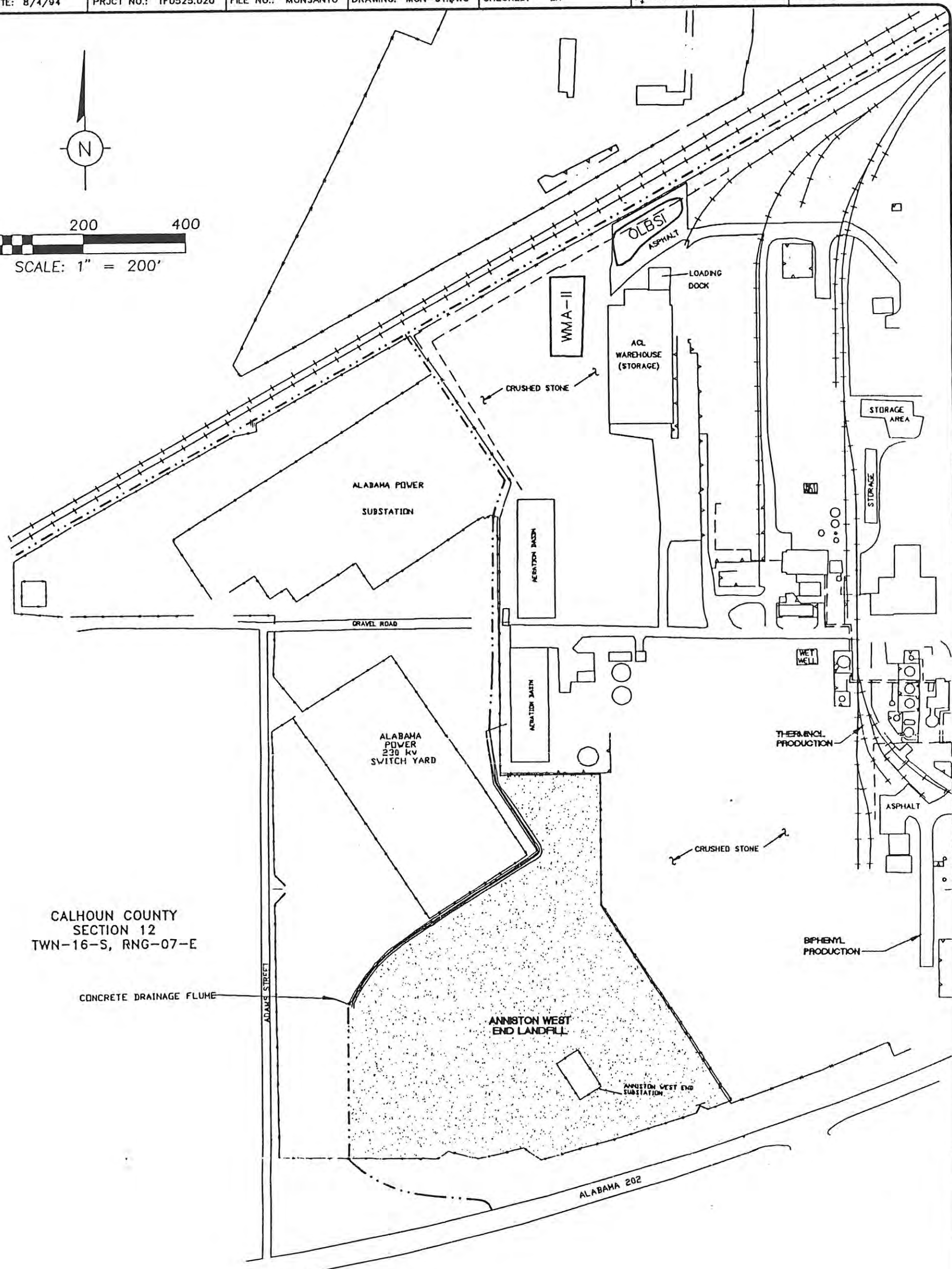
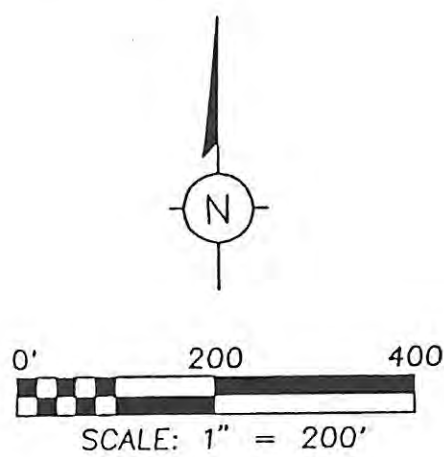
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CALHOUN COUNTY
SECTION 12
TWN-16-S, RNG-07-E







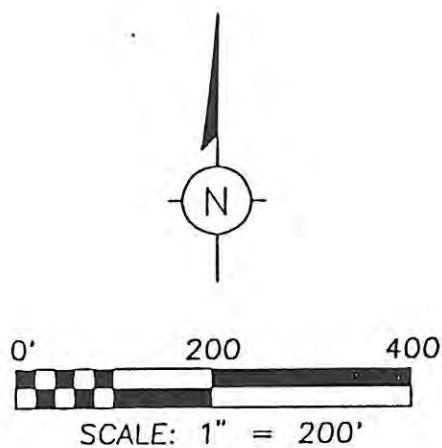
CALHOUN COUNTY
SECTION 12
TWN-16-S, RNG-07-E

LEGEND

EARTHEN DRAINAGE DITCH

[Stippled Box]

SUSPECTED AREAL EXTENT OF LANDFILL



CALHOUN COUNTY
SECTION 12
TWN-16-S, RNG-07-E

CONCRETE DRAINAGE FLUME

ADAMS STREET

ALABAMA POWER
SUBSTATION

ALABAMA
POWER
230 kv
SWITCH YARD

ADJACENT
AREA 4
(AA4)

ADJACENT
AREA 3
(AA3)

ADJACENT
AREA 2
(AA2)

ADJACENT
AREA 1
(AA1)

LANDFILL
QUADRANT 1
(LF1)

LANDFILL
QUADRANT 2
(LF2)

LANDFILL
QUADRANT 3
(LF3)

LANDFILL
QUADRANT 4
(LF4)

ANNISTON WEST END
SUBSTATION

ALABAMA 202

CRUSHED STONE

AERATION BASIN

AERATION BASIN

OLBSI
ASPHALT

LOADING
DOCK

ACL
WAREHOUSE
(STORAGE)

STORAGE
AREA

STORAGE

WET
WELL

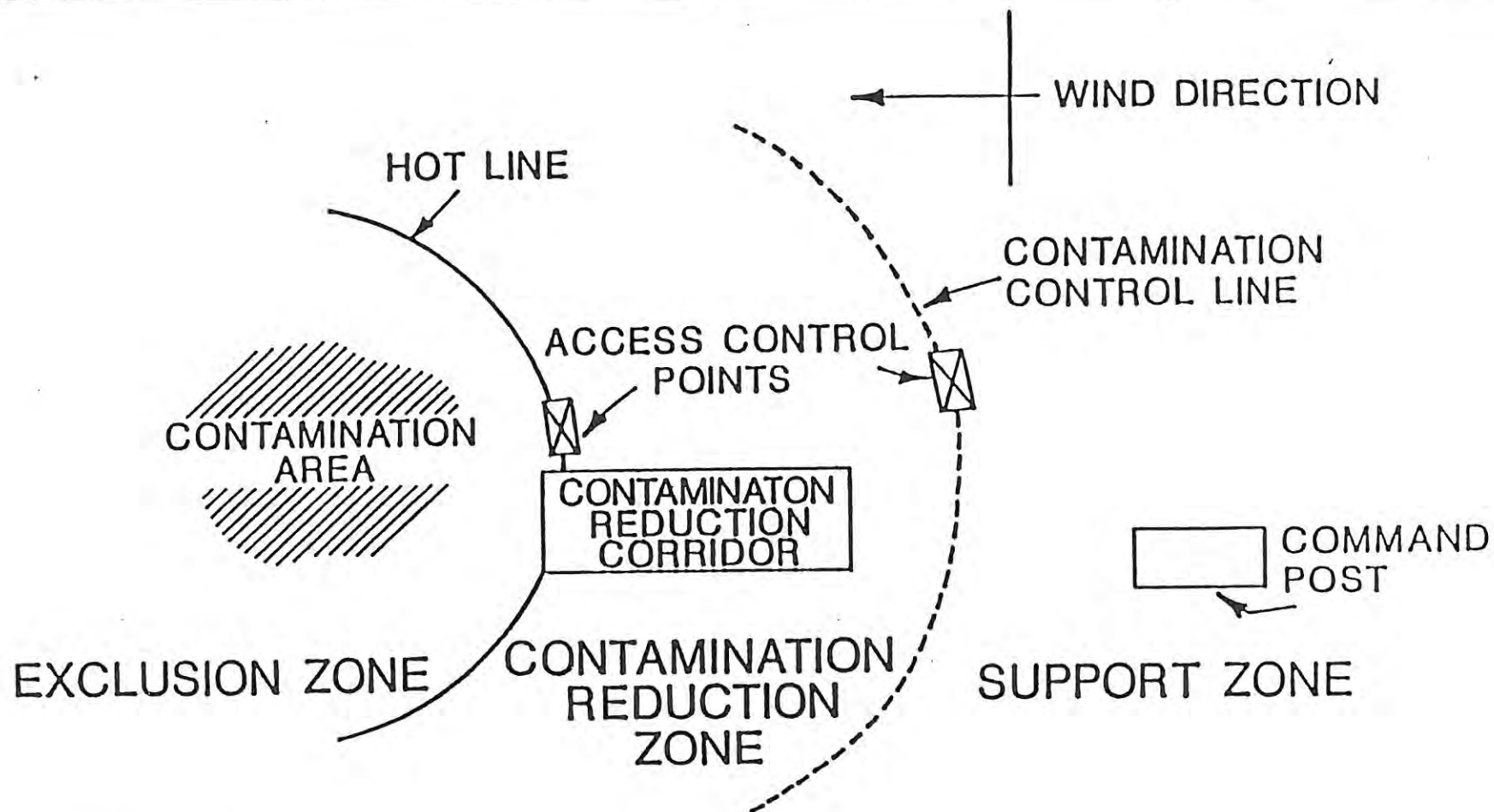
THERMOL
PRODUCTION

ASPHALT

BIPHENYL
PRODUCTION

LEGEND

- ⊕ PROPOSED MONITORING WELL LOCATION
- PROPOSED SURFACE SOIL SAMPLING LOCATION
- PROPOSED SEDIMENT SAMPLING LOCATION
- EARTHEN DRAINAGE DITCH
- [Stippled Area] SUSPECTED AREAL EXTENT OF LANDFILL



The size of each work zone will be dependent on the site specific conditions i.e. extent of contamination, drilling requirements.

SCALE

GENERAL WORK AREA

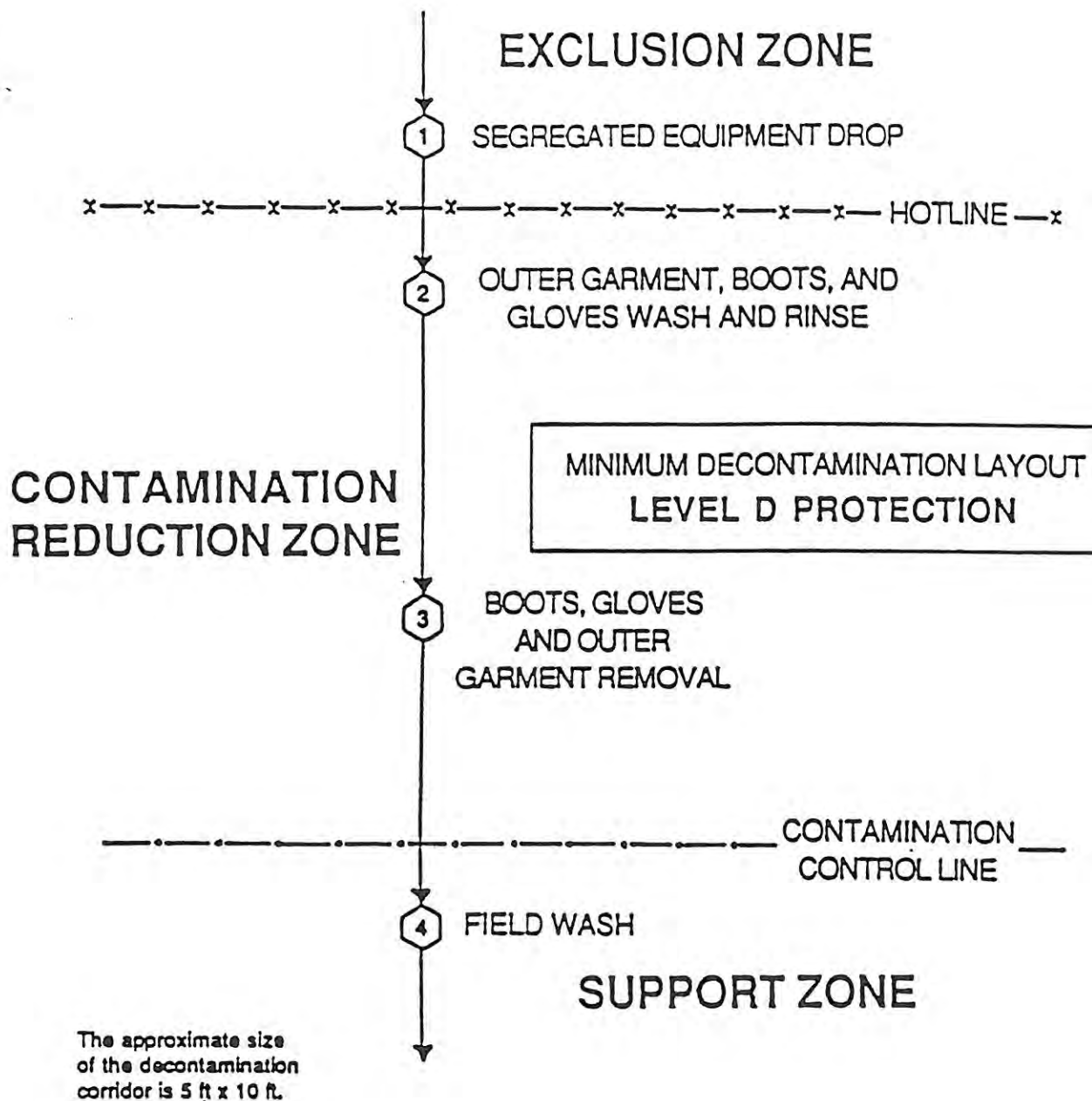
FIGURE

7-1

318479



GERAGHTY
& MILLER, INC.
Environmental Services



SCALE



**GERAGHTY
& MILLER, INC.**
Environmental Services

OUTLINE FOR LEVEL D DECONTAMINATION

FIGURE

7-2

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EXCLUSION ZONE

①

SEGREGATED
EQUIPMENT DROP

x—x—x—x—x—x—x—x—x—x—HOTLINE—x—

②

OUTER GARMENT, BOOTS, AND
GLOVES WASH AND RINSECARTRIDGE
CHANGE

④

③

OUTER BOOT AND
GLOVE REMOVAL

MINIMUM
DECONTAMINATION LAYOUT
LEVEL C PROTECTION

CONTAMINATION
REDUCTION ZONE

⑤

BOOTS, GLOVES, AND
OUTER GARMENT REMOVAL

⑥

RESPIRATORY
PROTECTION REMOVALCONTAMINATION
CONTROL LINE

⑦

FIELD WASH

The approximate size
of the decontamination
corridor is 5ft x 10 ft.

SUPPORT ZONE

SCALE



GERAGHTY
& MILLER, INC.
Environmental Services

OUTLINE FOR LEVEL C DECONTAMINATION

FIGURE

7-3

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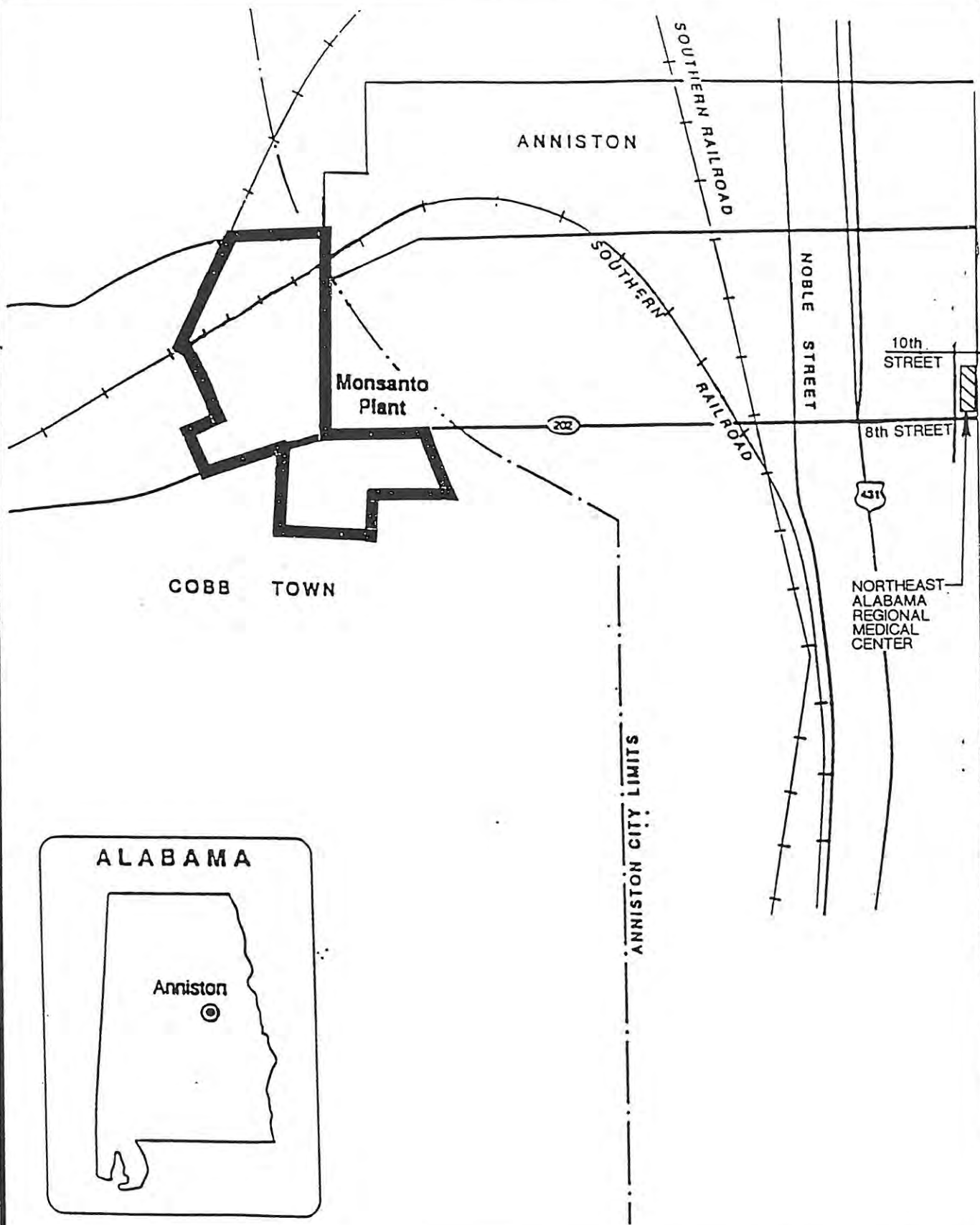
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SCALE
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 **GERAGHTY
& MILLER, INC.**
Environmental Services

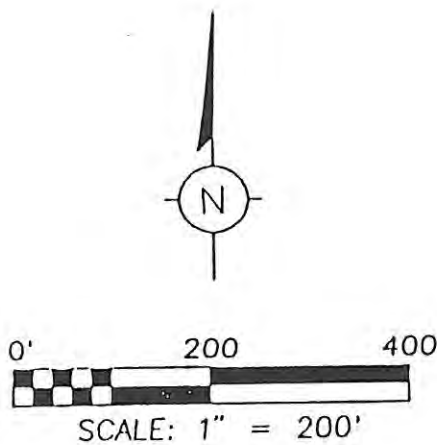
SITE AND HOSPITAL LOCATION MAP

ANNISTON WEST END LANDFILL

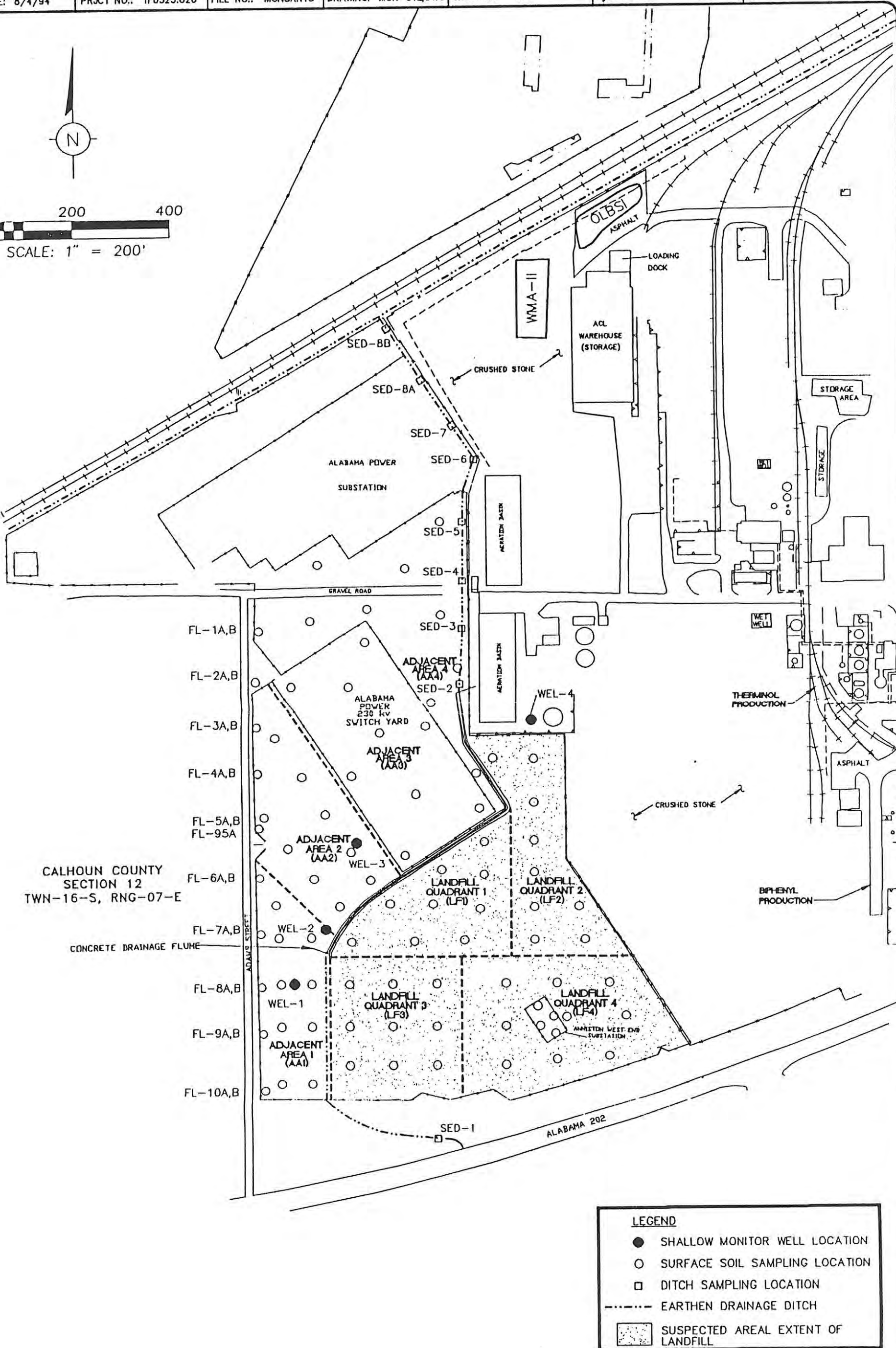
MONSANTO COMPANY
ANNISTON, ALABAMA

FIGURE

7-4

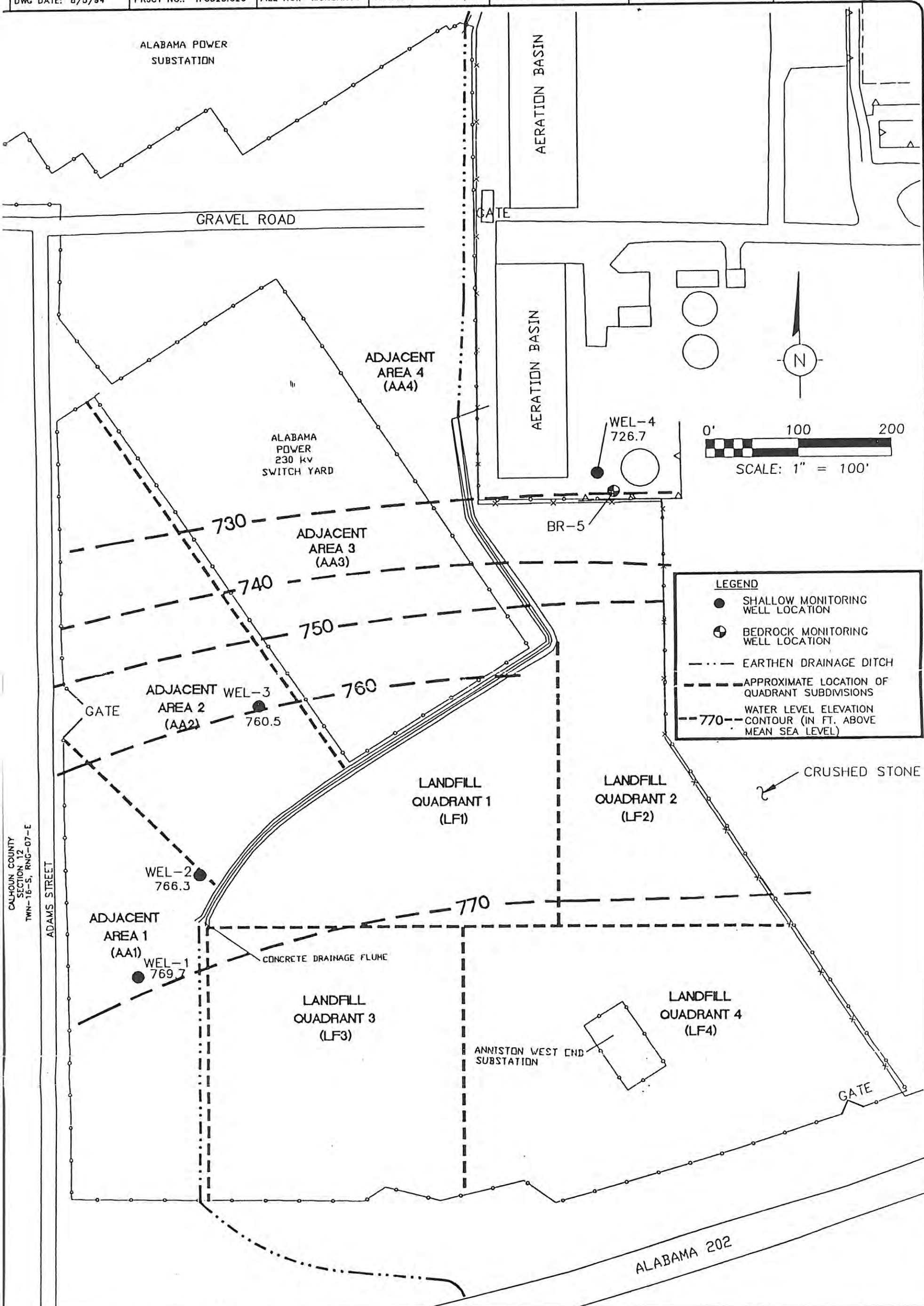


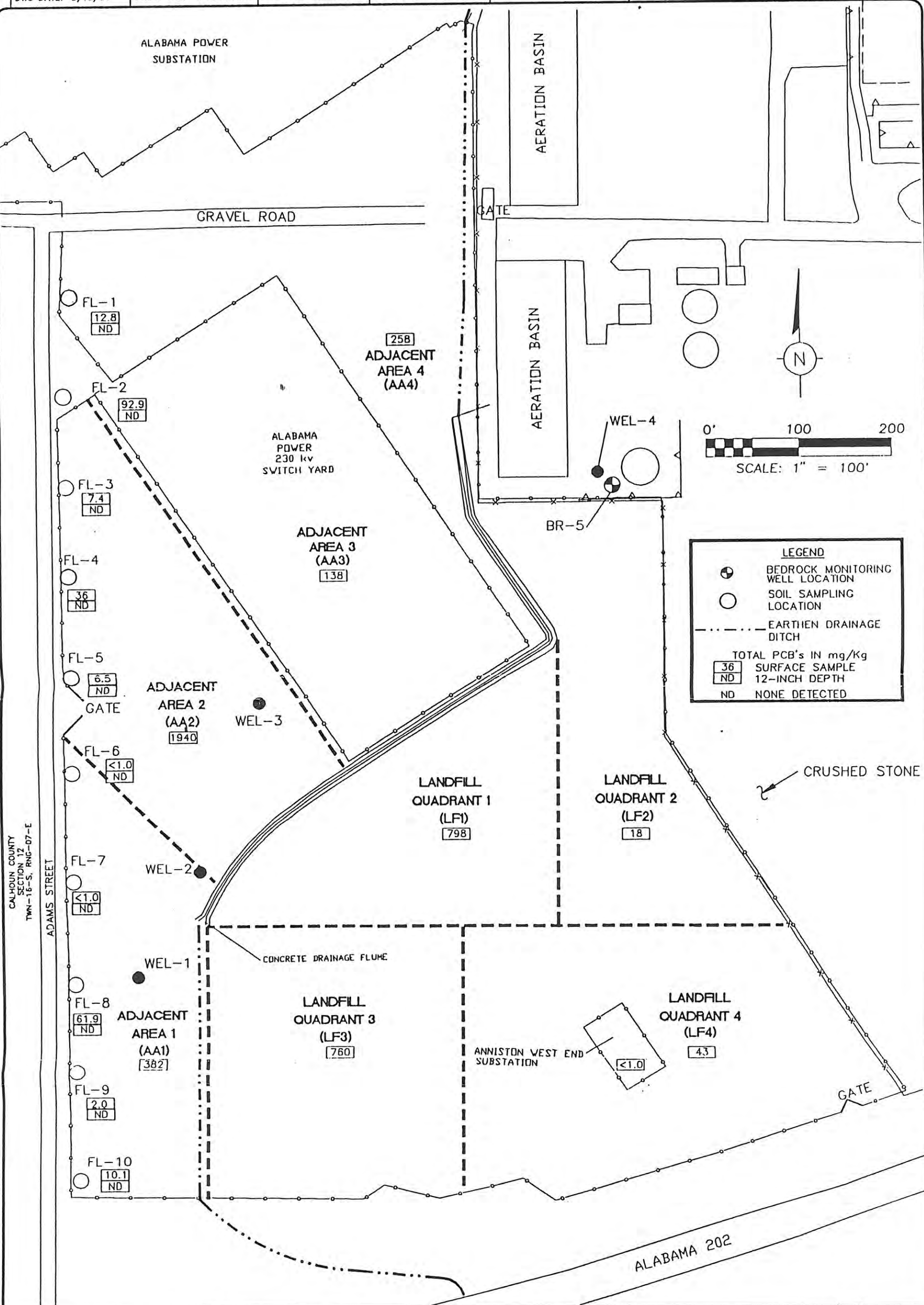
CALHOUN COUNTY
SECTION 12
TWN-16-S, RNG-07-E

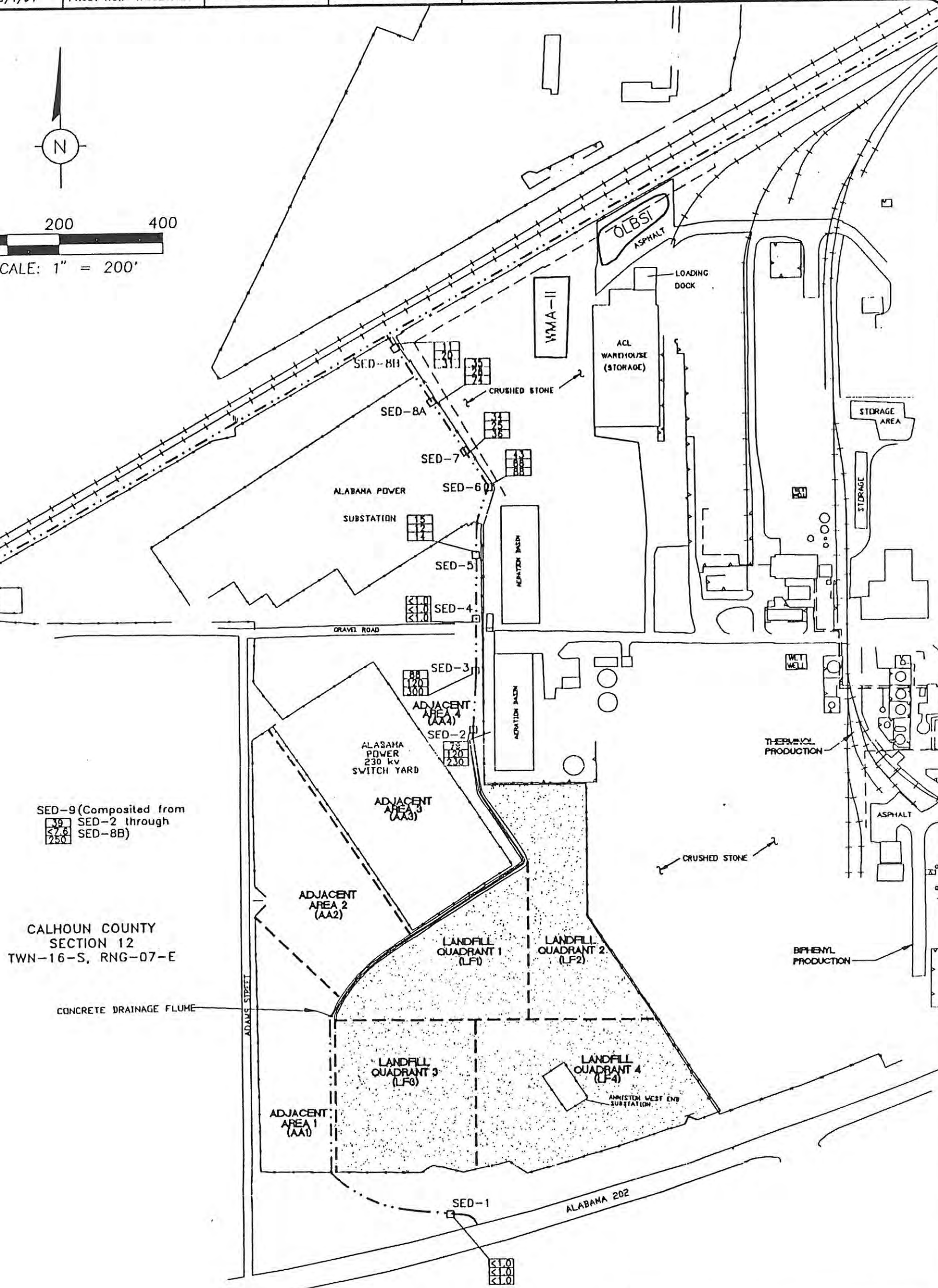
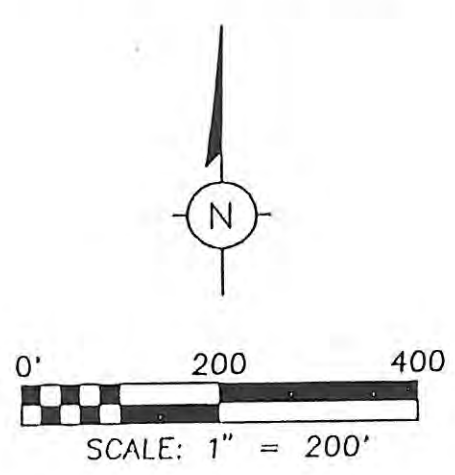


SOIL, DITCH AND GROUNDWATER SAMPLING LOCATIONS
AT THE ANNISTON WEST END LANDFILL

MONSANTO COMPANY
ANNISTON, ALABAMA

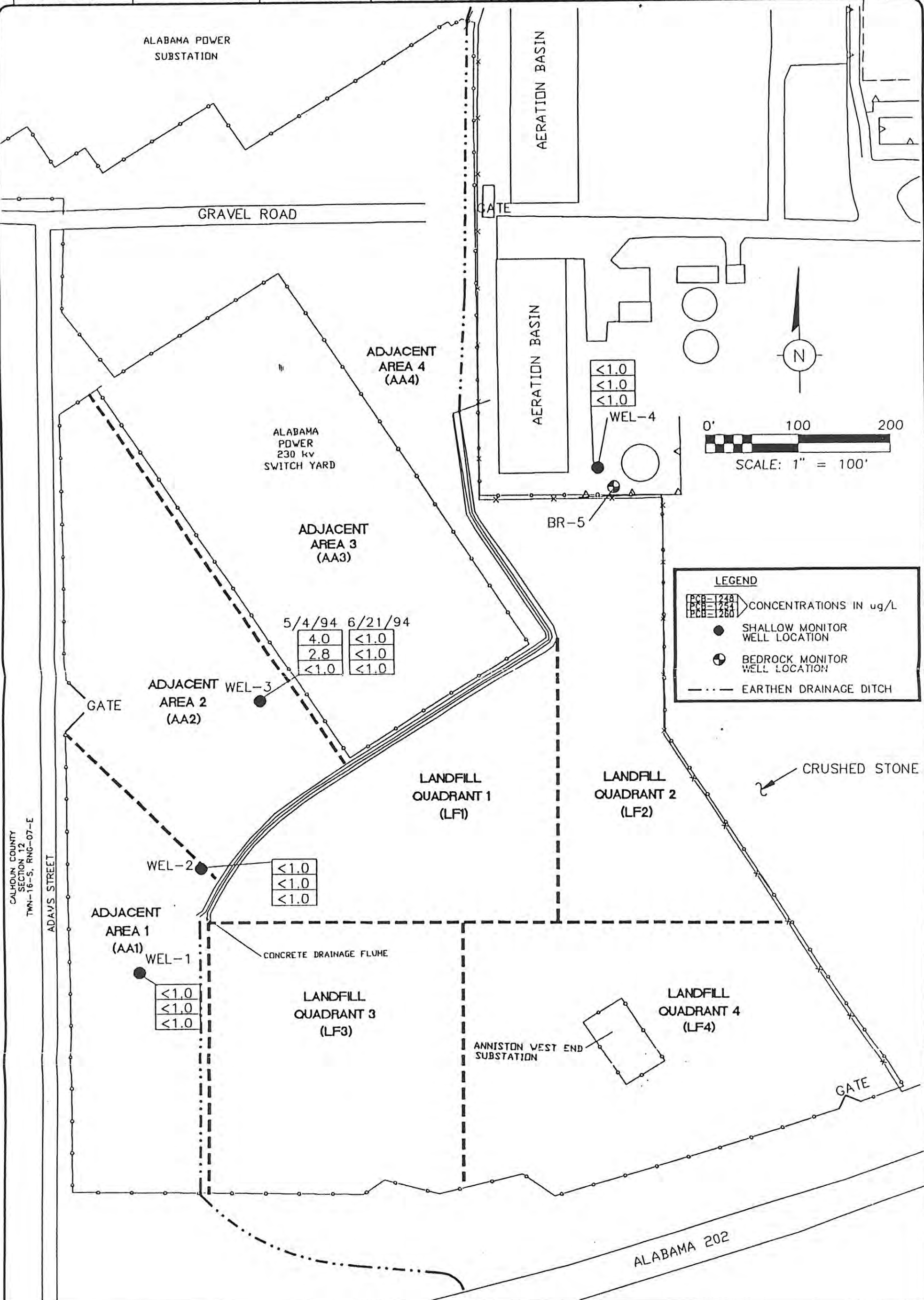






LEGEND

PCB-1248	CONCENTRATIONS IN mg/Kg
PCB-1254	
PCB-1260	
□	DITCH SAMPLING LOCATION
- - -	EARTHEN DRAINAGE DITCH



CONCENTRATIONS OF PCBs IN GROUNDWATER
 AT THE ANNISTON WEST END LANDFILL

MONSANTO COMPANY
 ANNISTON, ALABAMA

TABLE 6-1
SUMMARY OF FIELD AND QUALITY CONTROL SAMPLES AND CORRESPONDING ANALYTICAL METHODS
FOR SITE INVESTIGATION TASKS AT THE ANNISTON WEST END LANDFILL
Monsanto Company
Anniston, Alabama

Analyte		Field Samples	Duplicate Samples	Trip Blanks	Equipment Blanks	Total Samples
<u>Soil</u>						
PCBs	USEPA 8080	9	1	0	1	11
<u>Sediment</u>						
Appendix IX List	a/	1	1	0	1	3
Appendix IX Volatiles only	USEPA 8240	0	0	1	0	1
PCBs	USEPA 8080	9	0	0	0	9
<u>Groundwater</u>						
Appendix IX List	a/	5	1	0	1	7
Appendix IX Volatiles only	USEPA 8240	0	0	1	0	1

a/ Refer to Table 6-2 for analytes comprising the Appendix IX list of constituents and specific analytical methods.
PCBs polychlorinated biphenyls

Table 6-2
Analytical Methods and Accuracy, Precision, and Detection Limit Objectives
for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT				WATER					
		Accuracy (% R)	Precision (RPD)	Detection Limit		Accuracy (% R)	Precision (RPD)	Detection Limit			
VOLATILE ORGANIC COMPOUNDS: EPA 8240											
Acetone		29-92	+/-	0-40	50	ug/Kg	10-161	+/-	0-40	50	ug/L
Acetonitrile		78-151	+/-	0-40	200	ug/Kg	52-170	+/-	0-40	1000	ug/L
Acrolein		22-164	+/-	0-65	200	ug/Kg	60-132	+/-	0-40	100	ug/L
Acrylonitrile		61-145	+/-	0-40	100	ug/Kg	77-108	+/-	0-40	100	ug/L
Allyl chloride (3-Chloropropene)		88-127	+/-	0-40	5.0	ug/Kg	81-112	+/-	0-40	5	ug/L
Benzene		48-150	+/-	0-27	5.0	ug/Kg	73-144	+/-	0-22	5.0	ug/L
Bromodichloromethane		35-155	+/-	0-40	5.0	ug/Kg	35-155	+/-	0-40	5.0	ug/L
Bromoform		45-169	+/-	0-40	5.0	ug/Kg	45-169	+/-	0-40	5.0	ug/L
Bromomethane		10-242	+/-	0-65	10	ug/Kg	10-242	+/-	0-65	10	ug/L
Carbon disulfide		35-244	+/-	0-65	5.0	ug/Kg	37-138	+/-	0-40	5.0	ug/L
Carbon tetrachloride		70-140	+/-	0-40	5.0	ug/Kg	70-140	+/-	0-40	5.0	ug/L
Chlorobenzene		54-138	+/-	0-33	5.0	ug/Kg	68-136	+/-	0-17	5.0	ug/L
Chloroethane		44-136	+/-	0-40	10	ug/Kg	64-119	+/-	0-65	10	ug/L
Chlorodibromomethane		53-149	+/-	0-40	5.0	ug/Kg	53-149	+/-	0-40	5.0	ug/L
Chloroform		51-138	+/-	0-40	5.0	ug/Kg	51-138	+/-	0-40	5.0	ug/L
Chloromethane		10-273	+/-	0-65	10	ug/Kg	10-273	+/-	0-65	10	ug/L
Chloroprene		28-256	+/-	0-65	10	ug/Kg	81-112	+/-	0-40	5	ug/L
1,2-Dibromoethane (EDB)		86-153	+/-	0-40	5.0	ug/Kg	70-112	+/-	0-40	5.0	ug/L
Dibromomethane		50-150	+/-	0-40	5.0	ug/Kg	78-110	+/-	0-40	5.0	ug/L
1,2-Dibromo-3-chloropropane		26-165	+/-	0-40	10	ug/Kg	37-127	+/-	0-40	10	ug/L
trans-1,4-Dichloro-2-butene		79-178	+/-	0-40	10	ug/Kg	11-129	+/-	0-40	10	ug/L
Dichlorodifluoromethane		50-150	+/-	0-40	5.0	ug/Kg	72-146	+/-	0-40	5.0	ug/L
1,1-Dichloroethane		59-155	+/-	0-40	5.0	ug/Kg	59-155	+/-	0-40	5.0	ug/L
1,2-Dichloroethane		49-155	+/-	0-40	5.0	ug/Kg	49-155	+/-	0-40	5.0	ug/L
trans-1,2-Dichloroethene		54-156	+/-	0-40	5.0	ug/Kg	54-156	+/-	0-40	5.0	ug/L
1,1-Dichloroethylene		36-161	+/-	0-50	5.0	ug/Kg	60-136	+/-	0-40	5.0	ug/L
Dichloromethane (Methylene chloride)		10-221	+/-	0-65	5.0	ug/Kg	10-221	+/-	0-65	5.0	ug/L
1,2-Dichloropropane		10-210	+/-	0-65	5.0	ug/Kg	10-210	+/-	0-65	5.0	ug/L
cis-1,3-Dichloropropene		10-227	+/-	0-65	5.0	ug/Kg	10-227	+/-	0-65	5.0	ug/L
trans-1,3-Dichloropropene		17-183	+/-	0-65	5.0	ug/Kg	17-183	+/-	0-40	5.0	ug/L
Ethyl benzene		37-162	+/-	0-40	5.0	ug/Kg	37-162	+/-	0-40	5.0	ug/L
Ethyl methacrylate		47-87	+/-	0-40	5.0	ug/Kg	37-139	+/-	0-40	5.0	ug/L
2-Hexanone		22-86	+/-	0-40	50	ug/Kg	10-164	+/-	0-40	50	ug/L
Iodomethane		77-105	+/-	0-40	5.0	ug/Kg	37-137	+/-	0-40	5.0	ug/L
Isobutyl Alcohol		63-173	+/-	0-40	1000	ug/Kg	51-179	+/-	0-40	1000	ug/L
Methacrylonitrile		69-145	+/-	0-60	100	ug/Kg	76-111	+/-	0-40	100	ug/L
Methyl ethyl ketone (2-Butanone)		10-111	+/-	0-40	50	ug/Kg	79-208	+/-	0-40	50	ug/L
Methyl methacrylate		32-118	+/-	0-45	5.0	ug/Kg	51-130	+/-	0-40	5.0	ug/L
4-Methyl-2-pentanone		64-125	+/-	0-49	50	ug/Kg	68-111	+/-	0-40	50	ug/L
Pentachloroethane		41-165	+/-	0-50	25	ug/Kg	10-276	+/-	0-65	25	ug/L
Propionitrile (Ethyl cyanide)						ug/Kg	63-112	+/-	0-40	100	ug/L
Styrene		89-101	+/-	0-40	5.0	ug/Kg	61-109	+/-	0-40	5.0	ug/L

Table 6-2
Analytical Methods and Accuracy, Precision, and Detection Limit Objectives
for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT				WATER			
		Accuracy (% R)	Precision (RPD)	Detection Limit		Accuracy (% R)	Precision (RPD)	Detection Limit	
1,1,1,2-Tetrachloroethane		50-150	+/-	0-40	5.0 ug/Kg	34-138	+/-	0-40	5.0 ug/L
1,1,2,2-Tetrachloroethane		46-157	+/-	0-40	5.0 ug/Kg	46-157	+/-	0-40	5.0 ug/L
Tetrachloroethene		64-148	+/-	0-40	5.0 ug/Kg	64-148	+/-	0-40	5.0 ug/L
Toluene		51-141	+/-	0-27	5.0 ug/Kg	68-138	+/-	0-17	0.50 ug/L
1,1,1-Trichloroethane		52-162	+/-	0-40	5.0 ug/Kg	52-162	+/-	0-40	0.50 ug/L
1,1,2-Trichloroethane		52-150	+/-	0-40	5.0 ug/Kg	52-150	+/-	0-40	0.50 ug/L
Trichloroethene		43-140	+/-	0-27	5.0 ug/Kg	66-136	+/-	0-20	0.50 ug/L
Trichlorofluoromethane		17-181	+/-	0-65	5.0 ug/Kg	17-181	+/-	0-65	0.50 ug/L
1,2,3-Trichloropropane		43-105	+/-	0-40	5.0 ug/Kg	44-103	+/-	0-40	0.50 ug/L
Vinyl acetate		50-150	+/-	0-40	10 ug/Kg	49-147	+/-	0-40	10 ug/L
Vinyl chloride		10-251	+/-	0-65	10 ug/Kg	10-251	+/-	0-65	10 ug/L
Xylenes		50-150	+/-	0-40	5.0 ug/Kg	66-114	+/-	0-40	0.50 ug/L
SEMIVOLATILE ORGANIC COMPOUNDS:									
EPA 8270									
Acenaphthene		51-108	+/-	0-26	330 ug/Kg	65-116	+/-	0-20	10 ug/L
Acenaphthalene		54-140	+/-	0-24	330 ug/Kg	54-130	+/-	0-24	10 ug/L
Acetophenone		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
2-Acetylaminofluorene		25-150	+/-	0-50	330 ug/Kg	25-150	+/-	0-50	10 ug/L
4-Aminobiphenyl		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Aniline		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Anthracene		48-130	+/-	0-30	330 ug/Kg	59-125	+/-	0-19	10 ug/L
Aramite		40-150	+/-	0-50	330 ug/Kg	40-150	+/-	0-50	10 ug/L
Benzo(a)anthracene		42-143	+/-	0-25	330 ug/Kg	54-125	+/-	0-20	10 ug/L
Benzo(g,h,i)perylene		10-219	+/-	0-50	330 ug/Kg	10-219	+/-	0-50	10 ug/L
Benzo(k)fluoranthene		24-137	+/-	0-38	330 ug/Kg	40-160	+/-	0-33	10 ug/L
Benzyl alcohol		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Benzo(b)fluoranthene		49-123	+/-	0-25	330 ug/Kg	45-135	+/-	0-21	10 ug/L
Benzo(a)pyrene		44-141	+/-	0-29	330 ug/Kg	20-160	+/-	0-40	10 ug/L
Bis(2-Chloroethoxy)methane		33-184	+/-	0-50	330 ug/Kg	33-184	+/-	0-50	10 ug/L
Bis(2-Chloroethyl)ether		12-158	+/-	0-50	330 ug/Kg	12-158	+/-	0-50	10 ug/L
Bis(2-Chloroisopropyl)ether		36-166	+/-	0-50	330 ug/Kg	36-166	+/-	0-50	10 ug/L
Bis(2-Ethylhexyl)phthalate		10-158	+/-	0-40	330 ug/Kg	10-158	+/-	0-40	10 ug/L
4-Bromophenyl phenyl ether		53-127	+/-	0-40	330 ug/Kg	53-127	+/-	0-40	10 ug/L
Butyl benzyl phthalate		10-152	+/-	0-40	330 ug/Kg	10-152	+/-	0-40	10 ug/L
2-sec-Butyl-4,6-dinitrophenol (Dinoseb)		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
p-Chloroaniline		10-150	+/-	0-50	660 ug/Kg	10-150	+/-	0-50	20 ug/L
p-Chloro-m-cresol (4-Chloro-3-methylphenol)		38-112	+/-	0-23	330 ug/Kg	53-104	+/-	0-17	10 ug/L
2-Chloronaphthalene		60-118	+/-	0-40	330 ug/Kg	60-118	+/-	0-40	10 ug/L
2-Chlorophenol		45-105	+/-	0-31	330 ug/Kg	54-199	+/-	0-18	10 ug/L
4-Chlorophenyl phenyl ether		25-158	+/-	0-33	330 ug/Kg	25-158	+/-	0-33	10 ug/L
Chrysene		40-148	+/-	0-27	330 ug/Kg	45-131	+/-	0-25	10 ug/L
m-Cresol		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
o-Cresol		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L

Table 6-2
Analytical Methods and Accuracy, Precision, and Detection Limit Objectives
for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT				WATER			
		Accuracy (% R)	Precision (RPD)	Detection Limit		Accuracy (% R)	Precision (RPD)	Detection Limit	
p-Cresol		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Diallate		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Dibenz(a,h)anthracene		40-147	+/- 0-28	330	ug/Kg	47-135	+/- 0-24	10	ug/L
Dibenzofuran		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Di-n-butyl phthalate		10-118	+/- 0-50	330	ug/Kg	10-118	+/- 0-50	10	ug/L
o-Dichlorobenzene		32-129	+/- 0-40	330	ug/Kg	32-129	+/- 0-40	10	ug/L
m-Dichlorobenzene		10-172	+/- 0-42	330	ug/Kg	10-172	+/- 0-42	10	ug/L
p-Dichlorobenzene		46-112	+/- 0-28	330	ug/Kg	46-110	+/- 0-18	10	ug/L
3,3'-Dichlorobenzidine		10-262	+/- 0-100	660	ug/Kg	10-262	+/- 0-100	20	ug/L
2,4-Dichlorophenol		39-135	+/- 0-40	330	ug/Kg	39-135	+/- 0-40	10	ug/L
2,6-Dichlorophenol		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Diethyl phthalate		10-114	+/- 0-40	330	ug/Kg	10-114	+/- 0-40	10	ug/L
p-(Dimethylamino)azobenzene		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
7,12-Dimethylbenz(a)anthracene		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
3,3'-Dimethylbenzidine		10-200	+/- 0-100	1700	ug/Kg	10-200	+/- 0-100	200	ug/L
alpha,alpha-Dimethylphenethylamine		10-150	+/- 0-50	1700	ug/Kg	10-200	+/- 0-50	2000	ug/L
2,4-Dimethylphenol		15-151	+/- 0-22	330	ug/Kg	44-112	+/- 0-25	10	ug/L
Dimethyl phthalate		10-112	+/- 0-40	330	ug/Kg	10-112	+/- 0-40	10	ug/L
m-Dinitrobenzene		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)		10-181	+/- 0-93	1700	ug/Kg	10-181	+/- 0-93	50	ug/L
2,4-Dinitrophenol		10-167	+/- 0-87	1700	ug/Kg	10-143	+/- 0-48	50	ug/L
2,4-Dinitrotoluene		35-111	+/- 0-29	330	ug/Kg	39-133	+/- 0-25	10	ug/L
2,6-Dinitrotoluene		50-158	+/- 0-40	330	ug/Kg	50-158	+/- 0-40	10	ug/L
Di-n-octyl phthalate		10-146	+/- 0-50	330	ug/Kg	10-146	+/- 0-50	10	ug/L
1,4-Dioxane		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Diphenylamine		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Ethyl methanesulfonate		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Di-n-propylnitrosoamine (N-nitroso-di-n-propylamine)		27-140	+/- 0-35	330	ug/Kg	39-142	+/- 0-60	10	ug/L
Fluoranthene		54-135	+/- 0-21	330	ug/Kg	58-124	+/- 0-19	10	ug/L
Fluorene		59-121	+/- 0-40	330	ug/Kg	59-121	+/- 0-40	10	ug/L
Hexachlorobenzene		10-152	+/- 0-40	330	ug/Kg	10-152	+/- 0-40	10	ug/L
Hexachlorobutadiene		24-116	+/- 0-40	330	ug/Kg	24-116	+/- 0-40	10	ug/L
Hexachlorocyclopentadiene		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Hexachloroethane		40-113	+/- 0-40	330	ug/Kg	40-113	+/- 0-40	10	ug/L
Hexachloropropene		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Indeno(1,2,3-c,d)pyrene		18-157	+/- 0-83	330	ug/Kg	33-147	+/- 0-36	10	ug/L
Isophorone		10-150	+/- 0-50	330	ug/Kg	21-196	+/- 0-60	10	ug/L
Isosafrole		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Kepone		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
Methapyrillene		10-150	+/- 0-50	3300	ug/Kg	10-150	+/- 0-50	2000	ug/L
3-Methylcholanthrene		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L
4-Nitroquinoline-1-oxide		10-150	+/- 0-50	3300	ug/Kg	10-150	+/- 0-50	100	ug/L
Methyl methanesulfonate		10-150	+/- 0-50	330	ug/Kg	10-150	+/- 0-50	10	ug/L

Table 6-2
Analytical Methods and Accuracy, Precision, and Detection Limit Objectives
for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT				WATER			
		Accuracy (% R)	Precision (RPD)	Detection Limit		Accuracy (% R)	Precision (RPD)	Detection Limit	
2-Methylnaphthalene		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Naphthalene		53-125	+/-	0-21	330 ug/Kg	46-111	+/-	0-50	10 ug/L
1,4-Naphthoquinone		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
1-Naphthylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
2-Naphthylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
2-Nitroaniline		10-150	+/-	0-50	1700 ug/Kg	10-150	+/-	0-50	10 ug/L
3-Nitroaniline		10-150	+/-	0-50	1700 ug/Kg	10-150	+/-	0-50	50 ug/L
4-Nitroaniline		10-150	+/-	0-50	1700 ug/Kg	10-150	+/-	0-50	50 ug/L
Nitrobenzene		35-180	+/-	0-40	330 ug/Kg	35-180	+/-	0-40	10 ug/L
2-Nitrophenol		29-182	+/-	0-40	330 ug/Kg	29-182	+/-	0-40	10 ug/L
4-Nitrophenol		10-130	+/-	0-34	1700 ug/Kg	10-112	+/-	0-108	50 ug/L
N-Nitrosodi-n-butylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosodiethylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosomethylethylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosodiphenylamine/Diphenylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosodimethylamine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosomorpholine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosopiperidine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitrosopyrrolidine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
N-Nitro-o-toluidine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Pentachlorobenzene		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Pentachloronitrobenzene		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Pentachlorophenol		10-107	+/-	0-89	1700 ug/Kg	15-139	+/-	0-39	50 ug/L
Phenacetin		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Phenanthrene		56-129	+/-	0-21	330 ug/Kg	54-119	+/-	0-20	10 ug/L
Phenol		37-112	+/-	0-36	330 ug/Kg	10-96	+/-	0-21	10 ug/L
p-Phenylenediamine		10-150	+/-	0-50	1700 ug/Kg	10-200	+/-	0-50	2000 ug/L
2-Picoline		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	200 ug/L
Pronamide		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
Pyrene		33-139	+/-	0-25	330 ug/Kg	36-153	+/-	0-21	10 ug/L
Pyridine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	200 ug/L
Safrole		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
1,2,4,5-Tetrachlorobenzene		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
2,3,4,6-Tetrachlorophenol		36-121	+/-	0-31	1700 ug/Kg	45-129	+/-	0-22	50 ug/L
o-Toluidine		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
1,2,4-Trichlorobenzene		48-107	+/-	0-28	330 ug/Kg	49-108	+/-	0-24	10 ug/L
2,4,5-Trichlorophenol		39-123	+/-	0-27	1700 ug/Kg	45-113	+/-	0-21	10 ug/L
2,4,6-Trichlorophenol		37-144	+/-	0-40	330 ug/Kg	37-144	+/-	0-40	10 ug/L
O,O,O-Triethylphosphorite		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	10 ug/L
1,3,5-Trinitrobenzene		10-150	+/-	0-50	330 ug/Kg	10-150	+/-	0-50	200 ug/L

Table 6-2
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for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT					WATER				
		Accuracy (% R)	Precision (RPD)		Detection Limit		Accuracy (% R)	Precision (RPD)		Detection Limit	
DIOXINS AND FURANS:											
	EPA 8280										
Tetrachlorodibenzodioxins (total)		69-145	+/-	0-40	0.50	ug/Kg	63-137	+/-	0-40	0.0050	ug/L
2,3,7,8-Tetrachlorodibenzodioxin		69-145	+/-	0-40	0.50	ug/Kg	63-137	+/-	0-40	0.0050	ug/L
Pentachlorodibenzodioxins		41-203	+/-	0-40	0.50	ug/Kg	52-148	+/-	0-40	0.0050	ug/L
Hexachlorodibenzodioxins		45-174	+/-	0-53	0.50	ug/Kg	42-158	+/-	0-40	0.0050	ug/L
Tetrachlorodibenzofurans		59-142	+/-	0-40	0.50	ug/Kg	60-142	+/-	0-40	0.0050	ug/L
Pentachlorodibenzofurans		55-146	+/-	0-40	0.50	ug/Kg	37-163	+/-	0-40	0.0050	ug/L
Hexachlorodibenzofurans		50-154	+/-	0-46	0.50	ug/Kg	58-142	+/-	0-40	0.0050	ug/L
ORGANOCHLORINE PESTICIDES:											
	EPA 8080										
Aldrin		40-137	+/-	0-39	1.7	ug/Kg	48-124	+/-	0-30	0.010	ug/L
alpha-BHC		37-134	+/-	0-40	1.7	ug/Kg	52-132	+/-	0-30	0.010	ug/L
beta-BHC		17-147	+/-	0-40	1.7	ug/Kg	55-135	+/-	0-30	0.020	ug/L
gamma-BHC		41-134	+/-	0-36	1.7	ug/Kg	52-136	+/-	0-18	0.010	ug/L
delta-BHC		19-140	+/-	0-40	1.7	ug/Kg	57-147	+/-	0-30	0.010	ug/L
alpha-Chlordane		45-140	+/-	0-40	1.7	ug/Kg	45-140	+/-	0-40	0.050	ug/L
gamma-Chlordane		45-140	+/-	0-40	1.7	ug/Kg	45-140	+/-	0-40	0.050	ug/L
Chlorobenzilate		50-150	+/-	0-40	17	ug/Kg	50-150	+/-	0-40	0.5	ug/L
4,4'-DDD		31-141	+/-	0-50	3.3	ug/Kg	57-157	+/-	0-30	0.020	ug/L
4,4'-DDE		30-145	+/-	0-50	3.3	ug/Kg	51-147	+/-	0-30	0.020	ug/L
4,4'-DDT		48-150	+/-	0-34	3.3	ug/Kg	67-137	+/-	0-28	0.050	ug/L
Dieldrin		42-139	+/-	0-41	3.3	ug/Kg	51-143	+/-	0-46	0.020	ug/L
Endosulfan I		45-153	+/-	0-40	1.7	ug/Kg	47-127	+/-	0-30	0.020	ug/L
Endosulfan II		10-202	+/-	0-65	3.3	ug/Kg	52-132	+/-	0-30	0.050	ug/L
Endosulfan sulfate		26-144	+/-	0-50	3.3	ug/Kg	41-165	+/-	0-40	0.10	ug/L
Endrin		44-151	+/-	0-31	3.3	ug/Kg	57-143	+/-	0-23	0.020	ug/L
Endrin aldehyde		10-150	+/-	0-50	3.3	ug/Kg	48-128	+/-	0-30	0.10	ug/L
Heptachlor		40-136	+/-	0-34	1.7	ug/Kg	42-129	+/-	0-22	0.010	ug/L
Heptachlor epoxide		37-142	+/-	0-40	1.7	ug/Kg	47-127	+/-	0-30	0.020	ug/L
Isodrin		10-150	+/-	0-50	3.3	ug/Kg	55-110	+/-	0-40	0.050	ug/L
Methoxychlor		50-140	+/-	0-40	17	ug/Kg	37-163	+/-	0-40	0.50	ug/L
Toxaphene		41-126	+/-	0-50	170	ug/Kg	60-168	+/-	0-40	1.0	ug/L
POLYCHLORINATED BIPHENYLS:											
	EPA 8080										
PCB-1016		69-107	+/-	0-21	33	ug/Kg	50-130	+/-	0-40	0.50	ug/L
PCB-1221		15-178	+/-	0-20	67	ug/Kg	50-130	+/-	0-40	0.50	ug/L
PCB-1232		10-215	+/-	0-20	32	ug/Kg	50-123	+/-	0-40	0.50	ug/L
PCB-1242		39-150	+/-	0-20	33	ug/Kg	50-130	+/-	0-40	0.50	ug/L
PCB-1248		38-158	+/-	0-20	33	ug/Kg	50-130	+/-	0-40	0.50	ug/L
PCB-1254		66-122	+/-	0-23	33	ug/Kg	28-148	+/-	0-40	0.50	ug/L
PCB-1260		58-122	+/-	0-20	33	ug/Kg	28-148	+/-	0-40	0.50	ug/L

Table 6-2
Analytical Methods and Accuracy, Precision, and Detection Limit Objectives
for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT					WATER				
		Accuracy (% R)	Precision (RPD)		Detection Limit		Accuracy (% R)	Precision (RPD)		Detection Limit	
ORGANOPHOSPHOROUS PESTICIDES:		EPA 8141									
Dimethoate		38-120	+/-	0-40	2000	ug/Kg	38-120	+/-	0-40	10	ug/L
Disulfoton		10-134	+/-	0-93	130	ug/Kg	10-178	+/-	0-66	2.0	ug/L
Ethyl parathion		15-141	+/-	0-79	33	ug/Kg	18-171	+/-	0-28	1.0	ug/L
Famphur		10-129	+/-	0-60	330	ug/Kg	10-129	+/-	0-60	2.0	ug/L
Methyl parathion		40-104	+/-	0-40	17	ug/Kg	40-104	+/-	0-40	0.50	ug/L
Phorate		36-125	+/-	0-40	33	ug/Kg	36-125	+/-	0-40	1.0	ug/L
Sulfotepp		13-171	+/-	0-65	17	ug/Kg	10-241	+/-	0-40	0.50	ug/L
Thionazin		25-160	+/-	0-60	66	ug/Kg	25-160	+/-	0-60	1.0	ug/L
CHLORINATED HERBICIDES:		EPA 8150									
2,4-D		10-130	+/-	0-47	50	ug/Kg	25-129	+/-	0-60	0.50	ug/L
2,4,5-T		24-115	+/-	0-46	50	ug/Kg	25-145	+/-	0-62	0.50	ug/L
Silvex		10-150	+/-	0-54	50	ug/Kg	10-151	+/-	0-81	0.50	ug/L
METALS:											
Antimony	EPA 6010	70-130	+/-	0-30	5.0	mg/Kg	75-125	+/-	0-20	50	ug/L
Arsenic	EPA 7060	70-130	+/-	0-30	1.0	mg/Kg	75-125	+/-	0-20	10	ug/L
Barium	EPA 6010	70-130	+/-	0-30	1.0	mg/Kg	75-125	+/-	0-20	10	ug/L
Beryllium	EPA 6010	70-130	+/-	0-30	0.50	mg/Kg	75-125	+/-	0-20	5.0	ug/L
Cadmium	EPA 6010	70-130	+/-	0-30	0.50	mg/Kg	75-125	+/-	0-20	5.0	ug/L
Chromium	EPA 6010	70-130	+/-	0-30	1.0	mg/Kg	75-125	+/-	0-20	10	ug/L
Cobalt	EPA 6010	70-130	+/-	0-30	1.0	mg/Kg	75-125	+/-	0-20	10	ug/L
Copper	EPA 6010	70-130	+/-	0-30	2.5	mg/Kg	75-125	+/-	0-20	25	ug/L
Lead	EPA 6010	70-130	+/-	0-30	5.0	mg/Kg	75-125	+/-	0-20	50	ug/L
Mercury	EPA 7471	70-130	+/-	0-30	0.030	mg/Kg	75-125	+/-	0-20	50	ug/L
Nickel	EPA 6010	70-130	+/-	0-30	4.0	mg/Kg	75-125	+/-	0-20	40	ug/L
Selenium	EPA 7740	70-130	+/-	0-30	50	mg/Kg	75-125	+/-	0-20	10	ug/L
Silver	EPA 6010	70-130	+/-	0-30	1.0	mg/Kg	75-125	+/-	0-20	10	ug/L
Thallium	EPA 7841	70-130	+/-	0-30	50	mg/Kg	75-125	+/-	0-20	10	ug/L
Tin	EPA 6010	70-130	+/-	0-30	5.0	mg/Kg	75-125	+/-	0-20	50	ug/L
Vanadium	EPA 6010	70-130	+/-	0-30	1.0	mg/Kg	75-125	+/-	0-20	10	ug/L
Zinc	EPA 6010	70-130	+/-	0-30	2.0	mg/Kg	75-125	+/-	0-20	20	ug/L

Table 6-2
Analytical Methods and Accuracy, Precision, and Detection Limit Objectives
for Analytes Comprising the USEPA Appendix IX List of Constituents
Monsanto Company
Anniston, Alabama

Analyte	Method of Analysis a/	SOIL/SEDIMENT					WATER				
		Accuracy (% R)	Precision (RPD)		Detection Limit		Accuracy (% R)	Precision (RPD)		Detection Limit	
MISCELLANEOUS:											
Cyanide (total)	EPA 9012	75-125	+/-	0-30	1.0	mg/Kg	85-115	+/-	0-30	0.010	mg/L
Sulfide	EPA 9030	50-150	+/-	0-50	10	mg/Kg	50-150	+/-	0-50	0.40	mg/L

a/ Methods are the same for soil/sediment and water matrices, except where indicated.
 %R percent recovery
 RPD relative percent difference
 ug/Kg micrograms per kilogram (dry weight)
 mg/Kg milligrams per kilogram (dry weight)
 ug/L micrograms per liter
 mg/L milligrams per liter
 -- not performed
 NA not applicable

TABLE 7-1

**EXPOSURE LIMITS AND ACTION LEVELS FOR CONSTITUENTS OF CONCERN
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama**

Constituent	OSHA PEL	Units	Action Level D -- C	Units	Ionization Potential (eV)
Benzene ¹	1.0	ppm	1	ppm	9.24
PCBs	--	ppm	--	ppm	--
Methyl Parathion	0.5	ppm	0.5	ppm	9.44
Paranitrophenol	0.1	mg/m ³	0.1	mg/m ³	--
Phosphorus Pentasulfide	1	mg/m ³	1	mg/m ³	--

Footnotes:

- ¹ If the action level for this constituent is reached, work will cease.
eV = electron volts
ppm = parts per million
mg/m³ = milligrams per meter squared

TABLE 7-2

EMERGENCY TELEPHONE NUMBERS FOR THE
SITE INVESTIGATION AT THE ANNISTON WEST END LANDFILL
Monsanto Company,
Anniston, Alabama

<u>Emergency Service</u>	<u>Telephone Number</u>
Police	911
Fire	911
Hospital	(205) 236-2210
Poison Control	911
Project Safety Officer	(813) 961-1921
Monsanto Personnel to be Notified in case of emergency:	
Robert Jones	(205) 231-8492

TABLE 8-1
SUMMARY OF WELL CONSTRUCTION DETAILS AT THE ANNISTON WEST END LANDFILL
Monsanto Company
Anniston, Alabama

Sample Identification	TOC Elevation (ft. amsl)	Well Diameter/ Construction	Depth to Bottom (ft bls)	Sand Pack Interval (ft bls)	Bentonite Interval (ft bls)	Screened Interval (ft bls)
WEL-1	778.33	2" PVC	29.0	31.5 - 17.0	15.0 - 17.0	29.0 - 19.0
WEL-2	774.22	2" PVC	28.5	31.0 - 17.0	14.5 - 17.0	28.5 - 18.5
WEL-3	768.58	2" PVC	29.5	32.0 - 17.0	15.0 - 17.0	29.5 - 19.5
WEL-4	765.57	2" PVC	44.5	47.0 - 32.0	30.0 - 32.0	44.5 - 34.5

TOC = Top of Casing

ft bls = feet below land surface

ft. amsl = feet above mean sea level, referenced to the National Vertical Datum of 1929.



TABLE 8-2
WATER LEVEL MEASUREMENTS FOR MAY 4, 1994
ANNISTON WEST END LANDFILL
Monsanto Company
Anniston, Alabama

Sample Identification	Total Depth (ft. bmp)	Total Depth Elevation (ft. amsl)	TOC Elevation (ft. amsl)	Depth to Water (ft. bmp)	Water Elevation (ft amsl)
WEL-1	33.2	745.13	778.33	8.6	769.7
WEL-2	35.05	739.17	774.22	7.93	766.3
WEL-3	35.02	733.56	768.58	8.09	760.5
WEL-4	50.75	714.82	765.57	38.89	726.7

TOC = Top of Casing

ft bls = feet below land surface

ft amsl = feet above mean sea level, referenced to the National Vertical Datum of 1929.

ft bmp= feet below measuring point (Top of Casing)



TABLE 9-1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL
SAMPLES COLLECTED ON MAY 4 AND 5, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID	SUB-1	AA-1	AA-2	AA-3	AA-4	AA-92	
	Lab ID	42413-14	42413-22	42413-23	42413-15	42413-26	42413-24	
	Date Sampled	5/6/94	5/5/94	5/5/94	5/6/94	5/5/94	5/5/94	
	Dry Weight %	94	69	83	90	56	82	
<u>POLYCHLORINATED BIPHENYLS (mg/kg), USEPA 8080:</u>								
PCB-1248	<	1	42	300	3.7	<	29	260
PCB-1254	<	1	120	850	38		88	360
PCB-1260	<	1	220	790	96		170	490
TOTAL PCBs		BRL	382	1940	137.7		258	1110

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TABLE 9-1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL
SAMPLES COLLECTED ON MAY 4 AND 5, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID	LF-1	LF-2	LF-3	LF-4	LF-91	ST-1
	Lab ID	42363-13	42363-12	42413-21	42413-25	42363-14	42413-3
	Date Sampled	5/4/94	5/4/94	5/6/94	5/5/94	5/4/94	5/6/94
	Dry Weight %	83	84	90	66	80	98
POLYCHLORINATED BIPHENYLS (mg/kg). USEPA 8080:							
PCB-1248		68	< 3.9	130	< 2.5	84	< 1700
PCB-1254		350	4	280	15	340	17000
PCB-1260		380	14	350	28	390	16000
TOTAL PCBs		798	18	760	43	814	33000

FOOTNOTES:

mg/kg - milligrams per kilogram

BRL - Concentration Below Reporting Limit of 1 mg/kg

< - Analyte was not detected at or above the indicated concentration. The Reporting Limit is 1 mg/kg for undiluted samples.

TABLE 9-2
SUMMARY OF ANALYTICAL RESULTS FOR SOIL
SAMPLES COLLECTED ON JUNE 22, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled Dry Weight %	FL-1A 43366-1 6/22/94 88	FL-1B 43366A-1 6/22/94 89	FL-2A 43366-2 6/22/94 88	FL-2B 43366A-2 6/22/94 88	FL-3A 43366-3 6/22/94 93	FL-3B 43366A-3 6/22/94 88
<u>POLYCHLORINATED BIPHENYLS (mg/kg), USEPA 8080:</u>							
PCB-1248		6.4	< 1.0	2.9	< 1.0	< 3.5	< 1.0
PCB-1254	<	3.8	< 1.0	< 7.5	< 1.0	< 3.5	< 1.0
PCB-1260		6.4	< 1.0	90	< 1.0	7.4	< 1.0

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TABLE 9-2
SUMMARY OF ANALYTICAL RESULTS FOR SOIL
SAMPLES COLLECTED ON JUNE 22, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID	FL-4A	FL-4B	FL-5A	FL-5B	FL-95A	FL-6A
	Lab ID	43366-4	43366A-4	43366-4	43366A-5	4366-11	43366-6
	Date Sampled	6/22/94	6/22/94	6/22/94	6/22/94	6/22/94	6/22/94
	Dry Weight %	85	88	86	90	88	90
POLYCHLORINATED BIPHENYLS (mg/kg). USEPA 8080:							
PCB-1248	<	3.9	< 1.0	< 3.8	< 1.0	< 1.9	< 1.0
PCB-1254		18	< 1.0	< 3.8	< 1.0	3.2	< 1.0
PCB-1260		18	< 1.0	6.5	< 1.0	8.1	< 1.0

TABLE 9-2
 SUMMARY OF ANALYTICAL RESULTS FOR SOIL
 SAMPLES COLLECTED ON JUNE 22, 1994
 AT THE ANNISTON WEST END LANDFILL
 Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID	FL-7A	FL-8A	FL-8B	FL-9A	FL-9B	FL-10A	FL-10B			
	Lab ID	43366-7	43366-8	43366A-6	43366-9	43366A-7	43366-10	43366A-8			
	Date Sampled	6/22/94	6/22/94	6/22/94	6/22/94	6/22/94	6/22/94	6/22/94			
	Dry Weight %	95	96	88	83	90	80	83			
<u>POLYCHLORINATED BIPHENYLS (mg/kg), USEPA 8080:</u>											
PCB-1248	<	1.0	8.9	<	1.0	<	1.0	<	1.0		
PCB-1254	<	1.0	21	<	1.0	0.96	<	1.0	<	1.0	
PCB-1260	<	1.0	32	<	1.0	1.6	<	1.0	6.4	<	1.0

FOOTNOTES:

mg/kg - milligrams per kilogram

< - Analyte was not detected at or above the Indicated concentration.

The Reporting Limit is 1 mg/kg for undiluted samples.

TABLE 0-3
SUMMARY OF ANALYTICAL RESULTS FOR DITCH
SAMPLES COLLECTED ON MAY 6, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled Dry Weight %	SED-0 42413-1 5/6/94 87	SED-99 42413-2 5/6/94 85	SED-1 42413-4 5/6/94 85	SED-2 42413-5 5/6/94 73	SED-3 42413-6 5/6/94 77	SED-4 42413-7 5/6/94 83
<u>VOLATILE ORGANIC COMPOUNDS (ug/kg). USEPA 8240</u>		BDL	BDL	NA	NA	NA	NA
<u>SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg). USEPA 8270:</u>							
Anthracene		[25]	< 380	NA	NA	NA	NA
Benzo(a)anthracene		[70]	< 380	NA	NA	NA	NA
Benzo(b)fluoranthene		[140]	< 380	NA	NA	NA	NA
Benzo(a)pyrene		[99]	< 380	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate		[160]	[78]	NA	NA	NA	NA
Chrysene		[89]	[310]	NA	NA	NA	NA
Fluoranthene		[200]	< 380	NA	NA	NA	NA
Phenanthrene		[99]	< 380	NA	NA	NA	NA
Pyrene		[160]	< 380	NA	NA	NA	NA
<u>DIOXINS AND FURANS (ug/kg). USEPA 8280:</u>		BDL	BDL	NA	NA	NA	NA
<u>CHLORINATED PESTICIDES (ug/kg). USEPA 8080:</u>		BDL	BDL	NA	NA	NA	NA
<u>POLYCHLORINATED BIPHENYLS (mg/kg). USEPA 8080:</u>							
PCB-1248		39	19	< 1	79	88	< 1
PCB-1254	<	7.6	< 7.7	< 1	120	120	< 1
PCB-1260		250	200	< 1	230	300	< 1
TOTAL PCBs		289	219	BRL	429	508	BRL
<u>ORGANOPHOSPHOROUS PESTICIDES (ug/kg). USEPA 8141:</u>		BDL	BDL	NA	NA	NA	NA
<u>CHLORINATED HERBICIDES (ug/kg). USEPA 8151:</u>		BDL	BDL	NA	NA	NA	NA

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TABLE 9-3
SUMMARY OF ANALYTICAL RESULTS FOR DITCH
SAMPLES COLLECTED ON MAY 6, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled Dry Weight %	SED-9 42413-1 5/6/94 87	SED-99 42413-2 5/6/94 85	SED-1 42413-4 5/6/94 85	SED-2 42413-5 5/6/94 73	SED-3 42413-6 5/6/94 77	SED-4 42413-7 5/6/94 83
<u>METALS (mg/kg), Various:</u>							
Antimony, USEPA 6010	<	5.7	UJ <	5.9	UJ	NA	NA
Barium, USEPA 6010		24		620		NA	NA
Cadmium, USEPA 6010	<	0.57	UJ	0.79	J	NA	NA
Chromium, USEPA 6010		12	J	13	J	NA	NA
Cobalt, USEPA 6010		2.5		12		NA	NA
Copper, USEPA 6010		8.3	J	14	J	NA	NA
Nickel, USEPA 6010	<	4.6		6.2		NA	NA
Vanadium, USEPA 6010		23	J	25	J	NA	NA
Zinc, USEPA 6010		41	J	70	J	NA	NA
Arsenic, USEPA 7060		2.5	J	2.2	J	NA	NA
Lead, USEPA 6010		39	J	27	J	NA	NA
Mercury, USEPA 7471		0.11		0.12		NA	NA
<u>MISCELLANEOUS (mg/kg), Various:</u>							
Cyanide (total), USEPA 9012	<	1.1	<	1.2		NA	NA
Sulfide, USEPA 9030	<	11	<	12		NA	NA

Footnotes on Page 4

TABLE 9-3
SUMMARY OF ANALYTICAL RESULTS FOR DITCH
SAMPLES COLLECTED ON MAY 6, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled Dry Weight %	SED-5 42413-8 5/6/94 68	SED-6 42413-9 5/6/94 77	SED-7 42413-10 5/6/94 80	SED-8A 42413-11 5/6/94 80	SED-8B 42413-12 5/6/94 94	SED-95 42413-13 5/6/94
<u>VOLATILE ORGANIC COMPOUNDS (ug/kg). USEPA 8240</u>		NA	NA	NA	NA	NA	NA
<u>SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg). USEPA 8270:</u>							
Anthracene		NA	NA	NA	NA	NA	NA
Benzo(a)anthracene		NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate		NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA
Fluoranthene		NA	NA	NA	NA	NA	NA
Phenanthrene		NA	NA	NA	NA	NA	NA
Pyrene		NA	NA	NA	NA	NA	NA
<u>DIOXINS AND FURANS (ug/kg). USEPA 8280:</u>		NA	NA	NA	NA	NA	NA
<u>CHLORINATED PESTICIDES (ug/kg). USEPA 8080:</u>		NA	NA	NA	NA	NA	NA
<u>POLYCHLORINATED BIPHENYLS (mg/kg). USEPA 8080:</u>							
PCB-1248		15	43	34	35	11	10
PCB-1254		12	88	25	28	20	17
PCB-1260		14	88	36	74	31	23
TOTAL PCBs		41	219	95	137	62	50
<u>ORGANOPHOSPHOROUS PESTICIDES (ug/kg). USEPA 8141:</u>		NA	NA	NA	NA	NA	NA
<u>CHLORINATED HERBICIDES (ug/kg). USEPA 8151:</u>		NA	NA	NA	NA	NA	NA

Footnotes on Page 4

TABLE 9-3
SUMMARY OF ANALYTICAL RESULTS FOR DITCH
SAMPLES COLLECTED ON MAY 6, 1994
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled Dry Weight %	SED-5 42413-8 5/6/94 68	SED-6 42413-9 5/6/94 77	SED-7 42413-10 5/6/94 80	SED-8A 42413-11 5/6/94 80	SED-8B 42413-12 5/6/94 94	SED-95 42413-13 5/6/94
<u>METALS (mg/kg). Various :</u>							
Antimony, USEPA 6010		NA	NA	NA	NA	NA	NA
Barium, USEPA 6010		NA	NA	NA	NA	NA	NA
Cadmium, USEPA 6010		NA	NA	NA	NA	NA	NA
Chromium, USEPA 6010		NA	NA	NA	NA	NA	NA
Cobalt, USEPA 6010		NA	NA	NA	NA	NA	NA
Copper, USEPA 6010		NA	NA	NA	NA	NA	NA
Nickel, USEPA 6010		NA	NA	NA	NA	NA	NA
Vanadium, USEPA 6010		NA	NA	NA	NA	NA	NA
Zinc, USEPA 6010		NA	NA	NA	NA	NA	NA
Arsenic, USEPA 7060		NA	NA	NA	NA	NA	NA
Lead, USEPA 6010		NA	NA	NA	NA	NA	NA
Mercury, USEPA 7471		NA	NA	NA	NA	NA	NA
<u>MISCELLANEOUS (mg/kg). Various:</u>							
Cyanide (total), USEPA 9012		NA	NA	NA	NA	NA	NA
Sulfide, USEPA 9030		NA	NA	NA	NA	NA	NA

FOOTNOTES:

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

BDL - All constituents in analyte group were not detected at concentrations above respective Practical Quantitation Limits.

BRL - Concentration is Below the Reporting Limit of 1 mg/kg

< - Analyte was not detected at or above the indicated concentration. The values given are equal to the Practical Quantitation Limit for all groups except PCBs. The reporting limit for PCBs is 1 mg/kg in undiluted samples.

[] - Estimated value, the concentration is greater than the instrument detection limit but less than the Practical Quantitation Limit.

J - Positive result has been classified as qualitative

UJ - Analyte was not detected and has been classified as qualitative

U - Result has been classified as undetected

TABLE 9-4
SUMMARY OF ANALYTICAL RESULTS FOR
GROUNDWATER SAMPLES COLLECTED
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled	WEL-1 42363-1/42363-4 5/4/94	WEL-2 42363-2/42363-6 5/4/94	WEL-3 42329-1/42363-7 5/4/94	WEL-93 42329-4/42363-10 5/3/94	WEL-3 43335-1 6/21/94		
<u>VOLATILE ORGANIC COMPOUNDS (ug/L), USEPA 8240</u>		BDL	BDL	BDL	BDL	NA		
<u>SEMIVOLATILE ORGANIC COMPOUNDS (ug/L), USEPA 8270:</u>								
Bis(2-Ethylhexyl)phthalate	<	10	<	10	<	1	NA	
Di-n-butyl phthalate	<	10	<	10	<	10	NA	
Diethyl phthalate	<	10	<	10	<	10	NA	
<u>DIOXINS AND FURANS (ug/L), USEPA 8280:</u>		BDL	BDL	BDL	BDL	NA		
<u>CHLORINATED PESTICIDES (ug/L), USEPA 8080:</u>		BDL	BDL	BDL	BDL	NA		
<u>POLYCHLORINATED BIPHENYLS (ug/L), USEPA 8090:</u>								
PCB-1248	<	1.0	<	1.0	4.0	3.0	<	1.0
PCB-1254	<	1.0	<	1.0	2.8	1.8	<	1.0
TOTAL PCBS		BDL	BDL	BDL	4.8			BDL
<u>ORGANOPHOSPHOROUS PESTICIDES (ug/L), USEPA 8141:</u>		BDL	BDL	BDL	BDL	NA		
<u>CHLORINATED HERBICIDES (ug/L), USEPA 8151:</u>		BDL	BDL	BDL	BDL	NA		
<u>METALS (mg/L), Various:</u>								
Barium, USEPA 6010		0.036	0.080	0.056	0.056	NA		
Beryllium, USEPA 6010	<	0.0050	<	0.0050	<	0.0050	NA	
Chromium, USEPA 6010	<	0.010	<	0.010	<	0.010	NA	
Cobalt, USEPA 6010	<	0.010	<	0.010	<	0.010	NA	
Copper, USEPA 6010	<	0.025	<	0.025	<	0.025	NA	
Nickel, USEPA 6010	<	0.040	<	0.040	<	0.040	NA	
Vanadium, USEPA 6010	<	0.010	<	0.010	<	0.010	NA	
Zinc, USEPA 6010	<	0.020	<	0.020	0.023	0.031	NA	
Lead, USEPA 6010	<	0.0050	<	0.0050	<	0.0050	NA	
Mercury, USEPA 7471	<	0.00020	<	0.00020	<	0.00020	NA	
<u>MISCELLANEOUS (mg/L), Various:</u>								
Cyanide (total), USEPA 9012	<	0.010	<	0.010	<	0.010	NA	
Sulfide, USEPA 9030	<	0.40	<	0.40	<	0.40	NA	

Footnotes on Page 2

TABLI
SUMMARY OF ANALYTICAL RESULTS FOR
GROUNDWATER SAMPLES COLLECTED
AT THE ANNISTON WEST END LANDFILL
Monsanto Company, Anniston, Alabama

Analyte	G&M Sample ID Lab ID Date Sampled	WEL-4 42329-2/42363-8 5/4/94	DMW-1B 42329-3/42363-9 5/3/94	Equip. Blank 42363-3/42363-5 5/4/94	Trip Blank 42363-11 5/3/94
<u>VOLATILE ORGANIC COMPOUNDS (ug/L). USEPA 8240</u>		BDL	BDL	BDL	BDL
<u>SEMIVOLATILE ORGANIC COMPOUNDS (ug/L). USEPA 8271</u>					
Bis(2-Ethylhexyl)phthalate		[5.3]	< 10	< 10	NA
Di-n-butyl phthalate		[6.1]	< 10	< 10	NA
Diethyl phthalate		[2.4]	< 10	< 10	NA
<u>DIOXINS AND FURANS (ug/L). USEPA 8280;</u>		BDL	BDL	BDL	NA
<u>CHLORINATED PESTICIDES (ug/L). USEPA 8080;</u>		BDL	BDL	BDL	NA
<u>POLYCHLORINATED BIPHENYLS (ug/L). USEPA 8080;</u>					
PCB-1248	<	1.0	< 1.0	< 1.0	NA
PCB-1254	<	1.0	< 1.0	< 1.0	NA
TOTAL PCBS		BDL	BDL	BDL	NA
<u>ORGANOPHOSPHOROUS PESTICIDES (ug/L). USEPA 8141;</u>		BDL	BDL	BDL	NA
<u>CHLORINATED HERBICIDES (ug/L). USEPA 8151;</u>		BDL	BDL	BDL	NA
<u>METALS (mg/L). Various :</u>					
Barium, USEPA 6010		1.1	< 0.010	< 0.010	NA
Beryllium, USEPA 6010		0.031	< 0.0050	< 0.0050	NA
Chromium, USEPA 6010		0.13	< 0.010	< 0.010	NA
Cobalt, USEPA 6010		0.20	< 0.010	< 0.010	NA
Copper, USEPA 6010		0.27	< 0.025	< 0.025	NA
Nickel, USEPA 6010		0.32	< 0.040	< 0.040	NA
Vanadium, USEPA 6010		0.40	< 0.010	< 0.010	NA
Zinc, USEPA 6010		0.82	< 0.020	< 0.020	NA
Lead, USEPA 6010		0.12	0.014	U < 0.0050	NA
Mercury, USEPA 7471		0.00086	< 0.00020	< 0.00020	NA
<u>MISCELLANEOUS (mg/L). Various:</u>					
Cyanide (total), USEPA 9012	<	0.010	< 0.010	< 0.010	NA
Sulfide, USEPA 9030	<	0.40	< 0.40	< 0.40	NA

FOOTNOTES:

ug/L - micrograms per liter

mg/L - milligrams per liter

BDL - All constituents in analyte group were not detected above respective Practical Quantitation Limit

NA - Not Analyzed

< - Analyte was not detected at or above the indicated concentration. The values given are equal to the Practical Quantitation Limit

[] - Estimated value, the concentration is greater than the instrument detection limit but less than the Practical Quantitation Limit

J - Positive result has been classified as qualitative

UJ - Analyte was not detected and has been classified as qualitative

U - Result has been classified as undetected

APPENDIX A

Copies of Forms to be Completed by the Field Team During the
Site Investigation Activities at the Anniston West End Landfill
Monsanto Chemical Company
Anniston, Alabama

WATER SAMPLING LOG

Project/No. _____ Page _____ of _____

Site Location _____

Site/Well No. _____ Coded/
Replicate No. _____ Date _____

Weather _____ Time Sampling
Began _____ Time Sampling
Completed _____

EVACUATION DATA

Description of Measuring Point (MP) _____

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP _____ Water-Level Elevation _____

Held _____ Depth to Water Below MP _____ Diameter of Casing _____

Wet _____ Water Column in Well _____ Gallons Pumped/Bailed
Prior to Sampling _____

Gallons per Foot _____

Gallons in Well _____ Sampling Pump Intake Setting
(feet below land surface) _____

Evacuation Method _____

SAMPLING DATA/FIELD PARAMETERS

Color _____ Odor _____ Appearance _____ Temperature _____ °F/°C

Other (specific ion; OVA; HNU; etc.) _____

Specific Conductance,
umhos/cm _____ pH _____

Sampling Method and Material _____

Constituents Sampled	Container Description From Lab _____ or G&M _____	Preservative
_____	_____	_____
_____	_____	_____
_____	_____	_____

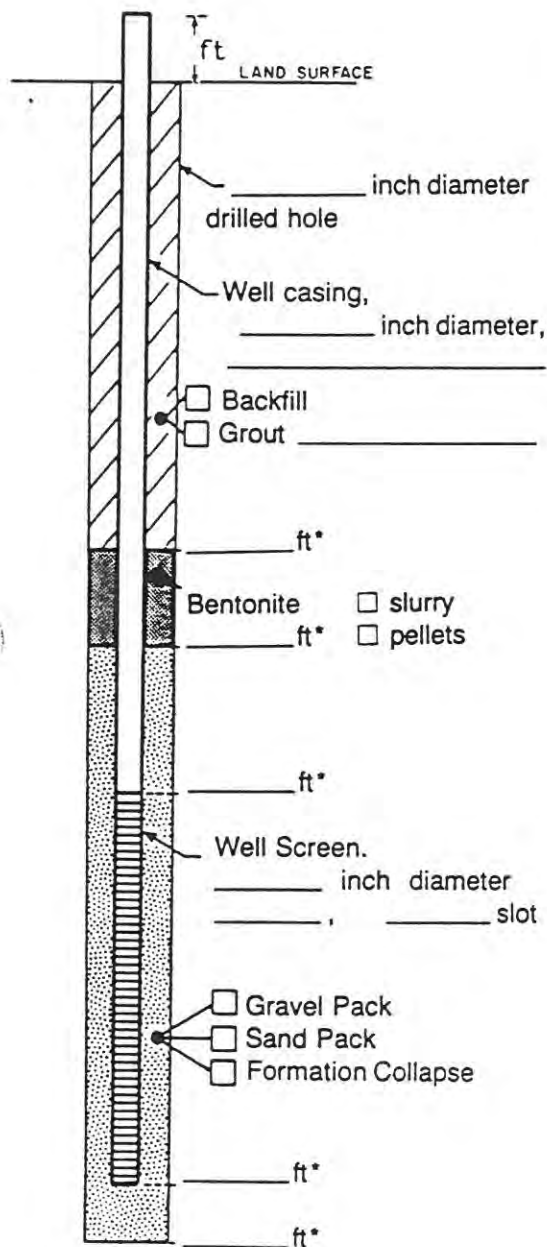
Remarks _____

Sampling Personnel _____

WELL CASING VOLUMES				
GAL./FT.	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 0.50	6" = 1.47

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project _____ Well _____

Town/City _____

County _____ State _____

Permit No. _____

Land-Surface Elevation

and Datum _____ feet

☐ Surveyed

☐ Estimated

Installation Date(s) _____

Drilling Method _____

Drilling Contractor _____

Drilling Fluid _____

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm

Date _____

Specific Capacity _____ gpm/ft

Well Purpose _____

Remarks _____

Prepared by _____

LOCATION SKETCH

Well(s) _____ Project/No. _____ Page _____ of _____

Site Location _____

Observer _____

(Locate all wells, borings, etc. with reference to three permanent reference points; tape all distances; clearly label all wells, roads, and permanent features)



0 ft. ft.



SOIL/SEDIMENT SAMPLING LOG

Project No. _____ Page _____ of _____

Site Location _____

Sample I.D. No. _____ Coded/Replicate No. _____

Date _____ Time of Sampling: Begin _____ End _____

Weather _____

Site Description _____

SAMPLING DATA

Collection Method _____

Depth _____ Moisture Content _____

Color _____ Odor _____

Description _____

Analyses Required

Container Description

_____ From Lab _____ or G&M _____

Sample Monitoring (TIP, OVA, HNU, etc.) _____

marks _____

Sampler(s) _____

APPENDIX B

Geraghty & Miller Level II Laboratory Deliverables

Level II Laboratory Reporting Requirements

- (1) Transmittal letter
- (2) Case narrative
- (3) Dates of sample collection, receipt, preparation and/or analysis
- (4) Method blank results
- (5) Surrogate recoveries and associated EPA or laboratory acceptance criteria
- (6) Matrix spike recoveries and associated EPA or laboratory acceptance criteria
- (7) Laboratory duplicate results or matrix spike duplicate recoveries, as appropriate to method, with calculated relative percent differences
- (8) Chain-of-custody documentation

APPENDIX C

Copy of Geraghty & Miller Validation Checklist

DATA VALIDATION CHECKLIST

SECTION ONE

PROJECT NAME:	
PROJECT NUMBER:	
SAMPLING DATE:	VALIDATION DATE:
SAMPLE IDENTIFICATION:	
SAMPLING TEAM:	
ANALYZING LABORATORY:	
ANALYSES PERFORMED:	
SAMPLE MATRIX:	
QA REPORTING LEVEL:	

FIELD DATA PACKAGE DOCUMENTATION

FIELD SAMPLING LOGS: 1/

			PERFORMANCE						
REPORTED			ACCEPTABLE					NOT	
No	Yes		No	Yes				REQUIRED	

1. SAMPLING DATES NOTED	—	—	—	—	—
2. SAMPLING TEAM INDICATED	—	—	—	—	—
3. SAMPLE IDENTIFICATION TRACEABLE TO LOCATION COLLECTED	—	—	—	—	—
4. SAMPLE LOCATION	—	—	—	—	—
5. SAMPLE DEPTH FOR SOILS	—	—	—	—	—
6. COLLECTION TECHNIQUE (BAILER, PUMP ETC	—	—	—	—	—
7. FIELD SAMPLE PREPARATION TECHNIQUES	—	—	—	—	—
8. SAMPLE TYPE (GRAB, COMPOSITE)	—	—	—	—	—
9. SAMPLE CONTAINER TYPE	—	—	—	—	—
10. PRESERVATION METHODS	—	—	—	—	—
11. CHAIN OF CUSTODY FORM COMPLETED	—	—	—	—	—
12. REQUIRED ANALYTICAL METHODS REQUESTED	—	—	—	—	—
13. FIELD (WATER AND SOIL) SAMPLE LOGS COMPLETED PROPERLY AND SIGNED	—	—	—	—	—
14. NUMBER AND TYPE OF FIELD QC SAMPLES COLLECTED (BLANKS, REPLICATES, SPLITS, ETC.)	—	—	—	—	—
15. FIELD EQUIPMENT CALIBRATION	—	—	—	—	—
16. FIELD EQUIPMENT DECONTAMINATION	—	—	—	—	—
17. SAMPLE SHIPPING	—	—	—	—	—
18. LABORATORY TASK ORDER	—	—	—	—	—

1/ FIELD SAMPLING LOGS = WATER AND/OR SOIL/SEDIMENT SAMPLING LOGS
COMMENTS: _____

DATA VALIDATION CHECKLIST
SECTION ONE CONTINUED

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

ALL QA REPORTING LEVELS

PERFORMANCE
REPORTED ACCEPTABLE NOT
NO YES NO YES REQUIRED

1. SAMPLE RESULTS	—	—	—	—	—
2. PARAMETERS ANALYZED	—	—	—	—	—
3. METHOD OF ANALYSIS	—	—	—	—	—
4. DETECTION LIMITS OF ANALYSIS	—	—	—	—	—
5. MASTER TRACKING LIST	—	—	—	—	—
6. SAMPLE COLLECTION DATE	—	—	—	—	—
7. LAB SAMPLE RECEIVED DATE	—	—	—	—	—
8. SAMPLE PREPARATION/EXTRACTION DATE	—	—	—	—	—
9. SAMPLE ANALYSIS DATE	—	—	—	—	—
10. COPY OF CHAIN-OF-CUSTODY FORM SIGNED BY THE LAB SAMPLE CUSTODIAN	—	—	—	—	—
11. A NARRATIVE SUMMARY OF QA OR SAMPLE PROBLEMS IS PROVIDED.	—	—	—	—	—

COMMENTS: _____

AFTER COMPLETING SECTION ONE PROCEED TO THE APPROPRIATE QA REPORTING LEVEL OF SECTION TWO (INORGANIC ANALYSES) AND/OR SECTION THREE (ORGANIC ANALYSES). FOLLOWING COMPLETION OF THESE SECTIONS PROCEED TO SECTION FOUR (DATA EVALUATION SUMMARY).

ANALYTICAL DATA VALIDATION CHECKLIST
SECTION TWO

INORGANIC ANALYSES
METALS AND CLASSICAL WET CHEMISTRY METHODS

QA REPORTING LEVEL: I

REQUIREMENTS (BATCH SPECIFIC QA) 1/

REPORTED IN LIMITS NOT
NO YES NO YES REQUIRED

1. METHOD BLANKS	—	—	—	—	—
2. MS ^{2/} OR RWS ^{3/} % RECOVERY (%R)	—	—	—	—	—
3. MSD ^{4/} OR RWSD ^{5/} OR LD ^{6/} %R	—	—	—	—	—
4. RPD ^{7/}	—	—	—	—	—

COMMENTS: _____

1/ BATCH SPECIFIC QA: APPLIES TO ANY SAMPLES IN ANALYTICAL BATCH REGARDLESS OF THE SOURCE.

2/ MS = MATRIX SPIKE;

3/ RWS = REAGENT WATER SPIKE;

4/ MSD = MATRIX SPIKE DUP.;

5/ RWSD = REAGENT WATER SPIKE DUP.;

6/ LD = LABORATORY DUPLICATE;

7/ RPD = RELATIVE PERCENT DIFFERENCE

ANALYTICAL DATA VALIDATION CHECKLIST
SECTION THREE

ORGANIC ANALYSES

QA REPORTING LEVEL: I_
REQUIREMENTS

REPORTED IN LIMITS NOT
NO YES NO YES REQUIRED

1. WATER BLANKS					
2. EXTRACTION BLANKS					
3. RWS ^{1/}					
4. RWSD ^{2/}					
5. RPD ^{3/}					

COMMENTS:

QA REPORTING LEVEL: II
REQUIREMENTS

A. GAS CHROMATOGRAPHY (NO MASS SPEC) OR WET CHEMISTRY PROCEDURE

1. WATER BLANKS					
2. EXTRACTION BLANKS					
3. MS ^{4/} (BATCH SPECIFIC)					
4. MSD ^{5/} (BATCH SPECIFIC)					
5. LD ^{6/} (OPTIONAL)					
6. MS/MSD RPD OR SAMPLE/LD RPD					
7. RWS					
8. RWSD					
9. RWS RPD					
10. SURROGATE SPIKES					

B. GAS CHROMATOGRAPH/MASS SPECTROMETER

1. WATER BLANKS					
2. EXTRACTION BLANKS					
3. MS (BATCH SPECIFIC)					
4. MSD (BATCH SPECIFIC)					
5. LD (OPTIONAL)					
6. MS/MSD RPD OR SAMPLE/LD RPD					
7. RWS					
8. RWSD					
9. RWS RPD					
10. SURROGATE SPIKES					

COMMENTS:

1/ RWS = REAGENT WATER SPIKE; 2/ RWSD = REAGENT WATER SPIKE DUPLICATE;
3/ RPD = RELATIVE PERCENT DIFFERENCE; 4/ MS = MATRIX SPIKE;
5/ MSD = MATRIX SPIKE DUPLICATE; 6/ LD = LAB DUP

ANALYTICAL DATA VALIDATION CHECKLIST
SECTION TWO

INORGANIC ANALYSES
METALS AND CLASSICAL WET CHEMISTRY METHODS

QA REPORTING LEVEL: II.
REQUIREMENTS (BATCH SPECIFIC QA)^{1/}

REPORTED IN LIMITS NOT
No YES No YES REQUIRED

1. METHOD BLANKS	___	___	___	___	___
2. MS % RECOVERY (%R)	___	___	___	___	___
3. MSD OR LAB DUPLICATE % R	___	___	___	___	___
4. RWS % R	___	___	___	___	___
5. RWSD % R	___	___	___	___	___
6. RPDs FOR MS/MSD, SAMPLE/LD, RWS/RWSD	___	___	___	___	___
7. LCS ^{8/} %R	___	___	___	___	___
8. ICVS ^{9/} %R	___	___	___	___	___

COMMENTS: _____

QA REPORTING LEVEL: III.
REQUIREMENTS (SAMPLE SPECIFIC QA)^{10/}

1. CALIBRATION CURVE STANDARDS	___	___	___	___	___
2. ICVS %R	___	___	___	___	___
3. CCVS ^{11/} %R	___	___	___	___	___
4. LCS %R	___	___	___	___	___
5. METHOD BLANKS	___	___	___	___	___
6. ICS ^{12/} %R (ICP ONLY)	___	___	___	___	___
7. DCS ^{13/} %R (ICP ONLY)	___	___	___	___	___
8. MS %R	___	___	___	___	___
9. LD OR MSD %R AND RPD	___	___	___	___	___
10. POST DIGESTION ANALYTICAL SPIKE ^{14/}	___	___	___	___	___

COMMENTS: _____

- 1/ BATCH SPECIFIC QA: APPLIES TO ANY SAMPLES IN ANALYTICAL BATCH.
2/ MS = MATRIX SPIKE; 3/ RWS = REAGENT WATER SPIKE;
4/ MSD = MATRIX SPIKE DUP.; 5/ RWSD = REAGENT WATER SPIKE DUP.;
6/ LD = LABORATORY DUPLICATE; 7/ RPD = RELATIVE PERCENT DIFFERENCE
8/ LCS = LABORATORY CONTROL SAMPLE;
9/ ICVS = INITIAL CALIBRATION VERIFICATION STANDARD;
10/ SAMPLE SPECIFIC QA: APPLIES TO PROJECT SPECIFIC SAMPLES.
11/ CCVS = CONTINUING CALIBRATION VERIFICATION STANDARD;
12/ ICS = INTERFERENCE CHECK SAMPLE; 13/ DCS = DILUTION CHECK SAMPLE;
14/ POST DIGESTION ANALYTICAL SPIKE APPLIES TO FURNACE AA ONLY;

ANALYTICAL DATA VALIDATION CHECKLIST
SECTION THREE CONTINUED

ORGANIC ANALYSES

QA REPORTING LEVEL: III
REQUIREMENTS

A. GAS CHROMATOGRAPH OR WET CHEMISTRY

REPORTED IN LIMITS NOT
No YES No YES REQUIRED

1. WATER BLANKS (VOC)	___	___	___	___	___
2. EXTRACTION BLANKS	___	___	___	___	___
3. MS ^{1/} %R SAMPLE SPECIFIC	___	___	___	___	___
4. MSD ^{2/} %R SAMPLE SPECIFIC	___	___	___	___	___
5. LD ^{3/} SAMPLE SPECIFIC (OPTIONAL)	___	___	___	___	___
6. MS/MSD RPD ^{4/} OR SAMPLE/LD RPD	___	___	___	___	___
7. RWS ^{5/}	___	___	___	___	___
8. RWSD ^{6/}	___	___	___	___	___
9. RWS/RWSD RPD	___	___	___	___	___
10. SURROGATE SPIKES	___	___	___	___	___

B. GAS CHROMATOGRAPH/MASS SPECTROMETER

1. BFB OR DFTPP TUNING ^{7/}	___	___	___	___	___
2. INITIAL CALIBRATION (IC)	___	___	___	___	___
A. SPCC COMPOUNDS (RRF ^{8/} >0.3/0.05)	___	___	___	___	___
B. CCC COMPOUNDS (RSD ^{9/} < 30%)	___	___	___	___	___
C. OTHER COMPOUNDS (RRF > 0.05)	___	___	___	___	___
3. CONTINUING CALIBRATION (CC)	___	___	___	___	___
A. SPCC COMPOUNDS (RRF >0.3/0.05)	___	___	___	___	___
B. CCC COMPOUNDS (MAX %D ^{10/} < 25%)	___	___	___	___	___
C. OTHER COMPOUNDS (RRF >0.05)	___	___	___	___	___
4. WATER BLANKS	___	___	___	___	___
5. EXTRACTION BLANKS	___	___	___	___	___
6. RWS	___	___	___	___	___
7. RWSD	___	___	___	___	___
8. RWS/RWSD RPD	___	___	___	___	___
9. MS (SAMPLE SPECIFIC)	___	___	___	___	___
10. MSD (SAMPLE SPECIFIC)	___	___	___	___	___
11. SURROGATE SPIKE	___	___	___	___	___

COMMENTS: _____

- 1/ MS = MATRIX SPIKE; 2/ MSD = MATRIX SPIKE DUPLICATE; 3/ LD = LAB DUP
4/ RPD = RELATIVE PERCENT DIFFERENCE; 5/ RWS = REAGENT WATER SPIKE;
6/ RWSD = REAGENT WATER SPIKE DUPLICATE; 7/ BFB TUNING IS FOR
VOLATILES AND DFTPP TUNING IS FOR SEMI-VOLATILES (BNA
EXTRACTABLES). 8/ RRF = RELATIVE RESPONSE FACTOR;
9/ RSD = RELATIVE STANDARD DEVIATION; 10/ %D = PERCENT DIFFERENCE;

ANALYTICAL DATA VALIDATION CHECKLIST
SECTION FOUR

DATA EVALUATION SUMMARY.

PROJECT NAME: _____ PROJECT NUMBER: _____
QA REPORTING LEVEL: _____ VALIDATION DATE: _____

ALL QA REPORTING LEVELS (I,II,III)

		PERFORMANCE			
REPORTED		ACCEPTABLE		NOT	
NO	YES	NO	YES	REQUIRED	

SUMMARY OF CHECKLIST FINDINGS

1. FIELD MEASUREMENTS OF PH AND SPECIFIC CONDUCTANCE ARE CONSISTENT WITH HISTORICAL DATA	_____	_____	_____	_____	_____
2. FIELD RECORDS	_____	_____	_____	_____	_____
3. METHODS (GEN.INFO. SECTION ONE)	_____	_____	_____	_____	_____
4. HOLDING TIMES (MASTER SAMPLE LIST)					
A. EXTRACTION HOLDING TIMES	_____	_____	_____	_____	_____
B. ANALYSIS HOLDING TIMES	_____	_____	_____	_____	_____
5. DETECTION LIMITS (SECTION ONE)	_____	_____	_____	_____	_____
6. BLANKS (SECTIONS TWO OR THREE)					
A. EQUIPMENT RINSATE BLANKS	_____	_____	_____	_____	_____
B. FIELD BLANKS	_____	_____	_____	_____	_____
C. TRIP BLANKS	_____	_____	_____	_____	_____
D. LABORATORY BLANKS	_____	_____	_____	_____	_____
7. FIELD REPLICATES	_____	_____	_____	_____	_____
8. FIELD SPLITS	_____	_____	_____	_____	_____
9. GEOPHYSICAL COMPARISONS					
A. CATION VS ANION	_____	_____	_____	_____	_____
B. TDS VS SPEC. CONDUCTANCE	_____	_____	_____	_____	_____
C. PH VS ALK/ACIDITY	_____	_____	_____	_____	_____
D. OTHER	_____	_____	_____	_____	_____
10. METALS QA DATA (SECTION TWO)	_____	_____	_____	_____	_____
11. INORGANIC WET CHEMISTRY (SEC. TWO)	_____	_____	_____	_____	_____
12. ORGANIC QA DATA-GC (SECTION THREE-A)	_____	_____	_____	_____	_____
13. ORGANIC WET CHEMISTRY (SEC. THREE-A)	_____	_____	_____	_____	_____
14. ORGANIC QA DATA-GC/MS (SEC. THREE-B)	_____	_____	_____	_____	_____

AFTER COMPLETING THIS SECTION GO TO SECTION FIVE.
COMMENTS: _____

[illegible]

ANALYTICAL DATA VALIDATION CHECKLIST
SECTION FIVE

DATA VALIDATION CODING

PROJECT NAME: _____ PROJECT NUMBER: _____
QA REPORTING LEVEL: _____ VALIDATION DATE: _____

1. QUALIFIER CODES ASSIGNED TO DATA: R, U, J, U/J, B, NO FLAG

2. IDENTIFICATION OF SAMPLES AND PARAMETERS WITH CODES:

SAMPLE ID

PARAMETERS

R CODE		
B CODE		
U CODE		
J CODE		
U/J CODE		

EXPLANATION: _____

VALIDATION PERFORMED BY: _____

SIGNED: _____

DATE: _____

APPENDIX D

Geraghty & Miller Policy Statement

STATEMENT OF POLICY

The health and safety of Geraghty & Miller, Inc. employees is of the utmost importance to each individual and to us as a company. As our employees may be potentially exposed to a variety of physical, chemical, and biological hazards in the course of their work, we have developed the Geraghty & Miller Health and Safety Manual to provide them with guidance in controlling and reducing work-related exposures to these hazards.

This manual serves as our primary source for company policies and procedures regarding health and safety issues and is to be followed by all Geraghty & Miller employees. The manual provides uniform guidance, regulatory requirements, and Geraghty & Miller policy for specific issues. It is intended to be a guidance manual, and as such, will provide the user with a summary of information. In the event that the use requires additional details, each section references the specific federal regulation(s) where this information can be found.^{1/} Our trained health and safety staff, located in the Tampa, Florida office, will always be available to provide assistance.

Geraghty & Miller has become known in the industry for our high quality work, and we make the same commitment to provide a safe work environment for our employees.

KEVIN J. ORMSBY
DIRECTOR, HEALTH & SAFETY

^{1/} The federal regulations provide the minimum applicable requirements. In some instances, more stringent state or local regulations must be followed.

APPENDIX E

Toxicological Data on Site Constituents



CHEMHAZIS Accession Number 56382

(CAS) CAS Registry Number: 56-38-2

(MAT) Material Name:

^[[7mPARATHION^[[0m;

DIETHYL P-NITROPHENYL THIOPHOSPHATE;

O,O-DIETHYL O-(P-NITROPHENYL) PHOSPHOROTHIOATE;

O,O-DIETHYL-O-(P-NITROPHENYL)THIONOPHOSPHATE;

DIETHYLPARATHION;

ETHYL PARATHION;

PARATHION-ETHYL;

P-NITROPHENOL O-ESTER WITH O,O-DIETHYLPHOSPHOROTHIOATE;

PHOSPHOROTHIOIC ACID, O,O-DIETHYL-O-(P-NITROPHENYL) ESTER;

PHOSPHOROTHIOIC ACID, O,O-DIETHYL-O-(4-NITROPHENYL) ESTER;

AAT;

AATP;

AC 3422;

ACC 3422;

ALKRON;

ALLERON;

AMERICAN CYANAMID 3422;

APHAMITE;

ARALO;

B 404;

BAY E-605;

BAYER E-605;

COMPOUND 3422;

COROTHION;

DANTHION;

DNTP;

DPP;

E 605;

ECATOX;

FOSFVE;

FOSOVA;

FOSTERN;

GENITHION;

KOLPHOS;

KYPHION;

LIROTHION;

MURFOS;

NA 2783;

NIRAN;

NITROSTYGMINE;

NIUIF-100;

NOURITHION;

OLEOFOS 20;

OLEOPARATHION;

ORTHOPHOS;

PANTHION;

PARAMAR;

PARAMAR 50;

PARAPHOS;

PARATHENE;

PARAWET;

PESTOX PLUS;

PETHION;

PHOSPHEMOL;

PHOSPHENOL;

PHOSPHOSTIGMINE;

RB;

SNP;

STABILIZED ETHYL PARATHION;

STATHION;

STRATHION;

SULPHOS;
T-47;
THIOPHOS;
THIOPHOS 3422;
TOX 47;
VAPOPHOS;
NCI-C00226;
ENT 15.108;
BLADAN;
BLADAN F;
CORTHION;
CORTHIONE;
DIETHYL PARA-NITROPHENOL THIOPHOSPHATE;
O,O-DIETHYL-O-(4-NITROPHENYL) PHOSPHOROTHIOATE;
DIETHYL 4-NITROPHENYL PHOSPHOROTHIONATE;
DIETHYL P-NITROPHENYL THIOPHOSPHATE;
O,O-DIETHYL O-P-NITROPHENYL THIOPHOSPHATE;
DIETHYL P-NITROPHENYL THIONOPHOSPHATE;
O,O-DIETHYL O-4-NITROPHENYL THIOPHOSPHATE;
DREXEL PARATHION 8E;
E 605 F;
E 605 FORTE;
EKATIN WF & WF ULV;
EKATOX;
ETHLON;
ETILON;
FOLIDOL;
FOLIDOL E;
FOLIDOL E605;
FOLIDOL E & E 605;
FOLIDOL OIL;
FOSFERMO;
FOSFERNO;
FOSFEX;
FOSTOX;
GEARPHOS;
LETHALAIRE G-54;
NIRAN E-4;
OLEOPARAPHENE;
OMS 19;
PAC;
PACOL;
PARADUST;
PHOSKIL;
RCRA WASTE NUMBER P089;
RHODIASOL;
RHODIATOX;
RHODIATROX;
SELEPHOS;
SIXTY-THREE SPECIAL E.C. INSECTICIDE;
SOPRATHION;
SUPER RODIATOX;
THIOFOS;
VITREX;
PENNCAP E;
THIOMEX;
TIOFOS
(NIOSH) NIOSH Number:
TF4550000
(PROP) Chemical and Physical Properties:
CHEMICAL FORMULA: C10H14NO5PS

MOLECULAR WEIGHT: 291.27

WLN: WNR DOPS&O2&O2

PHYSICAL DESCRIPTION: Pale yellow to dark brown liquid

SPECIFIC GRAVITY: 1.265 @ 20/4 C [169,172,395,430]

DENSITY: 1.270 g/cm³ @ 18.5 C [700]

MELTING POINT: 6 C [027,031,205,371]

BOILING POINT: 375 C [017,031,205,346]

SOLUBILITY:

Water: < 1 mg/mL @ 23 C [700]

DMSO: > = 100 mg/mL @ 22 C [700]

95% Ethanol: > = 100 mg/mL @ 22 C [700]

Acetone: > = 100 mg/mL @ 22 C [700]

OTHER SOLVENTS:

Chloroform: Soluble [017,047,169]

Alcohol: Soluble [017,031,043,169]

Esters: Soluble [031,043,173]

Ketones: Soluble [031,043,062,173]

Petroleum ether: Insoluble [027,031,173,205]

Kerosene: Insoluble [031,043,151,173]

Ether: Soluble [017,031,047,205]

Benzene: Soluble [169,205]

Petroleum oils: Slightly soluble [172,395]

Usual spray oils: Insoluble [031,062,173]

Most organic solvents: Miscible [058,172]

Animal and vegetable oils: Soluble [062]

Aromatic hydrocarbons: Soluble [031,043,062,173]

OTHER PHYSICAL DATA:

Specific gravity: 1.2704 @ 20/20 C [017,047]; 1.266 @ 25/15.6 C [058]

Boiling point: 157-162 C @ 0.6 mm Hg [027,031,055,395]

Vapor pressure: 0.0000965 mm Hg @ 25 C [058]

Refractive index: 1.5420 @ 20 C [027]; 1.5370 @ 25 C [017,031,169,205]

Surface tension: 39.2 dynes/cm @ 25 C [031]

Garlic-like odor [058,102,421]

Viscosity: 15.30 centipoise @ 25 C [031]

Heat of combustion: -5140 cal/g [371]

log P octanol: 3.81 @ 20 C [055]

(STDS) Standards, Regulations, Recommendations:

OSHA: Federal Register (1/19/89) and 29 CFR 1910.1000 Subpart Z

Transitional Limit: PEL-TWA 0.1 mg/m³ (skin) [015,327,545,610]

Final Limit: PEL-TWA 0.1 mg/m³ (skin) [015,545,610]

ACGIH: TLV-TWA 0.1 mg/m³ (skin) [015,415,421,610]

NIOSH: REL-TWA 0.05 mg/m³ [015,610]

NFPA Hazard Rating: Health (H): None

Flammability (F): None

Reactivity (R): None

IDLH value: 20 mg/m³ [371]

(CAR) Carcinogenicity:

IARC Cancer Review: There is inadequate evidence to classify this chemical as a positive animal carcinogen.

IARC: Not classifiable as a human carcinogen (Group 3) [015,395,610]

(AID) First Aid:

SKIN CONTACT:

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water.

IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop.

IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.

INHALATION:

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop.

Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Respirator Recommendation.

EYE CONTACT:

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center.

Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician.

IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

INGESTION:

CHOLINESTERASE INHIBITORS ARE EXTREMELY TOXIC AND FAST-ACTING POISONS.

IMMEDIATELY call a hospital or poison control center and transport the victim to a hospital. Atropine is an antidote for cholinesterase inhibitors but should only be administered by properly trained personnel. In the absence of this option and if the victim is conscious and not convulsing, it may be worth considering the risk of inducing vomiting, even though the induction of vomiting is not usually recommended outside of a physician's care. Ipecac syrup or salt water may be used to induce vomiting in such an emergency.

If the victim is convulsing or unconscious, do not give anything by mouth, assure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

OTHER: Not available

(EQP) Personal Protective Equipment:

MINIMUM PROTECTIVE CLOTHING:

If Tyvek-type disposable protective clothing is not worn during handling of this chemical, wear disposable Tyvek-type sleeves taped to your gloves.

RECOMMENDED GLOVE MATERIALS:

Permeation Test Results of Diluted Chemical in corn oil (0.03 gm/mL):

The permeation test results for solutions of this chemical are given below. The breakthrough times of the diluted chemical at the given concentration are given for each glove type tested. The table is a presentation of actual test results, not specific recommendations or suggestions. Avoid glove types which exhibit breakthrough times of less

than the anticipated task time plus an adequate safety factor. If this chemical makes direct contact with your glove, or if a tear, puncture or hole develops, replace them at once.

Glove Type	Model Number	Thickness	Breakthrough Time
Nitrile	Edmont 37-175	0.64 mm	480 min
PVC	Edmont 34-100	0.18 mm	75 min
Latex	Ansell 9020-5	0.10 mm	< 15 min
Neoprene	Edmont 29-870	0.46 mm	480 min

RECOMMENDED RESPIRATOR:

Where the neat test chemical is weighed and diluted, wear a NIOSH-approved half face respirator equipped with a combination filter cartridge, i.e. organic vapor/acid gas/HEPA (specific for organic vapors, HCl, acid gas, SO₂ and a high efficiency particulate filter).

(HHAZ) Health Hazards:
ACUTE/CHRONIC HAZARDS:

This compound can be fatal by ingestion, inhalation and skin or eye contact [058]. It is a cholinesterase inhibitor [058,102,151,295] and it can be absorbed through the skin [027,052,058,173]. When heated to decomposition it emits toxic fumes of hydrogen sulfide, carbon monoxide, nitrogen oxides, phosphorus oxides and sulfur oxides [043,058,102].

SYMPTOMS:

Symptoms of exposure may include nausea, vomiting, diarrhea, excessive salivation, muscle twitching, convulsions, respiratory failure, coma and cholinesterase inhibition [033,058,102,295]. Anorexia, pinpoint pupils and bronchoconstriction may occur [033]. Other symptoms may include tightness of the chest, wheezing, blurred vision, tearing, runny nose, headache, abdominal cramps, dizziness, staggering, slurred speech and irregular or slow heartbeat [058,102,151]. It may cause cyanosis (bluish discoloration of the skin), loss of appetite, sweating and confusion [058,102]. It may also cause aching in and behind the eyes, weakness, loss of muscle coordination and incontinence [151]. Pulmonary edema may also occur [371]. Exposure may result in labored breathing, nervousness, drooling or frothing of the mouth and nose, excessive bronchial secretion, possible muscle paralysis (on exposure to large amounts), loss of reflexes and death [058]. It may also result in general anesthesia and effects of the pulmonary system, kidney, ureter and bladder [043]. This chemical may cause reduced vision, narrowing of peripheral visual fields, congestion or atrophy of optic nerves, difficulty with ocular pursuit movements, abnormality of ERG, miosis and spasm of accommodation for near vision, wide and unreactive pupils, and scotoma [099].

(FHAZ) Fire Hazards:

This chemical has a flash point of >93.3 C (>200 F) [058]. It is combustible [043]. Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. A water spray may also be used [058].

LEL: Not available

UEL: Not available

(REAC) Reactivity:

This chemical is incompatible with strong oxidizers [102,346]. It reacts slowly with water and rapidly with bases or caustic solutions [058]. It is incompatible with substances having a pH higher than 7.5 [033]. It will attack some forms of plastics, rubber and coatings [102].

(USS) Uses:

This compound is a broad spectrum insecticide used in agricultural applications. It is also used as an acaricide, a fumigant and a nematocide.

(STAB) Stability:

This chemical slowly decomposes in air [062]. It decomposes when exposed to temperatures >100 C [058,102]. It is rapidly hydrolyzed under alkaline conditions [027,151,169,172]. It is stable at a pH below 7.5 [173]. This chemical is stable in distilled water and acid solutions [062,395].

(COMM) Comments:

This compound is among the most poisonous materials commonly used for pest control. It is responsible for hundreds of human poisonings, many of which are fatal [395].

(TRAN) Transportation Information:

PROPER SHIPPING NAME (IATA): Organophosphorus pesticides, liquid, toxic, n.o.s.

UN/ID NUMBER: UN3018

HAZARD CLASS: 6.1 SUBSIDIARY RISK: None PACKING GROUP: I

LABELS REQUIRED: Poison

PACKAGING: PASSENGER: PKG. INSTR.: 603 MAXIMUM QUANTITY: 1 L
CARGO : PKG. INSTR.: 604 MAXIMUM QUANTITY: 30 L

SPECIAL PROVISIONS: A4

(REFNO) Reference(s): 15; 17; 27; 31; 33; 43; 47; 52; 55; 58; 62; 99; 102;
151; 169; 172; 173; 205; 295; 327; 346; 371; 395; 415; 421; 430; 545;
610; 700

CHEMHAZIS Accession Number 11097691

(CAS) CAS Registry Number: 11097-69-1

(MAT) Material Name:

AROCHLOR 1254;
POLYCHLORINATED BIPHENYL 1254;
POLYCHLORINATED BIPHENYL (AROCLOR 1254);
CHLORODIPHENYL, 54 PERCENT CHLORINE;
PCB-1254;
PCB 1254;
AROCLOR 1254;
CHLORODIPHENYL (54% CL);
NCI-C02664;
^[[7mPCB^[[0m;
UN 2315

(NIOSH) NIOSH Number:

TQ1360000

(PROP) Chemical and Physical Properties:

CHEMICAL FORMULA: C12H5Cl5 (approximate)

MOLECULAR WEIGHT: 326 (approximate)

WLN: Not available

PHYSICAL DESCRIPTION: Light yellow, viscous liquid

SPECIFIC GRAVITY: 1.505 @ 15.5/4 C [031]

DENSITY: 1.47-1.49 g/mL @ 90 C [395,430]

MELTING POINT: 10 C [107,421]

BOILING POINT: 365-390 C @ 760 mm Hg [102]

SOLUBILITY:

Water: < 1 mg/mL @ 21 C [700]
DMSO: > = 100 mg/mL @ 23 C [700]
95% Ethanol: > = 100 mg/mL @ 23 C [700]
Acetone: > = 100 mg/mL @ 23 C [700]

OTHER SOLVENTS:

Most organic solvents: Soluble [396,421]
Oils: Soluble [396]
Glycerine: Insoluble [421]
Glycols: Insoluble [421]

OTHER PHYSICAL DATA:

Refractive index: 1.629-1.641 @ 20 C [031]; 1.6375-1.6415 @ 25 C [395]
Vaporization rate: 0.000053 g/cm²/h @ 100 C [395]
Moisture: 50 ppm maximum [395]
Distillation range: 365-390 C [031]
Mild hydrocarbon odor [421]
Specific gravity: 1.495 @ 65/4 C [031]
Dielectric constant (1000 cycles): 5.0 @ 25 C; 4.3 @ 100 C [031]
Acidity: 0.010 mg KOH/g maximum [058]
Viscosity: 1800-2500 cp @ 37.8 C [058]

(STDS) Standards, Regulations, Recommendations:

OSHA: 29 CFR 1910.1000 Subpart Z
PEL-TWA: 0.5 mg/m³ (skin) [015,326,414,610]
ACGIH: TLV-TWA 0.5 mg/m³ (skin); TLV-STEL 1 mg/m³ [015,414,610]
NIOSH: REL-TWA 0.001 mg/m³ [015,610]
NFPA Hazard Rating: Health (H): None
Flammability (F): None
Reactivity (R): None
IDLH level: 5 mg/m³ [346]

(CAR) Carcinogenicity:

IARC Cancer Review: There is limited evidence of human carcinogenicity but a positive association has been observed between exposure to this chemical and cancer [610].
IARC Cancer Review: There is sufficient evidence to classify this chemical as a positive animal carcinogen.
IARC probable human carcinogen (Group 2A) [610]
NTP anticipated human carcinogen [610]
EPA Carcinogen Assessment Group [610]

(AID) First Aid:

SKIN CONTACT:

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water.

IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop.

IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.

INHALATION:

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop.

Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA)

should be used; if not available, use a level of protection greater than or equal to that advised under Respirator Recommendation.

EYE CONTACT:

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center.

Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician.

IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

INGESTION:

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician.

If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

OTHER:

Since this chemical is a known or suspected carcinogen you should contact a physician for advice regarding the possible long term health effects and potential recommendation for medical monitoring. Recommendations from the physician will depend upon the specific compound, its chemical, physical and toxicity properties, the exposure level, length of exposure, and the route of exposure.

(EQP) Personal Protective Equipment:
MINIMUM PROTECTIVE CLOTHING:

If Tyvek-type disposable protective clothing is not worn during handling of this chemical, wear disposable Tyvek-type sleeves taped to your gloves.

RECOMMENDED GLOVE MATERIALS:

GlovES+ Expert System Glove Types For The Neat (Undiluted) Chemical:

This chemical has not been tested for permeation by Radian Corporation; however, the GlovES+ expert system was used to extrapolate permeation test information from compounds in the same chemical class. The GlovES+ system uses permeation data from literature sources; therefore, extra safety margins should be used with the estimated protection time(s). If this chemical makes direct contact with your glove, or if a tear, puncture or hole develops, replace them at once.

The GlovES+ expert system is a tool that can help people better manage protection from chemicals, however this tool cannot replace sound judgment nor make technical decisions. Our GlovES+ expert system is designed to offer initial advice and assistance in glove selection while the final glove selection should be made by knowledgeable individuals based on the specific circumstances involved.

Glove Type	Model Number	Thickness	Estimated Protection Time
Viton	North F-091	0.24 mm	480 min
Butyl rubber	North B-161	0.38 mm	480 min
Neoprene	Edmont 29-840	0.43 mm	480 min

RECOMMENDED RESPIRATOR:

Where the neat test chemical is weighed and diluted, wear a NIOSH-approved half face respirator equipped with a combination filter cartridge, i.e. organic vapor/acid gas/HEPA (specific for organic vapors, HCl, acid gas, SO₂ and a high efficiency particulate filter).

(HHAZ) Health Hazards:

ACUTE/CHRONIC HAZARDS:

This compound may be toxic by ingestion, inhalation and skin absorption [062]. It may be a strong irritant of the skin [301]. It may also be an irritant of the eyes, nose and throat [346]. When heated to decomposition it emits toxic fumes of carbon monoxide, carbon dioxide, and hydrogen chloride gas [043,058,102].

SYMPTOMS:

Symptoms of exposure to this compound may include chloracne, pigmentation of the skin and nails, swelling of the eyelids and distinctive hair follicles [031,396]. Other symptoms may include irritation of the skin, eyes, nose and throat, conjunctivitis, hepatotoxicity, gastrointestinal disturbances, visual disturbances, dermatitis, numbness of the extremities, paresthesia and respiratory disturbances [107]. It may cause edema, nausea, vomiting, abdominal pain, jaundice and fatty degeneration of the liver [051,151,346]. It may also cause excessive eye discharge, acneform eruptions, hyperemia of the conjunctiva, pigmentation of the mucous membranes, diarrhea, fever, limb spasms, headache and hearing difficulties [421]. The eyes and lungs may be injured [371]. Other symptoms may include cirrhosis of the liver, blindness and peripheral neuropathies (with decreased sural nerve conduction velocities) [151]. The urine may be dark [102]. It may cause leucocytosis, serum hyperlipidemia, decreased hemoglobin and a decreased number of red blood cells [396]. It may also cause enlargement of the liver, weakness, drowsiness and coma [301]. It may cause symptoms of anorexia and fatigue [346]. Newborn infants have shown skin discoloration, gingival hyperplasia and skin changes [151]. It may also cause stillbirth and increased eye discharge in infants born to women exposed during pregnancy [346].

(FHAZ) Fire Hazards:

This chemical has a flash point of 222 °C (432 °F) [102,107,421]. It is combustible. Fires involving this material may be controlled with a dry chemical, carbon dioxide, or Halon extinguisher.

LEL: Not available

UEL: Not available

(REAC) Reactivity:

This chemical is incompatible with strong oxidizers [102,107,346]. It will attack some forms of plastics, rubber, and coatings [102].

(USS) Uses:

This chemical is used in electrical capacitors, electrical transformers, vacuum pumps, gas-transmission turbines, high-temperature dielectrics for electric wires and electrical equipment, heat-exchange fluids, coatings, inks, insecticides, fillers, adhesives, paints and in duplicating papers. It is also used as a plasticizer for cellulose, vinyl resins and chlorinated rubbers. Formerly used as hydraulic fluids, fire retardants, wax extenders, dedusting agents, pesticide extenders, lubricants, cutting oils, sealants and caulking compounds.

(STAB) Stability:

This chemical is sensitive to heat [102]. Solutions of this chemical in water, DMSO, 95% ethanol, or acetone should be stable for 24 hours under normal laboratory conditions [700].

(COMM) Comments:

This chemical contains biphenyls with 54% chlorine. It is composed of 11% tetra-, 49% penta-, 34% hexa-, and 6% heptachlorobiphenyls.

(TRAN) Transportation Information:

PROPER SHIPPING NAME (IATA): Polychlorinated biphenyls

UN/ID NUMBER: UN2315

HAZARD CLASS: 9 SUBSIDIARY RISK: None PACKING GROUP: II

LABELS REQUIRED: Miscellaneous

PACKAGING: PASSENGER: PKG. INSTR.: 907 MAXIMUM QUANTITY: 100 L
CARGO : PKG. INSTR.: 907 MAXIMUM QUANTITY: 220 L

SPECIAL PROVISIONS: None

(REFNO) Reference(s): 15; 31; 43; 51; 58; 62; 102; 107; 151; 301; 326; 346;
371; 395; 396; 414; 421; 430; 610; 700

File: 2 Entry: 3

CHEMHAZIS Accession Number 11141165

(CAS) CAS Registry Number: 11141-16-5

(MAT) Material Name:

PCB-1232;
AROCOR 1232;
AROCOR 1232;
POLYCHLORINATED BIPHENYL 1232;
CHLORODIPHENYL (32 PERCENT CL);
PCB 1232

(NIOSH) NIOSH Number:

TQ1354000

(PROP) Chemical and Physical Properties:

CHEMICAL FORMULA: Not available

MOLECULAR WEIGHT: Not available

WLN: Not available

PHYSICAL DESCRIPTION: Viscous oily liquid

SPECIFIC GRAVITY: Not available

DENSITY: Not available

MELTING POINT: Not available

BOILING POINT: 290-325 C

SOLUBILITY:

Water: Not available

DMSO: Not available

95% Ethanol: Not available

Acetone: Not available

OTHER SOLVENTS: Not available

OTHER PHYSICAL DATA: Not available

(STDS) Standards, Regulations, Recommendations:

OSHA: None

ACGIH: None
NIOSH: REL-TWA 0.001 mg/m³ [610]
NFPA Hazard Rating: Health (H): None
Flammability (F): None
Reactivity (R): None

(CAR) Carcinogenicity:

IARC Cancer Review: There is limited evidence of human carcinogenicity but a positive association has been observed between exposure to this chemical and cancer. [610]

IARC Cancer Review: There is sufficient evidence to classify this chemical as a positive animal carcinogen.

IARC probable human carcinogen (Group 2A) [610]

EPA Carcinogen Assessment Group [610]

NTP anticipated human carcinogen [610]

(AID) First Aid:

SKIN CONTACT:

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water.

IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop.

IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.

INHALATION:

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop.

Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Respirator Recommendation.

EYE CONTACT:

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center.

Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician.

IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

INGESTION:

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician.

If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

OTHER:

Since this chemical is a known or suspected carcinogen you should see a physician for advice regarding the possible long term health effects and potential recommendation for medical monitoring. Recommendations from the physician will depend upon the specific compound, its chemical, physical and toxicity properties, the exposure level, length of exposure, and the route of exposure.

(EQP) Personal Protective Equipment:
MINIMUM PROTECTIVE CLOTHING:

If Tyvek-type disposable protective clothing is not worn during handling of this chemical, wear disposable Tyvek-type sleeves taped to your gloves.

RECOMMENDED GLOVE MATERIALS:

Permeation data indicate that Viton gloves may provide protection to contact with this compound. Viton over latex gloves is recommended. However, if this chemical makes direct contact with your gloves, or if a tear, hole or puncture develops, remove them at once.

RECOMMENDED RESPIRATOR:

Where the neat test chemical is weighed and diluted, wear a NIOSH-approved half face respirator equipped with a combination filter cartridge, i.e. organic vapor/acid gas/HEPA (specific for organic vapors, HCl, acid gas, SO₂ and a high efficiency particulate filter).

(HHAZ) Health Hazards:
ACUTE/CHRONIC HAZARDS:

This compound is an irritant and may be toxic by ingestion. It may also produce carcinogenic effects. When heated to decomposition, it emits toxic fumes of hydrogen chloride and carbon oxides.

SYMPTOMS:

Symptoms of exposure may include eye and skin irritation and acneform dermatitis (chloracne). It may also cause liver damage in humans.

(FHAZ) Fire Hazards:
This chemical has a flash point of >286 F. Fires involving this chemical should be extinguished with water, foam, carbon dioxide and/or dry chemical.

LEL: Not available UEL: Not available

(STAB) Stability:
Stable under normal laboratory conditions.

(TRAN) Transportation Information:
PROPER SHIPPING NAME (IATA): Polychlorinated biphenyls

UN/ID NUMBER: UN2315

HAZARD CLASS: 9 SUBSIDIARY RISK: None PACKING GROUP: II

LABELS REQUIRED: Miscellaneous

PACKAGING: PASSENGER: PKG. INSTR.: 907 MAXIMUM QUANTITY: 100 L
CARGO : PKG. INSTR.: 907 MAXIMUM QUANTITY: 220 L
SPECIAL PROVISIONS: None
(REFNO) Reference(s): 610

APPENDIX F

Hazard Communication Program



HAZARD COMMUNICATION

29 CFR 1910.1200

OVERVIEW

The storage and use of commercially available chemicals at Geraghty & Miller offices constitutes a potential avenue of employee exposure to potentially harmful substances. The principal goals of hazard communication are to inform Geraghty & Miller employees about potential hazards associated with routinely used chemicals, and to identify appropriate procedures and protective equipment to be employed during chemical use and handling. This hazard communication program primarily addresses chemical hazards within the Geraghty & Miller offices. Hazards associated with field programs at off-site work areas are addressed in the site-specific Health and Safety Plans.

REGULATORY GUIDANCE

Components of OSHA's hazard communication program are described in the Hazard Communication Standard (29 CFR 1910.1200). The principal means by which information is to be conveyed to employees is through hazardous substance listing and labelling, material safety data sheets (MSDSs), and employee training. Components of this program are described below.

PROGRAM COMPONENTS

Master List

Each Geraghty & Miller office will maintain a master list of all potentially hazardous chemicals stored or used at the office or in storage areas. The master chemical list will be kept by the office health and safety manager at a location available to all office staff. Criteria for establishing whether a substance is hazardous by this regulation is defined in the Hazard Communication Standard, which is included for reference. A representative master chemical list containing substances that should be included is attached.

Material Safety Data Sheets

The MSDS is the principal means of conveying chemical-specific information from the manufacturer to the user. MSDSs for all substances on the master chemical list will be

obtained by the office health and safety manager and maintained as a master MSDS file within the office. The master MSDS file will be made available for reference to all office staff. Copies of MSDSs for potentially hazardous chemicals used in sampling vans and site offices, must accompany the substances and be available for review at these locations.

Labelling

All containers of hazardous chemicals must be labelled in accordance with OSHA regulations. Containers that must be labelled include tanks, pails, cans, drums, or other receptacles which are used to store chemicals for longer than one 8-hour shift. Periodic inspections will be performed to ensure that containers stored or used within the office are properly labelled. Information to be included on the labels is described in the attached Hazard Communication Standard.

GERAGHTY & MILLER POLICY

The office health and safety manager will be responsible for performing the following functions under Geraghty & Miller's hazard communication program:

1. Maintain and update the office master chemical list.
2. Maintain and update the office MSDS file.
3. Perform periodic inspections of the work place for adherence to storage and labelling requirements of this program.
4. Perform staff training on the hazard communication program and inform/train non-staff personnel (subcontractors) of the program, when applicable.
5. Maintain a training roster listing all staff who have received the hazard communication training and annual updates.

The master list of chemicals used at each office and the MSDS master file are to be continuously updated and, along with a copy of this hazard communication program, kept at a location accessible to all office staff.

Any chemical stored or used in Geraghty & Miller offices and storage areas (acids, solvents) will be included in this program. The purchasing manager at each office will be

responsible for requesting updated MSDSs for products/chemicals purchased by the office. The purchasing manager will submit the MSDSs to the office health and safety manager for inclusion in the master MSDS file. Project managers and other office staff who purchase chemicals are to request MSDSs from suppliers when placing chemical orders. If a manufacturer will not provide an MSDS for its product(s), another supplier must be used.

The office health and safety manager will perform periodic office inspections to ensure compliance with the hazard communication program, particularly labelling and safe chemical handling. Any deficiencies identified during the inspection will be discussed with the responsible project manager and/or office staff.

When a potential for chemical exposure exists, subcontractor or other non-Geraghty & Miller personnel working within a Geraghty & Miller office will be informed of the hazard communication program by the office health and safety manager, who will also include a discussion of the potential hazards of chemicals stored or used within the office. Subcontractors are also required to inform the office health and safety manager of any chemical hazards associated with their activities.

Hazard communication training for technical staff will be covered in the initial and annual refresher training required under 29 CFR 1910.120. Support staff will be trained, when applicable, as determined by the office health and safety manager and the office manager.

APPENDIX G

Respiratory Protection Program



RESPIRATORY PROTECTION PROGRAM

29 CFR 1910.134

OVERVIEW

This respiratory protection program has been developed to educate and train our employees in the proper use and selection of respiratory protective equipment in order to minimize inhalation hazards resulting from various field tasks. It provides a step-by-step approach along with the recordkeeping requirements.

REGULATORY GUIDANCE

This procedure has been developed in accordance with the OSHA Title 29, Code of Federal Regulations 1910.134, "Respiratory Protection" and the National Institute of Occupational Health and Safety, NIOSH, "Guide to Industrial Respiratory Protection."

PERTINENT ISSUES

The preferred methods of protection are engineering controls and work practices. When these methods cannot reduce the hazard that an employee faces, respirators and other personal protective equipment must then be used. Respirators must not be worn when conditions, such as a growth of beard, sideburns, or temple pieces on glasses, prevent a good face seal. The employee's diligence in observing these factors is required. Any changes, such as recent dental work, which the employee feels could prevent a good face seal, should be reported to the office health and safety manager. A fit test procedure should be carried out to confirm the effect of these changes. A fit test must be conducted, as a minimum, every 3 years when no changes have occurred and a record must be kept of the fit test. A fit test form and a copy of the fit test procedure are included in this section.

Employees shall be properly instructed and trained in the proper use of respirators and their limitations. This training is provided in Geraghty & Miller's 40-hour health and safety training for hazardous waste activities, the annual 8-hour refresher training, and the 8-hour managers and supervisor training, which our field personnel attend as requested by OSHA 29 CFR 1910.120, "Hazardous Waste Activities and Emergency Response."

Respirators will be regularly cleaned and disinfected, after each day's use, or as often as necessary. The health and safety manager will designate an area for the cleaning and maintenance procedure. All necessary cleaning solutions will be provided.

All employees who have been issued respirators must participate in the medical surveillance program. They will not be assigned to tasks requiring the use of a respirator unless the attending physician has determined that they are physically capable.

Fit Testing/Checking Procedure:

1. Respirators should be physically inspected prior to being worn. A respirator inspection record which provides a list of items to check, is attached. If any defects are found, the respirator should not be worn until the defective part(s) has been replaced. (Parts are not interchangeable between brands).
2. Negative pressure check. This check consists of closing off all inlets, canisters, cartridges, and filters, or closing off the breathing tube so that it does not pass air. Inhale gently and hold for 10 seconds. The face piece should remain slightly collapsed with no inward leakage detectable.
3. Positive pressure check. Similar to the negative pressure checks, this check is conducted by closing off the exhalation valve. By exhaling, a slight positive pressure should build up inside the face piece without any evidence of outward leakage. The negative and positive pressure checks must be conducted every time a respirator is worn. Once this is completed, the respirator should be worn for approximately 10 minutes prior to the testing phase. Then steps 4 through 8 should be completed.
4. Normal breathing tests. Breathe regularly through the respirator.
5. Deep breathing tests. Be certain that breaths are deep and regular.
6. Turning head from side to side. Be certain movement is complete. Alert the test subject not to bump the respirator on the shoulders. Have the test subject inhale when his/her head is at either side.

7. Nodding head up and down. Be certain motions are complete and made about every second. Alert the test subject not to bump the respirator on the chest. Have the test subject inhale when his/her head is in the fully up position.
8. Talking. Talk loudly and slowly for several minutes. The Rainbow Passage has been included with this program. Reading it will result in a wide range of facial movements, and thus be useful to satisfy this requirement.

Qualitative Fit Test:

Steps 4 through 8 should then be repeated in conjunction with Isoamyl Acetate (Banana Oil) for odor threshold detection or irritation. An alternative method is to use irritant smoke to detect breakthrough/leakage.

GERAGHTY & MILLER POLICY

Employees required to wear respirators cannot wear beards or mustaches that will interfere with the fit. Every new respirator must be fit tested to the individual. Respirators will be issued to individual employees during field work when they may be exposed to inhalation hazards. Respirators will be selected based on the hazards that may be present. The selection of the proper respirator will be made by the office health and safety manager and/or the regional health and safety manager. Only Mine Safety and Health Administration (MSHA)/NIOSH-certified respirators will be selected. Due to the nature of our business, the selection of the proper respirator can vary from site to site. For this reason, a systematic approach has been incorporated to assist in the selection process. The NIOSH respirator decision logic flow chart has been included for guidance.

In the selection of air purifying respirators (APRs), full face respirators provide a greater degree of protection. For cartridge selection, use the NIOSH Chart. For all Level B work, the regional health and safety manager must be contacted. The regional health and safety manager will audit the program annually.

SAMPLE RESPIRATOR INSPECTION RECORD.

SAMPLE RESPIRATOR INSPECTION RECORD

1. TYPE _____ 2. NO. _____

3. DEFECTS FOUND:

A. Facepiece _____

B. Inhalation Valve _____

C. Exhalation Valve Assembly _____

D. Headbands _____

E. Cartridge Holder _____

F. Cartridge/Canister _____

G. Filter _____

H. Harness Assembly _____

I. Hose Assembly _____

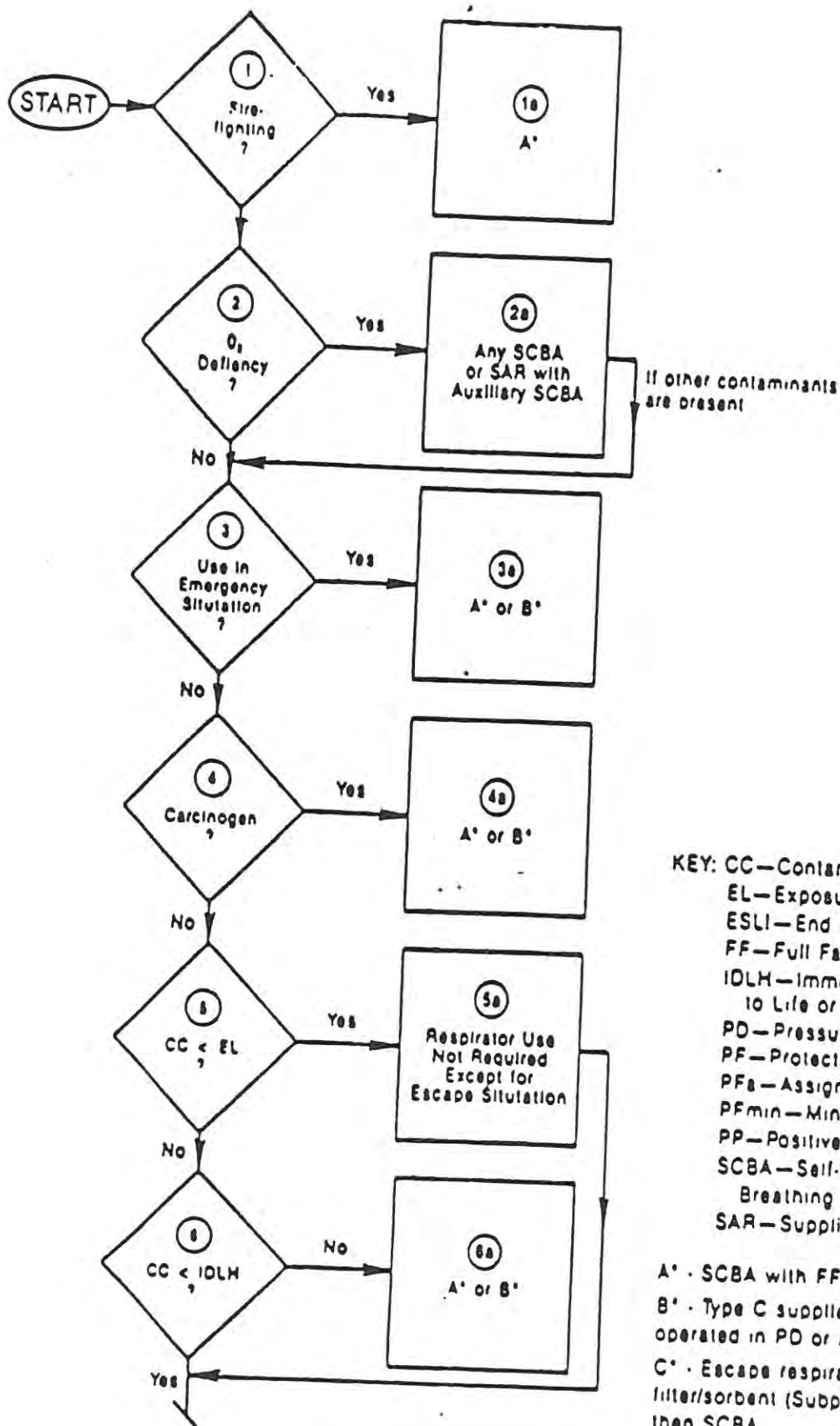
J. Speaking Diaphragm _____

K. Gaskets _____

L. Connections _____

M. Other Defects _____

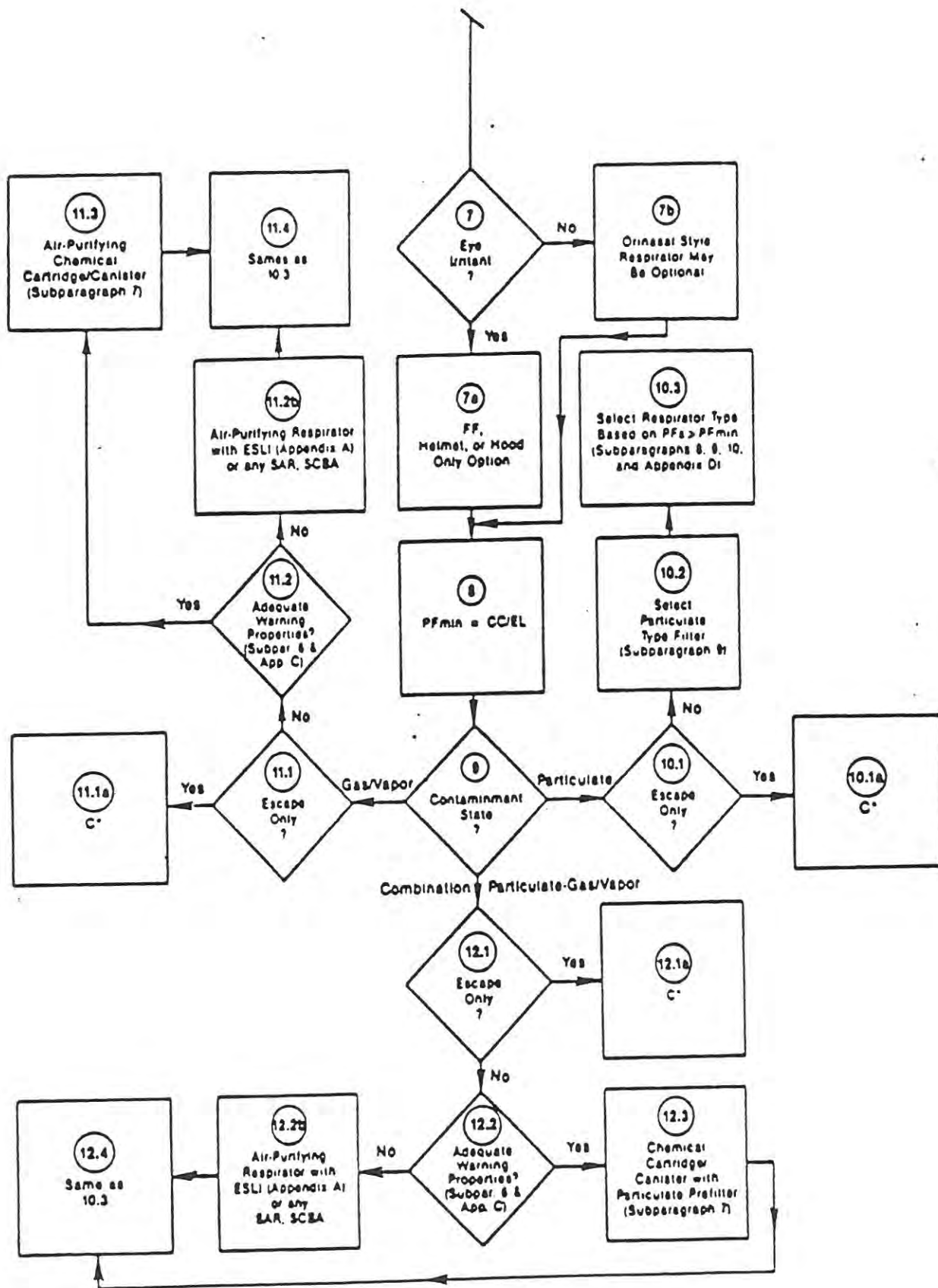
NIOSH RESPIRATOR DECISION LOGIC - FLOW CHART



KEY: CC—Contaminant Concentration
 EL—Exposure Limit
 ESLI—End of Service Life Indicator
 FF—Full Facepiece
 IDLH—Immediately Dangerous to Life or Health
 PD—Pressure Demand
 PF—Protection Factor
 PFa—Assigned PF
 PFmin—Minimum PF
 PP—Positive Pressure
 SCBA—Self-Contained Breathing Apparatus
 SAR—Supplied-Air Respirator

A* - SCBA with FF operated in PD or PP mode.
 B* - Type C supplied-air respirator (airline) operated in PD or PP mode with auxiliary SCBA.
 C* - Escape respirator or gas mask with appropriate filter/sorbent (Subparagraph 5); If O₂ deficient, then SCBA.

NIOSH RESPIRATOR DECISION LOGIC - FLOW CHART (Continued)



RESPIRATOR PROGRAM EVALUATION CHECKLIST.

The following is a sample respirator program evaluation checklist:

Respirator Program Evaluation Checklist

In general, the respirator program should be evaluated for each job or at least annually, with program adjustments, as appropriate, made to reflect the evaluation results. Program function can be separated into administration and operation.

A. Program Administration

- _____ (1) Is there a written policy which acknowledges employer responsibility for providing a safe and healthful workplace, and assigns program responsibility, accountability, and authority?
- _____ (2) Is program responsibility vested in one individual who is knowledgeable and who can coordinate all aspects of the program at the jobsite?
- _____ (3) Can feasible engineering controls or work practices eliminate the need for respirators?
- _____ (4) Are there written procedures/statements covering the various aspects of the respirator program, including:
 - _____ designation of an administrator;
 - _____ respirator selection;
 - _____ purchase of MSHA/NIOSH certified equipment;
 - _____ medical aspects of respirator usage;
 - _____ issuance of equipment;
 - _____ fitting;
 - _____ training;
 - _____ maintenance, storage, and repair;
 - _____ inspection;
 - _____ use under special condition; and
 - _____ work area surveillance?

B. Program Operation

(1) Respiratory protective equipment selection

- _____ Are work area conditions and worker exposures properly surveyed?

RESPIRATOR PROGRAM EVALUATION CHECKLIST. (Continued)

- _____ Are respirators selected on the basis of hazards to which the worker is exposed?
- _____ Are selections made by individuals knowledgeable of proper selection procedures?
- _____ (2) Are only certified respirators purchased and used; do they provide adequate protection for the specific hazard and concentration of the contaminant?
- _____ (3) Has a medical evaluation of the prospective user been made to determine physical and psychological ability to wear the selected respiratory protective equipment?
- _____ (4) Where practical, have respirators been issued to the users for their exclusive use, and are there records covering issuance?
- _____ (5) Respiratory protective equipment fitting
 - _____ Are the users given the opportunity to try on several respirators to determine whether the respirator they will subsequently be wearing is the best fitting one?
 - _____ Is the fit tested at appropriate intervals?
 - _____ Are those users who require corrective lenses properly fitted?
 - _____ Are users prohibited from wearing contact lenses when using respirators?
 - _____ Is the facepiece-to-face seal tested in a test atmosphere?
 - _____ Are workers prohibited from wearing respirators in contaminated work areas when they have facial hair or other characteristics may cause faceseal leakage?
- _____ (6) Respirator use in the work area
 - _____ Are respirators being worn correctly (i.e., head covering over respirator straps)?
 - _____ Are workers keeping respirators on all the time while in the work area?

RESPIRATOR PROGRAM EVALUATION CHECKLIST. (Continued)

- _____ Are respirators selected on the basis of hazards to which the worker is exposed?
- _____ Are selections made by individuals knowledgeable of proper selection procedures?
- _____ (2) Are only certified respirators purchased and used; do they provide adequate protection for the specific hazard and concentration of the contaminant?
- _____ (3) Has a medical evaluation of the prospective user been made to determine physical and psychological ability to wear the selected respiratory protective equipment?
- _____ (4) Where practical, have respirators been issued to the users for their exclusive use, and are there records covering issuance?
- _____ (5) Respiratory protective equipment fitting
 - _____ Are the users given the opportunity to try on several respirators to determine whether the respirator they will subsequently be wearing is the best fitting one?
 - _____ Is the fit tested at appropriate intervals?
 - _____ Are those users who require corrective lenses properly fitted?
 - _____ Are users prohibited from wearing contact lenses when using respirators?
 - _____ Is the facepiece-to-face seal tested in a test atmosphere?
 - _____ Are workers prohibited from wearing respirators in contaminated work areas when they have facial hair or other characteristics may cause faceseal leakage?
- _____ (6) Respirator use in the work area
 - _____ Are respirators being worn correctly (i.e., head covering over respirator straps)?
 - _____ Are workers keeping respirators on all the time while in the work area?

RESPIRATOR PROGRAM EVALUATION CHECKLIST. (Continued)

(7) Maintenance of respiratory protective equipment

Cleaning and Disinfecting

_____ Are respirators cleaned and disinfected after each use when different people use the same device, or as frequently as necessary for devices issued to individual users?

_____ Are proper methods of cleaning and disinfecting utilized?

Storage

_____ Are respirators stored in a manner so as to protect them from dust, sunlight, heat, excessive cold or moisture, or damaging chemicals?

_____ Are respirators stored properly in a storage facility so as to prevent them from deforming?

_____ Is storage in lockers and tool boxes permitted only if the respirator is in a carrying case or carton?

Inspection

_____ Are respirators inspected before and after each use and during cleaning?

_____ Are qualified individuals/users instructed in inspection techniques?

_____ Is respiratory protective equipment designated as "emergency use" inspected at least monthly (in addition to after each use)?

_____ Are SCBA incorporating breathing gas containers inspected weekly for breathing gas pressure?

_____ Is a record kept of the inspection of "emergency use" respiratory protective equipment?

Repair

_____ Are replacement parts used in repair those of the manufacturer of the respirator?

_____ Are repairs made by manufacturers or manufacturer-trained individuals?

RESPIRATOR PROGRAM EVALUATION CHECKLIST. (Continued)

- _____ Are respirators selected on the basis of hazards to which the worker is exposed?
- _____ Are selections made by individuals knowledgeable of proper selection procedures?
- _____ (2) Are only certified respirators purchased and used; do they provide adequate protection for the specific hazard and concentration of the contaminant?
- _____ (3) Has a medical evaluation of the prospective user been made to determine physical and psychological ability to wear the selected respiratory protective equipment?
- _____ (4) Where practical, have respirators been issued to the users for their exclusive use, and are there records covering issuance?
- _____ (5) Respiratory protective equipment fitting
 - _____ Are the users given the opportunity to try on several respirators to determine whether the respirator they will subsequently be wearing is the best fitting one?
 - _____ Is the fit tested at appropriate intervals?
 - _____ Are those users who require corrective lenses properly fitted?
 - _____ Are users prohibited from wearing contact lenses when using respirators?
 - _____ Is the facepiece-to-face seal tested in a test atmosphere?
 - _____ Are workers prohibited from wearing respirators in contaminated work areas when they have facial hair or other characteristics may cause faceseal leakage?
- _____ (6) Respirator use in the work area
 - _____ Are respirators being worn correctly (i.e., head covering over respirator straps)?
 - _____ Are workers keeping respirators on all the time while in the work area?

RAINBOW PASSAGE

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white lights into many beautiful colors. These take the shape of long, round arc, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for a pot of gold at the end of the rainbow.

APPENDIX H

"Tailgate" Safety Meeting Form



TAILGATE SAFETY MEETING

Client _____ Prepared by _____
Date _____ Project _____
Work Location _____ Project Number _____
Type of Work to be Done _____

SAFETY TOPICS PRESENTED

Chemical Hazards _____
Physical Hazards/Underground Utilities _____
Protective Clothing/Equipment _____
Special Equipment _____
Emergency Procedures _____
Hospital/Clinic _____ Phone () _____
Paramedic Phone () _____
Hospital Address _____
Other _____

ATTENDEES

NAME PRINTED

SIGNATURE

Meeting Conducted By _____
Name Printed _____ Signature _____

Note: This tailgate safety form must be completed daily.

APPENDIX I

OSHA 101 Form

SUPPLEMENTARY RECORD OF OCCUPATIONAL INJURIES AND ILLNESSES

EMPLOYER

1. Name _____
2. Mail Address _____
(No. and street) (City or town) (State)
3. Location, if different from mail address _____

INJURED OR ILL EMPLOYEE

4. Name _____ Social Security No. _____
(First name) (Middle name) (Last name)
5. Home Address _____
(No. and street) (City or town) (State)
6. Age _____ 7. Sex: Male _____ Female _____ (Check one)
8. Occupation _____
(Enter regular job title, not the specific activity he was performing at time of injury.)
9. Department _____
(Enter name of department or division in which the injured person is regularly employed, even though he may have been temporarily working in another department at the time of injury.)

THE ACCIDENT OR EXPOSURE TO OCCUPATIONAL ILLNESS

10. Place of accident or exposure _____
(No. and street) (City or town) (State)
If accident or exposure occurred on employer's premises, give address of plant or establishment in which it occurred. Do not indicate department or division within the plant or establishment. If accident occurred outside employer's premises at an identifiable address, give that address. If it occurred on a public highway or at any other place which cannot be identified by number and street, please provide place references locating the place of injury as accurately as possible.
11. Was place of accident or exposure on employer's premises? _____ (Yes or No)
12. What was the employee doing when injured? _____
(Be specific. If he was using tools or equipment or handling material, name them and tell what he was doing with them.)
13. How did the accident occur? _____
(Describe fully the events which resulted in the injury or occupational illness. Tell what happened and how it happened.
Name any objects or substances involved and tell how they were involved. Give full details on all factors which led or contributed to the accident.
Use separate sheet for additional space.)

OCCUPATIONAL INJURY OR OCCUPATIONAL ILLNESS

14. Describe the injury or illness in detail and indicate the part of body affected _____
(e.g. amputation of right index finger at second joint; fracture of ribs; lead poisoning; dermatitis of left hand, etc.)
15. Name the object or substance which directly injured the employee. (For example, the machine or thing he struck against or which struck him; the vapor or poison he inhaled or swallowed; the chemical or radiation which irritated his skin; or in cases of strains, hernias, etc., the thing he was lifting, pulling, etc.) _____
16. Date of injury or initial diagnosis of occupational illness _____ (Date)
17. Did employee die? _____ (Yes or No)

OTHER

18. Name and address of physician _____
19. If hospitalized, name and address of hospital _____

Date of report _____ Prepared by _____
Official position _____

APPENDIX J

Safety and Health Complaint Form

SAFETY AND HEALTH SUGGESTION FORM

DATE: _____
SITE: _____
COMPLAINANT: _____
COMPANY AFFILIATION: _____
SITE SAFETY AND HEALTH OFFICER: _____

PLEASE CHECK APPROPRIATE AREAS OF CONCERN

* NATURE OF SUGGESTION: _____

WORK AREAS _____
"RIGHT-TO-KNOW" _____
PERSONAL PROTECTION _____
LEVEL _____
SAFETY EQUIPMENT _____
EXPOSURE MONITORING _____
HEAT STRESS _____
HOUSEKEEPING _____
NOISE _____
SAFETY PRECAUTIONS _____
DECONTAMINATION _____

SANITATION _____
PERSONAL HYGIENE _____
EMERGENCY PROCEDURES _____
WASTE DISPOSAL _____
RECORDKEEPING _____
RESPIRATOR PROTECTION _____
WORKER TRAINING _____
PROTECTIVE CLOTHING _____
OTHER _____

SIGNATURE _____
DATE _____

APPENDIX K

Soil Sampling Logs

SOIL / SEDIMENT SAMPLING LOG

Project No. TF052020 Page 1 of 9
 Site Location Monsanto / Anniston
 Sample I.D. No. LF-1 Coded/Replicate No. LF-91
 Date 5/4/94 Time of Sampling: Begin 1355 End 1420
 Weather Cloudy, cool
 Site Description Various locations across the Landfill Quadrant 1 Area - nine locations

SAMPLING DATA

Collection Method Stainless steel spoon
 Depth 0-2" bts at each spot Moisture Content damp to moist
 Color orange to red brown Odor none
 Description Silty, clayey sand w/ gravel.

Analyses Required

Container Description

<u>PCB's (8080)</u>	From Lab <u>X</u> or G&M <u></u>
<u></u>	<u>1 x 250 ml glass</u>
<u></u>	<u></u>
<u></u>	<u></u>

Sample Monitoring (TIP, OVA, HNU, etc.) None

Remarks Composited from nine locations in LF Quad 1. See Figure 1-5 of SAP.

Sampler(s) J KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 2 of 9

Site Location Monsanto / Anniston

Sample I.D. No. LF-2 Coded/Replicate No. —

Date 5/4/94 Time of Sampling: Begin 1330 End 1355

Weather Overcast, cool

Site Description Various locations accross the Landfill Quadrant 2 Area.

(nine locations) from ~2" bts.

SAMPLING DATA

Collection Method Stainless steel spoon

Depth 0 to 2" at each location Moisture Content damp

Color brown to reddish brown Odor None

Description clayey, silty sand.

Analyses Required

PCB

Container Description

From Lab X or G&M —

1 x 250 ml glass

Sample Monitoring (TIP, OVA, HNU, etc.) None

Remarks Composited from the nine locations shown in

Quad 2 of Landfill - figure 1-5.

Sampler(s) T. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Subject No. TF0520020 Page 3 of 9
 Site Location Monsanto / Landfill area
 Sample I.D. No. LF-3 Coded/Replicate No. —
 Date 5/5/94 Time of Sampling: Begin 1640 End —
 Weather Sunny, cool, breezy
 Site Description Composite of nine locations across Landfill area 3, locations shown on Fig 1-5 of SAP.

SAMPLING DATA

Collection Method Stainless steel spoon
 Depth surface Moisture Content damp to dry
 Color brown to red brown Odor none
 Description silty, clayey SAND.

Analyses Required

Container Description

<u>PCB's (8080)</u> 	From Lab <u>Y</u> or G&M <u>—</u> <u>250 ml glass jar</u>
---------------------------------	--

Sample Monitoring (TIP, OVA, HNU, etc.) —
—
—

Remarks —

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 4 of 9

Site Location Monsanto

Sample I.D. No. LF-4 Coded/Replicate No. —

Date 5/5/94 Time of Sampling: Begin 1715 End —

Weather Sunny, clear, cool

Site Description Composite of nine locations across Quad 4 of landfill

See Fig 1-5 of SAP for exact locations

SAMPLING DATA

Collection Method S.S. spoon

Depth Surface Moisture Content damp to dry

Color brown Odor none

Description silty sand

Analyses Required

Container Description

PCB's (8080) From Lab X or G&M —

250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks —

Sampler(s) J. KILPATRICK

SOIL / SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 5 of 9
Site Location Monsanto
Sample I.D. No. AA-1 Coded/Replicate No. —
Date 5/5/94 Time of Sampling: Begin 1745 End —
Weather Sunny, cool.
Site Description Composite sample of nine locations shown on Figure

1-5 of SAP - area adjacent to CF-Quad 3.

SAMPLING DATA

Collection Method Stainless steel spoon
Depth surface Moisture Content damp to dry
Color brown to red brown Odor none
Description Silty sand

Analyses Required

Container Description

From Lab X or G&M —
PCB's (8080) (250 ml wide mouth glass)

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks —

Sampler(s) G. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Subject No. TF0520020 Page 6 of 9
Site Location Monserato
Sample I.D. No. AA-2 Coded/Replicate No. AA-92
Date 5/5/94 Time of Sampling: Begin 1800 End —
Weather Sunny, breezy
Site Description _____

Composite of nine locations in Adjacent Area #2
See Figure E-5 of SAP.

SAMPLING DATA

Collection Method S.S. Spoon
Depth Surface (0-1") Moisture Content dry
Color reddish brown Odor none
Description Silty, clayey sand, some grass

Analyses Required

Container Description

PCB's (8080)

From Lab X or G&M 250 ml wide mouth glass

Sample Monitoring (TIP, OVA, HNU, etc.) _____

Remarks collected duplicate (AA-92) here.

Sampler(s) J. Kirkpatrick

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520620 Page 7 of 9

Site Location MONSANTO

Sample I.D. No. AA-3 Coded/Replicate No. —

Date 5/6/94 Time of Sampling: Begin 1130 End —

Weather Sunny, cool, clear

Site Description From the Alabama Power Switch yard - Composite

of nine locations w/ the fenced area.

SAMPLING DATA

Collection Method S.S. Spoon

Depth surface (below the gravel) Moisture Content damp to dry

Color red/brown Odor none

Description Silty sand w/ gravel

Analyses Required

Container Description

From Lab X or G&M —

PCB's (8080) 250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks —

Sampler(s) E. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TFC520020 Page 8 of 9
Site Location Monsanto
Sample I.D. No. AA-4 Coded/Replicate No. —
Date 5/5/94 Time of Sampling: Begin 1819 End —
Weather sunny, breezy, cool
Site Description Composite of nine locations across Adjacent Area
Quad #4. See Fig. 1-5 of SAP for locations

SAMPLING DATA

Collection Method S.S. spoon
Depth Surface Moisture Content dry
Color brown to reddish brown Odor none
Description Silty sand and pebbles.

Analyses Required

Container Description

From Lab X or G&M —
PCB's (8080) 250 ml widemouth glass

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks —
Sampler(s) J. KILPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-10 B Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1725 End 1735
Weather Flt, 90's
Site Description Along western fence line of WEST END LANDFILL
100 ft South of FL-9

SAMPLING DATA

Collection Method S.S. auger
Depth 11 to 12 inches bls. Moisture Content dry to moist
Color reddish orange Odor None
Description clay w/ silt + sand, trace gravel. glass too.

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-10 A Coded/Replicate No. —
Date 6/22/94 Time of Sampling: Begin 1720 End 1725
Weather Hot 90's
Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-9 near south western
fence corner.

SAMPLING DATA

Collection Method S.S. spoon
Depth 0 to 1 inches Moisture Content dry
Color brown Odor none
Description Silt and clay w/ sand, moderately dense, gravel

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-9 B Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1705 End 1715
Weather Sunny hot 90's
Site Description Along western fence line of WEST END LANDFILL
100 ft South of FL-8

SAMPLING DATA

Collection Method SS auger
Depth 11 to 12 inches Moisture Content dry to moist
Color brown Odor none
Description silty clay w/ sand and gravel.

Analyses Required

Container Description

<u>PCB's</u>	From Lab <u>X</u> or G&M <u> </u>
<u> </u>	<u>8 oz. glass jar (widemouth)</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-9 A Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1700 End 1705
Weather sunny, hot, humid (90's)
Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-8

SAMPLING DATA

Collection Method S.S. spoon
Depth 0 to 1 inches Moisture Content dry
Color brown Odor none
Description Silty clay w/ sand, and grass, some gravel

Analyses Required

Container Description

PCB's From Lab X or G&M
 8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-8B Coded/Replicate No. —

Date 6/22/94 Time of Sampling: Begin 1640 End 1645

Weather Sunny, hot, humid (90's)

Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-7

SAMPLING DATA

Collection Method S.S. Auger

Depth 0 to 1 inch b/s. Moisture Content dry to moist

Color reddish orange Odor none

Description Silty, sandy, clay, dense,

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL / SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-8 A Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1630 End 1635

Weather Sunny, hot, humid (90's)

Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-7

SAMPLING DATA

Collection Method S.S. spoon

Depth 0 to 1 inch bks. Moisture Content dry

Color ~~pinkish~~ brown. Odor none

Description Sandy silt and clay, w/ roots + grass. some
black specs notes - not like tar.

Analyses Required

PCB's

Container Description

From Lab X or G&M

8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-7B Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1610 End 1620
Weather Sunny, hot, humid (90s)
Site Description Along western fence line of WEST END LANDFILL
100 ft South of FL-6

SAMPLING DATA

Collection Method S.S. auger
Depth 11 to 12 inches bbs. Moisture Content dry
Color Odor none
Description

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA
Remarks
Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-7 A Coded/Replicate No. —
Date 6/22/94 Time of Sampling: Begin 1605 End 1610
Weather sunny, hot, humid (90's)
Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-6

SAMPLING DATA

Collection Method S.S. spoon
Depth 0 to 1 inch bls. Moisture Content dry
Color brown Odor none
Description Sandy silt, clayey too, gravel & grass.

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-6 B Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1545 End 1555
Weather Sunny, hot, 90's
Site Description Along western fence line of WEST END LANDFILL
106 ft South of FL-5. Near drainage ditch

SAMPLING DATA

Collection Method S.S. auger
Depth 11 to 12 inches b/s. Moisture Content dry
Color reddish ~~orange~~ brown Odor none
Description silty sand to sandy silt, gravel + glass in
sample and above sample.

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-6 A Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1540 End 1545

Weather Sunny, hot, humid 90's

Site Description Along western fence line of WEST END LANDFILL
106 Ft south of FL-5. Next to drainage
ditch

SAMPLING DATA

Collection Method S.S. Spoon.

Depth 0 to 1 inch bts. Moisture Content dry

Color ~~pink~~ brown Odor none

Description 6/22/94
sandy silty red clay. w/ gravel & roots & grass.

Analyses Required

Container Description

<u>PCB's</u> 	From Lab <u>X</u> or G&M <u> </u> <u>8 oz. glass jar (widemouth)</u>
--------------------------	--

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-5B Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1510 End 1520

Weather

Site Description Along western fence line of WEST END LANDFILL
~ 94 ft south of FL-4

SAMPLING DATA

Collection Method stainless steel auger

Depth 11" to 12 inches b/s. Moisture Content dry

Color reddish brown. Odor none

Description Silty sand w/ lots of debris, (tires, china, plastic)
soil is stained ~~all~~ directly above the sample interval.

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-5 A Coded/Replicate No. FL-95A

Date 6/22/94 Time of Sampling: Begin 1500 End 1510

Weather Sunny, hot, 90's

Site Description Along western fence line of WEST END LANDFILL
~ 94 ft south of FL-4.

SAMPLING DATA

Collection Method Stainless steel spoon

Depth 0 to 1 inch b/s. Moisture Content dry

Color red + brown Odor none

Description Silty sand, well packed, dense, gravel + organic (roots)
material.

Analyses Required

PCB's

Container Description

From Lab X or G&M

8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL / SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-4 B Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1440 End 1450

Weather

Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-3

SAMPLING DATA

Collection Method Stainless steel auger

Depth 11 to 12 inches bls. Moisture Content dry

Color Red brown Odor none

Description Silty sand, dense, dry, some clay.

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Object No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-4 A Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1430 End 1440

Weather Sunny, hot, 90's, no breeze.

Site Description Along western fence line of WEST END LANDFILL
100 ft south of FL-3, along the western fence line

SAMPLING DATA

Collection Method Stainless steel spoon

Depth 0 to 1 inch b/s Moisture Content dry

Color brown Odor none

Description Silty sand, well packed, tight, some gravel.

Analyses Required

PCB's

Container Description

From Lab X or G&M

8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-3 B Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1355 End 1415

Weather Sunny, hot, 90's

Site Description Along western fence line of WEST END LANDFILL
(100' South of FL-2, inside fence line)

SAMPLING DATA

Collection Method S.S. auger

Depth 11 to 12 inches Bls. Moisture Content dry to moist

Color red. Odor none

Description sandy silt to silty sand, red, dense, some gravel

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-3 A Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1340 End 1350
Weather Sunny, 90's, hot
Site Description Along western fence line of WEST END LANDFILL
100' south of FL-2 inside fence line

SAMPLING DATA

Collection Method Stainless steel spoon
Depth 0 to 1 inches Moisture Content dry
Color reddish brown Odor none
Description Sandy silt to silty sand, ~~black~~ dry, packed.

Analyses Required

Container Description

<u>PCB's</u>	From Lab <u>X</u> or G&M <u> </u>
<u> </u>	<u>8 oz. glass jar (widemouth)</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-2B Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1310 End 1320

Weather

Site Description Along western fence line of WEST END LANDFILL
(170 ft South of FL-1)

SAMPLING DATA

Collection Method Stainless steel auger

Depth 11 to 12" bts. Moisture Content dry

Color red Odor none

Description Silty sand, w/ gravel.

Analyses Required

PCB's

Container Description

From Lab X or G&M

8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL / SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-2 A Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1250 End 1300

Weather Sunny, hot, 90's ↑

Site Description Along western fence line of WEST END LANDFILL
~ 110 ft South of FL-1(A+B) just north of the 2nd
gate entrance (on the south side of the entrance)

SAMPLING DATA

Collection Method S.S. spoon

Depth 0 to 1 inch b/s. Moisture Content dry

Color red / brown Odor none

Description silty sand

Analyses Required

PCB's

Container Description

From Lab X or G&M

8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of
Site Location ANNISTON ALABAMA
Sample I.D. No. FL-1 B Coded/Replicate No.
Date 6/22/94 Time of Sampling: Begin 1215 End 1220
Weather Hot, 90's F, no breeze
Site Description Along western fence line of WEST END LANDFILL
~ 70 ft from gravel road

SAMPLING DATA

Collection Method Stainless steel (S.S.) auger
Depth 11 to 12" inches 61s Moisture Content dry
Color red Odor none
Description Silty sand + clay, some gravel.

Analyses Required

PCB's

Container Description

From Lab X or G&M
8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

SOIL / SEDIMENT SAMPLING LOG

Project No. TF0525020 MONSANTO Page of

Site Location ANNISTON ALABAMA

Sample I.D. No. FL-1 A Coded/Replicate No.

Date 6/22/94 Time of Sampling: Begin 1200 End 1205

Weather

Site Description Along western fence line of WEST END LANDFILL

SAMPLING DATA

Collection Method stainless steel (S.S.) spoon

Depth 0 to 1 inch b/s. Moisture Content dry

Color red brown. Odor none

Description Silty sand w/ gravel and organic material (roots, etc.)

Analyses Required

PCB's

Container Description

From Lab X or G&M

8 oz. glass jar (widemouth)

Sample Monitoring (TIP, OVA, HNU, etc.) NA

Remarks

Sampler(s) J. KIRKPATRICK

APPENDIX L

Laboratory Analytical Data

GERAGHTY & MILLER, INC.
FAX TRANSMITTAL SHEETDATE: 4/8/94

DELIVER TO:

Frinda Wolfe

FROM:

Cynthia Lee, Geraghty & Miller - Tampa, FLTelephone: 813-264-3448
FAX: 813-963-1447

TOTAL NUMBER OF PAGES:

PROJECT NUMBER: TF0525.020 PROJECT NAME: Montanto

SUBJECT:

As a followup to my earlier fax, also indicate your preferred method of analysis for Chlorobenzilate, acc, prec, and DL data for soil and water, and whether this analyte can be included in 8270 analyses. If 8270 is acceptable, indicate acc, prec and DL's for Chlorobenzilate in water and soil

	POL $\mu\text{g}/\text{kg}$		Pesticide		Accuracy	
	H_2O	SOIL	H_2O	SOIL	H_2O	SOIL
Chlorobenzilate 8080	0.5	17	50-150	50-150	<40	<40

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE MESSAGE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE, AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE.

GERAGHTY & MILLER, INC.
FAX TRANSMITTAL SHEETDATE: 4/8/94

DELIVER TO:

Janette Long / Linda Wolfe

FROM:

Cynthia Lee, Geraghty & Miller - Tampa, FLTelephone: 813-264-3448
FAX: 813-963-1447TOTAL NUMBER OF PAGES: PROJECT NUMBER: PROJECT NAME:

SUBJECT:

Thanks for your fax. Please indicate whether you can perform the following analyses and, if so, indicate acc, prec, or data.

Method		Soil ($\mu\text{g/Kg}$)			Water ($\mu\text{g/L}$)		
		Acc	Prec	DL	Acc	Prec	DL
8270	Reponse	10-150%	<50%	330	10-150%	<50	10
8270	diphenylamine/	10-150%	<50%				
	N-nitroso -	27-110	6-35	330	10-150%	<50%	10
	diphenylamine	10-150%	<50%	330	10-150%	<50%	10
	1,4-dioxane	10-150%	<50%	330	10-150%	<50%	10

ThankCje

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Ground Water

Engineering

Hydrocarbon

Remediation

Education

FAX Transmittal Sheet

Date: 5-6-94

Please deliver TO:

BOBBIE HELLER
SAVANNAH LABORATORIES

FROM:

LESLIE HERD

If transmission is interrupted or
incomplete, please contact:

Total Number of Pages (including cover sheet): 1

Project No.: TFO525.020

Project Name: MONSANTO

Reply by fax to the Main Floor: (813) 961-2599

Message:

Bobbie - per our conversation this
morning, please note that sample
bottle SL-91 is correctly labelled and
that the COC which read SL-19 was
incorrect - the COC should be corrected
to read SL-91. Thank you for your
assistance.

Leslie

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IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND
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SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43366
Revised 7/12/94
Received: 23 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT60)
Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#		
43366-1	FL-1A	06-22-94/1200	GMT60		
43366-2	FL-2A	06-22-94/1250	GMT60		
43366-3	FL-3A	06-22-94/1350	GMT60		
43366-4	FL-4A	06-22-94/1440	GMT60		
43366-5	FL-5A	06-22-94/1510	GMT60		
PARAMETER	43366-1	43366-2	43366-3	43366-4	43366-5
PCB's (8080)					
Aroclor-1016, mg/kg dw	<3.8	<7.5	<3.5	<3.9	<3.8
Aroclor-1221, mg/kg dw	<7.6	<15	<7.2	<7.9	<7.8
Aroclor-1232, mg/kg dw	<3.8	<7.5	<3.5	<3.9	<3.8
Aroclor-1242, mg/kg dw	<3.8	<7.5	<3.5	<3.9	<3.8
Aroclor-1248, mg/kg dw	6.4	29	<3.5	<3.9	<3.8
Aroclor-1254, mg/kg dw	<3.8	<7.5	<3.5	18	<3.8
Aroclor-1260, mg/kg dw	6.4	90	7.4	18	6.5
Surrogate-TCX	*F33	*F33	*F33	*F33	*F33
Date Extracted	06.24.94	06.24.94	06.24.94	06.24.94	06.24.94
Date Analyzed	06.28.94	06.28.94	06.28.94	06.28.94	06.28.94
Percent Solids, %	88	88	93	85	86

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#		
43366-6	FL-6A	06-22-94/1545	GMT60		
43366-7	FL-7A	06-22-94/1610	GMT60		
43366-8	FL-8A	06-22-94/1635	GMT60		
43366-9	FL-9A	06-22-94/1705	GMT60		
43366-10	FL-10A	06-22-94/1725	GMT60		
PARAMETER	43366-6	43366-7	43366-8	43366-9	43366-10
PCB's (8080)					
Aroclor-1016, mg/kg dw	<1.0	<1.0	<6.9	<1.0	<2.1
Aroclor-1221, mg/kg dw	<1.0	<1.4	<14	<1.0	<4.2
Aroclor-1232, mg/kg dw	<1.0	<1.0	<6.9	<1.0	<2.1
Aroclor-1242, mg/kg dw	<1.0	<1.0	<6.9	<1.0	<2.1
Aroclor-1248, mg/kg dw	<1.0	<1.0	8.9	<1.0	<2.1
Aroclor-1254, mg/kg dw	<1.0	<1.0	21	0.96	3.7
Aroclor-1260, mg/kg dw	<1.0	2.9	32	1.6	6.4
Surrogate-TCX	173 %	*F33	*F33	98 %	*F33
Date Extracted	06.24.94	06.24.94	06.24.94	06.24.94	06.24.94
Date Analyzed	06.28.94	06.28.94	06.28.94	06.29.94	06.29.94
Percent Solids, %	90	95	96	83	80

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43366
Revised 7/12/94
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Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT60)
Sampled By: Client

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE/ TIME SAMPLED	SDG#
43366-11	FL-95A	06-22-94	GMT60
PARAMETER	43366-11		
PCB's (8080)			
Aroclor-1016, mg/kg dw	<1.9		
Aroclor-1221, mg/kg dw	<3.8		
Aroclor-1232, mg/kg dw	<1.9		
Aroclor-1242, mg/kg dw	<1.9		
Aroclor-1248, mg/kg dw	<1.9		
Aroclor-1254, mg/kg dw	3.2		
Aroclor-1260, mg/kg dw	8.1		
Surrogate-TCX	*F33		
Date Extracted	06.24.94		
Date Analyzed	06.29.94		
Percent Solids, %	88		

SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43366

Revised 7/12/94

Received: 23 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT60)

Sampled By: Client

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
43366-12	Matrix Spike/Matrix Spike Dup Result (FL-1A)					GMT60
43366-13	MS Expected Value					GMT60
43366-14	MS/MSD % Recovery					GMT60
43366-15	MS/MSD % Recovery Limits					GMT60
43366-16	MS % RPD (Limit)					GMT60
PARAMETER	43366-12	43366-13	43366-14	43366-15	43366-16	
PCB's (8080)						
Aroclor-1016, mg/kg dw	*F62	0.0832	*F62	69-107 %	*F62 (<21)%	
Aroclor-1260, mg/kg dw	*F62	0.0832	*F62	58-122 %	*F62 (<20)%	
Surrogate-TCX	*F33	---	---	---	---	
Date Extracted	06.24.94	---	---	---	---	
Date Analyzed	06.29.94	---	---	---	---	

LOG NO: S4-43366
 Revised 7/12/94
 Received: 23 JUN 94

Ms. Leslie Herd
 Geraghty & Miller, Inc.
 14497 North Dale Mabry Hwy, Suite 115
 Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT60)
 Sampled By: Client

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
43366-17	Detection Limits					GMT60
43366-18	Method Blank					GMT60
43366-19	Lab Control Standard (LCS) Result					GMT60
43366-20	LCS Expected Value					GMT60
43366-21	LCS % Recovery					GMT60
PARAMETER	43366-17	43366-18	43366-19	43366-20	43366-21	
PCB's (8080)						
Aroclor-1016, mg/kg dw	0.033	<0.033	0.105	0.0832	126 %	
roclor-1221, mg/kg dw	0.067	<0.067	---	---	---	
roclor-1232, mg/kg dw	0.033	<0.033	---	---	---	
Aroclor-1242, mg/kg dw	0.033	<0.033	---	---	---	
Aroclor-1248, mg/kg dw	0.033	<0.033	---	---	---	
Aroclor-1254, mg/kg dw	0.033	<0.033	---	---	---	
Aroclor-1260, mg/kg dw	0.033	<0.033	0.107	0.0832	129 %	
Surrogate-TCX	---	88 %	91 %	---	---	
Date Extracted	---	06.24.94	06.24.94	---	---	
Date Analyzed	---	06.28.94	06.28.94	---	---	

Methods: EPA SW-846

*F33 = Surrogates were not recovered due to sample dilution required.

*F62 = Matrix spikes were not recovered due to sample dilution required prior to analysis.

LOG NO: S4-43366
Revised 7/12/94
Received: 23 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT60)
Sampled By: Client

REPORT OF RESULTS

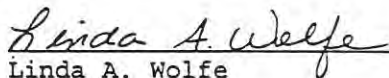
Page 6

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
43366-22	LCS % Recovery Limits	GMT60
PARAMETER	43366-22	
PCB's (8080)		
Aroclor-1016	69-107 %	
Aroclor-1260	58-122 %	

Methods: EPA SW-846

*F33 = Surrogates were not recovered due to sample dilution required.

*F62 = Matrix spikes were not recovered due to sample dilution required prior to analysis.


Linda A. Wolfe

CASE NARRATIVE

SDG GMT60
SL PROJECT S443366

PCB in Soil Fraction

The following samples were analyzed following SW-846 Method 8080.

SL No.	Client ID	Matrix
S443366-1	FL-1A	Soil
S443366-2	FL-2A	Soil
S443366-3	FL-3A	Soil
S443366-4	FL-4A	Soil
S443366-5	FL-5A	Soil
S443366-6	FL-6A	Soil
S443366-7	FL-7A	Soil
S443366-8	FL-8A	Soil
S443366-9	FL-9A	Soil
S443366-10	FL-10A	Soil
S443366-11	FL-95A	Soil

The samples for this SDG were extracted on June 24, 1994.

Quality control consisted of a method blank and lab control (blank spike) for each extraction batch.

Sample S443366-12 (FL-1A) was used as the SDG matrix spike/matrix spike duplicate. This sample extract was analyzed at 1:100 dilution in order to quantify target analytes. At this dilution, matrix spike compounds were below the practical quantitation limits. Thus, the results for the matrix spike/matrix spike duplicate have been flagged with the "*F33" data qualifier.

TCMX surrogate recovery for sample S443366-6 (FL-6A) at 173% exceeded control limits. It is probable that this sample was spiked twice with the surrogate spiking solution. However, since no target analytes were detected above the client-requested reporting limit, data quality was not impacted.

The proportion of higher chlorinated PCBs (octa --> decachlorobiphenyls) is greater in these sample extracts than would be expected from the presence of Aroclor 260. This may be due to "weathering" or to the presence of an Aroclor mixture or PCBs of a higher chlorination level.

As per client request, no results below 1 mg/kg have been reported.

000001

TEMPERATURE RECORD

Project Reference:
TF0525020

SL Log No.:	
	54-43366

Date Received:	6/23/94
----------------	---------

Chain of Custody Number

Cooler Temperature

cooler 1

2.1°



MEMORANDUM

TO: Linda Wolfe
Savannah Laboratories, Savannah, Georgia

FROM: Leslie Herd *Leslie*
Geraghty & Miller, Tampa, Florida

RE: Additional PCB Analyses
Monsanto Chemical Company, Anniston, Alabama
Geraghty & Miller Project No. TF525.020

CC: Frank Corden, Geraghty & Miller
Peter Palmer, Geraghty & Miller

DATE: June 21, 1994

Per our conversation yesterday, the following additional solid and liquid samples will be shipped to your laboratory on Wednesday, June 22, 1994 for the following analyses:

Liquid samples WEL-3, WEL-93, EB-1

- 1) Analyze a portion of the sample for total PCBs using USEPA Method 8080.
- 2) Filter a portion of the sample through a 45 micron glass fiber filter and analyzed for dissolved PCBs using USEPA Method 8080.

Solid samples FL-1A through FL-12b, FL-96A and FL-96B

- 1) Analyze all of the "A" samples first for PCBs using USEPA Method 8080.
- 2) Report results in milligrams per kilogram (mg/kg), with a reporting limit of 1 mg/kg.
- 3) If any of the "A" samples have positive results for PCBs, analyze the "B" sample from that location. For example, if sample FL-3A contains PCBs, analyze sample FL-3B.

Please report the results (LIMS report) back to me within 1 week, per our request for expedited turnaround. The Level III data package can be sent within 4 weeks. I understand that the unit costs for the quick analysis is \$240 per solid sample and \$200 per liquid sample.

Thank you for your assistance with this project. If you have any questions regarding this request, please do not hesitate to call me at (813) 961-1921.





CHAIN-OF-CUSTODY RECORD

Page 1 of 2

G. & M.

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

SAMPLE BOTTLE / CONTAINER DESCRIPTION

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

22

Relinquished by: _____
Received by: _____

Organization:
Organization:

Geoghegan + Miller
54-43366

Date 6/22/94 Time 2:00

Date 6/23/94 Time 1:12 pm

Seal Intact?
☒ Yes ☐ No ☐ N/A

Relinquished by: _____
Received by: _____

Organization:
Organization:

RUSH

Date 1/1 Time _____

Date 11 Time

Seal Intact?
Yes No N/A

Special Instructions/Remarks:

* NOTE - DO NOT ANALYZE ANY "B" SAMPLES (EXAMPLE = FL-8B) UNLESS HITS WERE DETECTED IN THE "A" SAMPLE AND AUTHORIZATION GIVEN BY JESLIE HERD

Delivery Method: ☐ In Person

☒ Common Carrier

FEDEX
SPECIES

☐ Lab Courier☐ Other

SPECIFY

Project Number TF0525020
 Project Location MONSANTO/ANNISTON
 Laboratory SAVANNAH
 Sampler(s)/Affiliation J. KIEKPATRICK
G+M

SAMPLE IDENTITY		Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION								TOTAL
FL-1 A	S		7/22/94 1200		EPA 8080 (AB's) 8 oz. clear 91.5% 1/24 on ice								1
FL-1 B	S		1210										1
FL-2 A	S		1250										1
FL-2 B	S		1310										1
FL-3 A	S		1350										1
FL-3 B	S		1415										1
FL-4 A	S		1440										1
FL-4 B	S		1450										1
FL-5 A	S		1510										1
FL-5 B	S		1520										1
FL-6 A	S		1545										1
FL-6 B	S		1555										1
FL-7 A	S		1610										1
FL-7 B	S		1620										1
FL-8 A	S		1635										1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

See pg 2

Relinquished by: <u>[Signature]</u>	Organization: <u>Craghty + Miller</u>	Date: <u>6/22/94</u> Time: <u>2800</u>	Seal Intact? Yes ☒ No ☐ N/A
Received by: <u>L. Bonds</u>	Organization: <u>54-43366</u>	Date: <u>6/23/94</u> Time: <u>1:12 pm</u>	
Relinquished by: _____	Organization: <u>RUSH</u>	Date: <u>1/1</u> Time: _____	Seal Intact? Yes ☐ No ☐ N/A
Received by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	

Special Instructions/Remarks:

*** DO NOT ANALYZE ANY "B" SAMPLES UNLESS AUTHORIZED BY
LESLIE HERD. REPORT "A" SAMPLE RESULTS TO L. HERD.**

Delivery Method: ☐ In Person ☒ Common Carrier FED EX ☐ Lab Courier ☐ Other _____

SPECIFY

SPECIFY

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

3102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7959 • Fax (912) 352-0165

LOG NO: S4-43335

Received: 22 JUN 94

Purchase Order: 31398

Requisition: WEL 94-2

Mr. Jerry Hopper
Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201Project: SDG#ANN03/WEL-3 (PCB)
Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED	SDG#
43335-1	WEL-3	06-21-94/0820	ANN03
PARAMETER	43335-1		
Pesticides in TCLP Extract (8080)			
Aroclor-1016, ug/l		<1.0	
Aroclor-1221, ug/l		<2.0	
Aroclor-1254, ug/l		<1.0	
Aroclor-1248, ug/l		<1.0	
Aroclor-1242, ug/l		<1.0	
Aroclor-1260, ug/l		<1.0	
Aroclor-1232, ug/l		<1.0	
Surrogate-TCX % R		86 %	
Extraction Date (Extract)		06.24.94	
Date Analyzed		06.29.94	

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43335

Mr. Jerry Hopper
Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201

Received: 22 JUN 94

Purchase Order: 31398

Requisition: WEL 94-2

Project: SDG#ANN03/WEL-3 (PCB)

Sampled By: Client

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
43335-2	Extract Fluid Method Blank	ANN03
PARAMETER	43335-2	
Pesticides in TCLP Extract (8080)		
Aroclor-1016, ug/l	<1.0	
Aroclor-1221, ug/l	<2.0	
Aroclor-1254, ug/l	<1.0	
Aroclor-1248, ug/l	<1.0	
Aroclor-1242, ug/l	<1.0	
Aroclor-1260, ug/l	<1.0	
Aroclor-1232, ug/l	<1.0	
Surrogate-TCX % R	78 %	
Extraction Date (Extract)	06.24.94	
Date Analyzed	06.28.94	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43335

Mr. Jerry Hopper
Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201

Received: 22 JUN 94

Purchase Order: 31398

Requisition: WEL 94-2

Project: SDG#ANN03/WEL-3 (PCB)

Sampled By: Client

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
43335-3	Matrix Spike WEL-3 (% Recovery)	ANN03
PARAMETER	43335-3	
Pesticides in TCLP Extract (8080)		
Aroclor-1016, ug/l	132 %	
Aroclor-1260, ug/l	127 %	
Surrogate-TCX	89 %	
Extraction Date (Extract)	06.24.94	
Date Analyzed	06.29.94	

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43335

Received: 22 JUN 94

Purchase Order: 31398

Requisition: WEL 94-2

Project: SDG#ANN03/WEL-3 (PCB)

Sampled By: Client

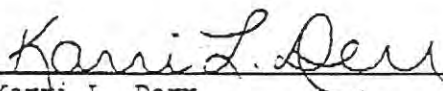
Mr. Jerry Hopper
Monsanto Chemical Company
300 Birmingham Highway
Anniston, Alabama 36201

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
43335-4	Analyst Initials	ANN03
PARAMETER	43335-4	
Pesticides in TCLP Extract (8080)		
Aroclor-1016	JS	
Aroclor-1221	JS	
Aroclor-1254	JS	
Aroclor-1248	JS	
Aroclor-1242	JS	
Aroclor-1260	JS	
Aroclor-1232	JS	

Methods: EPA SW-846


Karri L. Derr

Final Page Of Report

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43366A

Received: 30 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT61)
Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#		
43366A-1	FL-1B	06-22-94	GMT61		
43366A-2	FL-2B	06-22-94	GMT61		
43366A-3	FL-3B	06-22-94	GMT61		
43366A-4	FL-4B	06-22-94	GMT61		
43366A-5	FL-5B	06-22-94	GMT61		
PARAMETER	43366A-1	43366A-2	43366A-3	43366A-4	43366A-5
PCB's (8080)					
Aroclor-1016, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260, mg/kg dw	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate-TCX	81 %	79 %	67 %	73 %	66 %
Date Extracted	07.01.94	07.01.94	07.01.94	07.01.94	07.01.94
Date Analyzed	07.07.94	07.07.94	07.07.94	07.07.94	07.07.94
Percent Solids, %	89	88	88	88	90

Received: 30 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT61)
Sampled By: Client

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
43366A-6	FL-8B	06-22-94	GMT61
43366A-7	FL-9B	06-22-94	GMT61
43366A-8	FL-10B	06-22-94	GMT61
PARAMETER	43366A-6	43366A-7	43366A-8
PCB's (8080)			
Aroclor-1016, mg/kg dw	<1.0	<1.0	<1.0
Aroclor-1221, mg/kg dw	<1.0	<1.0	<1.0
Aroclor-1232, mg/kg dw	<1.0	<1.0	<1.0
Aroclor-1242, mg/kg dw	<1.0	<1.0	<1.0
Aroclor-1248, mg/kg dw	<1.0	<1.0	<1.0
Aroclor-1254, mg/kg dw	<1.0	<1.0	<1.0
Aroclor-1260, mg/kg dw	<1.0	<1.0	<1.0
Surrogate-TCX	71 %	81 %	54 %
Date Extracted	07.01.94	07.01.94	07.01.94
Date Analyzed	07.07.94	07.07.94	07.07.94
Percent Solids, %	88	90	83

Received: 30 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT61)
Sampled By: Client

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#			
43366A-9	Matrix Spike/Matrix Spike Dup Result (FL-1B)	GMT61			
43366A-10	MS Expected Value	GMT61			
43366A-11	MS/MSD % Recovery	GMT61			
43366A-12	MS/MSD % Recovery Limits	GMT61			
43366A-13	MS % RPD (Limit)	GMT61			
PARAMETER	43366A-9	43366A-10	43366A-11	43366A-12	43366A-13
PCB's (8080)					
Aroclor-1016, mg/kg dw	0.0899/*	0.0936	96/95 %	69-107 %	1.0(<21) %
Aroclor-1260, mg/kg dw	0.0740/*	0.0936	79/70 %	58-122 %	12(<20) %
Surrogate-TCX	77/81 %	---	---	---	---
Date Extracted	07.01.94	---	---	---	---
Date Analyzed	07.07.94	---	---	---	---

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT61)
Sampled By: Client

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#				
43366A-14	Detection Limits	GMT61				
43366A-15	Method Blank	GMT61				
43366A-16	Lab Control Standard (LCS) Result	GMT61				
43366A-17	LCS Expected Value	GMT61				
43366A-18	LCS % Recovery	GMT61				
PARAMETER	43366A-14	43366A-15	43366A-16	43366A-17	43366A-18	
PCB's (8080)						
Aroclor-1016, mg/kg dw	1.0	<1.0	0.0715	0.0833	86 %	
Aroclor-1221, mg/kg dw	1.0	<1.0	---	---	---	
Aroclor-1232, mg/kg dw	1.0	<1.0	---	---	---	
Aroclor-1242, mg/kg dw	1.0	<1.0	---	---	---	
Aroclor-1248, mg/kg dw	1.0	<1.0	---	---	---	
Aroclor-1254, mg/kg dw	1.0	<1.0	---	---	---	
Aroclor-1260, mg/kg dw	1.0	<1.0	0.0721	0.0833	86 %	
Surrogate-TCX	---	86 %	79 %	---	---	
Date Extracted	---	07.01.94	07.01.94	---	---	
Date Analyzed	---	07.06.94	07.06.94	---	---	

Methods: EPA SW-846

*Matrix Spike Dup Result: Aroclor-1016 = 0.0889,
Aroclor-1260 = 0.0660 mg/kg dw.

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-43366A

Received: 30 JUN 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: TF0525020/Monsanto (SDG GMT61)
Sampled By: Client

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
43366A-19	LCS % Recovery Limits	GMT61
PARAMETER	43366A-19	
PCB's (8080)		
Aroclor-1016	69-107 %	
Aroclor-1260	58-122 %	

Methods: EPA SW-846

*Matrix Spike Dup Result: Aroclor-1016 = 0.0889,
Aroclor-1260 = 0.0660 mg/kg dw.

Linda A. Wolfe
Linda A. Wolfe

Final Page Of Report

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA

CASE NARRATIVE

SDG GMT61
SL PROJECT S443366A

Polychlorinated Biphenyl (PCB) Fraction

The following samples were analyzed according to SW-846 Method 8080 and the Savannah Laboratories Quality Assurance Plan.

SL No.	Client ID	Matrix
S443366A-1	FL-1B	Solid
S443366A-2	FL-2B	Solid
S443366A-3	FL-3B	Solid
S443366A-4	FL-4B	Solid
S443366A-5	FL-5B	Solid
S443366A-6	FL-8B	Solid
S443366A-7	FL-9B	Solid
S443366A-8	FL-10B	Solid

Samples of SDG GMT61 were extracted on July 1, 1994 and analyzed on July 7, 1994.

Quality control consisted of a lab blank, lab spike and lab spike duplicate, with sample S443366A-1 (FL-1B) used as the SDG matrix spike/matrix spike duplicate.

Detection limits were reported as 1.0 mg/kg dw as per client's request.

All quality control parameters were within control limits.

000001



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Project Number TE0525020Project Location MONSANTO / AMMISTONLaboratory SavannahSampler(s)/Affiliation J. KIRKPATRICK
G+M

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
FL-8 B	S	6/21/94 6:15	
FL-9 A	S	1705	
FL-9 B	S	1715	
FL-10 A	S	1725	
FL-10 B	S	1735	
FL-95 A	S	↓	
TEMP.	L	—	

PCB: TEPA 8030
B 02. clear glass
for GC useTEMP
BLANKBlank
1

SAMPLE BOTTLE / CONTAINER DESCRIPTION

TOTAL

Total No. of Bottles/
Containers

22

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: J. Kirkpatrick
Received by: L. D. DyerOrganization: Gaghty + Miller
Organization: 54-43366Date 6.22.94 Time 2:00
Date 6.23.94 Time 1:12 pmSeal Intact?
Yes No N/ARelinquished by: _____
Received by: _____Organization: **RUSH**
Organization: _____Date 1 1 Time _____
Date 1 1 Time _____Seal Intact?
Yes No N/A

Special Instructions/Remarks:

* NOTE - DO NOT ANALYZE ANY "B" SAMPLES (EXAMPLE = FL-8B) UNLESS
HITS WERE DETECTED IN THE "A" SAMPLE AND AUTHORIZATION GIVEN BY LESLIE HER

☐ Lab Courier☐ Other

SPECIFY

Smallprint 91176A



Laboratory Task Order No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of 2

Project Number TF0525020Project Location MONSANTO/ANNISTONLaboratory SAVANAHSampler(s)/Affiliation J. KIEKPATRICKG+M

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

SAMPLE BOTTLE / CONTAINER DESCRIPTION								TOTAL
FL-1 A	S	7/22/94 12:00						1
FL-1 B	S	12:10						1
FL-2 A	S	12:50						1
FL-2 B	S	13:10						1
FL-3 A	S	13:50						1
FL-3 B	S	14:15						1
FL-4 A	S	14:40						1
FL-4 B	S	14:50						1
FL-5 A	S	15:10						1
FL-5 B	S	15:20						1
FL-6 A	S	15:45						1
FL-6 B	S	15:55						1
FL-7 A	S	16:10						1
FL-7 B	S	16:20						1
FL-8 A	S	16:35						1
Total No. of Bottles/Containers								See pg 2

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: J. KieckpatrickReceived by: L. Bonds

Relinquished by: _____

Received by: _____

Organization: G. Aughty & MillerOrganization: 64-43366Organization: RUSH

Organization: _____

Date 6/22/94 Time 2:00Date 6/23/94 Time 1:12 pmDate 1/1 Time _____Date 1/1 Time _____Seal Intact?
☒ Yes ☐ No ☐ N/ASeal Intact?
☐ Yes ☐ No ☐ N/A

Special Instructions/Remarks:

* DO NOT ANALYZE ANY "B" SAMPLES UNLESS AUTHORIZED BY
LESLIE HERD. REPORT "A" SAMPLE RESULTS TO L. HERD.

☐ Lab Courier☐ Other

SPECIFY

Smallprint 91 1768



MEMORANDUM

TO: Linda Wolfe
Savannah Laboratories, Savannah, Georgia

FROM: Leslic Herd *Leslic*
Geraghty & Miller, Tampa, Florida

RE: Additional PCB Analyses
Monsanto Chemical Company, Anniston, Alabama
Geraghty & Miller Project No. TF525.020

CC: Frank Corden, Geraghty & Miller
Peter Palmer, Geraghty & Miller

DATE: June 21, 1994

Per our conversation yesterday, the following additional solid and liquid samples will be shipped to your laboratory on Wednesday, June 22, 1994 for the following analyses:

Liquid samples WEL-3, WEL-93, EB-1

- 1) Analyze a portion of the sample for total PCBs using USEPA Method 8080.
- 2) Filter a portion of the sample through a 45 micron glass fiber filter and analyzed for dissolved PCBs using USEPA Method 8080.

Solid samples FL-1A through FL-12b, FL-96A and FL-96B

- 1) Analyze all of the "A" samples first for PCBs using USEPA Method 8080.
- 2) Report results in milligrams per kilogram (mg/kg), with a reporting limit of 1 mg/kg.
- 3) If any of the "A" samples have positive results for PCBs, analyze the "B" sample from that location. For example, if sample FL-3A contains PCBs, analyze sample FL-3B.

Please report the results (LIMS report) back to me within 1 week, per our request for expedited turnaround. The Level III data package can be sent within 4 weeks. I understand that the unit costs for the quick analysis is \$240 per solid sample and \$200 per liquid sample.

Thank you for your assistance with this project. If you have any questions regarding this request, please do not hesitate to call me at (813) 961-1921.



TEMPERATURE RECORD

Project Reference:

SL Log No.:

Date Received:

Monsanto - G & M

54-42413

5-7-94

[illegible]

CASE NARRATIVE

SDG#GMT58
SL Project S442363, S442413

Polychlorinated Biphenyl (PCB) Fraction

The following samples were analyzed according to SW-846 Method 8080.

SL No.	Client ID	Matrix
S442363-12	LF-2	Solid
S442363-13	LF-1	Solid
S442363-14	LF-91	Solid
S442413-3	ST-1	Solid
S442413-4	SED-1	Solid
S442413-5	SED-2	Solid
S442413-6	SED-3	Solid
S442413-7	SED-4	Solid
S442413-8	SED-5	Solid
S442413-9	SED-6	Solid
S442413-10	SED-7	Solid
S442413-11	SED-8A	Solid
S442413-12	SED-8B	Solid
S442413-13	SED-95	Solid
S442413-14	SUB-1	Solid
S442413-30	Equipment Blank	Liquid

The samples with Savannah Laboratories' numbers S442363 were extracted on May 12, 1994 and were analyzed beginning May 28, 1994. The soil samples with Savannah Laboratories' number S442413 were extracted on May 27, 1994. The liquid sample was extracted on May 11, 1994 and analyzed May 21, 1994.

Quality control consisted of a lab blank and lab spike for each matrix and date, with sample S442413-4 (SED-1) used as the SDG matrix spike/matrix spike duplicate.

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Sample S442413-7 and S442413-14 (SED-4, SUB-1) were analyzed at a 1:5 dilutions in order to quantify the Aroclors present in the sample. Samples S442363-12, S442413-8, and S442413-12 (LF-2, SED-5 and SED-8B) were analyzed at 1:100 dilutions due to the abundance of Aroclors in the samples. Samples S442413-10 and S442413-13 (SED-7, SED-95) were analyzed at 1:200 and 1:250 dilutions respectively, due to the abundance of Aroclors in the samples.

Samples S442413-9 and S442413-11 (SED-6, SED-8A) were analyzed at 1:500 dilutions due to the abundance of Aroclors in the samples. Sample S442363-13, S442363-14, S442413-5, S442413-6 (LF-1, LF-91, SED-2, SED-3) was analyzed at a 1:1000 dilution due to the abundance of Aroclors present in the sample. Sample S442413-3 (ST-1) was analyzed at a 1:50000 dilution in order to quantify the Aroclors present in the sample.

Surrogates were also diluted out in dilutions greater than 1:5, and their recovery flagged with the *F33 data qualifier to signify this fact.

All required quality control parameters were within control limits.

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CASE NARRATIVE

SDG#GMT59
SL Project S442413

Polychlorinated Biphenyl (PCB) Fraction

The following samples were analyzed according to SW-846 Method 8080.

SL No.	Client ID	Matrix
S442413-15	AA-3	Solid
S442413-16	SS-5	Solid
S442413-17	SS-6	Solid
S442413-18	SS-12	Solid
S442413-19	SS-4	Solid
S442413-20	BACKGROUND	Solid
S442413-21	LF-3	Solid
S442413-22	AA-1	Solid
S442413-23	AA-22	Solid
S442413-24	AA-92	Solid
S442413-25	LF-4	Solid
S442413-26	AA-4	Solid

The samples of SDG GMT 59 were extracted on May 11, 1994 and were analyzed beginning May 25, 1994.

Quality control consisted of a lab blank and lab spike, with sample S442413-25 (LF-4) used as the SDG matrix spike/matrix spike duplicate.

Sample S442413-17 (SS-6) was analyzed at a 1:20 dilution in order to quantify the Aroclors present in the sample. Samples S442413-16, S442413-18, and S442413-25 (SS-5, SS-12 and LF-4) were analyzed at 1:50 dilutions due to the abundance of Aroclors in the samples. Samples S442413-15 and S442413-19 (SED-95, SS-4) were analyzed at 1:100 dilutions due to the abundance of Aroclors in the samples.

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Page 2 of 2

Samples S442413-22 and S442413-26 (AA-1, AA-4) were analyzed at 1:500 dilutions due to the abundance of Aroclors in the samples. Sample S442413-17 (SS-6) was analyzed at a 1:20 dilution in order to quantify the Aroclors present in the sample.

Sample S442413-21 (LF-3) was analyzed at a 1:1000 dilution in order to quantify the Aroclors present in the sample. Sample S442413-24 (AA-92) was analyzed at 1:2000 dilution due to the abundance of Aroclors in the sample. Sample S442413-23 (AA-2) was analyzed at 1:5000 dilution due to the abundance of Aroclors in the sample.

Matrix spike/ matrix spike duplicate results were not reported due to the dilutions necessary for sample analysis.

Additionally, surrogates were also diluted out and their recovery flagged with the *F33 data qualifier to signify this fact.

All required quality control parameters were within control limits.

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CASE NARRATIVE

SDG GMT57
SL PROJECT S442413

Dioxin/Furan Fraction

The following samples were analyzed by SW-846 Method 8280/Appendix IX.

SL No.	Client ID	Matrix
S442413-1	SED-9	Solid
S442413-2	SED-99	Solid

Sample S442413-1 (SED-9) was the designated matrix spike/matrix spike duplicate. The PCDD concentrations and associated recoveries were high due to an interferant determined to be present in the spike solution. Since the associated samples do not contain PCDD, the high bias present in the spikes should not impact data assessment.

Due to the level of matrix interference affecting the internal standard recovery, sample S442413-1 (SED-9) was extracted using 1.0 gram of sample and S442413-2 (SED-99) was extracted using 0.5 gram of sample. Consequently, the PQLs for these samples were elevated.

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CASE NARRATIVE

SDG GMT56
SL PROJECT S442363, S442413

Volatile Fraction

The following samples were analyzed following EPA SW-846 Method 8240.

SL No.	Client ID	Matrix
S442363-4	WEL-1	Liquid
S442363-5	EQUIP BLANK	Liquid
S442363-6	WEL-2	Liquid
S442363-7	WEL-3	Liquid
S442363-8	WEL-4	Liquid
S442363-9	DMW-1B	Liquid
S442363-10	WEL-93	Liquid
S442363-11	TB-0503	Liquid
S442413-28	TB-0506	Liquid
S442413-29	EQUIP BLANK 3	Liquid

Sample S442363-7 (WEL-3) was the designated matrix spike/matrix spike duplicate.

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CASE NARRATIVE

SDG#GMT57
SL Project S442413

Volatile Fraction

The following samples were analyzed following SW-846 Method 8240.

SL No.	Client ID	Matrix
S442413-1	SED-9	Soil
S442413-2	SED-99	Soil

Sample S442413-1 (SED-9) was the designated matrix spike/matrix spike duplicate.

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CASE NARRATIVE

SDG GMT57
SL PROJECT S442413

Organophosphorous Pesticide Fraction

The following samples were analyzed according to EPA SW-846 Method 8140.

SL No.	Client ID	Matrix
S442413-1	SED-9	Solid
S442413-2	SED-99	Solid

The samples of SDG GMT57 were extracted on May 12, 1994 and were analyzed beginning May 20, 1994.

Quality control consisted of a lab blank and lab spike, with sample S442413-1 (SED-9) used as the SDG matrix spike/matrix spike duplicate.

All quality control parameters were within control limits.

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CASE NARRATIVE

SDG GMT57
SL PROJECT S442413

Chlorinated Herbicide Fraction

The following samples were analyzed according to EPA SW-846 Method 8150.

SL No.	Client ID	Matrix
S442413-1	SED-9	Solid
S442413-2	SED-99	Solid

The samples of SDG GMT57 were extracted on May 13, 1994 and were analyzed beginning May 25, 1994.

Quality control consisted of a lab blank and lab spike, with sample S442413-1 (SED-9) used as the SDG matrix spike/matrix spike duplicate.

All quality control parameters were within control limits.

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CASE NARRATIVE

SDG GMT57
SL PROJECT S442413

Chlorinated Pesticide Fraction

The following samples were analyzed according to EPA SW-846 Method 8080.

SL No.	Client ID	Matrix
S442413-1	SED-9	Solid
S442413-2	SED-99	Solid

The samples of SDG GMT57 were extracted on May 13, 1994 and were analyzed beginning May 27, 1994.

Quality control consisted of a lab blank and lab spike, with sample S442413-1 (SED-9) used as the SDG matrix spike/matrix spike duplicate.

Both samples were analyzed on May 27, 1994 at 1:200 and 1:500 dilutions in order to quantify Aroclors 1248 and 1260, respectively. The samples were reanalyzed at 1:500 dilutions on May 29, 1994 in order to report single-peak pesticides. Spike compounds and surrogates in the samples were not recovered due to the dilutions required. Surrogate and spike recoveries in the lab blank and lab spike were within control limits.

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CASE NARRATIVE

SDG GMT57
SL PROJECT S442413

Metals Fraction

The following samples were analyzed according to EPA SW-846 methodologies.

SL No.	Client ID	Matrix
S442413-1	SED-9	Solid
S442413-2	SED-99	Solid

Sample S442413-1 (SED-9) was the designated matrix spike/matrix spike duplicate.

The matrix spike/matrix spike duplicate percent recoveries were not within the advisory limits for cadmium, chromium, copper, antimony, vanadium, zinc, arsenic, selenium, and sulfide.

The duplicate relative percent difference exceeded the advisory limits for chromium, copper, vanadium, zinc, selenium, and lead.

Lab control samples were digested with each batch and the recoveries were within control limits for all analytes of interest.

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CASE NARRATIVE

SDG GMT57
SL PROJECT S442413

Semivolatile Fraction

The following samples were analyzed by SW-846 Method 8270.

SL No.	Client ID	Matrix
S442413-1	SED-9	Solid
S442413-2	SED-99	Solid

Sample S442413-1 (SED-9) was the designated matrix spike/matrix spike duplicate. The unspiked sample was extracted on May 12, 1994. Although the corresponding matrix spike and matrix spike duplicate samples were extracted in excess of hold on May 26, 1994, the data interpretation should not be impacted since matrix spike data are evaluated to provide matrix effect in lieu of target quantitation.

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GERAGHTY
& MILLER, INC.
Environmental Services

Laboratory Task Order No. 07548

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number TE0520020
Project Location MONSANTO
Laboratory SAVANNAH
Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION										TOTAL
				Metals (Appendix A) 500 mL Plastic on ice	BVA/RETT/HERB. 500 mL Glass on ice	CYANIDE/SULFIDE 250 mL Glass on ice	PCBs (BODS) 250 mL Glass on ice					TEMP. BLANK		
SED-7	S	5/17/94 1400		1	1	1								3
SED-77	S	—		1	1	1								3
ST-1	S	1445					1							1
SED-1	S	1055					1							1
SED-2	S	1145					1							1
SED-3	S	1200					1							1
SED-4	S	1215					1							1
SED-5	S	1230					1							1
SED-6	S	1245					1							1
SED-7	S	1305					1							1
SED-8A	S	1320					1							1
SED-8B	S	1345					1							1
SED-95	S	—					1							1
TEMP.	—	—										1		1

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

18

Relinquished by: <u>[Signature]</u>	Organization: <u>GERAGHTY & MILLER</u>	Date: <u>5/16/94</u> Time: <u>1700</u>	Seal Intact? Yes ☒ No ☐ N/A ☐
Received by: <u>L. BEND</u>	Organization: <u>SH-42413</u>	Date: <u>5/17/94</u> Time: <u>9:30am</u>	
Relinquished by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	Seal Intact? Yes ☐ No ☐ N/A ☐
Received by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	

Special Instructions/Remarks:

Contact Leslie Head w/ Questions.

5/9 per Leslie Head SED-9 + SED-27 are to be analyzed for dioxins - see fax to

Delivery Method: ☐ In Person ☒ Common Carrier FED EX ☐ Lab Courier ☐ Other _____

SPECIFY

SPECIFY



CHAIN-OF-CUSTODY RECORD

Page

Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE BOTTLE / CONTAINER DESCRIPTION

PCB's - (2080)
250 ml cleaning glass
on ice

TEMP
BLANK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
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TOTAL

[illegible]

Sample Code: L = ~~L~~iquid; S = ~~S~~olid; A = ~~A~~ir

Total No. of Bottles/
Containers

Relinquished by: Chrisand: Kip 11/10/16
Received by: Chrisand: Kip 11/10/16

Organization: Gregory & Miller Inc
Organization: 54-42413

Date 5/6/94 Time 1700
Date 5/17/94 Time 9:30am

Seal Intact?
(Yes) No N/A

Relinquished by: _____
Received by: _____

Organization: _____
Organization: _____

Date / / Time : :

Seal Intact?
Yes No N/A

Special Instructions/Remarks:

Delivery Method: ☐ In Person

☒ Common Carrier FED EX
SPECIFY

☐ Lab Courier☐ Other

SPECIFY

Project Number TF0520020

Project Location MONSANTO

Laboratory SAVANAH

Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID									TOTAL
EQUIP. BLANK	B L	5/6/94 1030		3								3
TB-0506	L	—		3								3
SED-9A*	S	1095			1							1
SED-9A	S	—			1							1
SED-9B	S	1200			1							1
SED-9B	S	—			1							1
SED-9C	S	1215			1							1
SED-9C	S	—			1							1
SED-9D	S	1230			1							1
SED-9D	S	—				1						1
SED-9E	S	1245				1						1
SED-9E	S	—				1						1
SED-9F	S	1300				1						1
SED-9F	S	—				1						1
SED-9G	S	1310				1						1

Sample Code: L = Liquid; S = Solid; -A = Air

Total No. of Bottles/
Containers

See Pg. 2

Relinquished by: <u>Casper Kirkpatrick</u>	Organization: <u>Raghty & Miller</u>	Date: <u>5/6/94</u>	Time: <u>1700</u>	Seal Intact?
Received by: <u>L. Bonds G</u>	Organization: <u>54-42413</u>	Date: <u>5/7/94</u>	Time: <u>9:30am</u>	Yes No N/A
Relinquished by: <u> </u>	Organization: <u> </u>	Date: <u> / / </u>	Time: <u> </u>	Seal Intact?
Received by: <u> </u>	Organization: <u> </u>	Date: <u> / / </u>	Time: <u> </u>	Yes No N/A

Special Instructions/Remarks:

See 2nd page for composite instructions - both

Delivery Method:

☐ In Person

☒ Common Carrier

FED EX

SPECIFY

☐ Lab Courier

☐ Other

SPECIFY

Project Number TE0520020
Project Location MONSANTO
Laboratory SAVANNAH
Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY		Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION										TOTAL
SED-776	S	5/6/94		1	VOCs (B240) 100 ml glass bottle Amount 100									1
SED-911	S	↓ 1345		1										1
SED-9911	S	↓		1										1
TEMP														1
					TEMP BLANK									

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers

23

Relinquished by: <u>[Signature]</u>	Organization: <u>Geraghty & Miller</u>	Date: <u>5/6/94</u> Time: <u>1700</u>	Seal Intact? Yes No N/A
Received by: <u>L. Bond</u>	Organization: <u>54-42413</u>	Date: <u>5/7/94</u> Time: <u>9:30am</u>	
Relinquished by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	

Special Instructions/Remarks:

* ALL SED, VOCs (SED 9A through 9H and SED 99A through 99H) must be combined to form ~~two~~ composite samples (SED 9 and SED 99) in the lab.

Delivery Method: ☐ In Person ☒ Common Carrier FED EX ☐ Lab Courier ☐ Other _____

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER		42413-1	42413-2
Volatile Organic Compounds (8240)			
Acetonitrile, ug/kg dw		<230	<240
Acetone, ug/kg dw		<57	<59
Benzene, ug/kg dw		<5.7	<5.9
Bromodichloromethane, ug/kg dw		<5.7	<5.9
Methyl Bromide (Bromomethane), ug/kg dw		<11	<12
Carbon Disulfide, ug/kg dw		<5.7	<5.9
Chlorobenzene, ug/kg dw		<5.7	<5.9
Dibromochloromethane, ug/kg dw		<5.7	<5.9
Chloroethane, ug/kg dw		<11	<12
Methyl Chloride (Chloromethane), ug/kg dw		<11	<12
Chloroform, ug/kg dw		<5.7	<5.9
Allylchloride (3-Chloropropene), ug/kg dw		<5.7	<5.9
Chloroprene, ug/kg dw		<11	<12
1,2-Dibromo-3-chloropropane, ug/kg dw		<11	<12
1,2-Dibromoethane (EDB) , ug/kg dw		<5.7	<5.9
Methylene Bromide, ug/kg dw		<11	<12
Trans-1,4-Dichloro-2-butene, ug/kg dw		<11	<12
Dichlorodifluoromethane, ug/kg dw		<5.7	<5.9
1,1-Dichloroethane, ug/kg dw		<5.7	<5.9
1,2-Dichloroethane, ug/kg dw		<5.7	<5.9
Trans-1,2-Dichloroethylene, ug/kg dw		<5.7	<5.9
1,1-Dichloroethylene, ug/kg dw		<5.7	<5.9

Received: 07 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
Sampled By: Client

REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Methylene Chloride (Dichloromethane), ug/kg dw	<5.7	<5.9	
1,2-Dichloropropane, ug/kg dw	<5.7	<5.9	
cis-1,3-Dichloropropene, ug/kg dw	<5.7	<5.9	
trans-1,3-Dichloropropene, ug/kg dw	<5.7	<5.9	
Ethylbenzene, ug/kg dw	<5.7	<5.9	
Methyl Ethyl Ketone, ug/kg dw	<5.7	<5.9	
Methyl Iodide, ug/kg dw	<5.7	<5.9	
Methacrylonitrile, ug/kg dw	<110	<120	
4-methyl-2-pentanone (MIBK), ug/kg dw	<5.7	<5.9	
Pentachloroethane, ug/kg dw	<29	<29	
Styrene, ug/kg dw	<5.7	<5.9	
1,1,1,2-Tetrachloroethane, ug/kg dw	<5.7	<5.9	
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.7	<5.9	
Tetrachloroethene, ug/kg dw	<5.7	<5.9	
Carbon Tetrachloride, ug/kg dw	<5.7	<5.9	
Toluene, ug/kg dw	<5.7	<5.9	
Bromoform, ug/kg dw	<5.7	<5.9	
1,1,2-Trichloroethane, ug/kg dw	<5.7	<5.9	
1,1,1-Trichloroethane, ug/kg dw	<5.7	<5.9	
Trichloroethylene, ug/kg dw	<5.7	<5.9	
Trichlorofluoromethane, ug/kg dw	<5.7	<5.9	
1,2,3-Trichloropropane, ug/kg dw	<5.7	<5.9	
Vinyl Acetate, ug/kg dw	<11	<12	

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
Sampled By: Client

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Vinyl chloride, ug/kg dw	<11	<12	
Xylenes, ug/kg dw	<5.7	<5.9	
2-Hexanone, ug/kg dw	<57	<59	
Propionitrile, ug/kg dw	<230	<240	
Methyl methacrylate, ug/kg dw	<5.7	<5.9	
Acrolein, ug/kg dw	<110	<120	
Acrylonitrile, ug/kg dw	<110	<120	
Ethyl methacrylate, ug/kg dw	<5.7	<5.9	
Isobutyl Alcohol, ug/kg dw	<1100	<1200	
Surrogate - Toluene-d8	115 %	109 %	
Surrogate - 4-Bromofluorobenzene	80 %	90 %	
Surrogate - 1,2-Dichloroethane-d4	88 %	85 %	
Date Analyzed	05.13.94	05.16.94	
Clock ID	1H0513	1H0516	

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
Sampled By: Client

REPORT OF RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER		42413-1	42413-2
Acids and Base Neutrals (8270)			
Acenaphthene, ug/kg dw		<380	<380
Acenaphthylene, ug/kg dw		<380	<380
Acetophenone, ug/kg dw		<380	<380
2-Acetylaminofluorene, ug/kg dw		<380	<380
4-Aminobiphenyl, ug/kg dw		<380	<380
Anthracene, ug/kg dw		25J	<380
Aniline, ug/kg dw		<380	<380
Aramite, ug/kg dw		<380	<380
Benzo(a)Anthracene, ug/kg dw		70J	<380
Benzo(k)fluoranthene, ug/kg dw		<380	<380
Benzo(b)fluoranthene, ug/kg dw		140J	<380
Benzo(g,h,i)perylene, ug/kg dw		<380	<380
Benzo(a)pyrene, ug/kg dw		99J	<380
Benzyl alcohol, ug/kg dw		<380	<380
bis(2-Chloroethoxy)methane, ug/kg dw		<380	<380
bis(2-Chloroethyl)ether, ug/kg dw		<380	<380
Bis(2-chloroisopropyl)ether, ug/kg dw		<380	<380
bis(2-Ethylhexyl)phthalate, ug/kg dw		160J	78J
4-Bromophenyl-phenyl-ether, ug/kg dw		<380	<380
Butylbenzylphthalate, ug/kg dw		<380	<380
(Dinoseb) 2-sec-Butyl-4,6-dinitrophenol, ug/kg dw		<380	<380
P-Chloroaniline, ug/kg dw		<760	<760

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
m-Dichlorobenzene, ug/kg dw	<380	<380	
p-Dichlorobenzene, ug/kg dw	<380	<380	
o-Dichlorobenzene, ug/kg dw	<380	<380	
4-Chlorophenyl-phenyl ether, ug/kg dw	<380	<380	
2-Chloronaphthalene, ug/kg dw	<380	<380	
Chrysene, ug/kg dw	89J	310J	
Dibenz(a,h)anthracene, ug/kg dw	<380	<380	
Di-n-butylphthalate, ug/kg dw	<380	<380	
3,3'-Dichlorobenzidine, ug/kg dw	<760	<760	
3,3'-Dimethylbenzidine, ug/kg dw	<2000	<2000	
Diethylphthalate, ug/kg dw	<380	<380	
p-(Dimethylamino)azobenzene, ug/kg dw	<380	<380	
7,12-Dimethylbenz(a)anthracene, ug/kg dw	<380	<380	
a-a-Dimethylphenethylamine, ug/kg dw	<2000	<2000	
Dimethylphthalate, ug/kg dw	<380	<380	
m-Dinitrobenzene , ug/kg dw	<380	<380	
2,4-Dinitrotoluene, ug/kg dw	<380	<380	
2,6-Dinitrotoluene, ug/kg dw	<380	<380	
Di-n-octylphthalate, ug/kg dw	<380	<380	
N-Nitroso-di-n-propylamine, ug/kg dw	<380	<380	
Fluoranthene, ug/kg dw	200J	<380	
Fluorene, ug/kg dw	<380	<380	
Hexachlorobenzene, ug/kg dw	<380	<380	

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Hexachlorobutadiene, ug/kg dw	<380	<380	
Hexachlorocyclopentadiene, ug/kg dw	<380	<380	
Hexachloroethane, ug/kg dw	<380	<380	
Hexachloropropene, ug/kg dw	<380	<380	
Indeno(1,2,3-cd)pyrene, ug/kg dw	<380	<380	
Isophorone, ug/kg dw	<380	<380	
Isosafrole, ug/kg dw	<380	<380	
Methapyrilene, ug/kg dw	<3800	<3800	
3-Methylcholanthrene, ug/kg dw	<380	<380	
Methyl methanesulfonate, ug/kg dw	<380	<380	
2-Methylnaphthalene, ug/kg dw	<380	<380	
Naphthalene, ug/kg dw	<380	<380	
1,4-Naphthoquinone, ug/kg dw	<380	<380	
1-Naphthylamine, ug/kg dw	<380	<380	
2-Naphthylamine, ug/kg dw	<380	<380	
o-Nitroaniline, ug/kg dw	<2000	<2000	
m-Nitroaniline, ug/kg dw	<2000	<2000	
p-Nitroaniline, ug/kg dw	<2000	<2000	
Nitrobenzene, ug/kg dw	<380	<380	
N-Nitrosodi-n-butylamine, ug/kg dw	<380	<380	
N-Nitrosodiethylamine, ug/kg dw	<380	<380	
N-Nitrosodimethylamine, ug/kg dw	<380	<380	
N-Nitrosomethylethylamine, ug/kg dw	<380	<380	

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42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw	<380	<380	
N-Nitrosomorpholine, ug/kg dw	<380	<380	
N-Nitrosopiperidine, ug/kg dw	<380	<380	
N-Nitrosopyrrolidine, ug/kg dw	<380	<380	
5-Nitro-o-toluidine, ug/kg dw	<380	<380	
Pentachlorobenzene, ug/kg dw	<380	<380	
Pentachloronitrobenzene, ug/kg dw	<380	<380	
Phenacetin, ug/kg dw	<380	<380	
Phenanthrene, ug/kg dw	99J	<380	
2-Picoline, ug/kg dw	<380	<380	
Pronamide, ug/kg dw	<380	<380	
Pyrene, ug/kg dw	160J	<380	
Safrole, ug/kg dw	<380	<380	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<380	<380	
1,2,4-Trichlorobenzene, ug/kg dw	<380	<380	
2-Chlorophenol, ug/kg dw	<380	<380	
Cresol m & p, ug/kg dw	<380	<380	
O-cresol, ug/kg dw	<380	<380	
p-Nitrophenol, ug/kg dw	<2000	<2000	
2,4-Dichlorophenol, ug/kg dw	<380	<380	
2,6-Dichlorophenol, ug/kg dw	<380	<380	
2,4-Dimethylphenol, ug/kg dw	<380	<380	
4,6-Dinitro-o-cresol, ug/kg dw	<2000	<2000	

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42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
2,4-Dinitrophenol, ug/kg dw	<2000	<2000	
Pentachlorophenol, ug/kg dw	<2000	<2000	
Phenol, ug/kg dw	<380	<380	
2,4,5-Trichlorophenol, ug/kg dw	<2000	<2000	
2,4,6-Trichlorophenol, ug/kg dw	<380	<380	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<2000	<2000	
o-Nitrophenol, ug/kg dw	<380	<380	
Diallate, ug/kg dw	<380	<380	
Ethyl methanesulfonate, ug/kg dw	<380	<380	
4-Nitroquinoline 1-oxide, ug/kg dw	<3800	<3800	
p-phenylenediamine, ug/kg dw	<2000	<2000	
o-toluidine, ug/kg dw	<380	<380	
O,O,O-triethyl phosphorothioate, ug/kg dw	<380	<380	
1,3,5-Trinitrobenzene, ug/kg dw	<380	<380	
p-Chloro-m-cresol, ug/kg dw	<380	<380	
Dibenzofuran, ug/kg dw	<380	<380	
Pyridine, ug/kg dw	<380	<380	
1,4-Dioxane, ug/kg dw	<380	<380	
Kepone, ug/kg dw	<380	<380	
Surrogate - Phenol d 5	75 %	86 %	
Surrogate - 2-Fluorophenol	77 %	87 %	
Surrogate - 2,4,6-Tribromophenol	95 %	111 %	
Surrogate - Nitrobenzene d-5	76 %	90 %	
Surrogate - 2-Fluorobiphenyl	93 %	112 %	
Surrogate - Terphenyl	75 %	80 %	
Date Extracted	05.12.94	05.12.94	
Date Analyzed	05.19.94	05.19.94	

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER		42413-1	42413-2
Chlorinated Pesticides (8080)			
Aldrin, ug/kg dw		<980	<1000
Isodrin, ug/kg dw		<1900	<1900
Chlordane, ug/kg dw		<9800	<10000
Chlorobenzilate, ug/kg dw		<9800	<10000
4,4'-DDD, ug/kg dw		<1900	<1900
4,4'-DDE, ug/kg dw		<1900	<1900
4,4'-DDT, ug/kg dw		<1900	<1900
Dieldrin, ug/kg dw		<1900	<1900
Endosulfan I, ug/kg dw		<980	<1000
Endosulfan II, ug/kg dw		<1900	<1900
Endosulfan sulfate, ug/kg dw		<1900	<1900
Endrin, ug/kg dw		<1900	<1900
Endrin Aldehyde, ug/kg dw		<1900	<1900
Heptachlor, ug/kg dw		<980	<1000
Heptachlor epoxide, ug/kg dw		<980	<1000
alpha-BHC, ug/kg dw		<980	<1000
beta-BHC, ug/kg dw		<980	<1000
gamma-BHC, ug/kg dw		<980	<1000
delta-BHC, ug/kg dw		<980	<1000
Methoxychlor, ug/kg dw		<9800	<10000
Toxaphene, ug/kg dw		<39000	<40000
Aroclor-1016, ug/kg dw		<7600	<7700

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LOG NO: S4-42413

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42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Aroclor-1221, ug/kg dw	<15000	<1600	
Aroclor-1232, ug/kg dw	<7600	<7700	
Aroclor-1242, ug/kg dw	<7600	<7700	
Aroclor-1248, ug/kg dw	39000	19000	
Aroclor-1254, ug/kg dw	<7600	<7700	
Aroclor-1260, ug/kg dw	250000	200000	
Surrogate - Dibutylchloredate	*F33	*F33	
Date Extracted	05.13.94	05.13.94	
Date Analyzed	5.27/29.94	5.27/29.94	
Herbicides (8151)			
2,4-D, ug/kg dw	<57	<59	
2,4,5-T, ug/kg dw	<57	<59	
2,4,5-TP Silvex, ug/kg dw	<57	<59	
Surrogate-DCAA	71 %	66 %	
Date Extracted	05.13.94	05.13.94	
Date Analyzed	05.26.94	05.27.94	

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42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Organophosphorus Pesticides (8141)			
Disulfoton, ug/kg dw	<150	<150	
Methyl Parathion, ug/kg dw	<19	<20	
Ethyl Parathion, ug/kg dw	<38	<39	
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/kg dw	<19	<20	
Famphur, ug/kg dw	<380	<390	
Phorate, ug/kg dw	<38	<39	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/kg dw	<75	<77	
Dimethoate, ug/kg dw	<2300	<2300	
Surrogate - Triphenylphosphate	69 %	82 %	
Date Extracted	05.12.94	05.12.94	
Date Analyzed	05.20.94	05.20.94	

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER		42413-1	42413-2
Metals (6010)			
Antimony (6010) , mg/kg dw		<5.7	<5.9
Barium (6010), mg/kg dw		24	620
Beryllium (6010), mg/kg dw		<0.57	<0.59
Cadmium (6010), mg/kg dw		<0.57	0.79
Chromium (6010), mg/kg dw		12	13
Cobalt (6010), mg/kg dw		2.5	12
Copper (6010), mg/kg dw		8.3	14
Nickel (6010), mg/kg dw		<4.6	6.2
Silver (6010), mg/kg dw		<1.1	<1.2
Tin (6010), mg/kg dw		<5.7	<5.9
Vanadium (6010), mg/kg dw		23	25
Zinc (6010), mg/kg dw		41	70
Date Analyzed		05.17.94	05.17.94
Arsenic (7060)			
Arsenic (7060), mg/kg dw		2.5	2.2
% R Post Digestion Spike		107 %	110 %
Date Analyzed		05.17.94	05.17.94
Lead (7421)			
Lead (7421), mg/kg dw		39	27
% R Post Digestion Spike		87 %	88 %
Date Analyzed		05.18.94	05.18.94

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Selenium (7740)			
Selenium (7740), mg/kg dw	<1.1	<1.2	
% R Post Digestion Spike	73 %	92 %	
Date Analyzed	05.17.94	05.17.94	
Thallium (7841)			
Thallium (7841) , mg/kg dw	<1.1	<1.2	
% R Post Digestion Spike	93 %	88 %	
Date Analyzed	05.17.94	05.17.94	
Mercury (7470/7471)			
Mercury (7470/7471), mg/kg dw	0.11	0.12	
Date Analyzed	05.20.94	05.20.94	
Total Cyanide			
Cyanide, Total (9012), mg/kg dw	<1.1	<1.2	
Date Analyzed	05.13.94	05.13.94	
Sulfide (9030)			
Sulfide (9030) , mg/kg dw	<11	<12	
Date Analyzed	05.11.94	05.11.94	

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42413-1	SED-9	05-06-94	GMT57
42413-2	SED-99	05-06-94	GMT57
PARAMETER	42413-1	42413-2	
Chlorinated Dioxins/Furans-App 9 (8280)			
Tetra CDD, ug/kg dw	<5.7*F65	<12*F65	
Tetra CDF, ug/kg dw	<5.7	<12	
Penta CDD, ug/kg dw	<5.7	<12	
Penta CDF, ug/kg dw	<5.7	<12	
Hexa CDD, ug/kg dw	<5.7	<12	
Hexa CDF, ug/kg dw	<5.7	<12	
Dioxin-2,3,7,8-TCDD (8280), ug/kg dw	<5.7	<12	
Internal Standard (TCDD)	56 %	71 %	
Date Extracted	05.18.94	05.30.94	
Date Analyzed	05.20.94	05.31.94	
Percent Solids, %	87	85	

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES			DATE SAMPLED	SDG#
42413-3	ST-1			05-06-94	GMT58
42413-4	SED-1			05-06-94	GMT58
42413-5	SED-2			05-06-94	GMT58
42413-6	SED-3			05-06-94	GMT58
42413-7	SED-4			05-06-94	GMT58
PARAMETER	42413-3	42413-4	42413-5	42413-6	42413-7
PCB's (8080)					
Aroclor-1016, mg/kg dw	<1700	<1	<45	<43	<1
Aroclor-1221, mg/kg dw	<3400	<1	<92	<87	<1
Aroclor-1232, mg/kg dw	<1700	<1	<45	<43	<1
Aroclor-1242, mg/kg dw	<1700	<1	<45	<43	<1
Aroclor-1248, mg/kg dw	<1700	<1	79	88	<1
Aroclor-1254, mg/kg dw	17000	<1	120	120	<1
Aroclor-1260, mg/kg dw	16000	<1	230	300	<1
Surrogate-TCX	*F33	78 %	*F33	*F33	69 %
Date Extracted	05.12.94	05.12.94	05.12.94	05.12.94	05.12.94
Date Analyzed	06.08.94	05.27.94	05.27.94	05.27.94	05.28.94
Percent Solids, %	98	85	73	77	83

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES			DATE SAMPLED	SDG#
42413-8	SED-5			05-06-94	GMT58
42413-9	SED-6			05-06-94	GMT58
42413-10	SED-7			05-06-94	GMT58
42413-11	SED-8A			05-06-94	GMT58
42413-12	SED-8B			05-06-94	GMT58
PARAMETER	42413-8	42413-9	42413-10	42413-11	42413-12
PCB's (8080)					
Aroclor-1016, mg/kg dw	<4.8	<21	<8.2	<21	<3.5
Aroclor-1221, mg/kg dw	<9.8	<44	<17	<42	<7.1
Aroclor-1232, mg/kg dw	<4.8	<21	<8.2	<21	<3.5
Aroclor-1242, mg/kg dw	<4.8	<21	<8.2	<21	<3.5
Aroclor-1248, mg/kg dw	15	43	34	35	11
Aroclor-1254, mg/kg dw	12	88	25	28	20
Aroclor-1260, mg/kg dw	14	88	36	74	31
Surrogate-TCX	*F33	*F33	*F33	*F33	*F33
Date Extracted	05.12.94	05.12.94	05.12.94	05.12.94	05.12.94
Date Analyzed	05.28.94	05.28.94	05.28.94	05.28.94	05.28.94
Percent Solids, %	68	77	80	80	94

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES			DATE SAMPLED	SDG#
42413-13	SED-95			05-06-94	GMT58
42413-14	SUB-1			05-06-94	GMT58
42413-15	AA-3			05-06-94	GMT59
42413-16	SS-5			05-05-94	GMT59
42413-17	SS-6			05-05-94	GMT59
PARAMETER	42413-13	42413-14	42413-15	42413-16	42413-17
PCB's (8080)					
Aroclor-1016, mg/kg dw	<11	<1	<3.7	<2.1	<1
Aroclor-1221, mg/kg dw	<23	<1	<7.4	<4.4	<1.4
Aroclor-1232, mg/kg dw	<11	<1	<3.7	<2.1	<1
Aroclor-1242, mg/kg dw	<11	<1	<3.7	<2.1	<1
Aroclor-1248, mg/kg dw	10	<1	4.0	<2.1	1.4
Aroclor-1254, mg/kg dw	17	<1	38	6.0	2.7
Aroclor-1260, mg/kg dw	23	1.1	96	6.0	2.3
Surrogate-TCX	*F33	69 %	*F33	*F33	*F33
Date Extracted	05.12.94	05.12.94	05.11.94	05.11.94	05.11.94
Date Analyzed	05.28.94	05.28.94	05.26.94	05.25.94	05.25.94
Percent Solids, %	74	94	90	77	93

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED		SDG#	
42413-18	SS-12	05-05-94		GMT59	
42413-19	SS-4	05-05-94		GMT59	
42413-20	BACKGROUND	05-05-94		GMT59	
42413-21	LF-3	05-06-94		GMT59	
42413-22	AA-1	05-05-94		GMT59	
PARAMETER	42413-18	42413-19	42413-20	42413-21	42413-22
PCB's (8080)					
Aroclor-1016, mg/kg dw	<2.3	<4.8	<1	<37	<24
Aroclor-1221, mg/kg dw	<4.7	<9.8	<1	<74	<48
Aroclor-1232, mg/kg dw	<2.3	<4.8	<1	<37	<24
Aroclor-1242, mg/kg dw	<2.3	<4.8	<1	<37	<24
Aroclor-1248, mg/kg dw	2.8	9.3	<1	130	42
Aroclor-1254, mg/kg dw	7.2	78	<1	280	120
Aroclor-1260, mg/kg dw	5.3	48	<1	350	220
Surrogate-TCX	*F33	*F33	87 %	*F33	*F33
Date Extracted	05.11.94	05.11.94	05.11.94	05.11.94	05.11.94
Date Analyzed	06.04.94	05.25.94	05.26.94	05.27.94	05.27.94
Percent Solids, %	71	68	51	90	69

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LOG NO: S4-42413

Received: 07 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES		DATE SAMPLED	SDG#
42413-23	AA-2		05-05-94	GMT59
42413-24	AA-92		05-05-94	GMT59
42413-25	LF-4		05-05-94	GMT59
42413-26	AA-4		05-05-94	GMT59
PARAMETER	42413-23	42413-24	42413-25	42413-26
PCB's (8080)				
Aroclor-1016, mg/kg dw	<200	<80	<2.5	<29
Aroclor-1221, mg/kg dw	<400	<160	<5.1	<60
Aroclor-1232, mg/kg dw	<200	<80	<2.5	<29
Aroclor-1242, mg/kg dw	<200	<80	<2.5	<29
Aroclor-1248, mg/kg dw	300	260	<2.5	<29
Aroclor-1254, mg/kg dw	850	360	15	88
Aroclor-1260, mg/kg dw	790	490	28	170
Surrogate-TCX	*F33	*F33	*F33	*F33
Date Extracted	05.11.94	05.11.94	05.11.94	05.11.94
Date Analyzed	05.27.94	05.27.94	06.04.94	05.27.94
Percent Solids, %	83	82	66	56

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Acids and Base Neutrals (8270)			
Acenaphthene, ug/l		<10	
Acenaphthylene, ug/l		<10	
Acetophenone, ug/l		<10	
2-Acetylaminofluorene, ug/l		<10	
4-Aminobiphenyl, ug/l		<10	
Anthracene, ug/l		<10	
Aniline, ug/l		<50	
Aramite, ug/l		<10	
Benzo(a)Anthracene, ug/l		<10	
Benzo(k)fluoranthene, ug/l		<10	
Benzo(b)fluoranthene, ug/l		<10	
Benzo(g,h,i)perylene, ug/l		<10	
Benzo(a)pyrene, ug/l		<10	
Benzyl alcohol, ug/l		<10	
bis(2-Chloroethoxy)methane, ug/l		<10	
bis(2-Chloroethyl)ether, ug/l		<10	
Bis(2-chloroisopropyl)ether, ug/l		<10	
bis(2-Ethylhexyl)phthalate, ug/l		<10	
4-Bromophenyl-phenyl-ether, ug/l		<10	
Butylbenzylphthalate, ug/l		<10	
(Dinoseb) 2-sec-Butyl-4,6-dinitrophenol, ug/l		<10	
P-Chloroaniline, ug/l		<20	
m-Dichlorobenzene, ug/l		<10	

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
p-Dichlorobenzene, ug/l	<10		
o-Dichlorobenzene, ug/l	<10		
4-Chlorophenyl-phenyl ether, ug/l	<10		
2-Chloronaphthalene, ug/l	<10		
Chrysene, ug/l	<10		
Dibenz(a,h)anthracene, ug/l	<10		
Di-n-butylphthalate, ug/l	<10		
3,3'-Dichlorobenzidine, ug/l	<20		
3,3'-Dimethylbenzidine, ug/l	<200		
Diethylphthalate, ug/l	<10		
p-(Dimethylamino)azobenzene, ug/l	<10		
7,12-Dimethylbenz(a)anthracene, ug/l	<10		
a-a-Dimethylphenethylamine, ug/l	<2000		
Dimethylphthalate, ug/l	<10		
m-Dinitrobenzene , ug/l	<10		
2,4-Dinitrotoluene, ug/l	<10		
2,6-Dinitrotoluene, ug/l	<10		
Di-n-octylphthalate, ug/l	<10		
N-Nitroso-di-n-propylamine, ug/l	<10		
Fluoranthene, ug/l	<10		
Fluorene, ug/l	<10		
Hexachlorobenzene, ug/l	<10		
Hexachlorobutadiene, ug/l	<10		
Hexachlorocyclopentadiene, ug/l	<10		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Hexachloroethane, ug/l	<10		
Hexachloropropene, ug/l	<10		
Indeno(1,2,3-cd)pyrene, ug/l	<10		
Isophorone, ug/l	<10		
Isosafrole, ug/l	<10		
Methapyrilene, ug/l	<2000		
3-Methylcholanthrene, ug/l	<10		
Methyl methanesulfonate, ug/l	<10		
2-Methylnaphthalene, ug/l	<10		
Naphthalene, ug/l	<10		
1,4-Naphthoquinone, ug/l	<10		
1-Naphthylamine, ug/l	<10		
2-Naphthylamine, ug/l	<10		
o-Nitroaniline, ug/l	<50		
m-Nitroaniline, ug/l	<50		
p-Nitroaniline, ug/l	<50		
Nitrobenzene, ug/l	<10		
N-Nitrosodi-n-butylamine, ug/l	<10		
N-Nitrosodiethylamine, ug/l	<10		
N-Nitrosodimethylamine, ug/l	<10		
N-Nitrosomethylethylamine, ug/l	<10		
N-Nitrosodiphenylamine/Diphenylamine, ug/l	<10		
N-Nitrosomorpholine, ug/l	<10		
N-Nitrosopiperidine, ug/l	<10		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
N-Nitrosopyrrolidine, ug/l	<10		
5-Nitro-o-toluidine, ug/l	<10		
Pentachlorobenzene, ug/l	<10		
Pentachloronitrobenzene, ug/l	<10		
Phenacetin, ug/l	<10		
Phenanthrene, ug/l	<10		
2-Picoline, ug/l	<200		
Pronamide, ug/l	<10		
Pyrene, ug/l	<10		
Safrole, ug/l	<10		
1,2,4,5-Tetrachlorobenzene, ug/l	<10		
1,2,4-Trichlorobenzene, ug/l	<10		
2-Chlorophenol, ug/l	<10		
Cresol m & p, ug/l	<10		
O-cresol, ug/l	<10		
p-Nitrophenol, ug/l	<50		
2,4-Dichlorophenol, ug/l	<10		
2,6-Dichlorophenol, ug/l	<10		
2,4-Dimethylphenol, ug/l	<10		
4,6-Dinitro-o-cresol, ug/l	<50		
2,4-Dinitrophenol, ug/l	<50		
Pentachlorophenol, ug/l	<50		
Phenol, ug/l	<10		
2,4,5-Trichlorophenol, ug/l	<10		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
2,4,6-Trichlorophenol, ug/l	<10		
2,3,4,6-Tetrachlorophenol, ug/l	<50		
o-Nitrophenol, ug/l	<10		
Diallate, ug/l	<10		
Ethyl methanesulfonate, ug/l	<10		
4-Nitroquinoline 1-oxide, ug/l	<100		
p-phenylenediamine, ug/l	<2000		
o-toluidine, ug/l	<10		
O,O,O-triethyl phosphorothioate, ug/l	<10		
1,3,5-Trinitrobenzene, ug/l	<200		
p-Chloro-m-cresol, ug/l	<10		
Dibenzofuran, ug/l	<10		
Pyridine, ug/l	<200		
1,4-Dioxane, ug/l	<10		
Kepone, ug/l	<10		
Surrogate - Phenol d 5	68 %		
Surrogate - 2-Fluorophenol	66 %		
Surrogate - 2,4,6-Tribromophenol	69 %		
Surrogate - Nitrobenzene d-5	78 %		
Surrogate - 2-Fluorobiphenyl	80 %		
Surrogate - Terphenyl	97 %		
Date Extracted	05.11.94		
Date Analyzed	05.17.94		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Chlorinated Pesticides (8080)			
Aldrin, ug/l	<0.050		
Isodrin, ug/l	<0.050		
Chlordane, ug/l	<0.50		
Chlorobenzilate, ug/l	<0.50		
4,4'-DDD, ug/l	<0.10		
4,4'-DDE, ug/l	<0.10		
4,4'-DDT, ug/l	<0.10		
Dieldrin, ug/l	<0.10		
Endosulfan I, ug/l	<0.050		
Endosulfan II, ug/l	<0.10		
Endosulfan sulfate, ug/l	<0.10		
Endrin, ug/l	<0.10		
Endrin Aldehyde, ug/l	<0.10		
Heptachlor, ug/l	<0.050		
Heptachlor epoxide, ug/l	<0.050		
alpha-BHC, ug/l	<0.050		
beta-BHC, ug/l	<0.050		
gamma-BHC, ug/l	<0.050		
delta-BHC, ug/l	<0.050		
Methoxychlor, ug/l	<0.50		
Toxaphene, ug/l	<5.0		
Aroclor-1016, ug/l	<1.0		
Aroclor-1221, ug/l	<2.0		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Aroclor-1232, ug/l	<1.0		
Aroclor-1242, ug/l	<1.0		
Aroclor-1248, ug/l	<1.0		
Aroclor-1254, ug/l	<1.0		
Aroclor-1260, ug/l	<1.0		
Surrogate - Dibutylchloredate	103 %		
Date Extracted	05.11.94		
Date Analyzed	05.25.94		
Herbicides (8151)			
2,4-D, ug/l	<0.50		
2,4,5-T, ug/l	<0.50		
2,4,5-TP Silvex, ug/l	<0.50		
Surrogate-DCAA	75 %		
Date Extracted	05.10.94		
Date Analyzed	05.24.94		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Organophosphorus Pesticides (8141)			
Disulfoton, ug/l		<2.0	
Methyl Parathion, ug/l		<0.50	
Ethyl Parathion, ug/l		<1.0	
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l		<0.50	
Famphur, ug/l		<2.0	
Phorate, ug/l		<1.0	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l		<1.0	
Dimethoate, ug/l		<10	
Surrogate - Triphenylphosphate		98 %	
Date Extracted		05.10.94	
Date Analyzed		05.17.94	

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Metals (6010)			
Antimony (6010) , mg/l	<0.050		
Barium (6010), mg/l	<0.010		
Beryllium (6010), mg/l	<0.0050		
Cadmium (6010), mg/l	<0.0050		
Chromium (6010), mg/l	<0.010		
Cobalt (6010), mg/l	<0.010		
Copper (6010), mg/l	<0.025		
Nickel (6010), mg/l	<0.040		
Silver (6010), mg/l	<0.010		
Tin (6010), mg/l	<0.050		
Vanadium (6010), mg/l	<0.010		
Zinc (6010), mg/l	<0.020		
Date Analyzed	05.19.94		
Arsenic (7060)			
Arsenic (7060), mg/l	<0.010		
% R Post Digestion Spike	96 %		
Date Analyzed	05.19.94		
Lead (7421)			
Lead (7421), mg/l	<0.0050		
% R Post Digestion Spike	110 %		
Date Analyzed	05.18.94		
Selenium (7740)			
Selenium (7740), mg/l	<0.010		
% R Post Digestion Spike	96 %		
Date Analyzed	05.19.94		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-27	EQUIP. BLANK 3	05-06-94	GMT55
PARAMETER	42413-27		
Thallium (7841)			
Thallium (7841) , mg/l	<0.010		
% R Post Digestion Spike	98 %		
Date Analyzed	05.18.94		
Mercury (7470/7471)			
Mercury (7470/7471), mg/l	<0.00020		
Date Analyzed	05.18.94		
Total Cyanide			
Cyanide, Total (9012), mg/l	<0.010		
Date Analyzed	05.10.94		
Sulfide (9030)			
Sulfide (9030) , mg/l	<0.40		
Date Analyzed	05.11.94		
Chlorinated Dioxins/Furans-App 9 (8280)			
Tetra CDD, ug/l	<0.0050		
Tetra CDF, ug/l	<0.0050		
Penta CDD, ug/l	<0.0050		
Penta CDF, ug/l	<0.0050		
Hexa CDD, ug/l	<0.0050		
Hexa CDF, ug/l	<0.0050		
Dioxin-2,3,7,8-TCDD (8280), ug/l	<0.0050		
Internal Standard (TCDD)	61 %		
Date Extracted	05.11.94		
Date Analyzed	05.17.94		

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-28	TB-0506	05-06-94	GMT56
42413-29	EQUIP. BLANK 3	05-06-94	GMT56
PARAMETER	42413-28	42413-29	
Volatile Organic Compounds (8240)			
Acetonitrile, ug/l	<1000	<1000	
Acetone, ug/l	<50	<50	
Benzene, ug/l	<5.0	<5.0	
Bromodichloromethane, ug/l	<5.0	<5.0	
Methyl Bromide (Bromomethane), ug/l	<10	<10	
Carbon Disulfide, ug/l	<5.0	<5.0	
Chlorobenzene, ug/l	<5.0	<5.0	
Dibromochloromethane, ug/l	<5.0	<5.0	
Chloroethane, ug/l	<10	<10	
Methyl Chloride (Chloromethane), ug/l	<10	<10	
2-Chloroethylvinyl Ether, ug/l	<50	<50	
Chloroform, ug/l	<5.0	<5.0	
Allylchloride (3-Chloropropene), ug/l	<5.0	<5.0	
Chloroprene, ug/l	<5.0	<5.0	
1,2-Dibromo-3-chloropropane, ug/l	<10	<10	
1,2-Dibromoethane (EDB) , ug/l	<5.0	<5.0	
Methylene Bromide, ug/l	<5.0	<5.0	
Trans-1,4-Dichloro-2-butene, ug/l	<10	<10	
Dichlorodifluoromethane, ug/l	<5.0	<5.0	
1,1-Dichloroethane, ug/l	<5.0	<5.0	
1,2-Dichloroethane, ug/l	<5.0	<5.0	
Trans-1,2-Dichloroethylene, ug/l	<5.0	<5.0	

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-28	TB-0506	05-06-94	GMT56
42413-29	EQUIP. BLANK 3	05-06-94	GMT56
PARAMETER	42413-28	42413-29	
1,1-Dichloroethylene, ug/l	<5.0	<5.0	
Methylene Chloride (Dichloromethane), ug/l	<5.0	<5.0	
1,2-Dichloropropane, ug/l	<5.0	<5.0	
cis-1,3-Dichloropropene, ug/l	<5.0	<5.0	
trans-1,3-Dichloropropene, ug/l	<5.0	<5.0	
Ethylbenzene, ug/l	<5.0	<5.0	
Methyl Ethyl Ketone, ug/l	<50	<50	
Methyl Iodide, ug/l	<5.0	<5.0	
Methacrylonitrile, ug/l	<100	<100	
4-methyl-2-pentanone (MIBK), ug/l	<50	<50	
Pentachloroethane, ug/l	<25	<25	
Styrene, ug/l	<5.0	<5.0	
1,1,1,2-Tetrachloroethane, ug/l	<5.0	<5.0	
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	
Tetrachloroethene, ug/l	<5.0	<5.0	
Carbon Tetrachloride, ug/l	<5.0	<5.0	
Toluene, ug/l	<5.0	<5.0	
Bromoform, ug/l	<5.0	<5.0	
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	
Trichloroethylene, ug/l	<5.0	<5.0	
Trichlorofluoromethane, ug/l	<5.0	<5.0	
1,2,3-Trichloropropane, ug/l	<5.0	<5.0	

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-28	TB-0506	05-06-94	GMT56
42413-29	EQUIP. BLANK 3	05-06-94	GMT56
PARAMETER	42413-28	42413-29	
Vinyl Acetate, ug/l	<10	<10	
Vinyl chloride, ug/l	<10	<10	
Xylenes, ug/l	<5.0	<5.0	
2-Hexanone, ug/l	<50	<50	
Propionitrile, ug/l	<100	<100	
Methyl methacrylate, ug/l	<5.0	<5.0	
Acrolein, ug/l	<100	<100	
Acrylonitrile, ug/l	<100	<100	
Ethyl methacrylate, ug/l	<5.0	<5.0	
Isobutyl Alcohol, ug/l	<1000	<1000	
Surrogate - Toluene-d8	89 %	90 %	
Surrogate - 4-Bromofluorobenzene	86 %	84 %	
Surrogate - 1,2-Dichloroethane-d4	84 %	84 %	
Date Analyzed	05.11.94	05.12.94	
Clock ID	2A0511	2A0511	

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LOG NO: S4-42413

Received: 07 MAY 94

Ms. Leslie Herd
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Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42413-30	EQUIP. BLANK 2	05-06-94	GMT58
PARAMETER	42413-30		
PCB's (8080)			
Aroclor-1016, ug/l	<1.0		
Aroclor-1221, ug/l	<2.0		
Aroclor-1232, ug/l	<1.0		
Aroclor-1242, ug/l	<1.0		
Aroclor-1248, ug/l	<1.0		
Aroclor-1254, ug/l	<1.0		
Aroclor-1260, ug/l	<1.0		
Surrogate-TCX	67 %		
Date Extracted	05.11.94		
Date Analyzed	05.21.94		

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-31	Matrix Spike/Matrix Spike Dup Result (SED-9)					GMT57
42413-32	MS Expected Value					GMT57
42413-33	MS/MSD % Recovery					GMT57
42413-34	MS/MSD % Recovery Limit					GMT57
42413-35	MS/MSD % RPD (Limit)					GMT57
PARAMETER	42413-31	42413-32	42413-33	42413-34	42413-35	
Volatile Organic Compounds (8240)						
Benzene, ug/kg dw	55.7/59.4	57.5	97/103 %	48-150 %	6.0(<27) %	
Chlorobenzene, ug/kg dw	48.8/52.5	57.5	85/91 %	54-138 %	6.8(<33) %	
1,1-Dichloroethylene, ug/kg dw	61.0/70.0	57.5	106/122 %	36-161 %	14(<50) %	
Toluene, ug/kg dw	44.8/47.8	57.5	78/83 %	51-141 %	6.2(<27) %	
Trichloroethylene, ug/kg dw	62.6/63.8	57.5	109/111 %	43-140 %	1.8(<27) %	
Surrogate - Toluene-d8	93/88 %	---	---	---	---	
Surrogate - 4-Bromofluorobenzene	93/89 %	---	---	---	---	
Surrogate - 1,2-Dichloroethane-d4	106/97 %	---	---	---	---	
Date Analyzed	05.16.94	---	---	---	---	
Clock ID	1H0516	---	---	---	---	

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-31	Matrix Spike/Matrix Spike Dup Result (SED-9)					GMT57
42413-32	MS Expected Value					GMT57
42413-33	MS/MSD % Recovery					GMT57
42413-34	MS/MSD % Recovery Limit					GMT57
42413-35	MS/MSD % RPD (Limit)					GMT57
PARAMETER	42413-31	42413-32	42413-33	42413-34	42413-35	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/kg dw	1627/1836	1915	85/96 %	51-108 %	12 (<26) %	
p-Dichlorobenzene, ug/kg dw	1278/1559	1915	67/81 %	46-112 %	19 (<28) %	
2,4-Dinitrotoluene, ug/kg dw	1687/1931	1915	88/101 %	35-111 %	14 (<29) %	
N-Nitroso-di-n-propylamine, ug/kg dw	1480/1732	1915	77/90 %	27-140 %	16 (<35) %	
Pyrene, ug/kg dw	2019/2298	1915	105/120 %	33-139 %	13 (<25) %	
1,2,4-Trichlorobenzene, ug/kg dw	1421/1704	1915	74/89 %	48-107 %	18 (<28) %	
2-Chlorophenol, ug/kg dw	2719/3217	3830	71/84 %	45-105 %	17 (<31) %	
p-Nitrophenol, ug/kg dw	2835/3241	3830	74/85 %	10-130 %	14 (<34) %	
Pentachlorophenol, ug/kg dw	894.7/1177	3830	23/31 %	10-107 %	30 (<89) %	
Phenol, ug/kg dw	2583/3075	3830	67/80 %	37-112 %	18 (<36) %	
p-Chloro-m-cresol, ug/kg dw	3184/3570	3830	83/93 %	38-112 %	11 (<23) %	
Surrogate - Phenol d 5	67/79 %	---	---	---	---	
Surrogate - 2-Fluorophenol	66/79 %	---	---	---	---	
Surrogate - 2,4,6-Tribromophenol	70/78 %	---	---	---	---	
Surrogate - Nitrobenzene d-5	64/78 %	---	---	---	---	
Surrogate - 2-Fluorobiphenyl	87/100 %	---	---	---	---	
Surrogate - Terphenyl	99/115 %	---	---	---	---	
Date Extracted	05.26.94	---	---	---	---	
Date Analyzed	05.27.94	---	---	---	---	

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-31	Matrix Spike/Matrix Spike Dup Result (SED-9)					GMT57
42413-32	MS Expected Value					GMT57
42413-33	MS/MSD % Recovery					GMT57
42413-34	MS/MSD % Recovery Limit					GMT57
42413-35	MS/MSD % RPD (Limit)					GMT57
PARAMETER	42413-31	42413-32	42413-33	42413-34	42413-35	
Chlorinated Pesticides (8080)						
Aldrin, ug/kg dw	*F62	7.66	*F62	40-137 %	---	(<39) %
4,4'-DDT, ug/kg dw	*F62	19.2	*F62	48-150 %	---	(<34) %
Dieldrin, ug/kg dw	*F62	19.2	*F62	42-139 %	---	(<41) %
Endrin, ug/kg dw	*F62	19.2	*F62	44-151 %	---	(<31) %
Heptachlor, ug/kg dw	*F62	7.66	*F62	40-136 %	---	(<34) %
gamma-BHC, ug/kg dw	*F62	7.66	*F62	41-134 %	---	(<36) %
Surrogate - Dibutylchlorendate	*F33	---	---	---	---	---
Herbicides (8151)						
2,4-D, ug/kg dw	38.7/31.7	38.3	101/83 %	10-130 %	20	(<47) %
2,4,5-T, ug/kg dw	14.7/16.4	38.3	38/43 %	24-115 %	12	(<46) %
2,4,5-TP Silvex, ug/kg dw	31.7/29.8	38.3	83/78 %	10-150 %	6.2	(<54) %
Surrogate-DCAA	91/71 %	---	---	---	---	---
Date Extracted	05.13.94	---	---	---	---	---
Date Analyzed	05.26.94	---	---	---	---	---
Organophosphorus Pesticides (8141)						
Methyl Parathion, ug/kg dw	197/190	191	103/99 %	40-104 %	4.0	(<40) %
Ethyl Parathion, ug/kg dw	166/160	191	87/84 %	15-141 %	3.5	(<28) %
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/kg dw	144/140	191	75/73 %	36-124 %	2.7	(<60) %
Surrogate - Triphenylphosphate	83/84 %	---	---	---	---	---
Date Extracted	05.12.94	---	---	---	---	---
Date Analyzed	05.20.94	---	---	---	---	---

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#				
42413-31	Matrix Spike/Matrix Spike Dup Result (SED-9)	GMT57				
42413-32	MS Expected Value	GMT57				
42413-33	MS/MSD % Recovery	GMT57				
42413-34	MS/MSD % Recovery Limit	GMT57				
42413-35	MS/MSD % RPD (Limit)	GMT57				
PARAMETER	42413-31	42413-32	42413-33	42413-34	42413-35	
Metals (6010)						
Antimony (6010) , mg/kg dw	26.9/28.1	57.5	47/49 %	75-125 %	4.2(<30) %	
Barium (6010), mg/kg dw	248/235	230	108/102 %	75-125 %	5.7(<30) %	
Beryllium (6010), mg/kg dw	5.75/5.48	5.75	100/95 %	75-125 %	5.1(<30) %	
Cadmium (6010), mg/kg dw	4.34/3.97	5.75	75/69 %	75-125 %	8.3(<30) %	
Chromium (6010), mg/kg dw	31.7/17.8	23.0	138/77 %	75-125 %	57(<30) %	
Cobalt (6010), mg/kg dw	54.1/50.9	57.5	94/89 %	75-125 %	5.5(<30) %	
Copper (6010), mg/kg dw	106/27.7	28.7	370/97 %	75-125 %	117(<30) %	
Nickel (6010), mg/kg dw	60.5/50.4	57.5	105/88 %	75-125 %	18(<30) %	
Silver (6010), mg/kg dw	4.97/4.80	5.75	86/83 %	75-125 %	3.6(<30) %	
Tin (6010), mg/kg dw	119/115	115	103/100 %	75-125 %	3.0(<30) %	
Vanadium (6010), mg/kg dw	58.3/42.7	57.5	101/74 %	75-125 %	31(<30) %	
Zinc (6010), mg/kg dw	117.2/58.7	57.5	204/102 %	75-125 %	67(<30) %	
Date Analyzed	05.17.94	---	---	---	---	
Arsenic (7060)						
Arsenic (7060), mg/kg dw	3.82/4.17	5.76	66/72 %	75-125 %	8.7(<30) %	
Date Analyzed	05.17.94	---	---	---	---	
Lead (7421)						
Lead (7421), mg/kg dw	6.65/27.3	5.75	116/475 %	75-125 %	121(<30) %	
Date Analyzed	05.18.94	---	---	---	---	

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-31	Matrix Spike/Matrix Spike Dup Result (SED-9)					GMT57
42413-32	MS Expected Value					GMT57
42413-33	MS/MSD % Recovery					GMT57
42413-34	MS/MSD % Recovery Limit					GMT57
42413-35	MS/MSD % RPD (Limit)					GMT57
PARAMETER	42413-31	42413-32	42413-33	42413-34	42413-35	
Selenium (7740)						
Selenium (7740), mg/kg dw	1.72/1.07	5.71	30/19 %	75-125 %	45(<30) %	
Date Analyzed	05.17.94	---	---	---	---	
Thallium (7841)						
Thallium (7841), mg/kg dw	5.87/6.01	5.72	102/105 %	75-125 %	2.9(<30) %	
Date Analyzed	05.17.94	---	---	---	---	
Mercury (7470/7471)						
Mercury (7470/7471), mg/kg dw	0.0571/*	0.0575	99/99 %	75-125 %	0(<30) %	
Date Analyzed	05.20.94	---	---	---	---	
Total Cyanide						
Cyanide, Total (9012), mg/kg dw	4.36/4.32	4.60	95/94 %	75-125 %	1.1(<30) %	
Date Analyzed	05.13.94	---	---	---	---	
Sulfide (9030)						
Sulfide (9030), mg/kg dw	27.1/25.3	43.1	63/59 %	50-150 %	6.6(<50) %	
Date Analyzed	05.11.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-31	Matrix Spike/Matrix Spike Dup Result (SED-9)					GMT57
42413-32	MS Expected Value					GMT57
42413-33	MS/MSD % Recovery					GMT57
42413-34	MS/MSD % Recovery Limit					GMT57
42413-35	MS/MSD % RPD (Limit)					GMT57
PARAMETER	42413-31	42413-32	42413-33	42413-34	42413-35	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/kg dw	60.9/84.4	21.75	280/388 %	69-145 %	32(<40) %	
Tetra CDF, ug/kg dw	25.4/22.4	21.75	117/103 %	59-142 %	13(<40) %	
Penta CDD, ug/kg dw	72.6/65.6	21.75	334/302 %	41-203 %	10(<40) %	
Penta CDF, ug/kg dw	29.7/26.0	21.75	136/120 %	55-146 %	12(<40) %	
Hexa CDD, ug/kg dw	29.2/23.1	21.75	134/106 %	45-174 %	23(<40) %	
Hexa CDF, ug/kg dw	30.1/26.5	21.75	138/122 %	50-154 %	12(<40) %	
Dioxin-2,3,7,8-TCDD (8280), ug/kg dw	60.9/84.4	21.75	280/388 %	69-145 %	32(<40) %	
Internal Standard (TCDD)	47/51 %	---	---	---	---	
Date Extracted	05.18.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Volatile Organic Compounds (8240)						
Acetonitrile, ug/kg dw	200	<200	---	---	---	
Acetone, ug/kg dw	50	<50	---	---	---	
Benzene, ug/kg dw	5.0	<5.0	45.7	50	91 %	
Bromodichloromethane, ug/kg dw	5.0	<5.0	---	---	---	
Methyl Bromide	10	<10	---	---	---	
(Bromomethane), ug/kg dw						
Carbon Disulfide, ug/kg dw	5.0	<5.0	---	---	---	
Chlorobenzene, ug/kg dw	5.0	<5.0	41.9	50	84 %	
Dibromochloromethane, ug/kg dw	5.0	<5.0	---	---	---	
Chloroethane, ug/kg dw	10	<10	---	---	---	
Methyl Chloride	10	<10	---	---	---	
(Chloromethane), ug/kg dw						
Chloroform, ug/kg dw	5.0	<5.0	---	---	---	
Allylchloride	5.0	<5.0	---	---	---	
(3-Chloropropene), ug/kg dw						
Chloroprene, ug/kg dw	5.0	<5.0	---	---	---	
1,2-Dibromo-3-chloropropane	10	<10	---	---	---	
, ug/kg dw						
1,2-Dibromoethane (EDB) , ug/kg dw	5.0	<5.0	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Methylene Bromide, ug/kg dw	10	<10	---	---	---	
Trans-1,4-Dichloro-2-butene	10	<10	---	---	---	
, ug/kg dw						
Dichlorodifluoromethane, ug/kg dw	5.0	<5.0	---	---	---	
1,1-Dichloroethane, ug/kg dw	5.0	<5.0	---	---	---	
1,2-Dichloroethane, ug/kg dw	5.0	<5.0	---	---	---	
Trans-1,2-Dichloroethylene,	5.0	<5.0	---	---	---	
ug/kg dw						
1,1-Dichloroethylene, ug/kg dw	5.0	<5.0	45.6	50	91 %	
Methylene Chloride	5.0	1.3J	---	---	---	
(Dichloromethane), ug/kg dw						
1,2-Dichloropropane, ug/kg dw	5.0	<5.0	---	---	---	
cis-1,3-Dichloropropene, ug/kg dw	5.0	<5.0	---	---	---	
trans-1,3-Dichloropropene, ug/kg dw	5.0	<5.0	---	---	---	
Ethylbenzene, ug/kg dw	5.0	2.9J	---	---	---	
Methyl Ethyl Ketone, ug/kg dw	50	<50	---	---	---	
Methyl Iodide, ug/kg dw	5.0	<5.0	---	---	---	
Methacrylonitrile, ug/kg dw	100	<100	---	---	---	
4-methyl-2-pentanone	50	<50	---	---	---	
(MIBK), ug/kg dw						

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Pentachloroethane, ug/kg dw	25	<25	---	---	---	
Styrene, ug/kg dw	5.0	0.76J	---	---	---	
1,1,1,2-Tetrachloroethane, ug/kg dw	5.0	<5.0	---	---	---	
1,1,2,2-Tetrachloroethane, ug/kg dw	5.0	<5.0	---	---	---	
Tetrachloroethene, ug/kg dw	5.0	<5.0	---	---	---	
Carbon Tetrachloride, ug/kg dw	5.0	<5.0	---	---	---	
Toluene, ug/kg dw	5.0	<5.0	37.9	50	76 %	
Bromoform, ug/kg dw	5.0	<5.0	---	---	---	
1,1,2-Trichloroethane, ug/kg dw	5.0	<5.0	---	---	---	
1,1,1-Trichloroethane, ug/kg dw	5.0	<5.0	---	---	---	
Trichloroethylene, ug/kg dw	5.0	<5.0	42.0	50	84 %	
Trichlorofluoromethane, ug/kg dw	5.0	<5.0	---	---	---	
1,2,3-Trichloropropane, ug/kg dw	5.0	<5.0	---	---	---	
Vinyl Acetate, ug/kg dw	10	<10	---	---	---	
Vinyl chloride, ug/kg dw	10	<10	---	---	---	
Xylenes, ug/kg dw	5.0	2.0J	---	---	---	
2-Hexanone, ug/kg dw	50	<50	---	---	---	
Propionitrile, ug/kg dw	200	<200	---	---	---	
Methyl methacrylate, ug/kg dw	5.0	<5.0	---	---	---	
Acrolein, ug/kg dw	100	<100	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Acrylonitrile, ug/kg dw	100	<100	---	---	---	
Ethyl methacrylate, ug/kg dw	5.0	<5.0	---	---	---	
Isobutyl Alcohol, ug/kg dw	1000	<1000	---	---	---	
Surrogate - Toluene-d8	---	107 %	108 %	---	---	
Surrogate - 4-Bromofluorobenzene	---	93 %	84 %	---	---	
Surrogate - 1,2-Dichloroethane-d4	---	83 %	88 %	---	---	
Date Analyzed	---	05.16.94	05.16.94	---	---	
Clock ID	---	1H0516	1H0516	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/kg dw	330	<330	1466	1665	88 %	
Acenaphthylene, ug/kg dw	330	<330	---	---	---	
Acetophenone, ug/kg dw	330	<330	---	---	---	
2-Acetylaminofluorene, ug/kg dw	330	<330	---	---	---	
4-Aminobiphenyl, ug/kg dw	330	<330	---	---	---	
Anthracene, ug/kg dw	330	<330	---	---	---	
Aniline, ug/kg dw	330	<330	---	---	---	
Aramite, ug/kg dw	330	<330	---	---	---	
Benzo(a)Anthracene, ug/kg dw	330	<330	---	---	---	
Benzo(k)fluoranthene, ug/kg dw	330	<330	---	---	---	
Benzo(b)fluoranthene, ug/kg dw	330	<330	---	---	---	
Benzo(g,h,i)perylene, ug/kg dw	330	<330	---	---	---	
Benzo(a)pyrene, ug/kg dw	330	<330	---	---	---	
Benzyl alcohol, ug/kg dw	330	<330	---	---	---	
bis(2-Chloroethoxy)methane, ug/kg dw	330	<330	---	---	---	
bis(2-Chloroethyl)ether, ug/kg dw	330	<330	---	---	---	
Bis(2-chloroisopropyl)ether , ug/kg dw	330	<330	---	---	---	

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42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
bis(2-Ethylhexyl)phthalate, ug/kg dw	330	<330	---	---	---	
4-Bromophenyl-phenyl-ether, ug/kg dw	330	<330	---	---	---	
Butylbenzylphthalate, ug/kg dw	330	<330	---	---	---	
(Dinoseb)	330	<330	---	---	---	
2-sec-Butyl-4,6-dinitrophenol, ug/kg dw						
P-Chloroaniline, ug/kg dw	660	<660	---	---	---	
m-Dichlorobenzene, ug/kg dw	330	<330	---	---	---	
p-Dichlorobenzene, ug/kg dw	330	<330	1298	1665	78 %	
o-Dichlorobenzene, ug/kg dw	330	<330	---	---	---	
4-Chlorophenyl-phenyl ether, ug/kg dw	330	<330	---	---	---	
2-Chloronaphthalene, ug/kg dw	330	<330	---	---	---	
Chrysene, ug/kg dw	330	<330	---	---	---	
Dibenz(a,h)anthracene, ug/kg dw	330	<330	---	---	---	
Di-n-butylphthalate, ug/kg dw	330	<330	---	---	---	
3,3'-Dichlorobenzidine, ug/kg dw	660	<660	---	---	---	
3,3'-Dimethylbenzidine, ug/kg dw	1700	<1700	---	---	---	

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42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Diethylphthalate, ug/kg dw	330	<330	---	---	---	
p-(Dimethylamino)azobenzene , ug/kg dw	330	<330	---	---	---	
7,12-Dimethylbenz(a)anthracene, ug/kg dw	330	<330	---	---	---	
a-a-Dimethylphenethylamine, ug/kg dw	1700	<1700	---	---	---	
Dimethylphthalate, ug/kg dw	330	<330	---	---	---	
m-Dinitrobenzene , ug/kg dw	330	<330	---	---	---	
2,4-Dinitrotoluene, ug/kg dw	330	<330	1336	1665	80 %	
2,6-Dinitrotoluene, ug/kg dw	330	<330	---	---	---	
Di-n-octylphthalate, ug/kg dw	330	<330	---	---	---	
N-Nitroso-di-n-propylamine, ug/kg dw	330	<330	1511	1665	91 %	
Fluoranthene, ug/kg dw	330	<330	---	---	---	
Fluorene, ug/kg dw	330	<330	---	---	---	
Hexachlorobenzene, ug/kg dw	330	<330	---	---	---	
Hexachlorobutadiene, ug/kg dw	330	<330	---	---	---	
Hexachlorocyclopentadiene, ug/kg dw	330	<330	---	---	---	
Hexachloroethane, ug/kg dw	330	<330	---	---	---	

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42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Hexachloropropene, ug/kg dw	330	<330	---	---	---	
Indeno(1,2,3-cd)pyrene, ug/kg dw	330	<330	---	---	---	
Isophorone, ug/kg dw	330	<330	---	---	---	
Isosafrole, ug/kg dw	330	<330	---	---	---	
Methapyrilene, ug/kg dw	3300	<3300	---	---	---	
3-Methylcholanthrene, ug/kg dw	330	<330	---	---	---	
Methyl methanesulfonate, ug/kg dw	330	<330	---	---	---	
2-Methylnaphthalene, ug/kg dw	330	<330	---	---	---	
Naphthalene, ug/kg dw	330	<330	---	---	---	
1,4-Naphthoquinone, ug/kg dw	330	<330	---	---	---	
1-Naphthylamine, ug/kg dw	330	<330	---	---	---	
2-Naphthylamine, ug/kg dw	330	<330	---	---	---	
o-Nitroaniline, ug/kg dw	1700	<1700	---	---	---	
m-Nitroaniline, ug/kg dw	1700	<1700	---	---	---	
p-Nitroaniline, ug/kg dw	1700	<1700	---	---	---	
Nitrobenzene, ug/kg dw	330	<330	---	---	---	
N-Nitrosodi-n-butylamine, ug/kg dw	330	<330	---	---	---	
N-Nitrosodiethylamine, ug/kg dw	330	<330	---	---	---	
N-Nitrosodimethylamine, ug/kg dw	330	<330	---	---	---	
N-Nitrosomethylethylamine, ug/kg dw	330	<330	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
N-Nitrosodiphenylamine/Diph enylamine, ug/kg dw	330	<330	---	---	---	
N-Nitrosomorpholine, ug/kg dw	330	<330	---	---	---	
N-Nitrosopiperidine, ug/kg dw	330	<330	---	---	---	
N-Nitrosopyrrolidine, ug/kg dw	330	<330	---	---	---	
5-Nitro-o-toluidine, ug/kg dw	330	<330	---	---	---	
Pentachlorobenzene, ug/kg dw	330	<330	---	---	---	
Pentachloronitrobenzene, ug/kg dw	330	<330	---	---	---	
Phenacetin, ug/kg dw	330	<330	---	---	---	
Phenanthrene, ug/kg dw	330	<330	---	---	---	
2-Picoline, ug/kg dw	330	<330	---	---	---	
Pronamide, ug/kg dw	330	<330	---	---	---	
Pyrene, ug/kg dw	330	<330	1780	1665	107 %	
Safrole, ug/kg dw	330	<330	---	---	---	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	330	<330	---	---	---	
1,2,4-Trichlorobenzene, ug/kg dw	330	<330	1397	1665	84 %	
2-Chlorophenol, ug/kg dw	330	<330	2699	3330	81 %	
Cresol m & p, ug/kg dw	330	<330	---	---	---	
O-cresol, ug/kg dw	330	<330	---	---	---	

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42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
p-Nitrophenol, ug/kg dw	1700	<1700	3687	3330	111 %	
2,4-Dichlorophenol, ug/kg dw	330	<330	---	---	---	
2,6-Dichlorophenol, ug/kg dw	330	<330	---	---	---	
2,4-Dimethylphenol, ug/kg dw	330	<330	---	---	---	
4,6-Dinitro-o-cresol, ug/kg dw	1700	<1700	---	---	---	
2,4-Dinitrophenol, ug/kg dw	1700	<1700	---	---	---	
Pentachlorophenol, ug/kg dw	1700	<1700	4334	3330	130 %	
Phenol, ug/kg dw	330	<330	2827	3330	85 %	
2,4,5-Trichlorophenol, ug/kg dw	1700	<1700	---	---	---	
2,4,6-Trichlorophenol, ug/kg dw	330	<330	---	---	---	
2,3,4,6-Tetrachlorophenol, ug/kg dw	1700	<1700	---	---	---	
o-Nitrophenol, ug/kg dw	330	<330	---	---	---	
Diallate, ug/kg dw	330	<330	---	---	---	
Ethyl methanesulfonate, ug/kg dw	330	<330	---	---	---	
4-Nitroquinoline 1-oxide, ug/kg dw	3300	<3300	---	---	---	
p-phenylenediamine, ug/kg dw	1700	<1700	---	---	---	
o-toluidine, ug/kg dw	330	<330	---	---	---	
O,O,O-triethyl phosphorothioate, ug/kg dw	330	<330	---	---	---	

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42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
1,3,5-Trinitrobenzene, ug/kg dw	330	<330	---	---	---	
p-Chloro-m-cresol, ug/kg dw	330	<330	3061	3330	92 %	
Dibenzofuran, ug/kg dw	330	<330	---	---	---	
Pyridine, ug/kg dw	330	<330	---	---	---	
1,4-Dioxane, ug/kg dw	330	<330	---	---	---	
Kepone, ug/kg dw	330	<330	---	---	---	
Surrogate - Phenol d 5	---	74 %	86 %	---	---	
Surrogate - 2-Fluorophenol	---	78 %	84 %	---	---	
Surrogate - 2,4,6-Tribromophenol	---	98 %	96 %	---	---	
Surrogate - Nitrobenzene d-5	---	81 %	90 %	---	---	
Surrogate - 2-Fluorobiphenyl	---	92 %	91 %	---	---	
Surrogate - Terphenyl	---	78 %	104 %	---	---	
Date Extracted	---	05.12.94	05.12.94	---	---	
Date Analyzed	---	05.19.94	05.21.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#				
42413-36	Detection Limits	GMT57				
42413-37	Method Blank	GMT57				
42413-38	Lab Control Standard (LCS) Result	GMT57				
42413-39	LCS Expected Value	GMT57				
42413-40	LCS % Recovery	GMT57				
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Chlorinated Pesticides (8080)						
Aldrin, ug/kg dw	1.7	<1.7	7.83	6.67	117 %	
Isodrin, ug/kg dw	3.3	<3.3	---	---	---	
Chlordane, ug/kg dw	17	<17	---	---	---	
Chlorobenzilate, ug/kg dw	17	<17	---	---	---	
4,4'-DDD, ug/kg dw	3.3	<3.3	---	---	---	
4,4'-DDE, ug/kg dw	3.3	<3.3	---	---	---	
4,4'-DDT, ug/kg dw	3.3	<3.3	20.5	16.7	123 %	
Dieldrin, ug/kg dw	3.3	<3.3	20.9	16.7	125 %	
Endosulfan I, ug/kg dw	1.7	<1.7	---	---	---	
Endosulfan II, ug/kg dw	3.3	<3.3	---	---	---	
Endosulfan sulfate, ug/kg dw	3.3	<3.3	---	---	---	
Endrin, ug/kg dw	3.3	<3.3	17.8	16.7	107 %	
Endrin Aldehyde, ug/kg dw	3.3	<3.3	---	---	---	
Heptachlor, ug/kg dw	1.7	<1.7	7.52	6.67	113 %	
Heptachlor epoxide, ug/kg dw	1.7	<1.7	---	---	---	
alpha-BHC, ug/kg dw	1.7	<1.7	---	---	---	
beta-BHC, ug/kg dw	1.7	<1.7	---	---	---	
gamma-BHC, ug/kg dw	1.7	<1.7	7.68	6.67	115 %	
delta-BHC, ug/kg dw	1.7	<1.7	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Kepone, ug/kg dw	17	<17	---	---	---	
Methoxychlor, ug/kg dw	17	<17	---	---	---	
Toxaphene, ug/kg dw	170	<170	---	---	---	
Aroclor-1016, ug/kg dw	33	<33	---	---	---	
Aroclor-1221, ug/kg dw	67	<67	---	---	---	
Aroclor-1232, ug/kg dw	33	<33	---	---	---	
Aroclor-1242, ug/kg dw	33	<33	---	---	---	
Aroclor-1248, ug/kg dw	33	<33	---	---	---	
Aroclor-1254, ug/kg dw	33	<33	---	---	---	
Aroclor-1260, ug/kg dw	33	<33	---	---	---	
Surrogate - Dibutylchloroendate	---	104 %	111 %	---	---	
Date Extracted	---	05.13.94	05.13.94	---	---	
Date Analyzed	---	5.27/29.94	05.29.94	---	---	
Herbicides (8151)						
2,4-D, ug/kg dw	50	<50	24.4	33.3	73 %	
2,4,5-T, ug/kg dw	50	<50	28.8	33.3	86 %	
2,4,5-TP Silvex, ug/kg dw	50	<50	30.8	33.3	92 %	
Surrogate-DCAA	---	66 %	72 %	---	---	
Date Extracted	---	05.13.94	05.13.94	---	---	
Date Analyzed	---	05.25.94	05.25.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Organophosphorus Pesticides (8141)						
Disulfoton, ug/kg dw	130	<130	---	---	---	
Methyl Parathion, ug/kg dw	17	<17	155	167	93 %	
Ethyl Parathion, ug/kg dw	33	<33	121	167	72 %	
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/kg dw	17	<17	---	---	---	
Famphur, ug/kg dw	330	<330	---	---	---	
Phorate, ug/kg dw	33	<33	---	---	---	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/kg dw	66	<66	127	167	76 %	
Dimethoate, ug/kg dw	2000	<2000	---	---	---	
Surrogate - Triphenylphosphate	---	100 %	92 %	---	---	
Date Extracted	---	05.12.94	05.12.94	---	---	
Date Analyzed	---	05.20.94	05.20.94	---	---	

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42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Metals (6010)						
Antimony (6010) , mg/kg dw	5.0	<5.0	82.5	83.2	99 %	
Barium (6010), mg/kg dw	1.0	<1.0	97.6	94.5	103 %	
Beryllium (6010), mg/kg dw	0.50	<0.50	92.0	87.4	105 %	
Cadmium (6010), mg/kg dw	0.50	<0.50	85.2	85.7	99 %	
Chromium (6010), mg/kg dw	1.0	<1.0	89.4	93.1	96 %	
Cobalt (6010), mg/kg dw	1.0	<1.0	89.2	89.6	100 %	
Copper (6010), mg/kg dw	2.5	<2.5	95.2	91.4	104 %	
Nickel (6010), mg/kg dw	4.0	<4.0	92.4	91.4	101 %	
Silver (6010), mg/kg dw	1.0	<1.0	86.2	86.8	99 %	
Tin (6010), mg/kg dw	5.0	<5.0	105	91.0	115 %	
Vanadium (6010), mg/kg dw	1.0	<1.0	91.4	92.7	99 %	
Zinc (6010), mg/kg dw	2.0	<2.0	84.5	84.9	100 %	
Date Analyzed	---	05.17.94	05.17.94	---	---	
Arsenic (7060)						
Arsenic (7060), mg/kg dw	1.0	<1.0	5.86	5.33	110 %	
% R Post Digestion Spike	---	108 %	---	---	---	
Date Analyzed	---	05.17.94	05.17.94	---	---	
Lead (7421)						
Lead (7421), mg/kg dw	0.50	<0.50	6.42	5.66	113 %	
% R Post Digestion Spike	---	105 %	---	---	---	
Date Analyzed	---	05.17.94	05.17.94	---	---	

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42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Selenium (7740)						
Selenium (7740), mg/kg dw	1.0	<1.0	5.29	5.29	100 %	
% R Post Digestion Spike	---	93 %	---	---	---	
Date Analyzed	---	05.17.94	05.17.94	---	---	
Thallium (7841)						
Thallium (7841), mg/kg dw	1.0	<1.0	5.57	5.18	108 %	
% R Post Digestion Spike	---	93 %	---	---	---	
Date Analyzed	---	05.17.94	05.17.94	---	---	
Mercury (7470/7471)						
Mercury (7470/7471), mg/kg dw	0.010	<0.010	1.26	1.40	90 %	
Date Analyzed	---	05.20.94	05.20.94	---	---	
Total Cyanide						
Cyanide, Total (9012), mg/kg dw	1.0	<0.20	3.92	4.00	98 %	
Date Analyzed	---	05.13.94	05.13.94	---	---	
Sulfide (9030)						
Sulfide (9030), mg/kg dw	10	<10	29.3	37.5	78 %	
Date Analyzed	---	05.11.94	05.11.94	---	---	

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42413-36	Detection Limits					GMT57
42413-37	Method Blank					GMT57
42413-38	Lab Control Standard (LCS) Result					GMT57
42413-39	LCS Expected Value					GMT57
42413-40	LCS % Recovery					GMT57
PARAMETER	42413-36	42413-37	42413-38	42413-39	42413-40	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/kg dw	0.50	<5.0	21.35	25	85 %	
Tetra CDF, ug/kg dw	0.50	<5.0	23.05	25	92 %	
Penta CDD, ug/kg dw	0.50	<5.0	77.54	25	310 %	
Penta CDF, ug/kg dw	0.50	<5.0	25.10	25	100 %	
Hexa CDD, ug/kg dw	0.50	<5.0	24.97	25	100 %	
Hexa CDF, ug/kg dw	0.50	<5.0	25.09	25	100 %	
Dioxin-2,3,7,8-TCDD (8280), ug/kg dw	0.50	<5.0	21.35	25	85 %	
Internal Standard (TCDD)	---	40 %	44 %	---	---	
Date Extracted	---	05.18.94	05.18.94	---	---	
Date Analyzed	---	05.20.94	05.20.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-41	LCS % Recovery Limits	GMT57
PARAMETER	42413-41	
Volatile Organic Compounds (8240)		
Benzene	48-150 %	
Chlorobenzene	54-138 %	
1,1-Dichloroethylene	36-161 %	
Toluene	51-141 %	
Trichloroethylene	43-140 %	
Acids and Base Neutrals (8270)		
Acenaphthene	51-108 %	
p-Dichlorobenzene	46-112 %	
2,4-Dinitrotoluene	35-111 %	
N-Nitroso-di-n-propylamine	27-140 %	
Pyrene	33-139 %	
1,2,4-Trichlorobenzene	48-107 %	
2-Chlorophenol	45-105 %	
p-Nitrophenol	10-130 %	
Pentachlorophenol	10-107 %	
Phenol	37-112 %	
p-Chloro-m-cresol	38-112 %	
Chlorinated Pesticides (8080)		
Aldrin	40-137 %	
4,4'-DDT	48-150 %	
Dieldrin	42-139 %	
Endrin	44-151 %	
Heptachlor	40-136 %	
gamma-BHC	41-134 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-41	LCS % Recovery Limits	GMT57
PARAMETER	42413-41	
Herbicides (8151)		
2,4-D	10-130 %	
2,4,5-T	24-115 %	
2,4,5-TP Silvex	10-150 %	
Organophosphorus Pesticides (8141)		
Methyl Parathion	40-104 %	
Ethyl Parathion	15-141 %	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin)	36-124 %	
Metals (6010)		
Antimony (6010)	70-130 %	
Barium (6010)	70-130 %	
Beryllium (6010)	70-130 %	
Cadmium (6010)	70-130 %	
Chromium (6010)	70-130 %	
Cobalt (6010)	70-130 %	
Copper (6010)	70-130 %	
Nickel (6010)	70-130 %	
Silver (6010)	70-130 %	
Tin (6010)	70-130 %	
Vanadium (6010)	70-130 %	
Zinc (6010)	70-130 %	
Arsenic (7060)		
Arsenic (7060)	70-130 %	
Lead (7421)		
Lead (7421)	70-130 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-41	LCS % Recovery Limits	GMT57
PARAMETER	42413-41	
Selenium (7740)		
Selenium (7740)	70-130 %	
Thallium (7841)		
Thallium (7841)	70-130 %	
Mercury (7470/7471)		
Mercury (7470/7471)	70-130 %	
Total Cyanide		
Cyanide, Total (9012)	75-125 %	
Sulfide (9030)		
Sulfide (9030)	50-150 %	
Chlorinated Dioxins/Furans-App 9 (8280)		
Tetra CDD	69-145 %	
Tetra CDF	59-142 %	
Penta CDD	41-203 %	
Penta CDF	55-146 %	
Hexa CDD	45-174 %	
Hexa CDF	50-154 %	
Dioxin-2,3,7,8-TCDD (8280)	69-145 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-42	Matrix Spike/Matrix Spike Dup Result (SED-1)					GMT58
42413-43	MS Expected Value					GMT58
42413-44	MS/MSD % Recovery					GMT58
42413-45	MS/MSD % Recovery Limit					GMT58
42413-46	MS % RPD (Limit)					GMT58
PARAMETER	42413-42	42413-43	42413-44	42413-45	42413-46	
PCB's (8080)						
Aroclor-1016, ug/kg dw	117/118	97.9	120/120 %	69-107 %	0(<21) %	
Aroclor-1260, ug/kg dw	436/528	97.9	445/539 %X	58-122 %	19(<21) %	
Surrogate-TCX	87/91 %	---	---	---	---	
Date Extracted	05.12.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-47	Detection Limits					GMT58
42413-48	Method Blank					GMT58
42413-49	Lab Control Standard (LCS) Result					GMT58
42413-50	LCS Expected Value					GMT58
42413-51	LCS % Recovery					GMT58
PARAMETER	42413-47	42413-48	42413-49	42413-50	42413-51	
PCB's (8080)						
Aroclor-1016, ug/kg dw	33	<33	71.1	83.2	85 %	
Aroclor-1221, ug/kg dw	67	<67	---	---	---	
Aroclor-1232, ug/kg dw	33	<33	---	---	---	
Aroclor-1242, ug/kg dw	33	<33	---	---	---	
Aroclor-1248, ug/kg dw	33	<33	---	---	---	
Aroclor-1254, ug/kg dw	33	<33	---	---	---	
Aroclor-1260, ug/kg dw	33	<33	93.0	83.2	112 %	
Surrogate-TCX	---	---	69 %	---	---	
Date Extracted	---	---	05.12.94	---	---	
Date Analyzed	---	---	05.20.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-52	LCS % Recovery Limits	GMT58
PARAMETER	42413-52	
PCB's (8080)		
Aroclor-1016, ug/kg dw	69-107 %	
Aroclor-1260, ug/kg dw	58-122 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-53	Matrix Spike/Matrix Spike Dup Result (LF-4)					GMT59
42413-54	MS Expected Value					GMT59
42413-55	MS/MSD % Recovery					GMT59
42413-56	MS/MSD % Recovery Limit					GMT59
42413-57	MS % RPD (Limit)					GMT59
PARAMETER	42413-53	42413-54	42413-55	42413-56	42413-57	
PCB's (8080)						
Aroclor-1016, ug/l	*F33	126	*F33	69-107 %	--- (<20) %	
Aroclor-1260, ug/l	*F33	126	*F33	58-122 %	--- (<20) %	
Surrogate-TCX	*F33	---	---	---	---	
Date Extracted	05.11.94	---	---	---	---	
Date Analyzed	05.26.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-58	Detection Limits					GMT59
42413-59	Method Blank					GMT59
42413-60	Lab Control Standard (LCS) Result					GMT59
42413-61	LCS Expected Value					GMT59
42413-62	LCS % Recovery					GMT59
PARAMETER	42413-58	42413-59	42413-60	42413-61	42413-62	
PCB's (8080)						
Aroclor-1016, ug/l	33	<33	86.7	83.3	104 %	
Aroclor-1221, ug/l	67	<67	---	---	---	
Aroclor-1232, ug/l	33	<33	---	---	---	
Aroclor-1242, ug/l	33	<33	---	---	---	
Aroclor-1248, ug/l	33	<33	---	---	---	
Aroclor-1254, ug/l	33	<33	---	---	---	
Aroclor-1260, ug/l	33	<33	91.8	83.3	110 %	
Surrogate-TCX	---	71 %	63 %	---	---	
Date Extracted	---	05.11.94	05.11.94	---	---	
Date Analyzed	---	05.25.94	05.25.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-63	LCS % Recovery Limits	GMT59
PARAMETER	42413-63	
PCB's (8080)		
Aroclor-1016, ug/l	69-107 %	
Aroclor-1260, ug/l	58-122 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42413-64	Detection Limits	GMT55
42413-65	Method Blank	GMT55
42413-66	Lab Control Standard (LCS) Result	GMT55
42413-67	LCS Expected Value	GMT55
42413-68	LCS % Recovery	GMT55

PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68
Acids and Base Neutrals (8270)					
Acenaphthene, ug/l	10	<10	41.34	50	83 %
Acenaphthylene, ug/l	10	<10	---	---	---
Acetophenone, ug/l	10	<10	---	---	---
2-Acetylaminofluorene, ug/l	10	<10	---	---	---
4-Aminobiphenyl, ug/l	10	<10	---	---	---
Anthracene, ug/l	10	<10	---	---	---
Aniline, ug/l	50	<50	---	---	---
Aramite, ug/l	10	<10	---	---	---
Benzo(a)Anthracene, ug/l	10	<10	---	---	---
Benzo(k)fluoranthene, ug/l	10	<10	---	---	---
Benzo(b)fluoranthene, ug/l	10	<10	---	---	---
Benzo(g,h,i)perylene, ug/l	10	<10	---	---	---
Benzo(a)pyrene, ug/l	10	<10	---	---	---
Benzyl alcohol, ug/l	10	<10	---	---	---
bis(2-Chloroethoxy)methane, ug/l	10	<10	---	---	---
bis(2-Chloroethyl)ether, ug/l	10	<10	---	---	---
Bis(2-chloroisopropyl)ether, ug/l	10	<10	---	---	---
bis(2-Ethylhexyl)phthalate, ug/l	10	<10	---	---	---
4-Bromophenyl-phenyl-ether, ug/l	10	<10	---	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
Butylbenzylphthalate, ug/l	10	<10	---	---	---	
(Dinoseb)	10	<10	---	---	---	
2-sec-Butyl-4,6-dinitrophenol, ug/l						
P-Chloroaniline, ug/l	20	<20	---	---	---	
m-Dichlorobenzene, ug/l	10	<10	---	---	---	
p-Dichlorobenzene, ug/l	10	<10	31.84	50	64 %	
o-Dichlorobenzene, ug/l	10	<10	---	---	---	
4-Chlorophenyl-phenyl ether, ug/l	10	<10	---	---	---	
2-Chloronaphthalene, ug/l	10	<10	---	---	---	
Chrysene, ug/l	10	<10	---	---	---	
Dibenz(a,h)anthracene, ug/l	10	<10	---	---	---	
Di-n-butylphthalate, ug/l	10	<10	---	---	---	
3,3'-Dichlorobenzidine, ug/l	20	<20	---	---	---	
3,3'-Dimethylbenzidine, ug/l	200	<200	---	---	---	
Diethylphthalate, ug/l	10	<10	---	---	---	
p-(Dimethylamino)azobenzene, ug/l	10	<10	---	---	---	
7,12-Dimethylbenz(a)anthracene, ug/l	10	<10	---	---	---	
a-a-Dimethylphenethylamine, ug/l	2000	<2000	---	---	---	
Dimethylphthalate, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
m-Dinitrobenzene , ug/l	10	<10	---	---	---	
2,4-Dinitrotoluene, ug/l	10	<10	42.84	50	86 %	
2,6-Dinitrotoluene, ug/l	10	<10	---	---	---	
Di-n-octylphthalate, ug/l	10	<10	---	---	---	
N-Nitroso-di-n-propylamine, ug/l	10	<10	35.41	50	71 %	
Fluoranthene, ug/l	10	<10	---	---	---	
Fluorene, ug/l	10	<10	---	---	---	
Hexachlorobenzene, ug/l	10	<10	---	---	---	
Hexachlorobutadiene, ug/l	10	<10	---	---	---	
Hexachlorocyclopentadiene, ug/l	10	<10	---	---	---	
Hexachloroethane, ug/l	10	<10	---	---	---	
Hexachloropropene, ug/l	10	<10	---	---	---	
Indeno(1,2,3-cd)pyrene, ug/l	10	<10	---	---	---	
Isophorone, ug/l	10	<10	---	---	---	
Isosafrole, ug/l	10	<10	---	---	---	
Methapyrilene, ug/l	2000	<2000	---	---	---	
3-Methylcholanthrene, ug/l	10	<10	---	---	---	
Methyl methanesulfonate, ug/l	10	<10	---	---	---	
2-Methylnaphthalene, ug/l	10	<10	---	---	---	
Naphthalene, ug/l	10	<10	---	---	---	

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42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
1,4-Naphthoquinone, ug/l	10	<10	---	---	---	
1-Naphthylamine, ug/l	10	<10	---	---	---	
2-Naphthylamine, ug/l	10	<10	---	---	---	
o-Nitroaniline, ug/l	50	<50	---	---	---	
m-Nitroaniline, ug/l	50	<50	---	---	---	
p-Nitroaniline, ug/l	50	<50	---	---	---	
Nitrobenzene, ug/l	10	<10	---	---	---	
N-Nitrosodi-n-butylamine, ug/l	10	<10	---	---	---	
N-Nitrosodiethylamine, ug/l	10	<10	---	---	---	
N-Nitrosodimethylamine, ug/l	10	<10	---	---	---	
N-Nitrosomethylethylamine, ug/l	10	<10	---	---	---	
N-Nitrosodiphenylamine/Diph enylamine, ug/l	10	<10	---	---	---	
N-Nitrosomorpholine, ug/l	10	<10	---	---	---	
N-Nitrosopiperidine, ug/l	10	<10	---	---	---	
N-Nitrosopyrrolidine, ug/l	10	<10	---	---	---	
5-Nitro-o-toluidine, ug/l	10	<10	---	---	---	
Pentachlorobenzene, ug/l	10	<10	---	---	---	
Pentachloronitrobenzene, ug/l	10	<10	---	---	---	
Phenacetin, ug/l	10	<10	---	---	---	

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42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
Phenanthrene, ug/l	10	<10	---	---	---	
2-Picoline, ug/l	200	<200	---	---	---	
Pronamide, ug/l	10	<10	---	---	---	
Pyrene, ug/l	10	<10	54.65	50	109 %	
Safrole, ug/l	10	<10	---	---	---	
1,2,4,5-Tetrachlorobenzene, ug/l	10	<10	---	---	---	
1,2,4-Trichlorobenzene, ug/l	10	<10	33.56	50	67 %	
2-Chlorophenol, ug/l	10	<10	66.31	100	66 %	
Cresol m & p, ug/l	10	<10	---	---	---	
O-cresol, ug/l	10	<10	---	---	---	
p-Nitrophenol, ug/l	50	<50	89.99	100	90 %	
2,4-Dichlorophenol, ug/l	10	<10	---	---	---	
2,6-Dichlorophenol, ug/l	10	<10	---	---	---	
2,4-Dimethylphenol, ug/l	10	<10	---	---	---	
4,6-Dinitro-o-cresol, ug/l	50	<50	---	---	---	
2,4-Dinitrophenol, ug/l	50	<50	---	---	---	
Pentachlorophenol, ug/l	50	<50	102.3	100	102 %	
Phenol, ug/l	10	<10	66.99	100	67 %	
2,4,5-Trichlorophenol, ug/l	10	<10	---	---	---	
2,4,6-Trichlorophenol, ug/l	10	<10	---	---	---	

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LOG NO: S4-42413

Received: 07 MAY 94

Ms. Leslie Herd
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Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/57/58/59)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
2,3,4,6-Tetrachlorophenol, ug/l	50	<50	---	---	---	
o-Nitrophenol, ug/l	10	<10	---	---	---	
Diallate, ug/l	10	<10	---	---	---	
Ethyl methanesulfonate, ug/l	10	<10	---	---	---	
4-Nitroquinoline 1-oxide, ug/l	100	<100	---	---	---	
p-phenylenediamine, ug/l	2000	<2000	---	---	---	
o-toluidine, ug/l	10	<10	---	---	---	
O,O,O-triethyl phosphorothioate, ug/l	10	<10	---	---	---	
1,3,5-Trinitrobenzene, ug/l	200	<200	---	---	---	
p-Chloro-m-cresol, ug/l	10	<10	73.08	100	73 %	
Dibenzofuran, ug/l	10	<10	---	---	---	
Pyridine, ug/l	200	<200	---	---	---	
1,4-Dioxane, ug/l	10	<10	---	---	---	
Kepone, ug/l	10	<10	---	---	---	
Surrogate - Phenol d 5	---	62 %	66 %	---	---	
Surrogate - 2-Fluorophenol	---	66 %	66 %	---	---	
Surrogate - 2,4,6-Tribromophenol	---	70 %	85 %	---	---	
Surrogate - Nitrobenzene d-5	---	75 %	78 %	---	---	
Surrogate - 2-Fluorobiphenyl	---	76 %	83 %	---	---	
Surrogate - Terphenyl	---	103 %	109 %	---	---	
Date Extracted	---	05.11.94	05.11.94	---	---	
Date Analyzed	---	05.24.94	05.17.94	---	---	

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42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
Chlorinated Pesticides (8080)						
Aldrin, ug/l	0.050	<0.050	0.217	0.20	108 %	
Isodrin, ug/l	0.050	<0.050	---	---	---	
Chlordane, ug/l	0.50	<0.50	---	---	---	
Chlorobenzilate, ug/l	0.50	<0.50	---	---	---	
4,4'-DDD, ug/l	0.10	<0.10	---	---	---	
4,4'-DDE, ug/l	0.10	<0.10	---	---	---	
4,4'-DDT, ug/l	0.10	<0.10	0.631	0.50	126 %	
Dieldrin, ug/l	0.10	<0.10	0.644	0.50	129 %	
Endosulfan I, ug/l	0.050	<0.050	---	---	---	
Endosulfan II, ug/l	0.10	<0.10	---	---	---	
Endosulfan sulfate, ug/l	0.10	<0.10	---	---	---	
Endrin, ug/l	0.10	<0.10	0.578	0.50	116 %	
Endrin Aldehyde, ug/l	0.10	<0.10	---	---	---	
Heptachlor, ug/l	0.050	<0.050	0.223	0.20	112 %	
Heptachlor epoxide, ug/l	0.050	<0.050	---	---	---	
alpha-BHC, ug/l	0.050	<0.050	---	---	---	
beta-BHC, ug/l	0.050	<0.050	---	---	---	
gamma-BHC, ug/l	0.050	<0.050	0.237	0.20	118 %	
delta-BHC, ug/l	0.050	<0.050	---	---	---	

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42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
Methoxychlor, ug/l	0.50	<0.50	---	---	---	
Toxaphene, ug/l	5.0	<5.0	---	---	---	
Aroclor-1016, ug/l	1.0	<1.0	---	---	---	
Aroclor-1221, ug/l	2.0	<2.0	---	---	---	
Aroclor-1232, ug/l	1.0	<1.0	---	---	---	
Aroclor-1242, ug/l	1.0	<1.0	---	---	---	
Aroclor-1248, ug/l	1.0	<1.0	---	---	---	
Aroclor-1254, ug/l	1.0	<1.0	---	---	---	
Aroclor-1260, ug/l	1.0	<1.0	---	---	---	
Surrogate - Dibutylchloroendate	---	99 %	111 %	---	---	
Date Extracted	---	05.11.94	05.11.94	---	---	
Date Analyzed	---	05.25.94	05.25.94	---	---	
Herbicides (8151)						
2,4-D, ug/l	0.50	<0.50	0.913	2.0	46 %	
2,4,5-T, ug/l	0.50	<0.50	1.18	2.0	59 %	
2,4,5-TP Silvex, ug/l	0.50	<0.50	1.53	2.0	76 %	
Surrogate-DCAA	---	64 %	62 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.26.94	05.24.94	---	---	

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42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
Organophosphorus Pesticides (8141)						
Disulfoton, ug/l	2.0	<2.0	---	---	---	
Methyl Parathion, ug/l	0.50	<0.50	4.63	5.0	93 %	
Ethyl Parathion, ug/l	1.0	<1.0	3.87	5.0	77 %	
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	0.50	<0.50	---	---	---	
Famphur, ug/l	2.0	<2.0	---	---	---	
Phorate, ug/l	1.0	<1.0	---	---	---	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	1.0	<1.0	3.56	5.0	71 %	
Dimethoate, ug/l	10	<10	---	---	---	
Surrogate - Triphenylphosphate	---	80 %	79 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.16.94	05.16.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42413-64	Detection Limits				GMT55
42413-65	Method Blank				GMT55
42413-66	Lab Control Standard (LCS) Result				GMT55
42413-67	LCS Expected Value				GMT55
42413-68	LCS % Recovery				GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68
Metals (6010)					
Antimony (6010) , mg/l	0.050	<0.050	0.910	0.996	91 %
Barium (6010), mg/l	0.010	<0.010	1.01	1.01	100 %
Beryllium (6010), mg/l	0.0050	<0.0050	0.977	0.996	98 %
Cadmium (6010), mg/l	0.0050	<0.0050	0.960	1.01	96 %
Chromium (6010), mg/l	0.010	<0.010	0.973	1.00	97 %
Cobalt (6010), mg/l	0.010	<0.010	0.960	1.01	95 %
Copper (6010), mg/l	0.025	<0.025	0.990	1.01	98 %
Nickel (6010), mg/l	0.040	<0.040	0.975	0.996	98 %
Silver (6010), mg/l	0.010	<0.010	0.970	1.00	97 %
Tin (6010), mg/l	0.050	<0.050	0.919	1.00	92 %
Vanadium (6010), mg/l	0.010	<0.010	0.977	0.999	98 %
Zinc (6010), mg/l	0.020	<0.020	0.945	1.01	94 %
Date Analyzed	---	05.19.94	05.19.94	---	---
Arsenic (7060)					
Arsenic (7060), mg/l	0.010	<0.010	0.0557	0.0501	111 %
% R Post Digestion Spike	---	96 %	---	---	---
Date Analyzed	---	05.19.94	05.19.94	---	---
Lead (7421)					
Lead (7421), mg/l	0.0050	<0.0050	0.0518	0.050	104 %
% R Post Digestion Spike	---	110 %	---	---	---
Date Analyzed	---	05.18.94	05.18.94	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42413-64	Detection Limits				GMT55
42413-65	Method Blank				GMT55
42413-66	Lab Control Standard (LCS) Result				GMT55
42413-67	LCS Expected Value				GMT55
42413-68	LCS % Recovery				GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68
Selenium (7740)					
Selenium (7740), mg/l	0.010	<0.010	0.0540	0.0497	109 %
% R Post Digestion Spike	---	100 %	---	---	---
Date Analyzed	---	05.19.94	05.19.94	---	---
Thallium (7841)					
Thallium (7841), mg/l	0.010	<0.010	0.0532	0.0498	107 %
% R Post Digestion Spike	---	95 %	---	---	---
Date Analyzed	---	05.18.94	05.18.94	---	---
Mercury (7470/7471)					
Mercury (7470/7471), mg/l	0.00020	<0.00020	0.00129	0.00150	86 %
Date Analyzed	---	05.18.94	05.18.94	---	---
Total Cyanide					
Cyanide, Total (9012), mg/l	0.010	<0.010	0.207	0.200	104 %
Date Analyzed	---	05.10.94	05.10.94	---	---
Sulfide (9030)					
Sulfide (9030), mg/l	0.40	<0.40	1.15	1.50	77 %
Date Analyzed	---	05.11.94	05.11.94	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42413-64	Detection Limits					GMT55
42413-65	Method Blank					GMT55
42413-66	Lab Control Standard (LCS) Result					GMT55
42413-67	LCS Expected Value					GMT55
42413-68	LCS % Recovery					GMT55
PARAMETER	42413-64	42413-65	42413-66	42413-67	42413-68	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/l	0.0050	<0.0050	0.0167	0.0250		67 %
Tetra CDF, ug/l	0.0050	<0.0050	0.0198	0.0250		79 %
Penta CDD, ug/l	0.0050	<0.0050	0.0208	0.0250		83 %
Penta CDF, ug/l	0.0050	<0.0050	0.0188	0.0250		75 %
Hexa CDD, ug/l	0.0050	<0.0050	0.0170	0.0250		68 %
Hexa CDF, ug/l	0.0050	<0.0050	0.0152	0.0250		61 %
Dioxin-2,3,7,8-TCDD (8280), ug/l	0.0050	<0.0050	0.0167	0.0250		67 %
Internal Standard (TCDD)	---	69 %	70 %	---		---
Date Extracted	---	05.11.94	05.11.94	---		---
Date Analyzed	---	05.17.94	05.17.94	---		---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42413-69	LCS % Recovery Limits	GMT55
PARAMETER	42413-69	
Acids and Base Neutrals (8270)		
Acenaphthene	65-116 %	
p-Dichlorobenzene	46-110 %	
2,4-Dinitrotoluene	39-133 %	
N-Nitroso-di-n-propylamine	39-142 %	
Pyrene	36-153 %	
1,2,4-Trichlorobenzene	49-108 %	
2-Chlorophenol	54-99 %	
p-Nitrophenol	10-112 %	
Pentachlorophenol	15-139 %	
Phenol	10-96 %	
p-Chloro-m-cresol	53-104 %	
Chlorinated Pesticides (8080)		
Aldrin	42-116 %	
4,4'-DDT	67-137 %	
Dieldrin	51-143 %	
Endrin	57-142 %	
Heptachlor	42-149 %	
gamma-BHC	52-136 %	
Herbicides (8151)		
2,4-D	25-129 %	
2,4,5-T	25-145 %	
2,4,5-TP Silvex	10-151 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42413-69	LCS % Recovery Limits	GMT55
PARAMETER	42413-69	
Organophosphorus Pesticides (8141)		
Methyl Parathion	40-140 %	
Ethyl Parathion	18-171 %	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin)	25-160 %	
Metals (6010)		
Antimony (6010)	80-120 %	
Barium (6010)	80-120 %	
Beryllium (6010)	80-120 %	
Cadmium (6010)	80-120 %	
Chromium (6010)	80-120 %	
Cobalt (6010)	80-120 %	
Copper (6010)	80-120 %	
Nickel (6010)	80-120 %	
Silver (6010)	80-120 %	
Tin (6010)	80-120 %	
Vanadium (6010)	80-120 %	
Zinc (6010)	80-120 %	
Arsenic (7060)		
Arsenic (7060)	80-120 %	
Lead (7421)		
Lead (7421)	80-120 %	
Selenium (7740)		
Selenium (7740)	80-120 %	
Thallium (7841)		
Thallium (7841)	80-120 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42413-69	LCS % Recovery Limits	GMT55
PARAMETER	42413-69	
Mercury (7470/7471)		
Mercury (7470/7471)	80-120 %	
Total Cyanide		
Cyanide, Total (9012)	85-115 %	
Sulfide (9030)		
Sulfide (9030)	50-150 %	
Chlorinated Dioxins/Furans-App 9 (8280)		
Tetra CDD	63-137 %	
Tetra CDF	60-142 %	
Penta CDD	37-163 %	
Penta CDF	52-148 %	
Hexa CDD	42-158 %	
Hexa CDF	58-142 %	
Dioxin-2,3,7,8-TCDD (8280)	63-137 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42413-70	Detection Limits					GMT56
42413-71	Method Blank					GMT56
42413-72	Lab Control Standard (LCS) Result					GMT56
42413-73	LCS Expected Value					GMT56
42413-74	LCS % Recovery					GMT56
PARAMETER	42413-70	42413-71	42413-72	42413-73	42413-74	
Volatile Organic Compounds (8240)						
Acetonitrile, ug/l	1000	<1000	---	---	---	
Acetone, ug/l	50	<50	---	---	---	
Benzene, ug/l	5.0	<5.0	50.0	50	100 %	
Bromodichloromethane, ug/l	5.0	<5.0	---	---	---	
Methyl Bromide (Bromomethane), ug/l	10	<10	---	---	---	
Carbon Disulfide, ug/l	5.0	<5.0	---	---	---	
Chlorobenzene, ug/l	5.0	<5.0	53.4	50	107 %	
Dibromochloromethane, ug/l	5.0	<5.0	---	---	---	
Chloroethane, ug/l	10	<10	---	---	---	
Methyl Chloride (Chloromethane), ug/l	10	<10	---	---	---	
Chloroform, ug/l	5.0	<5.0	---	---	---	
Allylchloride (3-Chloropropene), ug/l	5.0	<5.0	---	---	---	
Chloroprene, ug/l	5.0	<5.0	---	---	---	
1,2-Dibromo-3-chloropropane, ug/l	10	<10	---	---	---	
1,2-Dibromoethane (EDB) , ug/l	5.0	<5.0	---	---	---	
Methylene Bromide, ug/l	5.0	<5.0	---	---	---	
Trans-1,4-Dichloro-2-butene, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42413-70	Detection Limits					GMT56
42413-71	Method Blank					GMT56
42413-72	Lab Control Standard (LCS) Result					GMT56
42413-73	LCS Expected Value					GMT56
42413-74	LCS % Recovery					GMT56
PARAMETER	42413-70	42413-71	42413-72	42413-73	42413-74	
Dichlorodifluoromethane, ug/l	5.0	<5.0	---	---	---	
1,1-Dichloroethane, ug/l	5.0	<5.0	---	---	---	
1,2-Dichloroethane, ug/l	5.0	<5.0	---	---	---	
Trans-1,2-Dichloroethylene, ug/l	5.0	<5.0	---	---	---	
1,1-Dichloroethylene, ug/l	5.0	<5.0	36.9	50	74 %	
Methylene Chloride (Dichloromethane), ug/l	5.0	<5.0	---	---	---	
1,2-Dichloropropane, ug/l	5.0	<5.0	---	---	---	
cis-1,3-Dichloropropene, ug/l	5.0	<5.0	---	---	---	
trans-1,3-Dichloropropene, ug/l	5.0	<5.0	---	---	---	
Ethylbenzene, ug/l	5.0	<5.0	---	---	---	
Methyl Ethyl Ketone, ug/l	50	<50	---	---	---	
Methyl Iodide, ug/l	5.0	<5.0	---	---	---	
Methacrylonitrile, ug/l	100	<100	---	---	---	
4-methyl-2-pentanone (MIBK), ug/l	50	<50	---	---	---	
Pentachloroethane, ug/l	25	<25	---	---	---	
Styrene, ug/l	5.0	<5.0	---	---	---	
1,1,1,2-Tetrachloroethane, ug/l	5.0	<5.0	---	---	---	
1,1,2,2-Tetrachloroethane, ug/l	5.0	<5.0	---	---	---	
Tetrachloroethene, ug/l	5.0	<5.0	---	---	---	

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42413-70	Detection Limits					GMT56
42413-71	Method Blank					GMT56
42413-72	Lab Control Standard (LCS) Result					GMT56
42413-73	LCS Expected Value					GMT56
42413-74	LCS % Recovery					GMT56
PARAMETER	42413-70	42413-71	42413-72	42413-73	42413-74	
Carbon Tetrachloride, ug/l	5.0	<5.0	---	---	---	
Toluene, ug/l	5.0	<5.0	52.2	50	104 %	
Bromoform, ug/l	5.0	<5.0	---	---	---	
1,1,2-Trichloroethane, ug/l	5.0	<5.0	---	---	---	
1,1,1-Trichloroethane, ug/l	5.0	<5.0	---	---	---	
Trichloroethylene, ug/l	5.0	<5.0	48.3	50	97 %	
Trichlorofluoromethane, ug/l	5.0	<5.0	---	---	---	
1,2,3-Trichloropropane, ug/l	5.0	<5.0	---	---	---	
Vinyl Acetate, ug/l	10	<10	---	---	---	
Vinyl chloride, ug/l	10	<10	---	---	---	
Xylenes, ug/l	5.0	<5.0	---	---	---	
2-Hexanone, ug/l	50	<50	---	---	---	
Propionitrile, ug/l	100	<100	---	---	---	
Methyl methacrylate, ug/l	5.0	<5.0	---	---	---	
Acrolein, ug/l	100	<100	---	---	---	
Acrylonitrile, ug/l	100	<100	---	---	---	
Ethyl methacrylate, ug/l	5.0	<5.0	---	---	---	
Isobutyl Alcohol, ug/l	1000	<1000	---	---	---	
Surrogate - Toluene-d8	---	88 %	88 %	---	---	
Surrogate - 4-Bromofluorobenzene	---	84 %	85 %	---	---	
Surrogate - 1,2-Dichloroethane-d4	---	80 %	86 %	---	---	
Date Analyzed	---	05.11.94	05.12.94	---	---	
Clock ID	---	2A0511	2A0511	---	---	

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42413-75	LCS % Recovery Limits	GMT56
PARAMETER	42413-75	
Volatile Organic Compounds (8240)		
Benzene	73-144 %	
Chlorobenzene	68-136 %	
1,1-Dichloroethylene	60-136 %	
Toluene	68-138 %	
Trichloroethylene	66-136 %	

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42413-76	Detection Limits					GMT58
42413-77	Method Blank					GMT58
42413-78	Lab Control Standard (LCS) Result					GMT58
42413-79	LCS Expected Value					GMT58
42413-80	LCS % Recovery					GMT58
PARAMETER	42413-76	42413-77	42413-78	42413-79	42413-80	
PCB's (8080)						
Aroclor-1016, ug/l	1.0	<1.0	2.59	2.50	104 %	
Aroclor-1221, ug/l	2.0	<2.0	---	---	---	
Aroclor-1232, ug/l	1.0	<1.0	---	---	---	
Aroclor-1242, ug/l	1.0	<1.0	---	---	---	
Aroclor-1248, ug/l	1.0	<1.0	---	---	---	
Aroclor-1254, ug/l	1.0	<1.0	---	---	---	
Aroclor-1260, ug/l	1.0	<1.0	2.87	2.50	114 %	
Surrogate-TCX	---	52 %	64 %	---	---	
Date Extracted	---	05.11.94	05.11.94	---	---	
Date Analyzed	---	05.20.94	05.20.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42413-81	LCS % Recovery Limits	GMT58
PARAMETER	42413-81	
PCB's (8080)		
Aroclor-1016, ug/l	69-107 %	
Aroclor-1260, ug/l	58-122 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42413-82	Method Blank					GMT57
42413-83	Method Blank					GMT57
42413-84	Lab Control Standard (LCS) Result					GMT57
42413-85	LCS Expected Value					GMT57
42413-86	LCS % Recovery					GMT57
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/kg dw	<330	<330	1382	1665	83 %	
Acenaphthylene, ug/kg dw	<330	<330	---	---	---	
Acetophenone, ug/kg dw	<330	<330	---	---	---	
2-Acetylaminofluorene, ug/kg dw	<330	<330	---	---	---	
4-Aminobiphenyl, ug/kg dw	<330	<330	---	---	---	
Anthracene, ug/kg dw	<330	<330	---	---	---	
Aniline, ug/kg dw	<330	<330	---	---	---	
Aramite, ug/kg dw	<330	<330	---	---	---	
Benzo(a)Anthracene, ug/kg dw	<330	<330	---	---	---	
Benzo(k)fluoranthene, ug/kg dw	<330	<330	---	---	---	
Benzo(b)fluoranthene, ug/kg dw	<330	<330	---	---	---	
Benzo(g,h,i)perylene, ug/kg dw	<330	<330	---	---	---	
Benzo(a)pyrene, ug/kg dw	<330	<330	---	---	---	
Benzyl alcohol, ug/kg dw	<330	<330	---	---	---	
bis(2-Chloroethoxy)methane, ug/kg dw	<330	<330	---	---	---	
bis(2-Chloroethyl)ether, ug/kg dw	<330	<330	---	---	---	
Bis(2-chloroisopropyl)ether , ug/kg dw	<330	<330	---	---	---	

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42413-82	Method Blank	GMT57				
42413-83	Method Blank	GMT57				
42413-84	Lab Control Standard (LCS) Result	GMT57				
42413-85	LCS Expected Value	GMT57				
42413-86	LCS % Recovery	GMT57				
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86	
bis(2-Ethylhexyl)phthalate, ug/kg dw	<330	<330	---	---	---	
4-Bromophenyl-phenyl-ether, ug/kg dw	<330	<330	---	---	---	
Butylbenzylphthalate, ug/kg dw (Dinoseb)	<330	<330	---	---	---	
2-sec-Butyl-4,6-dinitrophenol, ug/kg dw						
P-Chloroaniline, ug/kg dw	<660	<660	---	---	---	
m-Dichlorobenzene, ug/kg dw	<330	<330	---	---	---	
p-Dichlorobenzene, ug/kg dw	<330	<330	1299	1665	78 %	
o-Dichlorobenzene, ug/kg dw	<330	<330	---	---	---	
4-Chlorophenyl-phenyl ether, ug/kg dw	<330	<330	---	---	---	
2-Chloronaphthalene, ug/kg dw	<330	<330	---	---	---	
Chrysene, ug/kg dw	<330	<330	---	---	---	
Dibenz(a,h)anthracene, ug/kg dw	<330	<330	---	---	---	
Di-n-butylphthalate, ug/kg dw	<330	<330	---	---	---	
3,3'-Dichlorobenzidine, ug/kg dw	<660	<660	---	---	---	
3,3'-Dimethylbenzidine, ug/kg dw	<1700	<1700	---	---	---	

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42413-82	Method Blank					GMT57
42413-83	Method Blank					GMT57
42413-84	Lab Control Standard (LCS) Result					GMT57
42413-85	LCS Expected Value					GMT57
42413-86	LCS % Recovery					GMT57
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86	
Diethylphthalate, ug/kg dw	<330	<330	---	---	---	
p-(Dimethylamino)azobenzene, ug/kg dw	<330	<330	---	---	---	
7,12-Dimethylbenz(a)anthracene, ug/kg dw	<330	<330	---	---	---	
a-a-Dimethylphenethylamine, ug/kg dw	<1700	<1700	---	---	---	
Dimethylphthalate, ug/kg dw	<330	<330	---	---	---	
m-Dinitrobenzene, ug/kg dw	<330	<330	---	---	---	
2,4-Dinitrotoluene, ug/kg dw	<330	<330	1505	1665	90 %	
2,6-Dinitrotoluene, ug/kg dw	<330	<330	---	---	---	
Di-n-octylphthalate, ug/kg dw	<330	<330	---	---	---	
N-Nitroso-di-n-propylamine, ug/kg dw	<330	<330	1346	1665	81 %	
Fluoranthene, ug/kg dw	<330	<330	---	---	---	
Fluorene, ug/kg dw	<330	<330	---	---	---	
Hexachlorobenzene, ug/kg dw	<330	<330	---	---	---	
Hexachlorobutadiene, ug/kg dw	<330	<330	---	---	---	
Hexachlorocyclopentadiene, ug/kg dw	<330	<330	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#			
42413-82	Method Blank	GMT57			
42413-83	Method Blank	GMT57			
42413-84	Lab Control Standard (LCS) Result	GMT57			
42413-85	LCS Expected Value	GMT57			
42413-86	LCS % Recovery	GMT57			
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86
Hexachloroethane, ug/kg dw	<330	<330	---	---	---
Hexachloropropene, ug/kg dw	<330	<330	---	---	---
Indeno(1,2,3-cd)pyrene, ug/kg dw	<330	<330	---	---	---
Isophorone, ug/kg dw	<330	<330	---	---	---
Isosafrole, ug/kg dw	<330	<330	---	---	---
Methapyrilene, ug/kg dw	<3300	<3300	---	---	---
3-Methylcholanthrene, ug/kg dw	<330	<330	---	---	---
Methyl methanesulfonate, ug/kg dw	<330	<330	---	---	---
2-Methylnaphthalene, ug/kg dw	<330	<330	---	---	---
Naphthalene, ug/kg dw	<330	<330	---	---	---
1,4-Naphthoquinone, ug/kg dw	<330	<330	---	---	---
1-Naphthylamine, ug/kg dw	<330	<330	---	---	---
2-Naphthylamine, ug/kg dw	<330	<330	---	---	---
o-Nitroaniline, ug/kg dw	<1700	<1700	---	---	---
m-Nitroaniline, ug/kg dw	<1700	<1700	---	---	---
p-Nitroaniline, ug/kg dw	<1700	<1700	---	---	---
Nitrobenzene, ug/kg dw	<330	<330	---	---	---
N-Nitrosodi-n-butylamine, ug/kg dw	<330	<330	---	---	---
N-Nitrosodiethylamine, ug/kg dw	<330	<330	---	---	---
N-Nitrosodimethylamine, ug/kg dw	<330	<330	---	---	---

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42413-82	Method Blank					GMT57
42413-83	Method Blank					GMT57
42413-84	Lab Control Standard (LCS) Result					GMT57
42413-85	LCS Expected Value					GMT57
42413-86	LCS % Recovery					GMT57
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86	
N-Nitrosomethylethylamine, ug/kg dw	<330	<330	---	---	---	
N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw	<330	<330	---	---	---	
N-Nitrosomorpholine, ug/kg dw	<330	<330	---	---	---	
N-Nitrosopiperidine, ug/kg dw	<330	<330	---	---	---	
N-Nitrosopyrrolidine, ug/kg dw	<330	<330	---	---	---	
5-Nitro-o-toluidine, ug/kg dw	<330	<330	---	---	---	
Pentachlorobenzene, ug/kg dw	<330	<330	---	---	---	
Pentachloronitrobenzene, ug/kg dw	<330	<330	---	---	---	
Phenacetin, ug/kg dw	<330	<330	---	---	---	
Phenanthrene, ug/kg dw	<330	<330	---	---	---	
2-Picoline, ug/kg dw	<330	<330	---	---	---	
Pronamide, ug/kg dw	<330	<330	---	---	---	
Pyrene, ug/kg dw	<330	<330	1656	1665	99 %	
Safrole, ug/kg dw	<330	<330	---	---	---	
1,2,4,5-Tetrachlorobenzene, ug/kg dw	<330	<330	---	---	---	
1,2,4-Trichlorobenzene, ug/kg dw	<330	<330	1329	1665	80 %	
2-Chlorophenol, ug/kg dw	<330	<330	2482	3330	74 %	

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42413-82	Method Blank	GMT57				
42413-83	Method Blank	GMT57				
42413-84	Lab Control Standard (LCS) Result	GMT57				
42413-85	LCS Expected Value	GMT57				
42413-86	LCS % Recovery	GMT57				
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86	
Cresol m & p, ug/kg dw	<330	<330	---	---	---	
O-cresol, ug/kg dw	<330	<330	---	---	---	
p-Nitrophenol, ug/kg dw	<1700	<1700	2605	3330	78 %	
2,4-Dichlorophenol, ug/kg dw	<330	<330	---	---	---	
2,6-Dichlorophenol, ug/kg dw	<330	<330	---	---	---	
2,4-Dimethylphenol, ug/kg dw	<330	<330	---	---	---	
4,6-Dinitro-o-cresol, ug/kg dw	<1700	<1700	---	---	---	
2,4-Dinitrophenol, ug/kg dw	<1700	<1700	---	---	---	
Pentachlorophenol, ug/kg dw	<1700	<1700	2789	3330	84 %	
Phenol, ug/kg dw	<330	<330	2480	3330	74 %	
2,4,5-Trichlorophenol, ug/kg dw	<1700	<1700	---	---	---	
2,4,6-Trichlorophenol, ug/kg dw	<330	<330	---	---	---	
2,3,4,6-Tetrachlorophenol, ug/kg dw	<1700	<1700	---	---	---	
o-Nitrophenol, ug/kg dw	<330	<330	---	---	---	
Diallate, ug/kg dw	<330	<330	---	---	---	
Ethyl methanesulfonate, ug/kg dw	<330	<330	---	---	---	
4-Nitroquinoline 1-oxide, ug/kg dw	<3300	<3300	---	---	---	
p-phenylenediamine, ug/kg dw	<1700	<1700	---	---	---	

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42413-82	Method Blank					GMT57
42413-83	Method Blank					GMT57
42413-84	Lab Control Standard (LCS) Result					GMT57
42413-85	LCS Expected Value					GMT57
42413-86	LCS % Recovery					GMT57
PARAMETER	42413-82	42413-83	42413-84	42413-85	42413-86	
o-toluidine, ug/kg dw	<330	<330	---	---	---	
O,O,O-triethyl phosphorothioate, ug/kg dw	<330	<330	---	---	---	
1,3,5-Trinitrobenzene, ug/kg dw	<330	<330	---	---	---	
p-Chloro-m-cresol, ug/kg dw	<330	<330	2742	3330	82 %	
Dibenzofuran, ug/kg dw	<330	<330	---	---	---	
Pyridine, ug/kg dw	<330	<330	---	---	---	
1,4-Dioxane, ug/kg dw	<330	<330	---	---	---	
Kepone, ug/kg dw	<330	<330	---	---	---	
Surrogate - Phenol d 5	79 %	83 %	73 %	---	---	
Surrogate - 2-Fluorophenol	76 %	86 %	75 %	---	---	
Surrogate - 2,4,6-Tribromophenol	82 %	102 %	96 %	---	---	
Surrogate - Nitrobenzene d-5	82 %	82 %	73 %	---	---	
Surrogate - 2-Fluorobiphenyl	82 %	99 %	87 %	---	---	
Surrogate - Terphenyl	97 %	114 %	101 %	---	---	
Date Extracted	05.12.94	05.26.94	05.26.94	---	---	
Date Analyzed	05.21.94	05.27.94	05.27.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-87	LCS % Recovery Limits	GMT57
PARAMETER	42413-87	
Acids and Base Neutrals (8270)		
Acenaphthene	51-108 %	
p-Dichlorobenzene	46-112 %	
2,4-Dinitrotoluene	35-111 %	
N-Nitroso-di-n-propylamine	27-140 %	
Pyrene	33-139 %	
1,2,4-Trichlorobenzene	48-107 %	
2-Chlorophenol	45-105 %	
p-Nitrophenol	10-130 %	
Pentachlorophenol	10-107 %	
Phenol	37-112 %	
p-Chloro-m-cresol	38-112 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-88	Method Blank	GMT57
PARAMETER	42413-88	
Volatile Organic Compounds (8240)		
Acetonitrile, ug/kg dw	<200	
Acetone, ug/kg dw	<50	
Benzene, ug/kg dw	<5.0	
Bromodichloromethane, ug/kg dw	<5.0	
Methyl Bromide (Bromomethane), ug/kg dw	<10	
Carbon Disulfide, ug/kg dw	<5.0	
Chlorobenzene, ug/kg dw	<5.0	
Dibromochloromethane, ug/kg dw	<5.0	
Chloroethane, ug/kg dw	<10	
Methyl Chloride (Chloromethane), ug/kg dw	<10	
Chloroform, ug/kg dw	<5.0	
Allylchloride (3-Chloropropene), ug/kg dw	<5.0	
Chloroprene, ug/kg dw	<10	
1,2-Dibromo-3-chloropropane, ug/kg dw	<10	
1,2-Dibromoethane (EDB) , ug/kg dw	<5.0	
Methylene Bromide, ug/kg dw	<10	
Trans-1,4-Dichloro-2-butene, ug/kg dw	<10	
Dichlorodifluoromethane, ug/kg dw	<5.0	
1,1-Dichloroethane, ug/kg dw	<5.0	
1,2-Dichloroethane, ug/kg dw	<5.0	
Trans-1,2-Dichloroethylene, ug/kg dw	<5.0	
1,1-Dichloroethylene, ug/kg dw	<5.0	
Methylene Chloride (Dichloromethane), ug/kg dw	<5.0	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-88	Method Blank	GMT57
PARAMETER	42413-88	
1,2-Dichloropropane, ug/kg dw	<5.0	
cis-1,3-Dichloropropene, ug/kg dw	<5.0	
trans-1,3-Dichloropropene, ug/kg dw	<5.0	
Ethylbenzene, ug/kg dw	1.0J	
Methyl Ethyl Ketone, ug/kg dw	<50	
Methyl Iodide, ug/kg dw	<5.0	
Methacrylonitrile, ug/kg dw	<100	
4-methyl-2-pentanone (MIBK), ug/kg dw	<50	
Pentachloroethane, ug/kg dw	<25	
Styrene, ug/kg dw	<5.0	
1,1,1,2-Tetrachloroethane, ug/kg dw	<5.0	
1,1,2,2-Tetrachloroethane, ug/kg dw	<5.0	
Tetrachloroethene, ug/kg dw	<5.0	
Carbon Tetrachloride, ug/kg dw	<5.0	
Toluene, ug/kg dw	<5.0	
Bromoform, ug/kg dw	<5.0	
1,1,2-Trichloroethane, ug/kg dw	<5.0	
1,1,1-Trichloroethane, ug/kg dw	<5.0	
Trichloroethylene, ug/kg dw	<5.0	
Trichlorofluoromethane, ug/kg dw	<5.0	
1,2,3-Trichloropropane, ug/kg dw	<5.0	
Vinyl Acetate, ug/kg dw	<10	
Vinyl chloride, ug/kg dw	<10	
Xylenes, ug/kg dw	0.73J	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42413-88	Method Blank	GMT57
PARAMETER	42413-88	
2-Hexanone, ug/kg dw	<50	
Propionitrile, ug/kg dw	<200	
Methyl methacrylate, ug/kg dw	<5.0	
Acrolein, ug/kg dw	<100	
Acrylonitrile, ug/kg dw	<100	
Ethyl methacrylate, ug/kg dw	<5.0	
Isobutyl Alcohol, ug/kg dw	<1000	
Surrogate - Toluene-d8	111 %	
Surrogate - 4-Bromofluorobenzene	82 %	
Surrogate - 1,2-Dichloroethane-d4	83 %	
Date Analyzed	05.13.94	
Clock ID	1H0513	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#			
42413-89	Method Blank	GMT57			
42413-90	Lab Control Standard (LCS) Result	GMT57			
42413-91	LCS Expected Value	GMT57			
42413-92	LCS % Recovery	GMT57			
PARAMETER	42413-89	42413-90	42413-91	42413-92	
Chlorinated Dioxins/Furans-App 9 (8280)					
Tetra CDD, ug/kg dw	<10	38.65	50	77 %	
Tetra CDF, ug/kg dw	<10	37.40	50	75 %	
Penta CDD, ug/kg dw	<10	43.08	50	86 %	
Penta CDF, ug/kg dw	<10	36.52	50	73 %	
Hexa CDD, ug/kg dw	<10	38.88	50	78 %	
Hexa CDF, ug/kg dw	<10	37.23	50	74 %	
Dioxin-2,3,7,8-TCDD (8280), ug/kg dw	<10	38.65	50	75 %	
Internal Standard (TCDD)	70 %	66 %	---	---	
Date Extracted	05.30.94	05.30.94	---	---	
Date Analyzed	05.31.94	05.31.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#		
42413-89	Method Blank			
42413-90	Lab Control Standard (LCS) Result	GMT57		
42413-91	LCS Expected Value	GMT57		
42413-92	LCS % Recovery	GMT57		
		GMT57		
PARAMETER	42413-89	42413-90	42413-91	42413-92

Methods: EPA SW-846 and 40 CFR Part 136.

*Mercury Matrix Spike Dup result = 0.0570 mg/kg dw.

*F33 = Surrogates were not recovered due to sample dilution required.

*F62 = Matrix spikes were not recovered due to sample dilution required prior to analysis.

*F65 = Elevated detection limits were reported due to sample matrix interference which required sample dilution prior to analysis.

X (PCB) = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

Linda A. Wolfe (SHN)
Linda A. Wolfe

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	
42329A-1	WEL-3	05-03-94	
42329A-2	WEL-93	05-03-94	
PARAMETER		42329A-1	42329A-2
PCB's (8080)			
Aroclor-1016, ug/l		<1.0	<1.0
Aroclor-1221, ug/l		<2.0	<2.0
Aroclor-1232, ug/l		<1.0	<1.0
Aroclor-1242, ug/l		<1.0	<1.0
Aroclor-1248, ug/l		1.6	1.6
Aroclor-1254, ug/l		1.8	1.7
Aroclor-1260, ug/l		<1.0	<1.0
Surrogate-TCX		58 %	48 %
Date Extracted		06.09.94	06.09.94
Date Analyzed		06.14.94	06.14.94

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	
42329A-3	WEL-3	05-03-94	
42329A-4	WEL-93	05-03-94	
PARAMETER	42329A-3	42329A-4	
PCB's (8080)			
Aroclor-1016, ug/wipe	<1.0	<1.0	
Aroclor-1221, ug/wipe	<2.0	<2.0	
Aroclor-1232, ug/wipe	<1.0	<1.0	
Aroclor-1242, ug/wipe	<1.0	<1.0	
Aroclor-1248, ug/wipe	<1.0	<1.0	
Aroclor-1254, ug/wipe	<1.0	<1.0	
Aroclor-1260, ug/wipe	<1.0	<1.0	
Surrogate-TCX	80 %	74 %	
Date Extracted	06.10.94	06.10.94	
Date Analyzed	06.13.94	06.13.94	

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LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

42329A-5 Leachate Blank

PARAMETER 42329A-5

PCB's (8080)

Aroclor-1016, ug/l <1.0

Aroclor-1221, ug/l <2.0

Aroclor-1232, ug/l <1.0

Aroclor-1242, ug/l <1.0

Aroclor-1248, ug/l <1.0

Aroclor-1254, ug/l <1.0

Aroclor-1260, ug/l <1.0

Surrogate-TCX 68 %

Date Extracted 06.09.94

Date Analyzed 06.14.94

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LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

42329A-6 Glass Fiber Filter Blank

PARAMETER

42329A-6

PCB's (8080)

Aroclor-1016, ug/wipe

<1.0

Aroclor-1221, ug/wipe

<2.0

Aroclor-1232, ug/wipe

<1.0

Aroclor-1242, ug/wipe

<1.0

Aroclor-1248, ug/wipe

<1.0

Aroclor-1254, ug/wipe

<1.0

Aroclor-1260, ug/wipe

<1.0

Surrogate-TCX

79 %

Date Extracted

06.10.94

Date Analyzed

06.13.94

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LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

42329A-7 Detection Limits
42329A-8 Method Blank
42329A-9 Lab Control Standard (LCS) Result
42329A-10 LCS Expected Value
42329A-11 LCS % Recovery

PARAMETER	42329A-7	42329A-8	42329A-9	42329A-10	42329A-11
PCB's (8080)					
Aroclor-1016, ug/l	1.0	<1.0	2.46	2.50	98 %
Aroclor-1221, ug/l	2.0	<2.0	---	---	---
Aroclor-1232, ug/l	1.0	<1.0	---	---	---
Aroclor-1242, ug/l	1.0	<1.0	---	---	---
Aroclor-1248, ug/l	1.0	<1.0	---	---	---
Aroclor-1254, ug/l	1.0	<1.0	---	---	---
Aroclor-1260, ug/l	1.0	<1.0	2.73	2.50	109 %
Surrogate-TCX	---	59 %	54 %	---	---
Date Extracted	---	06.09.94	06.09.94	---	---
Date Analyzed	---	06.14.94	06.14.94	---	---



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Aroclor-1260

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LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

42329A-13 Detection Limits
42329A-14 Method Blank
42329A-15 Lab Control Standard (LCS) Result
42329A-16 LCS Expected Value
42329A-17 LCS % Recovery

PARAMETER	42329A-13	42329A-14	42329A-15	42329A-16	42329A-17
PCB's (8080)					
Aroclor-1016, ug/wipe	1.0	<1.0	2.88	2.50	115 %
Aroclor-1221, ug/wipe	2.0	<2.0	---	---	---
Aroclor-1232, ug/wipe	1.0	<1.0	---	---	---
Aroclor-1242, ug/wipe	1.0	<1.0	---	---	---
Aroclor-1248, ug/wipe	1.0	<1.0	---	---	---
Aroclor-1254, ug/wipe	1.0	<1.0	---	---	---
Aroclor-1260, ug/wipe	1.0	<1.0	2.74	2.50	110 %
Surrogate-TCX	---	74 %	76 %	---	---
Date Extracted	---	06.10.94	06.10.94	---	---
Date Analyzed	---	06.13.94	06.13.94	---	---

Methods: EPA SW-846

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LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

42329A-18 LCS % Recovery Limits

PARAMETER 42329A-18

PCB's (8080)

Aroclor-1016 69-107 %

Aroclor-1260 58-122 %

Methods: EPA SW-846

Linda A. Wolfe (S.H.N.)
Linda A. Wolfe

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42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
Acids and Base Neutrals (8270)				
Acenaphthene, ug/l	<10	<10	<10	<10
Acenaphthylene, ug/l	<10	<10	<10	<10
Acetophenone, ug/l	<10	<10	<10	<10
2-Acetylaminofluorene, ug/l	<10	<10	<10	<10
4-Aminobiphenyl, ug/l	<10	<10	<10	<10
Anthracene, ug/l	<10	<10	<10	<10
Aniline, ug/l	<50	<50	<50	<50
Aramite, ug/l	<10	<10	<10	<10
Benzo(a)Anthracene, ug/l	<10	<10	<10	<10
Benzo(k)fluoranthene, ug/l	<10	<10	<10	<10
Benzo(b)fluoranthene, ug/l	<10	<10	<10	<10
Benzo(g,h,i)perylene, ug/l	<10	<10	<10	<10
Benzo(a)pyrene, ug/l	<10	<10	<10	<10
Benzyl alcohol, ug/l	<10	<10	<10	<10
bis(2-Chloroethoxy)methane, ug/l	<10	<10	<10	<10
bis(2-Chloroethyl)ether, ug/l	<10	<10	<10	<10
Bis(2-chloroisopropyl)ether, ug/l	<10	<10	<10	<10
bis(2-Ethylhexyl)phthalate, ug/l	<10	5.3J	<10	<10
4-Bromophenyl-phenyl-ether, ug/l	<10	<10	<10	<10
Butylbenzylphthalate, ug/l	<10	<10	<10	<10

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#	
42329-1	WEL-3	05-03-94	GMT55	
42329-2	WEL-4	05-03-94	GMT55	
42329-3	DMW-1B	05-03-94	GMT55	
42329-4	WEL-93	05-03-94	GMT55	
PARAMETER	42329-1	42329-2	42329-3	42329-4
(Dinoseb) 2-sec-Butyl-4,6-dinitrophenol, ug/l	<10	<10	<10	<10
P-Chloroaniline, ug/l	<20	<20	<20	<20
m-Dichlorobenzene, ug/l	<10	<10	<10	<10
p-Dichlorobenzene, ug/l	<10	<10	<10	<10
o-Dichlorobenzene, ug/l	<10	<10	<10	<10
4-Chlorophenyl-phenyl ether, ug/l	<10	<10	<10	<10
2-Chloronaphthalene, ug/l	<10	<10	<10	<10
Chrysene, ug/l	<10	<10	<10	<10
Dibenz(a,h)anthracene, ug/l	<10	<10	<10	<10
Di-n-butylphthalate, ug/l	<10	6.1J	<10	<10
3,3'-Dichlorobenzidine, ug/l	<20	<20	<20	<20
3,3'-Dimethylbenzidine, ug/l	<200	<200	<200	<200
Diethylphthalate, ug/l	<10	2.4J	<10	<10
p-(Dimethylamino)azobenzene, ug/l	<10	<10	<10	<10
7,12-Dimethylbenz(a)anthracene, ug/l	<10	<10	<10	<10
a-a-Dimethylphenethylamine, ug/l	<2000	<2000	<2000	<2000
Dimethylphthalate, ug/l	<10	<10	<10	<10
m-Dinitrobenzene , ug/l	<10	<10	<10	<10
2,4-Dinitrotoluene, ug/l	<10	<10	<10	<10
2,6-Dinitrotoluene, ug/l	<10	<10	<10	<10
Di-n-octylphthalate, ug/l	<10	<10	<10	<10

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42329-1	WEL-3	05-03-94	GMT55	
42329-2	WEL-4	05-03-94	GMT55	
42329-3	DMW-1B	05-03-94	GMT55	
42329-4	WEL-93	05-03-94	GMT55	
PARAMETER	42329-1	42329-2	42329-3	42329-4
N-Nitroso-di-n-propylamine, ug/l	<10	<10	<10	<10
Fluoranthene, ug/l	<10	<10	<10	<10
Fluorene, ug/l	<10	<10	<10	<10
Hexachlorobenzene, ug/l	<10	<10	<10	<10
Hexachlorobutadiene, ug/l	<10	<10	<10	<10
Hexachlorocyclopentadiene, ug/l	<10	<10	<10	<10
Hexachloroethane, ug/l	<10	<10	<10	<10
Hexachloropropene, ug/l	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene, ug/l	<10	<10	<10	<10
Isophorone, ug/l	<10	<10	<10	<10
Isosafrole, ug/l	<10	<10	<10	<10
Methapyrilene, ug/l	<2000	<2000	<2000	<2000
3-Methylcholanthrene, ug/l	<10	<10	<10	<10
Methyl methanesulfonate, ug/l	<10	<10	<10	<10
2-Methylnaphthalene, ug/l	<10	<10	<10	<10
Naphthalene, ug/l	<10	<10	<10	<10
1,4-Naphthoquinone, ug/l	<10	<10	<10	<10
1-Naphthylamine, ug/l	<10	<10	<10	<10
2-Naphthylamine, ug/l	<10	<10	<10	<10
o-Nitroaniline, ug/l	<50	<50	<50	<50
m-Nitroaniline, ug/l	<50	<50	<50	<50

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42329-1	WEL-3	05-03-94	GMT55	
42329-2	WEL-4	05-03-94	GMT55	
42329-3	DMW-1B	05-03-94	GMT55	
42329-4	WEL-93	05-03-94	GMT55	
PARAMETER	42329-1	42329-2	42329-3	42329-4
p-Nitroaniline, ug/l	<50	<50	<50	<50
Nitrobenzene, ug/l	<10	<10	<10	<10
N-Nitrosodi-n-butylamine, ug/l	<10	<10	<10	<10
N-Nitrosodiethylamine, ug/l	<10	<10	<10	<10
N-Nitrosodimethylamine, ug/l	<10	<10	<10	<10
N-Nitrosomethylethylamine, ug/l	<10	<10	<10	<10
N-Nitrosodiphenylamine/Diphenylamine, ug/l	<10	<10	<10	<10
N-Nitrosomorpholine, ug/l	<10	<10	<10	<10
N-Nitrosopiperidine, ug/l	<10	<10	<10	<10
N-Nitrosopyrrolidine, ug/l	<10	<10	<10	<10
5-Nitro-o-toluidine, ug/l	<10	<10	<10	<10
Pentachlorobenzene, ug/l	<10	<10	<10	<10
Pentachloronitrobenzene, ug/l	<10	<10	<10	<10
Phenacetin, ug/l	<10	<10	<10	<10
Phenanthrene, ug/l	<10	<10	<10	<10
2-Picoline, ug/l	<200	<200	<200	<200
Pronamide, ug/l	<10	<10	<10	<10
Pyrene, ug/l	<10	<10	<10	<10
Safrole, ug/l	<10	<10	<10	<10
1,2,4,5-Tetrachlorobenzene, ug/l	<10	<10	<10	<10
1,2,4-Trichlorobenzene, ug/l	<10	<10	<10	<10

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LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
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Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED		SDG#
42329-1	WEL-3	05-03-94		GMT55
42329-2	WEL-4	05-03-94		GMT55
42329-3	DMW-1B	05-03-94		GMT55
42329-4	WEL-93	05-03-94		GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
2-Chlorophenol, ug/l	<10	<10	<10	<10
Cresol m & p, ug/l	<10	<10	<10	<10
O-cresol, ug/l	<10	<10	<10	<10
p-Nitrophenol, ug/l	<50	<50	<50	<50
2,4-Dichlorophenol, ug/l	<10	<10	<10	<10
2,6-Dichlorophenol, ug/l	<10	<10	<10	<10
2,4-Dimethylphenol, ug/l	<10	<10	<10	<10
4,6-Dinitro-o-cresol, ug/l	<50	<50	<50	<50
2,4-Dinitrophenol, ug/l	<50	<50	<50	<50
Pentachlorophenol, ug/l	<50	<50	<50	<50
Phenol, ug/l	<10	<10	<10	<10
2,4,5-Trichlorophenol, ug/l	<10	<10	<10	<10
2,4,6-Trichlorophenol, ug/l	<10	<10	<10	<10
2,3,4,6-Tetrachlorophenol, ug/l	<50	<50	<50	<50
o-Nitrophenol, ug/l	<10	<10	<10	<10
Diallate, ug/l	<10	<10	<10	<10
Ethyl methanesulfonate, ug/l	<10	<10	<10	<10
4-Nitroquinoline 1-oxide, ug/l	<100	<100	<100	<100
p-phenylenediamine, ug/l	<2000	<2000	<2000	<2000
o-toluidine, ug/l	<10	<10	<10	<10
O,O,O-triethyl phosphorothioate, ug/l	<10	<10	<10	<10

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE SAMPLED	SDG#
42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
1,3,5-Trinitrobenzene, ug/l	<200	<200	<200	<200
p-Chloro-m-cresol, ug/l	<10	<10	<10	<10
Dibenzofuran, ug/l	<10	<10	<10	<10
Pyridine, ug/l	<200	<200	<200	<200
1,4-Dioxane, ug/l	<10	<10	<10	<10
Kepone, ug/l	<10	<10	<10	<10
Surrogate - Phenol d 5	49 %	57 %	68 %	66 %
Surrogate - 2-Fluorophenol	57 %	62 %	77 %	72 %
Surrogate - 2,4,6-Tribromophenol	33 %	51 %	51 %	47 %
Surrogate - Nitrobenzene d-5	56 %	74 %	75 %	71 %
Surrogate - 2-Fluorobiphenyl	72 %	93 %	97 %	93 %
Surrogate - Terphenyl	52 %	47 %	73 %	70 %
Date Extracted	05.10.94	05.10.94	05.10.94	05.10.94
Date Analyzed	05.19.94	05.19.94	05.20.94	05.20.94

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#	
42329-1	WEL-3	05-03-94	GMT55	
42329-2	WEL-4	05-03-94	GMT55	
42329-3	DMW-1B	05-03-94	GMT55	
42329-4	WEL-93	05-03-94	GMT55	
PARAMETER	42329-1	42329-2	42329-3	42329-4
Chlorinated Pesticides (8080)				
Aldrin, ug/l	<0.050	<0.050	<0.050	<0.050
Isodrin, ug/l	<0.050	<0.050	<0.050	<0.050
Chlordane, ug/l	<0.50	<0.50	<0.50	<0.50
Chlorobenzilate, ug/l	<0.50	<0.50	<0.50	<0.50
4,4'-DDD, ug/l	<0.10	<0.10	<0.10	<0.10
4,4'-DDE, ug/l	<0.10	<0.10	<0.10	<0.10
4,4'-DDT, ug/l	<0.10	<0.10	<0.10	<0.10
Dieldrin, ug/l	<0.10	<0.10	<0.10	<0.10
Endosulfan I, ug/l	<0.050	<0.050	<0.050	<0.050
Endosulfan II, ug/l	<0.10	<0.10	<0.10	<0.10
Endosulfan sulfate, ug/l	<0.10	<0.10	<0.10	<0.10
Endrin, ug/l	<0.10	<0.10	<0.10	<0.10
Endrin Aldehyde, ug/l	<0.10	<0.10	<0.10	<0.10
Heptachlor, ug/l	<0.050	<0.050	<0.050	<0.050
Heptachlor epoxide, ug/l	<0.050	<0.050	<0.050	<0.050
alpha-BHC, ug/l	<0.050	<0.050	<0.050	<0.050
beta-BHC, ug/l	<0.050	<0.050	<0.050	<0.050
gamma-BHC, ug/l	<0.050	<0.050	<0.050	<0.050
delta-BHC, ug/l	<0.050	<0.050	<0.050	<0.050
Methoxychlor, ug/l	<0.50	<0.50	<0.50	<0.50

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE SAMPLED	SDG#
42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
Toxaphene, ug/l	<5.0	<5.0	<5.0	<5.0
Aroclor-1016, ug/l	<1.0	<1.0	<1.0	<1.0
Aroclor-1221, ug/l	<2.0	<2.0	<2.0	<2.0
Aroclor-1232, ug/l	<1.0	<1.0	<1.0	<1.0
Aroclor-1242, ug/l	<1.0	<1.0	<1.0	<1.0
Aroclor-1248, ug/l	4.0	<1.0	<1.0	3.0
Aroclor-1254, ug/l	2.8	<1.0	<1.0	1.8
Aroclor-1260, ug/l	<1.0	<1.0	<1.0	<1.0
Surrogate - Dibutylchloredate	158 %	84 %	109 %	126 %
Date Extracted	05.09.94	05.09.94	05.09.94	05.09.94
Date Analyzed	05.25.94	05.25.94	05.25.94	05.25.94
Herbicides (8151)				
2,4-D, ug/l	<0.50	<0.50	<0.50	<0.50
2,4,5-T, ug/l	<0.50	<0.50	<0.50	<0.50
2,4,5-TP Silvex, ug/l	<0.50	<0.50	<0.50	<0.50
Surrogate-DCAA	89 %	66 %	69 %	67 %
Date Extracted	05.10.94	05.10.94	05.10.94	05.10.94
Date Analyzed	05.20.94	05.20.94	05.20.94	05.20.94

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE SAMPLED	SDG#
42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
Organophosphorus Pesticides (8141)				
Disulfoton, ug/l	<2.0	<2.0	<2.0	<2.0
Methyl Parathion, ug/l	<0.50	<0.50	<0.50	<0.50
Ethyl Parathion, ug/l	<1.0	<1.0	<1.0	<1.0
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	<0.50	<0.50	<0.50
Famphur, ug/l	<2.0	<2.0	<2.0	<2.0
Phorate, ug/l	<1.0	<1.0	<1.0	<1.0
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	<1.0	<1.0	<1.0	<1.0
Dimethoate, ug/l	<10	<10	<10	<10
Surrogate - Triphenylphosphate	103 %	105 %	103 %	98 %
Date Extracted	05.10.94	05.10.94	05.10.94	05.10.94
Date Analyzed	05.17.94	05.17.94	05.18.94	05.18.94

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE SAMPLED	SDG#
42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
Metals (6010)				
Antimony (6010) , mg/l	<0.050	<0.050	<0.050	<0.050
Barium (6010), mg/l	0.056	1.1	<0.010	0.056
Beryllium (6010), mg/l	<0.0050	0.031	<0.0050	<0.0050
Cadmium (6010), mg/l	<0.0050	<0.0050	<0.0050	<0.0050
Chromium (6010), mg/l	<0.010	0.13	<0.010	<0.010
Cobalt (6010), mg/l	<0.010	0.20	<0.010	<0.010
Copper (6010), mg/l	<0.025	0.27	<0.025	<0.025
Nickel (6010), mg/l	<0.040	0.32	<0.040	<0.040
Silver (6010), mg/l	<0.010	<0.010	<0.010	<0.010
Tin (6010), mg/l	<0.050	<0.050	<0.050	<0.050
Vanadium (6010), mg/l	<0.010	0.40	<0.010	<0.010
Zinc (6010), mg/l	0.023	0.82	<0.020	0.031
Date Analyzed	05.19.94	05.19.94	05.19.94	05.19.94
Arsenic (7060)				
Arsenic (7060), mg/l	<0.010	<0.010	<0.010	<0.010
% R Post Digestion Spike	90 %	88 %	92 %	94 %
Date Analyzed	05.19.94	05.19.94	05.19.94	05.19.94
Lead (7421)				
Lead (7421), mg/l	<0.0050	0.12	0.014	<0.0050
% R Post Digestion Spike	107 %	104 %	97 %	105 %
Date Analyzed	05.18.94	05.19.94	05.18.94	05.18.94

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE SAMPLED	SDG#
42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
Selenium (7740)				
Selenium (7740), mg/l	<0.010	<0.020*F65	<0.010	<0.010
% R Post Digestion Spike	94 %	54 %	89 %	90 %
Date Analyzed	05.19.94	05.19.94	05.19.94	05.19.94
Thallium (7841)				
Thallium (7841), mg/l	<0.010	<0.010	<0.010	<0.010
% R Post Digestion Spike	89 %	100 %	96 %	98 %
Date Analyzed	05.18.94	05.18.94	05.18.94	05.18.94
Mercury (7470/7471)				
Mercury (7470/7471), mg/l	<0.00020	0.00086	<0.00020	<0.00020
Date Analyzed	05.09.94	05.09.94	05.09.94	05.09.94
Total Cyanide				
Cyanide, Total (9012), mg/l	<0.010	<0.010	<0.010	<0.010
Date Analyzed	05.09.94	05.09.94	05.09.94	05.09.94
Sulfide (9030)				
Sulfide (9030), mg/l	<0.40	<0.40	<0.40	<0.40
Date Analyzed	05.09.94	05.09.94	05.09.94	05.09.94

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES		DATE SAMPLED	SDG#
42329-1	WEL-3		05-03-94	GMT55
42329-2	WEL-4		05-03-94	GMT55
42329-3	DMW-1B		05-03-94	GMT55
42329-4	WEL-93		05-03-94	GMT55
PARAMETER	42329-1	42329-2	42329-3	42329-4
Chlorinated Dioxins/Furans-App 9 (8280)				
Tetra CDD, ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Tetra CDF, ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Penta CDD, ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Penta CDF, ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Hexa CDD, ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Hexa CDF, ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Dioxin-2,3,7,8-TCDD (8280), ug/l	<0.0050	<0.0050	<0.0050	<0.0050
Internal Standard (TCDD)	62/48 %	43/40 %	68/69 %	60/40 %
Date Extracted	5.10/17.94	5.10/17.94	5.10/30.94	5.10/17.94
Date Analyzed	5.16/26.94	5.16/27.94	5.16/6.01	5.16/26.94

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-5	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42329-6	MS Expected Value					GMT55
42329-7	MS/MSD % Recovery					GMT55
42329-8	MS/MSD % Recovery Limit					GMT55
42329-9	MS % RPD (Limit)					GMT55
PARAMETER	42329-5	42329-6	42329-7	42329-8	42329-9	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/l	45.1/48.0	50	90/96 %	65-116 %	6.4 (<20) %	
p-Dichlorobenzene, ug/l	39.9/43.5	50	80/87 %	46-110 %	8.4 (<18) %	
2,4-Dinitrotoluene, ug/l	53.8/51.8	50	108/104 %	39-133 %	3.8 (<25) %	
N-Nitroso-di-n-propylamine, ug/l	35.0/33.2	50	70/66 %	39-142 %	5.9 (<60) %	
Pyrene, ug/l	42.7/44.4	50	85/89 %	36-153 %	4.6 (<21) %	
1,2,4-Trichlorobenzene, ug/l	38.0/42.2	50	76/84 %	49-108 %	10 (<24) %	
2-Chlorophenol, ug/l	75.2/80.3	100	75/80 %	54-99 %	6.4 (<18) %	
p-Nitrophenol, ug/l	62.7/61.2	100	63/61 %	10-112 %	3.2 (<108) %	
Pentachlorophenol, ug/l	64.8/68.1	100	65/68 %	15-139 %	4.5 (<39) %	
Phenol, ug/l	72.2/76.1	100	72/76 %	10-96 %	5.4 (<21) %	
p-Chloro-m-cresol, ug/l	76.1/76.5	100	76/76 %	53-104 %	0 (<17) %	
Surrogate - Phenol d 5	68/74 %	---	---	---	---	
Surrogate - 2-Fluorophenol	73/81 %	---	---	---	---	
Surrogate -	58/59 %	---	---	---	---	
2,4,6-Tribromophenol						
Surrogate - Nitrobenzene d-5	73/80 %	---	---	---	---	
Surrogate - 2-Fluorobiphenyl	92/100 %	---	---	---	---	
Surrogate - Terphenyl	64/64 %	---	---	---	---	
Date Extracted	05.10.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-5	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42329-6	MS Expected Value					GMT55
42329-7	MS/MSD % Recovery					GMT55
42329-8	MS/MSD % Recovery Limit					GMT55
42329-9	MS % RPD (Limit)					GMT55
PARAMETER	42329-5	42329-6	42329-7	42329-8	42329-9	
Chlorinated Pesticides (8080)						
Aldrin, ug/l	.334/.321	0.20	167/160 %	42-116 %	4.3 (<25) %	
4,4'-DDT, ug/l	.683/.621	0.50	137/124 %	67-137 %	10 (<28) %	
Dieldrin, ug/l	.752/.753	0.50	150/151 %	51-143 %	0.66 (<46) %	
Endrin, ug/l	.629/.611	0.50	126/122 %	57-142 %	3.2 (<23) %	
Heptachlor, ug/l	.323/.311	0.20	162/156 %	42-129 %	3.8 (<22) %	
gamma-BHC, ug/l	.322/.311	0.20	161/156 %	52-136 %	3.2 (<18) %	
Surrogate -	150/132 %	---	---	---	---	
Dibutylchloredate						
Date Extracted	05.09.94	---	---	---	---	
Date Analyzed	05.25.94	---	---	---	---	
Herbicides (8151)						
2,4-D, ug/l	1.53/1.70	2.0	76/85 %	25-129 %	11 (<60) %	
2,4,5-T, ug/l	1.88/2.09	2.0	94/104 %	25-145 %	10 (<62) %	
2,4,5-TP Silvex, ug/l	1.96/2.10	2.0	98/105 %	10-151 %	6.9 (<81) %	
Surrogate-DCAA	82/87 %	---	---	---	---	
Date Extracted	05.10.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-5	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42329-6	MS Expected Value					GMT55
42329-7	MS/MSD % Recovery					GMT55
42329-8	MS/MSD % Recovery Limit					GMT55
42329-9	MS % RPD (Limit)					GMT55
PARAMETER	42329-5	42329-6	42329-7	42329-8	42329-9	
Organophosphorus Pesticides (8141)						
Methyl Parathion, ug/l	5.14/4.87	5.0	103/97 %	40-104 %	6.0(<40) %	
Ethyl Parathion, ug/l	4.14/3.95	5.0	83/79 %	18-171 %	4.9(<28) %	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	3.37/3.82	5.0	67/76 %	25-160 %	12(<60) %	
Surrogate - Triphenylphosphate	102/96 %	---	---	---	---	
Date Extracted	05.10.94	---	---	---	---	
Date Analyzed	05.18.94	---	---	---	---	

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Tampa, FL 33618-2047

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42329-5	Matrix Spike/Matrix Spike Dup Result (WEL-3)				GMT55
42329-6	MS Expected Value				GMT55
42329-7	MS/MSD % Recovery				GMT55
42329-8	MS/MSD % Recovery Limit				GMT55
42329-9	MS % RPD (Limit)				GMT55
PARAMETER	42329-5	42329-6	42329-7	42329-8	42329-9
Metals (6010)					
Antimony (6010) , mg/l	.395/.373	0.50	79/75 %	75-125 %	5.2(<20) %
Barium (6010), mg/l	1.94/1.94	2.00	97/97 %	75-125 %	0(<20) %
Beryllium (6010), mg/l	0.0479/*	0.050	96/96 %	75-125 %	0(<20) %
Cadmium (6010), mg/l	0.0388/*	0.050	78/79 %	75-125 %	1.3(<20) %
Chromium (6010), mg/l	.185/.187	0.20	93/94 %	75-125 %	1.1(<20) %
Cobalt (6010), mg/l	.461/.461	0.50	92/92 %	75-125 %	0(<20) %
Copper (6010), mg/l	.234/.236	0.25	94/94 %	75-125 %	0(<20) %
Nickel (6010), mg/l	.478/.480	0.50	96/96 %	75-125 %	0(<20) %
Silver (6010), mg/l	0.0476/*	0.050	95/95 %	75-125 %	0(<20) %
Tin (6010), mg/l	.875/.881	1.00	88/88 %	75-125 %	0(<20) %
Vanadium (6010), mg/l	.466/.469	0.50	93/94 %	75-125 %	1.1(<20) %
Zinc (6010), mg/l	.438/.442	0.50	88/88 %	75-125 %	0(<20) %
Date Analyzed	05.19.94	---	---	---	---
Arsenic (7060)					
Arsenic (7060), mg/l	0.0523/*	0.0501	104/90 %	75-125 %	14(<20) %
Date Analyzed	05.19.94	---	---	---	---
Lead (7421)					
Lead (7421), mg/l	0.0508/*	0.050	102/97 %	75-125 %	5.0(<20) %
Date Analyzed	05.18.94	---	---	---	---

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LOG NO: S4-42329

Received: 04 MAY 94

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-5	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42329-6	MS Expected Value					GMT55
42329-7	MS/MSD % Recovery					GMT55
42329-8	MS/MSD % Recovery Limit					GMT55
42329-9	MS % RPD (Limit)					GMT55
PARAMETER	42329-5	42329-6	42329-7	42329-8	42329-9	
Selenium (7740)						
Selenium (7740), mg/l	0.0458/*	0.0497	92/79 %	75-125 %	15(<20) %	
Date Analyzed	05.19.94	---	---	---	---	
Thallium (7841)						
Thallium (7841), mg/l	0.0501/*	0.0498	101/93 %	75-125 %	8.2(<20) %	
Date Analyzed	05.18.94	---	---	---	---	
Mercury (7470/7471)						
Mercury (7470/7471), mg/l	0.00112/*	0.0010	112/110 %	75-125 %	1.8(<20) %	
Date Analyzed	05.09.94	---	---	---	---	
Total Cyanide						
Cyanide, Total (9012), mg/l	.213/0.208	0.200	107/104 %	75-125 %	2.8(<30) %	
Date Analyzed	05.09.94	---	---	---	---	
Sulfide (9030)						
Sulfide (9030), mg/l	.892/.933	1.50	59/62 %	50-150 %	5.0(<50) %	
Date Analyzed	05.09.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-5	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42329-6	MS Expected Value					GMT55
42329-7	MS/MSD % Recovery					GMT55
42329-8	MS/MSD % Recovery Limit					GMT55
42329-9	MS % RPD (Limit)					GMT55
PARAMETER	42329-5	42329-6	42329-7	42329-8	42329-9	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/l	0.0222/*	0.0250	89/110 %	63-137 %	21(<40) %	
Tetra CDF, ug/l	0.0239/*	0.0250	96/117 %	60-142 %	20(<40) %	
Penta CDD, ug/l	0.6743/*	0.0250	2697/224 %	37-163 %	169(<40) %	
Penta CDF, ug/l	0.0253/*	0.0250	101/127 %	52-148 %	23(<40) %	
Hexa CDD, ug/l	0.0219/*	0.0250	88/113 %	42-158 %	25(<40) %	
Hexa CDF, ug/l	0.0228/*	0.0250	91/124 %	58-142 %	31(<40) %	
Dioxin-2,3,7,8-TCDD (8280), ug/l	0.0222/*	0.0250	89/110 %	63-137 %	21(<40) %	
Internal Standard (TCDD)	67/54 %	---	---	---	---	
Date Extracted	05.19.94	---	---	---	---	
Date Analyzed	05.27.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#				
42329-10	Detection Limits	GMT55				
42329-11	Method Blank	GMT55				
42329-12	Lab Control Standard (LCS) Result	GMT55				
42329-13	LCS Expected Value	GMT55				
42329-14	LCS % Recovery	GMT55				
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/l	10	<10	48.7	50	97 %	
Acenaphthylene, ug/l	10	<10	---	---	---	
Acetophenone, ug/l	10	<10	---	---	---	
2-Acetylaminofluorene, ug/l	10	<10	---	---	---	
4-Aminobiphenyl, ug/l	10	<10	---	---	---	
Anthracene, ug/l	10	<10	---	---	---	
Aniline, ug/l	50	<50	---	---	---	
Aramite, ug/l	10	<10	---	---	---	
Benzo(a)Anthracene, ug/l	10	<10	---	---	---	
Benzo(k)fluoranthene, ug/l	10	<10	---	---	---	
Benzo(b)fluoranthene, ug/l	10	<10	---	---	---	
Benzo(g,h,i)perylene, ug/l	10	<10	---	---	---	
Benzo(a)pyrene, ug/l	10	<10	---	---	---	
Benzyl alcohol, ug/l	10	<10	---	---	---	
bis(2-Chloroethoxy)methane, ug/l	10	<10	---	---	---	
bis(2-Chloroethyl)ether, ug/l	10	<10	---	---	---	
Bis(2-chloroisopropyl)ether, ug/l	10	<10	---	---	---	
bis(2-Ethylhexyl)phthalate, ug/l	10	<10	---	---	---	
4-Bromophenyl-phenyl-ether, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Butylbenzylphthalate, ug/l	10	<10	---	---	---	
(Dinoseb)	10	<10	---	---	---	
2-sec-Butyl-4,6-dinitrophenol, ug/l						
P-Chloroaniline, ug/l	20	<20	---	---	---	
m-Dichlorobenzene, ug/l	10	<10	---	---	---	
p-Dichlorobenzene, ug/l	10	<10	42.0	50	84 %	
o-Dichlorobenzene, ug/l	10	<10	---	---	---	
4-Chlorophenyl-phenyl ether, ug/l	10	<10	---	---	---	
2-Chloronaphthalene, ug/l	10	<10	---	---	---	
Chrysene, ug/l	10	<10	---	---	---	
Dibenz(a,h)anthracene, ug/l	10	<10	---	---	---	
Di-n-butylphthalate, ug/l	10	<10	---	---	---	
3,3'-Dichlorobenzidine, ug/l	20	<20	---	---	---	
3,3'-Dimethylbenzidine, ug/l	200	<200	---	---	---	
Diethylphthalate, ug/l	10	<10	---	---	---	
p-(Dimethylamino)azobenzene, ug/l	10	<10	---	---	---	
7,12-Dimethylbenz(a)anthracene, ug/l	10	<10	---	---	---	
a-a-Dimethylphenethylamine, ug/l	2000	<2000	---	---	---	
Dimethylphthalate, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
m-Dinitrobenzene , ug/l	10	<10	---	---	---	
2,4-Dinitrotoluene, ug/l	10	<10	50.7	50	101 %	
2,6-Dinitrotoluene, ug/l	10	<10	---	---	---	
Di-n-octylphthalate, ug/l	10	<10	---	---	---	
N-Nitroso-di-n-propylamine, ug/l	10	<10	35.8	50	72 %	
Fluoranthene, ug/l	10	<10	---	---	---	
Fluorene, ug/l	10	<10	---	---	---	
Hexachlorobenzene, ug/l	10	<10	---	---	---	
Hexachlorobutadiene, ug/l	10	<10	---	---	---	
Hexachlorocyclopentadiene, ug/l	10	<10	---	---	---	
Hexachloroethane, ug/l	10	<10	---	---	---	
Hexachloropropene, ug/l	10	<10	---	---	---	
Indeno(1,2,3-cd)pyrene, ug/l	10	<10	---	---	---	
Isophorone, ug/l	10	<10	---	---	---	
Isosafrole, ug/l	10	<10	---	---	---	
Methapyrilene, ug/l	2000	<2000	---	---	---	
3-Methylcholanthrene, ug/l	10	<10	---	---	---	
Methyl methanesulfonate, ug/l	10	<10	---	---	---	
2-Methylnaphthalene, ug/l	10	<10	---	---	---	
Naphthalene, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#				
42329-10	Detection Limits	GMT55				
42329-11	Method Blank	GMT55				
42329-12	Lab Control Standard (LCS) Result	GMT55				
42329-13	LCS Expected Value	GMT55				
42329-14	LCS % Recovery	GMT55				
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
1,4-Naphthoquinone, ug/l	10	<10	---	---	---	
1-Naphthylamine, ug/l	10	<10	---	---	---	
2-Naphthylamine, ug/l	10	<10	---	---	---	
o-Nitroaniline, ug/l	50	<50	---	---	---	
m-Nitroaniline, ug/l	50	<50	---	---	---	
p-Nitroaniline, ug/l	50	<50	---	---	---	
Nitrobenzene, ug/l	10	<10	---	---	---	
N-Nitrosodi-n-butylamine, ug/l	10	<10	---	---	---	
N-Nitrosodiethylamine, ug/l	10	<10	---	---	---	
N-Nitrosodimethylamine, ug/l	10	<10	---	---	---	
N-Nitrosomethylethylamine, ug/l	10	<10	---	---	---	
N-Nitrosodiphenylamine/Diph enylamine, ug/l	10	<10	---	---	---	
N-Nitrosomorpholine, ug/l	10	<10	---	---	---	
N-Nitrosopiperidine, ug/l	10	<10	---	---	---	
N-Nitrosopyrrolidine, ug/l	10	<10	---	---	---	
5-Nitro-o-toluidine, ug/l	10	<10	---	---	---	
Pentachlorobenzene, ug/l	10	<10	---	---	---	
Pentachloronitrobenzene, ug/l	10	<10	---	---	---	
Phenacetin, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Phenanthrene, ug/l	10	<10	---	---	---	
2-Picoline, ug/l	200	<200	---	---	---	
Pronamide, ug/l	10	<10	---	---	---	
Pyrene, ug/l	10	<10	43.7	50	87 %	
Safrole, ug/l	10	<10	---	---	---	
1,2,4,5-Tetrachlorobenzene, ug/l	10	<10	---	---	---	
1,2,4-Trichlorobenzene, ug/l	10	<10	41.0	50	82 %	
2-Chlorophenol, ug/l	10	<10	82.2	100	82 %	
Cresol m & p, ug/l	10	<10	---	---	---	
O-cresol, ug/l	10	<10	---	---	---	
p-Nitrophenol, ug/l	50	<50	61.4	100	61 %	
2,4-Dichlorophenol, ug/l	10	<10	---	---	---	
2,6-Dichlorophenol, ug/l	10	<10	---	---	---	
2,4-Dimethylphenol, ug/l	10	<10	---	---	---	
4,6-Dinitro-o-cresol, ug/l	50	<50	---	---	---	
2,4-Dinitrophenol, ug/l	50	<50	---	---	---	
Pentachlorophenol, ug/l	50	<50	66.7	100	67 %	
Phenol, ug/l	10	<10	78.2	100	78 %	
2,4,5-Trichlorophenol, ug/l	10	<10	---	---	---	
2,4,6-Trichlorophenol, ug/l	10	<10	---	---	---	

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42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
2,3,4,6-Tetrachlorophenol, ug/l	50	<50	---	---	---	
o-Nitrophenol, ug/l	10	<10	---	---	---	
Diallate, ug/l	10	<10	---	---	---	
Ethyl methanesulfonate, ug/l	10	<10	---	---	---	
4-Nitroquinoline 1-oxide, ug/l	100	<100	---	---	---	
p-phenylenediamine, ug/l	2000	<2000	---	---	---	
o-toluidine, ug/l	10	<10	---	---	---	
O,O,O-triethyl phosphorothioate, ug/l	10	<10	---	---	---	
1,3,5-Trinitrobenzene, ug/l	200	<200	---	---	---	
p-Chloro-m-cresol, ug/l	10	<10	76.0	100	76 %	
Dibenzofuran, ug/l	10	<10	---	---	---	
Pyridine, ug/l	200	<200	---	---	---	
1,4-Dioxane, ug/l	10	<10	---	---	---	
Kepone, ug/l	10	<10	---	---	---	
Surrogate - Phenol d 5	---	55 %	74 %	---	---	
Surrogate - 2-Fluorophenol	---	65 %	84 %	---	---	
Surrogate - 2,4,6-Tribromophenol	---	42 %	61 %	---	---	
Surrogate - Nitrobenzene d-5	---	62 %	82 %	---	---	
Surrogate - 2-Fluorobiphenyl	---	77 %	101 %	---	---	
Surrogate - Terphenyl	---	66 %	72 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.19.94	05.19.94	---	---	

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42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Chlorinated Pesticides (8080)						
Aldrin, ug/l	0.050	<0.050	0.224	0.20	112 %	
Isodrin, ug/l	0.050	<0.050	---	---	---	
Chlordane, ug/l	0.50	<0.50	---	---	---	
Chlorobenzilate, ug/l	0.50	<0.50	---	---	---	
4,4'-DDD, ug/l	0.10	<0.10	---	---	---	
4,4'-DDE, ug/l	0.10	<0.10	---	---	---	
4,4'-DDT, ug/l	0.10	<0.10	0.644	0.50	129 %	
Dieldrin, ug/l	0.10	<0.10	0.633	0.50	127 %	
Endosulfan I, ug/l	0.050	<0.050	---	---	---	
Endosulfan II, ug/l	0.10	<0.10	---	---	---	
Endosulfan sulfate, ug/l	0.10	<0.10	---	---	---	
Endrin, ug/l	0.10	<0.10	0.586	0.50	117 %	
Endrin Aldehyde, ug/l	0.10	<0.10	---	---	---	
Heptachlor, ug/l	0.050	<0.050	0.248	0.20	124 %	
Heptachlor epoxide, ug/l	0.050	<0.050	---	---	---	
alpha-BHC, ug/l	0.050	<0.050	---	---	---	
beta-BHC, ug/l	0.050	<0.050	---	---	---	
gamma-BHC, ug/l	0.050	<0.050	0.241	0.20	120 %	
delta-BHC, ug/l	0.050	<0.050	---	---	---	

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42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Methoxychlor, ug/l	0.50	<0.50	---	---	---	
Toxaphene, ug/l	5.0	<5.0	---	---	---	
Aroclor-1016, ug/l	1.0	<1.0	---	---	---	
Aroclor-1221, ug/l	2.0	<2.0	---	---	---	
Aroclor-1232, ug/l	1.0	<1.0	---	---	---	
Aroclor-1242, ug/l	1.0	<1.0	---	---	---	
Aroclor-1248, ug/l	1.0	<1.0	---	---	---	
Aroclor-1254, ug/l	1.0	<1.0	---	---	---	
Aroclor-1260, ug/l	1.0	<1.0	---	---	---	
Surrogate - Dibutylchloroendate	---	75 %	93 %	---	---	
Date Extracted	---	05.09.94	05.09.94	---	---	
Date Analyzed	---	05.25.94	05.25.94	---	---	
Herbicides (8151)						
2,4-D, ug/l	0.50	<0.50	0.913	2.0	46 %	
2,4,5-T, ug/l	0.50	<0.50	1.18	2.0	59 %	
2,4,5-TP Silvex, ug/l	0.50	<0.50	1.53	2.0	76 %	
Surrogate-DCAA	---	64 %	62 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.26.94	05.24.94	---	---	

LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 27

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Organophosphorus Pesticides (8141)						
Disulfoton, ug/l	2.0	<2.0	---	---	---	
Methyl Parathion, ug/l	0.50	<0.50	4.63	5.0	93 %	
Ethyl Parathion, ug/l	1.0	<1.0	3.87	5.0	77 %	
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	0.50	<0.50	---	---	---	
Famphur, ug/l	2.0	<2.0	---	---	---	
Phorate, ug/l	1.0	<1.0	---	---	---	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	1.0	<1.0	3.56	5.0	71 %	
Dimethoate, ug/l	10	<10	---	---	---	
Surrogate - Triphenylphosphate	---	80 %	79 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.16.94	05.16.94	---	---	

SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 28

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Metals (6010)						
Antimony (6010) , mg/l	0.050	<0.050	0.910	0.996	91 %	
Barium (6010), mg/l	0.010	<0.010	1.01	1.01	100 %	
Beryllium (6010), mg/l	0.0050	<0.0050	0.977	0.996	98 %	
Cadmium (6010), mg/l	0.0050	<0.0050	0.960	1.01	95 %	
Chromium (6010), mg/l	0.010	<0.010	0.973	1.00	97 %	
Cobalt (6010), mg/l	0.010	<0.010	0.960	1.01	95 %	
Copper (6010), mg/l	0.025	<0.025	0.990	1.01	98 %	
Nickel (6010), mg/l	0.040	<0.040	0.975	0.996	98 %	
Silver (6010), mg/l	0.010	<0.010	0.970	1.00	97 %	
Tin (6010), mg/l	0.050	<0.050	0.919	1.00	92 %	
Vanadium (6010), mg/l	0.010	<0.010	0.977	0.999	98 %	
Zinc (6010), mg/l	0.020	<0.020	0.945	1.01	94 %	
Date Analyzed	---	05.19.94	05.19.94	---	---	
Arsenic (7060)						
Arsenic (7060), mg/l	0.010	<0.010	0.0557	0.0501	111 %	
% R Post Digestion Spike	---	96 %	---	---	---	
Date Analyzed	---	05.19.94	05.19.94	---	---	
Lead (7421)						
Lead (7421), mg/l	0.0050	0.0050	0.0518	0.050	104 %	
% R Post Digestion Spike	---	110 %	---	---	---	
Date Analyzed	---	05.18.94	05.18.94	---	---	

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LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 29

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42329-10	Detection Limits					GMT55
42329-11	Method Blank					GMT55
42329-12	Lab Control Standard (LCS) Result					GMT55
42329-13	LCS Expected Value					GMT55
42329-14	LCS % Recovery					GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14	
Selenium (7740)						
Selenium (7740), mg/l	0.010	<0.010	0.0540	0.0497	109 %	
% R Post Digestion Spike	---	100 %	---	---	---	
Date Analyzed	---	05.19.94	05.19.94	---	---	
Thallium (7841)						
Thallium (7841), mg/l	0.010	<0.010	0.0532	0.0498	107 %	
% R Post Digestion Spike	---	95 %	---	---	---	
Date Analyzed	---	05.18.94	05.18.94	---	---	
Mercury (7470/7471)						
Mercury (7470/7471), mg/l	0.00020	<0.00020	0.00157	0.00150	105 %	
Date Analyzed	---	05.09.94	05.09.94	---	---	
Total Cyanide						
Cyanide, Total (9012), mg/l	0.010	<0.010	0.208	0.200	104 %	
Date Analyzed	---	05.09.94	05.09.94	---	---	
Sulfide (9030)						
Sulfide (9030), mg/l	0.40	<0.40	1.15	1.50	77 %	
Date Analyzed	---	05.09.94	05.09.94	---	---	

LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 30

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42329-10	Detection Limits				GMT55
42329-11	Method Blank				GMT55
42329-12	Lab Control Standard (LCS) Result				GMT55
42329-13	LCS Expected Value				GMT55
42329-14	LCS % Recovery				GMT55
PARAMETER	42329-10	42329-11	42329-12	42329-13	42329-14
Chlorinated Dioxins/Furans-App 9 (8280)					
Tetra CDD, ug/l	0.0050	<0.0050	0.0171	0.0250	68 %
Tetra CDF, ug/l	0.0050	<0.0050	0.0187	0.0250	75 %
Penta CDD, ug/l	0.0050	<0.0050	0.0218	0.0250	87 %
Penta CDF, ug/l	0.0050	<0.0050	0.0214	0.0250	86 %
Hexa CDD, ug/l	0.0050	<0.0050	0.0207	0.0250	83 %
Hexa CDF, ug/l	0.0050	<0.0050	0.0214	0.0250	86 %
Dioxin-2,3,7,8-TCDD (8280), ug/l	0.0050	<0.0050	0.0171	0.0250	68 %
Internal Standard (TCDD)	---	52 %	60 %	---	---
Date Extracted	---	05.17.94	05.17.94	---	---
Date Analyzed	---	05.20.94	05.20.94	---	---

LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
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14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 31

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42329-15	LCS % Recovery Limits	GMT55
PARAMETER	42329-15	
Acids and Base Neutrals (8270)		
Acenaphthene	65-116 %	
p-Dichlorobenzene	46-110 %	
2,4-Dinitrotoluene	39-133 %	
N-Nitroso-di-n-propylamine	39-142 %	
Pyrene	36-153 %	
1,2,4-Trichlorobenzene	49-108 %	
2-Chlorophenol	54-99 %	
p-Nitrophenol	10-112 %	
Pentachlorophenol	15-139 %	
Phenol	10-96 %	
p-Chloro-m-cresol	53-104 %	
Chlorinated Pesticides (8080)		
Aldrin	42-116 %	
4,4'-DDT	67-137 %	
Dieldrin	51-143 %	
Endrin	57-142 %	
Heptachlor	42-129 %	
gamma-BHC	52-136 %	
Herbicides (8151)		
2,4-D	25-129 %	
2,4,5-T	25-145 %	
2,4,5-TP Silvex	10-151 %	

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 32

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42329-15	LCS % Recovery Limits	GMT55
PARAMETER	42329-15	
Organophosphorus Pesticides (8141)		
Methyl Parathion	40-104 %	
Ethyl Parathion	18-171 %	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin)	25-160 %	
Metals (6010)		
Antimony (6010)	80-120 %	
Barium (6010)	80-120 %	
Beryllium (6010)	80-120 %	
Cadmium (6010)	80-120 %	
Chromium (6010)	80-120 %	
Cobalt (6010)	80-120 %	
Copper (6010)	80-120 %	
Nickel (6010)	80-120 %	
Silver (6010)	80-120 %	
Tin (6010)	80-120 %	
Vanadium (6010)	80-120 %	
Zinc (6010)	80-120 %	
Arsenic (7060)		
Arsenic (7060)	80-120 %	
Lead (7421)		
Lead (7421)	80-120 %	
Selenium (7740)		
Selenium (7740)	80-120 %	
Thallium (7841)		
Thallium (7841)	80-120 %	

LOG NO: S4-42329

Received: 04 MAY 94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 33

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42329-15	LCS % Recovery Limits	GMT55
PARAMETER	42329-15	
Mercury (7470/7471)		
Mercury (7470/7471)	80-120 %	
Total Cyanide		
Cyanide, Total (9012)	85-115 %	
Sulfide (9030)		
Sulfide (9030)	50-150 %	
Chlorinated Dioxins/Furans-App 9 (8280)		
Tetra CDD	63-137 %	
Tetra CDF	60-142 %	
Penta CDD	37-163 %	
Penta CDF	52-148 %	
Hexa CDD	42-158 %	
Hexa CDF	58-142 %	
Dioxin-2,3,7,8-TCDD (8280)	63-137 %	

LOG NO: S4-42329

Received: 04 MAY 94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 34

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#		
42329-16	Method Blank	GMT55		
42329-17	Method Blank	GMT55		
42329-18	Method Blank	GMT55		
PARAMETER	42329-16	42329-17	42329-18	
Chlorinated Dioxins/Furans-App 9 (8280)				
Tetra CDD, ug/l	<0.0050	<0.0050	<0.0050	
Tetra CDF, ug/l	<0.0050	<0.0050	<0.0050	
Penta CDD, ug/l	<0.0050	<0.0050	<0.0050	
Penta CDF, ug/l	<0.0050	<0.0050	<0.0050	
Hexa CDD, ug/l	<0.0050	<0.0050	<0.0050	
Hexa CDF, ug/l	<0.0050	<0.0050	<0.0050	
Dioxin-2,3,7,8-TCDD (8280), ug/l	<0.0050	<0.0050	<0.0050	
Internal Standard (TCDD)	38 %	69 %	60 %	
Date Extracted	05.19.94	05.10.94	05.30.94	
Date Analyzed	05.27.94	05.16.94	06.01.94	

LOG NO: S4-42329

Received: 04 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55)
Sampled By: Client

REPORT OF RESULTS

Page 35

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES			SDG#
42329-16	Method Blank			GMT55
42329-17	Method Blank			GMT55
42329-18	Method Blank			GMT55
PARAMETER	42329-16	42329-17	42329-18	

Methods: EPA SW-846

*Matrix Spike Dup result: Beryllium = 0.0481 mg/l;
Cadmium = 0.0393 mg/l; Silver = 0.0474 mg/l;
Arsenic = 0.0450 mg/l; Lead = 0.0486 mg/l;
Selenium = 0.0391; Thallium = 0.0464 mg/l;
Mercury = 0.00110 mg/l.

*Matrix Spike Dup results for Dioxins:
TETRA-CDD = 0.0276 ug/l; TETRA-CDF = 0.0292 ug/l;
PENTA-CDD = 0.0560 ug/l; PENTA-CDF = 0.0317 ug/l;
HEXA-CDD = 0.0282 ug/l; HEXA-CDF = 0.0310 ug/l;
TCDD = 0.0276 ug/l.

*F65 = Elevated detection limits were reported
due to sample matrix interference which required
sample dilution prior to analysis.

Linda A. Wolfe
Linda A. Wolfe

Final Page Of Report

CASE NARRATIVE

SDG GMT55
SL PROJECT S442329, S442363, S442413

Chlorinated Pesticide Fraction

The following samples were analyzed according to EPA SW-846 Method 8080.

SL No.	Client ID	Matrix
S442329-1	WEL-3	Liquid
S442329-2	WEL-4	Liquid
S442329-3	DMW-1B	Liquid
S442329-4	WEL-93	Liquid
S442363-1	WEL-1	Liquid
S442363-2	WEL-2	Liquid
S442363-3	EQUIP. BLANK	Liquid
S442413-27	EQUIP. BLANK 3	Liquid

Samples of SDG GMT55 with Savannah Laboratories' numbers S442329 and S442363 were extracted on May 9, 1994. The sample with SL number S442413 was extracted on May 11, 1994. Samples were analyzed beginning May 25, 1994.

Quality control consisted of a lab blank and lab spike for each extraction date, with sample S442329-1 (WEL-3) used as the SDG matrix spike/matrix spike duplicate.

Samples S442329-1 (WEL-3) and S442329-4 (WEL-93) were reanalyzed on May 27, 1994 in order to quantify Aroclor 1248. Both analyses of these samples are included.

Endrin breakdown was evident in the lab spikes. However, since neither endrin nor its breakdown products was present in the samples, no corrective action was necessary. Endrin recovery was calculated using a summation of endrin, endrin aldehyde, and endrin ketone.

DBC surrogate recovery in sample S442329-1 (WEL-3) exceeded control limits due to a coeluting matrix interference.

000001

CASE NARRATIVE

SDG GMT55
SL PROJECT S442329, S442363, S442413

Semivolatile Fraction

The following samples were analyzed by EPA SW-846 Method 8270.

SL No.	Client ID	Matrix
S442329-1	WEL-3	Liquid
S442329-2	WEL-4	Liquid
S442329-3	DMW-1B	Liquid
S442329-4	WEL-93	Liquid
S442363-1	WEL-1	Liquid
S442363-2	WEL-2	Liquid
S442363-3	EQUIP. BLANK	Liquid
S442413-27	EQUIP. BLANK 3	Liquid

Sample S442329-1 (WEL-3) was the designated matrix spike/matrix spike duplicate.

000001

CASE NARRATIVE

SDG GMT55
SL PROJECT S442329, S442363, S442413

Chlorinated Herbicide Fraction

The following samples were analyzed according to EPA SW-846 Method 8150.

SL No.	Client ID	Matrix
S442329-1	WEL-3	Liquid
S442329-2	WEL-4	Liquid
S442329-3	DMW-1B	Liquid
S442329-4	WEL-93	Liquid
S442363-1	WEL-1	Liquid
S442363-2	WEL-2	Liquid
S442363-3	EQUIP. BLANK	Liquid
S442413-27	EQUIP. BLANK 3	Liquid

Samples of SDG GMT55 were extracted on May 10, 1994 and were analyzed beginning May 20, 1994.

Quality control consisted of a lab blank and lab spike, with sample S442329-1 (WEL-3) used as the SDG matrix spike/matrix spike duplicate.

All quality control parameters were within control limits.

000001

CASE NARRATIVE

SDG GMT55
SL PROJECT S442329, S442363, S442413

Metals Fraction

The following samples were analyzed according to EPA SW-846 methodologies.

SL No.	Client ID	Matrix
S442329-1	WEL-3	Liquid
S442329-2	WEL-4	Liquid
S442329-3	DMW-1B	Liquid
S442329-4	WEL-93	Liquid
S442363-1	WEL-1	Liquid
S442363-2	WEL-2	Liquid
S442363-3	EQUIP. BLANK	Liquid
S442413-27	EQUIP. BLANK 3	Liquid

Sample S442321-1 (WEL-3) was the designated matrix spike/matrix spike duplicate.

The matrix spike/matrix spike duplicate percent recoveries were not within the advisory limits for sulfide.

The matrix spike/matrix spike duplicate samples were utilized to determine the duplicate relative percent difference.

Lab control samples were digested with each batch and the recoveries were within control limits for all analytes of interest.

000001

CASE NARRATIVE

SDG GMT55
SL PROJECT S442329, S442363, S442413

Organophosphorous Pesticide Fraction

The following samples were analyzed according to EPA SW-846 Method 8140.

SL No.	Client ID	Matrix
S442329-1	WEL-3	Liquid
S442329-2	WEL-4	Liquid
S442329-3	DMW-1B	Liquid
S442329-4	WEL-93	Liquid
S442363-1	WEL-1	Liquid
S442363-2	WEL-2	Liquid
S442363-3	EQUIP. BLANK	Liquid
S442413-27	EQUIP. BLANK 3	Liquid

Samples of SDG GMT55 were extracted on May 10, 1994 and were analyzed beginning May 17, 1994.

Quality control consisted of a lab blank and lab spike, with sample S442329-1 (WEL-3) used as the SDG matrix spike/matrix spike duplicate.

All quality control parameters were within control limits.

000001

TEMPERATURE RECORD

Project Reference:

SL Log No.:

Date Received:

G+M - Tampa

54-42329

5/4/94

Chain of Custody Number

Cooler Temperature

cooler A

0.0

B

0.1

--

G.U (FWT)

_____ ၎

4.2

E

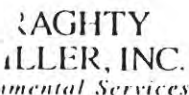
4.1

$$F$$

3.8

Project Number TF0520020
Project Location MONSANTO/ANNISTON
Laboratory SAVANAH LAB
Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION										TOTAL
WEL-1	L	5/4/94 1000		VOC's (EPA 8240) 40 ml vial HCL, on ice										3
EQUIP. BLANK 1	L	5/4/94 0700		PGB's (8085) 250 ml w/tear glass - on ice										3
WEL-2	L	5/4/94 1120		TEMP. BLANK										3
WEL-3	L	5/3/94 1300												3
WEL-3 MS	L	5/3/94 1300												3
WEL-3 MSD	L	5/3/94 1300												3
WEL-4	L	5/3/94 1530												3
DMW-1 B	L	5/3/94 1330												3
WEL-93	L	5/3/94 —												3
TB-0503	L	—												3
LF-2	S	5/4/94 1350		+ } AWK 5/4/94										1
LF-1	S	5/4/94 1430		+ }										1
LF-17	S	5/4/94 —		+ }										1



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

WFL-1	L	5/4/94 1000
-------	---	-------------

Sample Code: L = ~~L~~iquid; S = ~~S~~olid; A = ~~A~~ir

Total No. of Bottles/
Containers

12

Relinquished by: Fernando Alvarez
Received by: _____

Organization: Generosity & Miller Inc
Organization: _____

Date 5/9/79 Time 1:00
Date 1/1 Time

Seal Intact?
Yes No N/A

Relinquished by: _____
Received by: S. Baker D 42363

Organization: SAV LABS

Date 1/1 Time
Date 5/5/94 Time 10:24

Seal Intact?
(Yes) No N/A

Special Instructions/Remarks:

Refer to LTO # above for references + methods. Contact Leslie Head w/
Questioning (1961-1971)

Delivery Method:

☐ In Person☐ Common Carrier

AIRBORNE

SPECIFY

☐ Lab Courier☐ Other

SPECIFY



Laboratory Task Order No. 07548

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number TF0520020

Project Location MONTICELLO / ANNISTON

Laboratory SAVANAH LAB.

Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

Date/Time
Sampled

Lab ID

BNA / PEST. / HERB.
1 liter amber glass
no pres. - only

Dioxins
1 liter amber glass
no pres. - on ice

DATE	DESCRIPTION
9/1/78	250 ml poly bottle
	ZnOAc - on ice
	Total Cranide
	500 ml poly bottle
	NaOH - on ice
	Appendix IX Metal
	500 ml poly bottle
	HABZ - on ice

Temp blank

TOTAL

[illegible]

Sample Code: L = ~~L~~iquid; S = ~~S~~olid; A = ~~A~~ir

Total No. of Bottles/
Containers

12

Relinquished by: Jaswant K. Jha
Received by: _____

Organization: GORAGHY & MILLER
Organization: _____

Date 5/4/94 Time 1700
Date 1/1 Time

Seal Intact?
Yes No N/A

Relinquished by: _____
Received by: L Baker C 42363

Organization: SAV LABS

Date 5/5/94 Time 10:24

Seal Intact?
☒ Yes ☐ No ☐ N/A

Special Instructions/Remarks:

See LTO # above for methods & specifications - Contact Leslie
Herd (961-1921) w/ Questions.

Delivery Method: ☐ In Person ☒ Common Carrier AIR BORNE

☐ Lab Courier ☐ Other

SPECIFY

 $\epsilon_{\text{coul}} = 0.00176 \text{ J}$



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

4/1 liter omber 9/155
no pres/ox 100

DIOXINS in 1 liter
amber glass
no pres. / on ice

CYANIDE (TOTAL)
 500 ml plastic
 NaOH on 100
 Sulfide 250 ml

CONTAINER DESCRIPTION	
700 ml plastic	
App. ix Metals	
800 ml poly	
HNO ₃	on ice

Temp blank

TOTAL

[illegible]

Sample Code: L = ~~Liquid~~; S = ~~Solid~~; A = ~~Air~~

Total No. of Bottles/
Containers

12

Relinquished by: <u>Jason R. Smith</u>	Organization: <u>Geraghty & Miller</u>	Date: <u>3/5/94</u>	Time: <u>1700</u>
Received by: <u>Frank Mitchell</u>	Organization: <u>SAVANNAH LABORATORIES</u>	Date: <u>5/4/94</u>	Time: <u>16:45</u>
Relinquished by: <u>42329</u>	Organization: _____	Date: <u>1/1</u>	Time: _____
Received by: _____	Organization: _____	Date: <u>1/1</u>	Time: _____

Seal Intact?
(Yes) No N/A

Seal Intact?	Yes	No	N/A
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100			

Special Instructions/Remarks:

Tac

Delivery Method:

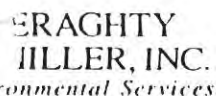
☐ In Person

☒ Common Carrier

~~FED EX~~
AIRBORNE

☐ Lab Courier☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number TF052020
Project Location Monsanto
Laboratory Javanah
Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

[illegible]Total No. of Bottles/
Containers

1700

Time 16:45

Date 1 1 Date 1 / 1 / 1

Seal Intact?
Yes No N/A

Seal Intact?
(Yes) No N/A

Special Instructions/Remarks:

Delivery Method:

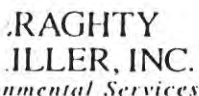
☐ In Person

☒ Common Carrier

~~EX~~
11.000000

☐ Lab Courier☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Sampler(s)/Affiliation J. KIRKPAT

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

✓
GVA/POST/HERP
1 liter amber
box ice

Dioxins
1 liter amber
as ice

Cyanide (TOTAL)
 800 mL
 NaOH
 Sulfide on 10
 250

Appendix 1X Material
500 mil. pol
400 mil. pol

	Tous blank	
		TOTAL

TOTAL

WEL-3 MSD	C	5/3/94	1300
-----------	---	--------	------

6

2

1

1

1

1

12

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

12

Relinquished by:

Organization:

Graybill & Miller

Date 5.3.94 Time 1700

Seal Intact?
Yes No N/A

Received by:

Organization:

SAMMANNAH LABORATORIES

Date 5/4/94 Time 16:45

Relinquished by:

Organization:

Date 11 / 1 / 2008 Time 10:00

Seal Intact?
Yes No N/A

Received by:

Organization:

Date 11 / 11 / 11 Time 11:00

Special Instructions/Remarks:

Delivery Method:

☐ In Person

☒ Common Carrier

~~FED EX~~
AIRBOND

☐ Lab Courier☐ Other

SPECIFY

Project Number TF052020
Project Location Mon Santo
Laboratory Savannah
Sampler(s)/Affiliation J. Kickpatrick

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

[illegible][illegible]

Sample Code: L = ~~Liquid~~; S = ~~Solid~~; A = ~~Air~~

Total No. of Bottles/
Containers

12

Relinquished by: Garrett Gaynes
Received by: Robert Marshall

Organization: SAYANNAH LABORATORIES

Date 5/3/94 Time 1700
Date 5/4/94 Time 16:45

Seal Intact?
Yes No N/A

Relinquished by: _____
Received by: _____

Organization: _____
Organization: _____

Date / / Time
Date / / Time

Seal Intact?
Yes No N/A

Special Instructions/Remarks:

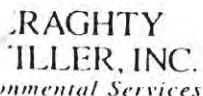
Delivery Method: ☐ In Person

☒ Common Carrier

~~FED EX~~
SPECIES: ~~DRAGONS~~

☐ Lab Courier☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

of

Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

BNA/PEST/HERB
in 1 liter amber
no preservative

Doors
1 liter amber
on ice

CYANIDE (TOTAL)
500 mL ROH
NaOH
500

[illegible]

QAC poly
Appendix IX m
500 mL poly
HNO₃ on the

Terry blank

TOTAL

[illegible]

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

12

Relinquished by:

Organization:

Genagel + Miller

Date 5/13/79 Time

1700

Seal Intact?

Received by:

Organization:

SAVANNAH LABORATORIES

Date 5/4/24 Time

16:15

☒ Yes ☐ No ☐ N/A

Relinquished by:

Organization:

Date / / Time

Seal Intact?

Received by:

Organization:

Date / / Time

Yes No N/A

Special Instructions/Remarks:

Delivery Method: ☐ In Person

☒ Common Carrier

~~IED~~ ~~EX~~
MARBORNE

☐ Lab Courier☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

Project Number TF0920020
Project Location Monsanto/ Anniston
Laboratory SAVANNAH LAB.
Sampler(s)/Affiliation J. KIRKPATRICK

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID
-----------------	------	----------------------	--------

10/11
BWA / PEST. / HERB.
1 liter cucumber / 150 g
NO pres - ON 10/11

DIOXINS
1 lb - amber glass
no pres. - on ice

SAMPLE BOTTLE / CONTAINER DESCRIPTION	
Sulfide	250 mL poly bottle
ZnOAC	- on ice
Total	Cyanide
500	mL poly bottle
NaOH	- on ice
Appendix	1X Metal
500	mL poly bottle
HNO ₃	- on ice

TEMP BLANK

TOTAL

[illegible]

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

12

Relinquished by: <u>James M. Patel</u>	Organization: <u>Crossley + Miller</u>	Date: <u>5/4/94</u> Time: <u>1700</u>	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	
Relinquished by: _____	Organization: _____	Date: <u>1/1</u> Time: _____	Seal Intact? Yes No N/A
Received by: <u>J. Baker B 42363</u>	Organization: <u>SAV LABS</u>	Date: <u>5/5/94</u> Time: <u>10:24</u>	Seal Intact? ☒ Yes ☐ No ☐ N/A

Special Instructions/Remarks: Refer to LTO # above for methods + specifications. Contact Leslie Head w/ Questions

Delivery Method: ☐ In Person ☒ Common Carrier AIRBORNE ☐ Lab Courier ☐ Other _____
SPECIFY SPECIFY

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
2,4-Dichlorophenol, ug/l	<10	<10	<10
2,6-Dichlorophenol, ug/l	<10	<10	<10
2,4-Dimethylphenol, ug/l	<10	<10	<10
4,6-Dinitro-o-cresol, ug/l	<50	<50	<50
2,4-Dinitrophenol, ug/l	<50	<50	<50
Pentachlorophenol, ug/l	<50	<50	<50
Phenol, ug/l	<10	<10	<10
2,4,5-Trichlorophenol, ug/l	<10	<10	<10
2,4,6-Trichlorophenol, ug/l	<10	<10	<10
2,3,4,6-Tetrachlorophenol, ug/l	<50	<50	<50
o-Nitrophenol, ug/l	<10	<10	<10
Diallate, ug/l	<10	<10	<10
Ethyl methanesulfonate, ug/l	<10	<10	<10
4-Nitroquinoline 1-oxide, ug/l	<100	<100	<100
p-phenylenediamine, ug/l	<2000	<2000	<2000
o-toluidine, ug/l	<10	<10	<10
O,O,O-triethyl phosphorothioate, ug/l	<10	<10	<10
1,3,5-Trinitrobenzene, ug/l	<200	<200	<200
p-Chloro-m-cresol, ug/l	<10	<10	<10
Dibenzofuran, ug/l	<10	<10	<10
Pyridine, ug/l	<200	<200	<200
1,4-Dioxane, ug/l	<10	<10	<10

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Kepone, ug/l	<10	<10	<10
Surrogate - Phenol d 5	58 %	57 %	64 %
Surrogate - 2-Fluorophenol	65 %	66 %	71 %
Surrogate - 2,4,6-Tribromophenol	42 %	41 %	50 %
Surrogate - Nitrobenzene d-5	67 %	65 %	73 %
Surrogate - 2-Fluorobiphenyl	85 %	81 %	91 %
Surrogate - Terphenyl	55 %	56 %	59 %
Date Extracted	05.10.94	05.10.94	05.10.94
Date Analyzed	05.20.94	05.20.94	05.20.94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

Page 7

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Chlorinated Pesticides (8080)			
Aldrin, ug/l	<0.050	<0.050	<0.050
Isodrin, ug/l	<0.050	<0.050	<0.050
Chlordane, ug/l	<0.50	<0.50	<0.50
Chlorobenzilate, ug/l	<0.50	<0.50	<0.50
4,4'-DDD, ug/l	<0.10	<0.10	<0.10
4,4'-DDE, ug/l	<0.10	<0.10	<0.10
4,4'-DDT, ug/l	<0.10	<0.10	<0.10
Dieldrin, ug/l	<0.10	<0.10	<0.10
Endosulfan I, ug/l	<0.050	<0.050	<0.050
Endosulfan II, ug/l	<0.10	<0.10	<0.10
Endosulfan sulfate, ug/l	<0.10	<0.10	<0.10
Endrin, ug/l	<0.10	<0.10	<0.10
Endrin Aldehyde, ug/l	<0.10	<0.10	<0.10
Heptachlor, ug/l	<0.050	<0.050	<0.050
Heptachlor epoxide, ug/l	<0.050	<0.050	<0.050
alpha-BHC, ug/l	<0.050	<0.050	<0.050
beta-BHC, ug/l	<0.050	<0.050	<0.050
gamma-BHC, ug/l	<0.050	<0.050	<0.050
delta-BHC, ug/l	<0.050	<0.050	<0.050
Methoxychlor, ug/l	<0.50	<0.50	<0.50
Toxaphene, ug/l	<5.0	<5.0	<5.0

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-42363

Received: 05 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

Page 8

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Aroclor-1016, ug/l	<1.0	<1.0	<1.0
Aroclor-1221, ug/l	<2.0	<2.0	<2.0
Aroclor-1232, ug/l	<1.0	<1.0	<1.0
Aroclor-1242, ug/l	<1.0	<1.0	<1.0
Aroclor-1248, ug/l	<1.0	<1.0	<1.0
Aroclor-1254, ug/l	<1.0	<1.0	<1.0
Aroclor-1260, ug/l	<1.0	<1.0	<1.0
Surrogate - Dibutylchlorendate	108 %	120 %	69 %
Date Extracted	05.09.94	05.09.94	05.09.94
Date Analyzed	05.25.94	05.25.94	05.25.94
Herbicides (8151)			
2,4-D, ug/l	<0.50	<0.50	<0.50
2,4,5-T, ug/l	<0.50	<0.50	<0.50
2,4,5-TP Silvex, ug/l	<0.50	<0.50	<0.50
Surrogate-DCAA	78 %	100 %	76 %
Date Extracted	05.10.94	05.10.94	05.10.94
Date Analyzed	05.25.94	05.25.94	05.24.94

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Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Organophosphorus Pesticides (8141)			
Disulfoton, ug/l	<2.0	<2.0	<2.0
Methyl Parathion, ug/l	<0.50	<0.50	<0.50
Ethyl Parathion, ug/l	<1.0	<1.0	<1.0
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	<0.50	<0.50	<0.50
Famphur, ug/l	<2.0	<2.0	<2.0
Phorate, ug/l	<1.0	<1.0	<1.0
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	<1.0	<1.0	<1.0
Dimethoate, ug/l	<10	<10	<10
Surrogate - Triphenylphosphate	97 %	98 %	97 %
Date Extracted	05.10.94	05.10.94	05.10.94
Date Analyzed	05.17.94	05.17.94	05.17.94

Ms. Leslie Herd
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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Metals (6010)			
Antimony (6010) , mg/l	<0.050	<0.050	<0.050
Barium (6010), mg/l	0.036	0.080	<0.010
Beryllium (6010), mg/l	<0.0050	<0.0050	<0.0050
Cadmium (6010), mg/l	<0.0050	<0.0050	<0.0050
Chromium (6010), mg/l	<0.010	<0.010	<0.0010
Cobalt (6010), mg/l	<0.010	<0.010	<0.0010
Copper (6010), mg/l	<0.025	<0.025	<0.025
Nickel (6010), mg/l	<0.040	<0.040	<0.040
Silver (6010), mg/l	<0.010	<0.010	<0.010
Tin (6010), mg/l	<0.050	<0.050	<0.050
Vanadium (6010), mg/l	<0.010	<0.010	<0.010
Zinc (6010), mg/l	<0.020	<0.020	<0.020
Date Analyzed	05.19.94	05.19.94	05.19.94
Arsenic (7060)			
Arsenic (7060), mg/l	<0.010	<0.010	<0.010
% R Post Digestion Spike	93 %	91 %	95 %
Date Analyzed	05.19.94	05.19.94	05.19.94
Lead (7421)			
Lead (7421), mg/l	<0.0050	<0.0050	<0.0050
% R Post Digestion Spike	108 %	113 %	116 %
Date Analyzed	05.18.94	05.18.94	05.18.94

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S4-42363

Received: 05 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Selenium (7740)			
Selenium (7740), mg/l	<0.010	<0.010	<0.010
% R Post Digestion Spike	104 %	101 %	97 %
Date Analyzed	05.19.94	05.19.94	05.19.94
Thallium (7841)			
Thallium (7841), mg/l	<0.010	<0.010	<0.010
% R Post Digestion Spike	96 %	96 %	101 %
Date Analyzed	05.18.94	05.18.94	05.18.94
Mercury (7470/7471)			
Mercury (7470/7471), mg/l	<0.00020	<0.00020	<0.00020
Date Analyzed	05.09.94	05.09.94	05.09.94
Total Cyanide			
Cyanide, Total (9012), mg/l	<0.010	<0.010	<0.010
Date Analyzed	05.09.94	05.09.94	05.09.94
Sulfide (9030)			
Sulfide (9030), mg/l	<0.40	<0.40	<0.40
Date Analyzed	05.09.94	05.09.94	05.09.94

SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S4-42363

Received: 05 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-1	WEL-1	05-04-94	GMT55
42363-2	WEL-2	05-04-94	GMT55
42363-3	EQUIP. BLANK	05-04-94	GMT55
PARAMETER	42363-1	42363-2	42363-3
Chlorinated Dioxins/Furans-App 9 (8280)			
Tetra CDD, ug/l	<0.0050	<0.0050	<0.0050
Tetra CDF, ug/l	<0.0050	<0.0050	<0.0050
Penta CDD, ug/l	<0.0050	<0.0050	<0.0050
Penta CDF, ug/l	<0.0050	<0.0050	<0.0050
Hexa CDD, ug/l	<0.0050	<0.0050	<0.0050
Hexa CDF, ug/l	<0.0050	<0.0050	<0.0050
Dioxin-2,3,7,8-TCDD (8280), ug/l	<0.0050	<0.0050	<0.0050
Internal Standard (TCDD)	75/54 %	60/57 %	61/67 %
Date Extracted	5.09/16.94	5.09/16.94	5.09/26.94
Date Analyzed	5.13/19.94	5.13/19.94	5.13/27.94

Ms. Leslie Herd
Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy, Suite 115
Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#		
42363-4	WEL-1	05-04-94	GMT56		
42363-5	EQUIP. BLANK	05-04-94	GMT56		
42363-6	WEL-2	05-04-94	GMT56		
42363-7	WEL-3	05-03-94	GMT56		
42363-8	WEL-4	05-03-94	GMT56		
PARAMETER	42363-4	42363-5	42363-6	42363-7	42363-8
Volatile Organic Compounds (8240)					
Acetonitrile, ug/l	<1000	<1000	<1000	<1000	<1000
Acetone, ug/l	<50	<50	<50	<50	<50
Benzene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Bromodichloromethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl Bromide (Bromomethane), ug/l	<10	<10	<10	<10	<10
Carbon Disulfide, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Chlorobenzene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Dibromochloromethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane, ug/l	<10	<10	<10	<10	<10
Methyl Chloride (Chloromethane), ug/l	<10	<10	<10	<10	<10
2-Chloroethylvinyl Ether, ug/l	<50	<50	<50	<50	<50
Chloroform, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Allylchloride (3-Chloropropene), ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroprene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromo-3-chloropropane, ug/l	<10	<10	<10	<10	<10
1,2-Dibromoethane (EDB) , ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Bromide, ug/l	<10	<10	<10	<10	<10

LOG NO: S4-42363

Received: 05 MAY 94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#		
42363-4	WEL-1	05-04-94	GMT56		
42363-5	EQUIP. BLANK	05-04-94	GMT56		
42363-6	WEL-2	05-04-94	GMT56		
42363-7	WEL-3	05-03-94	GMT56		
42363-8	WEL-4	05-03-94	GMT56		
PARAMETER	42363-4	42363-5	42363-6	42363-7	42363-8
Trans-1,4-Dichloro-2-butene, ug/l	<10	<10	<10	<10	<10
Dichlorodifluoromethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Trans-1,2-Dichloroethylene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethylene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride	<5.0	<5.0	<5.0	<5.0	<5.0
(Dichloromethane), ug/l					
1,2-Dichloropropane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,3-Dichloropropene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,3-Dichloropropene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Ethylbenzene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl Ethyl Ketone, ug/l	<50	<50	<50	<50	<50
Methyl Iodide, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Methacrylonitrile, ug/l	<100	<100	<100	<100	<100
4-methyl-2-pentanone (MIBK), ug/l	<50	<50	<50	<50	<50
Pentachloroethane, ug/l	<25	<25	<25	<25	<25
Styrene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1,2-Tetrachloroethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES			DATE SAMPLED	SDG#
42363-4	WEL-1			05-04-94	GMT56
42363-5	EQUIP. BLANK			05-04-94	GMT56
42363-6	WEL-2			05-04-94	GMT56
42363-7	WEL-3			05-03-94	GMT56
42363-8	WEL-4			05-03-94	GMT56
PARAMETER	42363-4	42363-5	42363-6	42363-7	42363-8
Tetrachloroethene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Carbon Tetrachloride, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Bromoform, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethylene, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Trichlorofluoromethane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
1,2,3-Trichloropropane, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Acetate, ug/l	<10	<10	<10	<10	<10
Vinyl chloride, ug/l	<10	<10	<10	<10	<10
Xylenes, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
2-Hexanone, ug/l	<50	<50	<50	<50	<50
Propionitrile, ug/l	<100	<100	<100	<100	<100
Methyl methacrylate, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Acrolein, ug/l	<100	<100	<100	<100	<100
Acrylonitrile, ug/l	<100	<100	<100	<100	<100
Ethyl methacrylate, ug/l	<5.0	<5.0	<5.0	<5.0	<5.0
Isobutyl Alcohol, ug/l	<1000	<1000	<1000	<1000	<1000
Surrogate - Toluene-d8	92 %	94 %	92 %	92 %	93 %
Surrogate - 4-Bromofluorobenzene	89 %	90 %	88 %	88 %	89 %
Surrogate - 1,2-Dichloroethane-d4	94 %	88 %	91 %	95 %	89 %
Date Analyzed	05.11.94	05.11.94	05.11.94	05.11.94	05.11.94
Clock ID	2I0510	2I0510	2I0510	1I0511	1I0511

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

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LOG NO: S4-42363

Received: 05 MAY 94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-9	DMW-1B	05-03-94	GMT56
42363-10	WEL-93	05-03-94	GMT56
42363-11	TB-0503	05-03-94	GMT56
PARAMETER	42363-9	42363-10	42363-11
Volatile Organic Compounds (8240)			
Acetonitrile, ug/l	<1000	<1000	<1000
Acetone, ug/l	<50	<50	<50
Benzene, ug/l	<5.0	<5.0	<5.0
Bromodichloromethane, ug/l	<5.0	<5.0	<5.0
Methyl Bromide (Bromomethane), ug/l	<10	<10	<10
Carbon Disulfide, ug/l	<5.0	<5.0	<5.0
Chlorobenzene, ug/l	<5.0	<5.0	<5.0
Dibromochloromethane, ug/l	<5.0	<5.0	<5.0
Chloroethane, ug/l	<10	<10	<10
Methyl Chloride (Chloromethane), ug/l	<10	<10	<10
2-Chloroethylvinyl Ether, ug/l	<50	<50	<50
Chloroform, ug/l	<5.0	<5.0	<5.0
Allylchloride (3-Chloropropene), ug/l	<5.0	<5.0	<5.0
Chloroprene, ug/l	<5.0	<5.0	<5.0
1,2-Dibromo-3-chloropropane, ug/l	<10	<10	<10
1,2-Dibromoethane (EDB) , ug/l	<5.0	<5.0	<5.0
Methylene Bromide, ug/l	<10	<10	<10
Trans-1,4-Dichloro-2-butene, ug/l	<10	<10	<10
Dichlorodifluoromethane, ug/l	<5.0	<5.0	<5.0
1,1-Dichloroethane, ug/l	<5.0	<5.0	<5.0
1,2-Dichloroethane, ug/l	<5.0	<5.0	<5.0

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-9	DMW-1B	05-03-94	GMT56
42363-10	WEL-93	05-03-94	GMT56
42363-11	TB-0503	05-03-94	GMT56
PARAMETER	42363-9	42363-10	42363-11
Trans-1,2-Dichloroethylene, ug/l	<5.0	<5.0	<5.0
1,1-Dichloroethylene, ug/l	<5.0	<5.0	<5.0
Methylene Chloride (Dichloromethane), ug/l	<5.0	<5.0	<5.0
1,2-Dichloropropane, ug/l	<5.0	<5.0	<5.0
cis-1,3-Dichloropropene, ug/l	<5.0	<5.0	<5.0
trans-1,3-Dichloropropene, ug/l	<5.0	<5.0	<5.0
Ethylbenzene, ug/l	<5.0	<5.0	<5.0
Methyl Ethyl Ketone, ug/l	<50	<50	<50
Methyl Iodide, ug/l	<5.0	<5.0	<5.0
Methacrylonitrile, ug/l	<100	<100	<100
4-methyl-2-pentanone (MIBK), ug/l	<50	<50	<50
Pentachloroethane, ug/l	<25	<25	<25
Styrene, ug/l	<5.0	<5.0	<5.0
1,1,1,2-Tetrachloroethane, ug/l	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<5.0
Tetrachloroethene, ug/l	<5.0	<5.0	<5.0
Carbon Tetrachloride, ug/l	<5.0	<5.0	<5.0
Toluene, ug/l	<5.0	<5.0	<5.0
Bromoform, ug/l	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<5.0
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<5.0
Trichloroethylene, ug/l	<5.0	<5.0	<5.0

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED	SDG#
42363-9	DMW-1B	05-03-94	GMT56
42363-10	WEL-93	05-03-94	GMT56
42363-11	TB-0503	05-03-94	GMT56
PARAMETER	42363-9	42363-10	42363-11
Trichlorofluoromethane, ug/l	<5.0	<5.0	<5.0
1,2,3-Trichloropropane, ug/l	<5.0	<5.0	<5.0
Vinyl Acetate, ug/l	<10	<10	<10
Vinyl chloride, ug/l	<10	<10	<10
Xylenes, ug/l	<5.0	<5.0	<5.0
2-Hexanone, ug/l	<50	<50	<50
Propionitrile, ug/l	<100	<100	<100
Methyl methacrylate, ug/l	<5.0	<5.0	<5.0
Acrolein, ug/l	<100	<100	<100
Acrylonitrile, ug/l	<100	<100	<100
Ethyl methacrylate, ug/l	<5.0	<5.0	<5.0
Isobutyl Alcohol, ug/l	<1000	<1000	<1000
Surrogate - Toluene-d8	92 %	93 %	93 %
Surrogate - 4-Bromofluorobenzene	89 %	90 %	89 %
Surrogate - 1,2-Dichloroethane-d4	91 %	88 %	91 %
Date Analyzed	05.11.94	05.11.94	05.11.94
Clock ID	1I0511	1I0511	1I0511

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LOG NO: S4-42363

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	DATE SAMPLED	SDG#
42363-12	LF-2	05-04-94	GMT58
42363-13	LF-1	05-04-94	GMT58
42363-14	LF-91	05-04-94	GMT58
PARAMETER	42363-12	42363-13	42363-14
PCB's (8080)			
Aroclor-1016, mg/kg dw	<3.9	<40	<41
Aroclor-1221, mg/kg dw	<8.0	<81	<84
Aroclor-1232, mg/kg dw	<3.9	<40	<41
Aroclor-1242, mg/kg dw	<3.9	<40	<41
Aroclor-1248, mg/kg dw	<3.9	68	84
Aroclor-1254, mg/kg dw	4.0	350	340
Aroclor-1260, mg/kg dw	14	380	390
Surrogate-TCX	*F33	*F33	*F33
Date Extracted	05.12.94	05.12.94	05.12.94
Date Analyzed	06.04.94	05.28.94	05.28.94
Percent Solids, %	84	83	80

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/l	45.1/48.0	50	90/96 %	65-116 %	6.4 (<20) %	
p-Dichlorobenzene, ug/l	39.9/43.5	50	80/87 %	46-110 %	8.4 (<18) %	
2,4-Dinitrotoluene, ug/l	53.8/51.8	50	108/104 %	39-133 %	3.8 (<25) %	
N-Nitroso-di-n-propylamine, ug/l	35.0/33.2	50	70/66 %	39-142 %	5.9 (<60) %	
Pyrene, ug/l	42.7/44.4	50	85/89 %	36-153 %	4.6 (<21) %	
1,2,4-Trichlorobenzene, ug/l	38.0/42.2	50	76/84 %	49-108 %	10 (<24) %	
2-Chlorophenol, ug/l	75.2/80.3	100	75/80 %	54-99 %	6.4 (<18) %	
p-Nitrophenol, ug/l	62.7/61.2	100	63/61 %	10-112 %	3.2 (<108) %	
Pentachlorophenol, ug/l	64.8/68.1	100	65/68 %	15-139 %	4.5 (<39) %	
Phenol, ug/l	72.2/76.1	100	72/76 %	10-96 %	5.4 (<21) %	
p-Chloro-m-cresol, ug/l	76.1/76.5	100	76/76 %	53-104 %	0 (<17) %	
Surrogate - Phenol d 5	68/74 %	---	---	---	---	
Surrogate - 2-Fluorophenol	73/81 %	---	---	---	---	
Surrogate -	58/59 %	---	---	---	---	
2,4,6-Tribromophenol						
Surrogate - Nitrobenzene d-5	73/80 %	---	---	---	---	
Surrogate - 2-Fluorobiphenyl	92/100 %	---	---	---	---	
Surrogate - Terphenyl	64/64 %	---	---	---	---	
Date Extracted	05.10.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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Received: 05 MAY 94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Chlorinated Pesticides (8080)						
Aldrin, ug/l	.334/.321	0.20	167/160 %	42-116 %	4.3 (<25) %	
4,4'-DDT, ug/l	.683/.621	0.50	137/124 %	67-137 %	10 (<28) %	
Dieldrin, ug/l	.752/.753	0.50	150/151 %	51-143 %	0.66 (<46) %	
Endrin, ug/l	.629/.611	0.50	126/122 %	57-142 %	3.2 (<23) %	
Heptachlor, ug/l	.323/.311	0.20	162/156 %	42-129 %	3.8 (<22) %	
gamma-BHC, ug/l	.322/.311	0.20	161/156 %	52-136 %	3.2 (<18) %	
Surrogate -	150/132 %	---	---	---	---	
Dibutylchloredate						
Date Extracted	05.09.94	---	---	---	---	
Date Analyzed	05.25.94	---	---	---	---	
Herbicides (8151)						
2,4-D, ug/l	1.53/1.70	2.0	76/85 %	25-129 %	11 (<60) %	
2,4,5-T, ug/l	1.88/2.09	2.0	94/104 %	25-145 %	10 (<62) %	
2,4,5-TP Silvex, ug/l	1.96/2.10	2.0	98/105 %	10-151 %	6.9 (<81) %	
Surrogate-DCAA	82/87 %	---	---	---	---	
Date Extracted	05.10.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Organophosphorus Pesticides (8141)						
Methyl Parathion, ug/l	5.14/4.87	5.0	103/97 %	40-104 %	6.0(<40) %	
Ethyl Parathion, ug/l	4.14/3.95	5.0	83/79 %	18-171 %	4.9(<28) %	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	3.37/3.82	5.0	67/76 %	25-160 %	12(<60) %	
Surrogate - Triphenylphosphate	102/96 %	---	---	---	---	
Date Extracted	05.10.94	---	---	---	---	
Date Analyzed	05.18.94	---	---	---	---	

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Metals (6010)						
Antimony (6010) , mg/l	.395/.373	0.50	79/75 %	75-125 %	5.2(<20) %	
Barium (6010), mg/l	1.94/1.94	2.00	97/97 %	75-125 %	0(<20) %	
Beryllium (6010), mg/l	0.0479/*	0.050	96/96 %	75-125 %	0(<20) %	
Cadmium (6010), mg/l	0.0388/*	0.050	78/79 %	75-125 %	1.3(<20) %	
Chromium (6010), mg/l	.185/.187	0.20	93/94 %	75-125 %	1.1(<20) %	
Cobalt (6010), mg/l	.461/.461	0.50	92/92 %	75-125 %	0(<20) %	
Copper (6010), mg/l	.234/.236	0.25	94/94 %	75-125 %	0(<20) %	
Nickel (6010), mg/l	.478/.480	0.50	96/96 %	75-125 %	0(<20) %	
Silver (6010), mg/l	0.0476/*	0.050	95/95 %	75-125 %	0(<20) %	
Tin (6010), mg/l	.875/.881	1.00	88/88 %	75-125 %	0(<20) %	
Vanadium (6010), mg/l	.466/.469	0.50	93/94 %	75-125 %	1.1(<20) %	
Zinc (6010), mg/l	.438/.442	0.50	88/88 %	75-125 %	0(<20) %	
Date Analyzed	05.19.94	---	---	---	---	
Arsenic (7060)						
Arsenic (7060), mg/l	0.0523/*	0.0501	104/90 %	75-125 %	14(<20) %	
Date Analyzed	05.19.94	---	---	---	---	
Lead (7421)						
Lead (7421), mg/l	0.0508/*	0.050	102/97 %	75-125 %	5.0(<20) %	
Date Analyzed	05.18.94	---	---	---	---	

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LOG NO: S4-42363

Received: 05 MAY 94

Ms. Leslie Herd
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Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Selenium (7740)						
Selenium (7740), mg/l	0.0458/*	0.0497	92/79 %	75-125 %	15(20) %	
Date Analyzed	05.19.94	---	---	---	---	
Thallium (7841)						
Thallium (7841) , mg/l	0.0501/*	0.0498	101/93 %	75-125 %	8.2(<20) %	
Date Analyzed	05.18.94	---	---	---	---	
Mercury (7470/7471)						
Mercury (7470/7471), mg/l	0.00112/*	0.0010	112/110 %	75-125 %	1.8(<20) %	
Date Analyzed	05.09.94	---	---	---	---	
Total Cyanide						
Cyanide, Total (9012), mg/l	0.213/.208	0.200	107/104 %	75-125 %	2.8(<30) %	
Date Analyzed	05.09.94	05.09.94	---	---	---	
Sulfide (9030)						
Sulfide (9030) , mg/l	.892/.933	1.50	59/62 %	50-150 %	5.0(<50) %	
Date Analyzed	05.09.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/l	0.0222/*	0.0250	89/110 %	63-137 %	21(<40) %	
Tetra CDF, ug/l	0.0239/*	0.0250	96/117 %	60-142 %	20(<40) %	
Penta CDD, ug/l	0.6743/*	0.0250	2697/224 %	37-163 %	169(<40) %	
Penta CDF, ug/l	0.0253/*	0.0250	101/127 %	52-148 %	23(<40) %	
Hexa CDD, ug/l	0.0219/*	0.0250	88/113 %	42-158 %	25(<40) %	
Hexa CDF, ug/l	0.0228/*	0.0250	91/124 %	58-142 %	31(<40) %	
Dioxin-2,3,7,8-TCDD (8280), ug/l	0.0222/*	0.0250	89/110 %	63-137 %	21(<40) %	
Internal Standard (TCDD)	67/54 %	---	---	---	---	
Date Extracted	05.19.94	---	---	---	---	
Date Analyzed	05.27.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-20	Detection Limits					GMT55
42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
Acids and Base Neutrals (8270)						
Acenaphthene, ug/l	10	<10	48.7	50	97 %	
Acenaphthylene, ug/l	10	<10	---	---	---	
Acetophenone, ug/l	10	<10	---	---	---	
2-Acetylaminofluorene, ug/l	10	<10	---	---	---	
4-Aminobiphenyl, ug/l	10	<10	---	---	---	
Anthracene, ug/l	10	<10	---	---	---	
Aniline, ug/l	50	<50	---	---	---	
Aramite, ug/l	10	<10	---	---	---	
Benzo(a)Anthracene, ug/l	10	<10	---	---	---	
Benzo(k)fluoranthene, ug/l	10	<10	---	---	---	
Benzo(b)fluoranthene, ug/l	10	<10	---	---	---	
Benzo(g,h,i)perylene, ug/l	10	<10	---	---	---	
Benzo(a)pyrene, ug/l	10	<10	---	---	---	
Benzyl alcohol, ug/l	10	<10	---	---	---	
bis(2-Chloroethoxy)methane, ug/l	10	<10	---	---	---	
bis(2-Chloroethyl)ether, ug/l	10	<10	---	---	---	
Bis(2-chloroisopropyl)ether, ug/l	10	<10	---	---	---	
bis(2-Ethylhexyl)phthalate, ug/l	10	<10	---	---	---	
4-Bromophenyl-phenyl-ether, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42363-20	Detection Limits				GMT55
42363-21	Method Blank				GMT55
42363-22	Lab Control Standard (LCS) Result				GMT55
42363-23	LCS Expected Value				GMT55
42363-24	LCS % Recovery				GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24
Butylbenzylphthalate, ug/l	10	<10	---	---	---
(Dinoseb)	10	<10	---	---	---
2-sec-Butyl-4,6-dinitropheno 1, ug/l					
P-Chloroaniline, ug/l	20	<20	---	---	---
m-Dichlorobenzene, ug/l	10	<10	---	---	---
p-Dichlorobenzene, ug/l	10	<10	42.0	50	84 %
o-Dichlorobenzene, ug/l	10	<10	---	---	---
4-Chlorophenyl-phenyl ether, ug/l	10	<10	---	---	---
2-Chloronaphthalene, ug/l	10	<10	---	---	---
Chrysene, ug/l	10	<10	---	---	---
Dibenz(a,h)anthracene, ug/l	10	<10	---	---	---
Di-n-butylphthalate, ug/l	10	<10	---	---	---
3,3'-Dichlorobenzidine, ug/l	20	<20	---	---	---
3,3'-Dimethylbenzidine, ug/l	200	<200	---	---	---
Diethylphthalate, ug/l	10	<10	---	---	---
p-(Dimethylamino)azobenzene, ug/l	10	<10	---	---	---
7,12-Dimethylbenz(a)anthracene, ug/l	10	<10	---	---	---
a-a-Dimethylphenethylamine, ug/l	2000	<2000	---	---	---
Dimethylphthalate, ug/l	10	<10	---	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-20	Detection Limits					GMT55
42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
m-Dinitrobenzene , ug/l	10	<10	---	---	---	
2,4-Dinitrotoluene, ug/l	10	<10	50.7	50	101 %	
2,6-Dinitrotoluene, ug/l	10	<10	---	---	---	
Di-n-octylphthalate, ug/l	10	<10	---	---	---	
N-Nitroso-di-n-propylamine, ug/l	10	<10	35.8	50	72 %	
Fluoranthene, ug/l	10	<10	---	---	---	
Fluorene, ug/l	10	<10	---	---	---	
Hexachlorobenzene, ug/l	10	<10	---	---	---	
Hexachlorobutadiene, ug/l	10	<10	---	---	---	
Hexachlorocyclopentadiene, ug/l	10	<10	---	---	---	
Hexachloroethane, ug/l	10	<10	---	---	---	
Hexachloropropene, ug/l	10	<10	---	---	---	
Indeno(1,2,3-cd)pyrene, ug/l	10	<10	---	---	---	
Isophorone, ug/l	10	<10	---	---	---	
Isosafrole, ug/l	10	<10	---	---	---	
Methapyrilene, ug/l	2000	<2000	---	---	---	
3-Methylcholanthrene, ug/l	10	<10	---	---	---	
Methyl methanesulfonate, ug/l	10	<10	---	---	---	
2-Methylnaphthalene, ug/l	10	<10	---	---	---	
Naphthalene, ug/l	10	<10	---	---	---	

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42363-20	Detection Limits					GMT55
42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
1,4-Naphthoquinone, ug/l	10	<10	---	---	---	
1-Naphthylamine, ug/l	10	<10	---	---	---	
2-Naphthylamine, ug/l	10	<10	---	---	---	
o-Nitroaniline, ug/l	50	<50	---	---	---	
m-Nitroaniline, ug/l	50	<50	---	---	---	
p-Nitroaniline, ug/l	50	<50	---	---	---	
Nitrobenzene, ug/l	10	<10	---	---	---	
N-Nitrosodi-n-butylamine, ug/l	10	<10	---	---	---	
N-Nitrosodiethylamine, ug/l	10	<10	---	---	---	
N-Nitrosodimethylamine, ug/l	10	<10	---	---	---	
N-Nitrosomethylethylamine, ug/l	10	<10	---	---	---	
N-Nitrosodiphenylamine/Diph enylamine, ug/l	10	<10	---	---	---	
N-Nitrosomorpholine, ug/l	10	<10	---	---	---	
N-Nitrosopiperidine, ug/l	10	<10	---	---	---	
N-Nitrosopyrrolidine, ug/l	10	<10	---	---	---	
5-Nitro-o-toluidine, ug/l	10	<10	---	---	---	
Pentachlorobenzene, ug/l	10	<10	---	---	---	
Pentachloronitrobenzene, ug/l	10	<10	---	---	---	
Phenacetin, ug/l	10	<10	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-20	Detection Limits					GMT55
42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
Phenanthrene, ug/l	10	<10	---	---	---	
2-Picoline, ug/l	200	<200	---	---	---	
Pronamide, ug/l	10	<10	---	---	---	
Pyrene, ug/l	10	<10	43.7	50	87 %	
Safrole, ug/l	10	<10	---	---	---	
1,2,4,5-Tetrachlorobenzene, ug/l	10	<10	---	---	---	
1,2,4-Trichlorobenzene, ug/l	10	<10	41.0	50	82 %	
2-Chlorophenol, ug/l	10	<10	82.2	100	82 %	
Cresol m & p, ug/l	10	<10	---	---	---	
O-cresol, ug/l	10	<10	---	---	---	
p-Nitrophenol, ug/l	50	<50	61.4	100	61 %	
2,4-Dichlorophenol, ug/l	10	<10	---	---	---	
2,6-Dichlorophenol, ug/l	10	<10	---	---	---	
2,4-Dimethylphenol, ug/l	10	<10	---	---	---	
4,6-Dinitro-o-cresol, ug/l	50	<50	---	---	---	
2,4-Dinitrophenol, ug/l	50	<50	---	---	---	
Pentachlorophenol, ug/l	50	<50	66.7	100	67 %	
Phenol, ug/l	10	<10	78.2	100	78 %	
2,4,5-Trichlorophenol, ug/l	10	<10	---	---	---	
2,4,6-Trichlorophenol, ug/l	10	<10	---	---	---	

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42363-20	Detection Limits					GMT55
42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
2,3,4,6-Tetrachlorophenol, ug/l	50	<50	---	---	---	
o-Nitrophenol, ug/l	10	<10	---	---	---	
Diallate, ug/l	10	<10	---	---	---	
Ethyl methanesulfonate, ug/l	10	<10	---	---	---	
4-Nitroquinoline 1-oxide, ug/l	100	<100	---	---	---	
p-phenylenediamine, ug/l	2000	<2000	---	---	---	
o-toluidine, ug/l	10	<10	---	---	---	
O,O,O-triethyl phosphorothioate, ug/l	10	<10	---	---	---	
1,3,5-Trinitrobenzene, ug/l	200	<200	---	---	---	
p-Chloro-m-cresol, ug/l	10	<10	76.0	100	76 %	
Dibenzofuran, ug/l	10	<10	---	---	---	
Pyridine, ug/l	200	<200	---	---	---	
1,4-Dioxane, ug/l	10	<10	---	---	---	
Kepone, ug/l	10	<10	---	---	---	
Surrogate - Phenol d 5	---	55 %	---	---	---	
Surrogate - 2-Fluorophenol	---	65 %	---	---	---	
Surrogate - 2,4,6-Tribromophenol	---	42 %	---	---	---	
Surrogate - Nitrobenzene d-5	---	62 %	---	---	---	
Surrogate - 2-Fluorobiphenyl	---	77 %	---	---	---	
Surrogate - Terphenyl	---	66 %	---	---	---	
Date Extracted	---	05.10.94	---	---	---	
Date Analyzed	---	05.19.94	---	---	---	

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42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
Chlorinated Pesticides (8080)						
Aldrin, ug/l	0.050	<0.050	0.224	0.20	112 %	
Isodrin, ug/l	0.050	<0.050	---	---	---	
Chlordane, ug/l	0.50	<0.50	---	---	---	
Chlorobenzilate, ug/l	0.50	<0.50	---	---	---	
4,4'-DDD, ug/l	0.10	<0.10	---	---	---	
4,4'-DDE, ug/l	0.10	<0.10	---	---	---	
4,4'-DDT, ug/l	0.10	<0.10	0.644	0.50	129 %	
Dieldrin, ug/l	0.10	<0.10	0.633	0.50	127 %	
Endosulfan I, ug/l	0.050	<0.050	---	---	---	
Endosulfan II, ug/l	0.10	<0.10	---	---	---	
Endosulfan sulfate, ug/l	0.10	<0.10	---	---	---	
Endrin, ug/l	0.10	<0.10	0.586	0.50	117 %	
Endrin Aldehyde, ug/l	0.10	<0.10	---	---	---	
Heptachlor, ug/l	0.050	<0.050	0.248	0.20	124 %	
Heptachlor epoxide, ug/l	0.050	<0.050	---	---	---	
alpha-BHC, ug/l	0.050	<0.050	---	---	---	
beta-BHC, ug/l	0.050	<0.050	---	---	---	
gamma-BHC, ug/l	0.050	<0.050	0.241	0.20	120 %	
delta-BHC, ug/l	0.050	<0.050	---	---	---	

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42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
Methoxychlor, ug/l	0.50	<0.50	---	---	---	
Toxaphene, ug/l	5.0	<5.0	---	---	---	
Aroclor-1016, ug/l	1.0	<1.0	---	---	---	
Aroclor-1221, ug/l	2.0	<2.0	---	---	---	
Aroclor-1232, ug/l	1.0	<1.0	---	---	---	
Aroclor-1242, ug/l	1.0	<1.0	---	---	---	
Aroclor-1248, ug/l	1.0	<1.0	---	---	---	
Aroclor-1254, ug/l	1.0	<1.0	---	---	---	
Aroclor-1260, ug/l	1.0	<1.0	---	---	---	
Surrogate - Dibutylchloredate	---	75 %	93 %	---	---	
Date Extracted	---	05.09.94	05.09.94	---	---	
Date Analyzed	---	05.25.94	05.25.94	---	---	
Herbicides (8151)						
2,4-D, ug/l	0.50	<0.50	0.913	2.0	46 %	
2,4,5-T, ug/l	0.50	<0.50	1.18	2.0	59 %	
2,4,5-TP Silvex, ug/l	0.50	<0.50	1.53	2.0	76 %	
Surrogate-DCAA	---	64 %	62 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.26.94	05.24.94	---	---	

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42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
Organophosphorus Pesticides (8141)						
Disulfoton, ug/l	2.0	<2.0	---	---	---	
Methyl Parathion, ug/l	0.50	<0.50	4.63	5.0	93 %	
Ethyl Parathion, ug/l	1.0	<1.0	3.87	5.0	77 %	
Tetraethyl dithiopyrophosphate (Sulfotepp), ug/l	0.50	<0.50	---	---	---	
Famphur, ug/l	2.0	<2.0	---	---	---	
Phorate, ug/l	1.0	<1.0	---	---	---	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin), ug/l	1.0	<1.0	3.56	5.0	71 %	
Dimethoate, ug/l	10	<10	---	---	---	
Surrogate - Triphenylphosphate	---	80 %	79 %	---	---	
Date Extracted	---	05.10.94	05.10.94	---	---	
Date Analyzed	---	05.16.94	05.16.94	---	---	

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LOG NO: S4-42363

Received: 05 MAY 94

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42363-20	Detection Limits				GMT55
42363-21	Method Blank				GMT55
42363-22	Lab Control Standard (LCS) Result				GMT55
42363-23	LCS Expected Value				GMT55
42363-24	LCS % Recovery				GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24
Metals (6010)					
Antimony (6010) , mg/l	0.050	<0.050	0.910	0.996	91 %
Barium (6010), mg/l	0.010	<0.010	1.01	1.01	100 %
Beryllium (6010), mg/l	0.0050	<0.0050	0.977	0.996	98 %
Cadmium (6010), mg/l	0.0050	<0.0050	0.960	1.01	95 %
Chromium (6010), mg/l	0.010	<0.010	0.973	1.00	97 %
Cobalt (6010), mg/l	0.010	<0.010	0.960	1.01	95 %
Copper (6010), mg/l	0.025	<0.025	0.990	1.01	98 %
Nickel (6010), mg/l	0.040	<0.040	0.975	0.996	98 %
Silver (6010), mg/l	0.010	<0.010	0.970	1.00	97 %
Tin (6010), mg/l	0.050	<0.050	0.919	1.00	92 %
Vanadium (6010), mg/l	0.010	<0.010	0.977	0.999	98 %
Zinc (6010), mg/l	0.020	<0.020	0.945	1.01	94 %
Date Analyzed	---	05.19.94	05.19.94	---	---
Arsenic (7060)					
Arsenic (7060), mg/l	0.010	<0.010	0.0557	0.0501	111 %
% R Post Digestion Spike	---	96 %	---	---	---
Date Analyzed	---	05.19.94	05.19.94	---	---
Lead (7421)					
Lead (7421), mg/l	0.0050	<0.0050	0.0518	0.050	104 %
% R Post Digestion Spike	---	110 %	---	---	---
Date Analyzed	---	05.18.94	05.18.94	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				SDG#
42363-20	Detection Limits				GMT55
42363-21	Method Blank				GMT55
42363-22	Lab Control Standard (LCS) Result				GMT55
42363-23	LCS Expected Value				GMT55
42363-24	LCS % Recovery				GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24
Selenium (7740)					
Selenium (7740), mg/l	0.010	<0.010	0.0540	0.0497	109 %
% R Post Digestion Spike	---	100 %	---	---	---
Date Analyzed	---	05.19.94	05.19.94	---	---
Thallium (7841)					
Thallium (7841), mg/l	0.010	<0.010	0.0532	0.0498	107 %
% R Post Digestion Spike	---	95 %	---	---	---
Date Analyzed	---	05.18.94	05.18.94	---	---
Mercury (7470/7471)					
Mercury (7470/7471), mg/l	0.00020	<0.00020	0.00157	0.00150	105 %
Date Analyzed	---	05.09.94	05.09.94	---	---
Total Cyanide					
Cyanide, Total (9012), mg/l	0.010	<0.010	0.208	0.200	104 %
Date Analyzed	---	05.09.94	05.09.94	---	---
Sulfide (9030)					
Sulfide (9030), mg/l	0.40	<0.40	1.15	1.50	77 %
Date Analyzed	---	05.09.94	05.09.94	---	---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-20	Detection Limits					GMT55
42363-21	Method Blank					GMT55
42363-22	Lab Control Standard (LCS) Result					GMT55
42363-23	LCS Expected Value					GMT55
42363-24	LCS % Recovery					GMT55
PARAMETER	42363-20	42363-21	42363-22	42363-23	42363-24	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/l	0.0050	<0.0050	0.0178	0.0250		71 %
Tetra CDF, ug/l	0.0050	<0.0050	0.0199	0.0250		80 %
Penta CDD, ug/l	0.0050	<0.0050	0.0230	0.0250		92 %
Penta CDF, ug/l	0.0050	<0.0050	0.0204	0.0250		82 %
Hexa CDD, ug/l	0.0050	<0.0050	0.0204	0.0250		82 %
Hexa CDF, ug/l	0.0050	<0.0050	0.0210	0.0250		84 %
Dioxin-2,3,7,8-TCDD (8280), ug/l	0.0050	<0.0050	0.0178	0.0250		71 %
Internal Standard (TCDD)	---	60 %	58 %	---		---
Date Extracted	---	05.16.94	05.16.94	---		---
Date Analyzed	---	05.25.94	05.25.94	---		---

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42363-25	LCS % Recovery Limits	GMT55
PARAMETER	42363-25	
Acids and Base Neutrals (8270)		
Acenaphthene	65-116 %	
p-Dichlorobenzene	46-110 %	
2,4-Dinitrotoluene	39-133 %	
N-Nitroso-di-n-propylamine	39-142 %	
Pyrene	36-153 %	
1,2,4-Trichlorobenzene	49-108 %	
2-Chlorophenol	54-99 %	
p-Nitrophenol	10-112 %	
Pentachlorophenol	15-139 %	
Phenol	10-96 %	
p-Chloro-m-cresol	53-104 %	
Chlorinated Pesticides (8080)		
Aldrin	42-116 %	
4,4'-DDT	67-137 %	
Dieldrin	51-143 %	
Endrin	57-142 %	
Heptachlor	42-129 %	
gamma-BHC	52-136 %	
Herbicides (8151)		
2,4-D	25-129 %	
2,4,5-T	25-145 %	
2,4,5-TP Silvex	10-151 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42363-25	LCS % Recovery Limits	GMT55
PARAMETER	42363-25	
Organophosphorus Pesticides (8141)		
Methyl Parathion	40-140 %	
Ethyl Parathion	18-171 %	
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Thionazin)	25-160 %	
Metals (6010)		
Antimony (6010)	80-120 %	
Barium (6010)	80-120 %	
Beryllium (6010)	80-120 %	
Cadmium (6010)	80-120 %	
Chromium (6010)	80-120 %	
Cobalt (6010)	80-120 %	
Copper (6010)	80-120 %	
Nickel (6010)	80-120 %	
Silver (6010)	80-120 %	
Tin (6010)	80-120 %	
Vanadium (6010)	80-120 %	
Zinc (6010)	80-120 %	
Arsenic (7060)		
Arsenic (7060)	80-120 %	
Lead (7421)		
Lead (7421)	80-120 %	
Selenium (7740)		
Selenium (7740)	80-120 %	
Thallium (7841)		
Thallium (7841)	80-120 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42363-25	LCS % Recovery Limits	GMT55
PARAMETER	42363-25	
Mercury (7470/7471)		
Mercury (7470/7471)	80-120 %	
Total Cyanide		
Cyanide, Total (9012)	85-115 %	
Sulfide (9030)		
Sulfide (9030)	50-150 %	
Chlorinated Dioxins/Furans-App 9 (8280)		
Tetra CDD	63-137 %	
Tetra CDF	60-142 %	
Penta CDD	37-163 %	
Penta CDF	52-148 %	
Hexa CDD	42-158 %	
Hexa CDF	58-142 %	
Dioxin-2,3,7,8-TCDD (8280)	63-137 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-26	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT56
42363-27	MS Expected Value					GMT56
42363-28	MS/MSD % Recovery					GMT56
42363-29	MS/MSD % Recovery Limit					GMT56
42363-30	MS % RPD (Limit)					GMT56
PARAMETER	42363-26	42363-27	42363-28	42363-29	42363-30	
Volatile Organic Compounds (8240)						
Benzene, ug/l	45.2/43.1	50	90/86 %	73-144 %	4.5(<22) %	
Chlorobenzene, ug/l	51.8/49.5	50	104/99 %	68-136 %	4.9(<17) %	
1,1-Dichloroethylene, ug/l	58.1/49.3	50	116/99 %	60-136 %	16(<19) %	
Toluene, ug/l	49.6/48.6	50	99/97 %	68-138 %	2.0(<17) %	
Trichloroethylene, ug/l	50.5/47.4	50	101/95 %	66-136 %	6.1(<20) %	
Surrogate - Toluene-d8	110/105 %	---	---	---	---	
Surrogate - 4-Bromofluorobenzene	108/100 %	---	---	---	---	
Surrogate - 1,2-Dichloroethane-d4	108/102 %	---	---	---	---	
Date Analyzed	05.13.94	---	---	---	---	
Clock_ID	2I0512	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-31	Detection Limits					GMT56
42363-32	Method Blank					GMT56
42363-33	Lab Control Standard (LCS) Result					GMT56
42363-34	LCS Expected Value					GMT56
42363-35	LCS % Recovery					GMT56
PARAMETER	42363-31	42363-32	42363-33	42363-34	42363-35	
Volatile Organic Compounds (8240)						
Acetonitrile, ug/l	1000	<1000	---	---	---	
Acetone, ug/l	50	<50	---	---	---	
Benzene, ug/l	5.0	<5.0	38.9	50	78 %	
Bromodichloromethane, ug/l	5.0	<5.0	---	---	---	
Methyl Bromide (Bromomethane), ug/l	10	<10	---	---	---	
Carbon Disulfide, ug/l	5.0	<5.0	---	---	---	
Chlorobenzene, ug/l	5.0	<5.0	45.6	50	91 %	
Dibromochloromethane, ug/l	5.0	<5.0	---	---	---	
Chloroethane, ug/l	10	<10	---	---	---	
Methyl Chloride (Chloromethane), ug/l	10	3.4J	---	---	---	
Chloroform, ug/l	5.0	<5.0	---	---	---	
Allylchloride (3-Chloropropene), ug/l	5.0	<5.0	---	---	---	
Chloroprene, ug/l	5.0	<5.0	---	---	---	
1,2-Dibromo-3-chloropropane, ug/l	10	<10	---	---	---	
1,2-Dibromoethane (EDB) , ug/l	5.0	<5.0	---	---	---	
Methylene Bromide, ug/l	10	<10	---	---	---	
Trans-1,4-Dichloro-2-butene, ug/l	10	<10	---	---	---	

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REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-31	Detection Limits					GMT56
42363-32	Method Blank					GMT56
42363-33	Lab Control Standard (LCS) Result					GMT56
42363-34	LCS Expected Value					GMT56
42363-35	LCS % Recovery					GMT56
PARAMETER	42363-31	42363-32	42363-33	42363-34	42363-35	
Dichlorodifluoromethane, ug/l	5.0	<5.0	---	---	---	
1,1-Dichloroethane, ug/l	5.0	<5.0	---	---	---	
1,2-Dichloroethane, ug/l	5.0	<5.0	---	---	---	
Trans-1,2-Dichloroethylene, ug/l	5.0	<5.0	---	---	---	
1,1-Dichloroethylene, ug/l	5.0	<5.0	37.0	50	74 %	
Methylene Chloride (Dichloromethane), ug/l	5.0	<5.0	---	---	---	
1,2-Dichloropropane, ug/l	5.0	<5.0	---	---	---	
cis-1,3-Dichloropropene, ug/l	5.0	<5.0	---	---	---	
trans-1,3-Dichloropropene, ug/l	5.0	<5.0	---	---	---	
Ethylbenzene, ug/l	5.0	<5.0	---	---	---	
Methyl Ethyl Ketone, ug/l	50	<50	---	---	---	
Methyl Iodide, ug/l	5.0	<5.0	---	---	---	
Methacrylonitrile, ug/l	100	<100	---	---	---	
4-methyl-2-pentanone (MIBK), ug/l	50	<50	---	---	---	
Pentachloroethane, ug/l	25	<25	---	---	---	
Styrene, ug/l	5.0	<5.0	---	---	---	
1,1,1,2-Tetrachloroethane, ug/l	5.0	<5.0	---	---	---	
1,1,2,2-Tetrachloroethane, ug/l	5.0	<5.0	---	---	---	
Tetrachloroethene, ug/l	5.0	<5.0	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#				
42363-31	Detection Limits	GMT56				
42363-32	Method Blank	GMT56				
42363-33	Lab Control Standard (LCS) Result	GMT56				
42363-34	LCS Expected Value	GMT56				
42363-35	LCS % Recovery	GMT56				
PARAMETER	42363-31	42363-32	42363-33	42363-34	42363-35	
Carbon Tetrachloride, ug/l	5.0	<5.0	---	---	---	
Toluene, ug/l	5.0	<5.0	44.2	50	88 %	
Bromoform, ug/l	5.0	<5.0	---	---	---	
1,1,2-Trichloroethane, ug/l	5.0	<5.0	---	---	---	
1,1,1-Trichloroethane, ug/l	5.0	<5.0	---	---	---	
Trichloroethylene, ug/l	5.0	<5.0	42.8	50	86 %	
Trichlorofluoromethane, ug/l	5.0	<5.0	---	---	---	
1,2,3-Trichloropropane, ug/l	5.0	<5.0	---	---	---	
Vinyl Acetate, ug/l	10	<10	---	---	---	
Vinyl chloride, ug/l	10	<10	---	---	---	
Xylenes, ug/l	5.0	<5.0	---	---	---	
2-Hexanone, ug/l	50	<50	---	---	---	
Propionitrile, ug/l	100	<100	---	---	---	
Methyl methacrylate, ug/l	5.0	<5.0	---	---	---	
Acrolein, ug/l	100	<100	---	---	---	
Acrylonitrile, ug/l	100	<100	---	---	---	
Ethyl methacrylate, ug/l	5.0	<5.0	---	---	---	
Isobutyl Alcohol, ug/l	1000	<1000	---	---	---	
Surrogate - Toluene-d8	---	94 %	93 %	---	---	
Surrogate - 4-Bromofluorobenzene	---	88 %	88 %	---	---	
Surrogate - 1,2-Dichloroethane-d4	---	114 %	100 %	---	---	
Date Analyzed	---	05.12.94	05.11.94	---	---	
Clock ID	---	2I0512	1I0511	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42363-36	LCS % Recovery Limits	GMT56
PARAMETER	42363-36	
Volatile Organic Compounds (8240)		
Benzene	73-144 %	
Chlorobenzene	68-136 %	
1,1-Dichloroethylene	60-136 %	
Toluene	68-138 %	
Trichloroethylene	66-136 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42363-37	Matrix Spike/Matrix Spike Dup Result (SED-1)					GMT58
42363-38	MS Expected Value					GMT58
42363-39	MS/MSD % Recovery					GMT58
42363-40	MS/MSD % Recovery Limit					GMT58
42363-41	MS % RPD (Limit)					GMT58
PARAMETER	42363-37	42363-38	42363-39	42363-40	42363-41	
PCB's (8080)						
Aroclor-1016, ug/kg dw	117/118	97.9	120/120 %	69-107 %	0(<21) %	
Aroclor-1260, ug/kg dw	436/528	97.9	445/539 %X	58-122 %	19(<21) %	
Surrogate-TCX	87/91 %	---	---	---	---	
Date Extracted	05.12.94	---	---	---	---	
Date Analyzed	05.20.94	---	---	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID					SDG#
42363-42	Detection Limits					GMT58
42363-43	Method Blank					GMT58
42363-44	Lab Control Standard (LCS) Result					GMT58
42363-45	LCS Expected Value					GMT58
42363-46	LCS % Recovery					GMT58
PARAMETER	42363-42	42363-43	42363-44	42363-45	42363-46	
PCB's (8080)						
Aroclor-1016, ug/kg dw	33	<33	71.1	83.2	85 %	
Aroclor-1221, ug/kg dw	67	<67	---	---	---	
Aroclor-1232, ug/kg dw	33	<33	---	---	---	
Aroclor-1242, ug/kg dw	33	<33	---	---	---	
Aroclor-1248, ug/kg dw	33	<33	---	---	---	
Aroclor-1254, ug/kg dw	33	<33	---	---	---	
Aroclor-1260, ug/kg dw	33	<33	93.0	83.2	112 %	
Surrogate-TCX	---	68 %	47 %	---	---	
Date Extracted	---	05.12.94	05.12.94	---	---	
Date Analyzed	---	05.20.94	05.20.94	---	---	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID	SDG#
42363-47	LCS % Recovery Limits	GMT58
PARAMETER	42363-47	
PCB's (8080)		
Aroclor-1016, ug/kg dw	69-107 %	
Aroclor-1260, ug/kg dw	58-122 %	

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#	
42363-48	Method Blank	GMT56	
42363-49	Method Blank	GMT56	
PARAMETER	42363-48	42363-49	
Volatile Organic Compounds (8240)			
Acetonitrile, ug/l	<1000	<1000	
Acetone, ug/l	<50	<50	
Benzene, ug/l	<5.0	<5.0	
Bromodichloromethane, ug/l	<5.0	<5.0	
Methyl Bromide (Bromomethane), ug/l	<10	<10	
Carbon Disulfide, ug/l	<5.0	<5.0	
Chlorobenzene, ug/l	<5.0	<5.0	
Dibromochloromethane, ug/l	<5.0	<5.0	
Chloroethane, ug/l	<10	<10	
Methyl Chloride (Chloromethane), ug/l	<10	<10	
2-Chloroethylvinyl Ether, ug/l	<50	<50	
Chloroform, ug/l	<5.0	<5.0	
Allylchloride (3-Chloropropene), ug/l	<5.0	<5.0	
Chloroprene, ug/l	<5.0	<5.0	
1,2-Dibromo-3-chloropropane, ug/l	<10	<10	
1,2-Dibromoethane (EDB) , ug/l	<5.0	<5.0	
Methylene Bromide, ug/l	<10	<10	
Trans-1,4-Dichloro-2-butene, ug/l	<10	<10	
Dichlorodifluoromethane, ug/l	<5.0	<5.0	
1,1-Dichloroethane, ug/l	<5.0	<5.0	
1,2-Dichloroethane, ug/l	<5.0	<5.0	
Trans-1,2-Dichloroethylene, ug/l	<5.0	<5.0	

Ms. Leslie Herd
Geraghty & Miller, Inc.
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Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)

Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42363-48	Method Blank	GMT56
42363-49	Method Blank	GMT56
PARAMETER	42363-48	42363-49
1,1-Dichloroethylene, ug/l	<5.0	<5.0
Methylene Chloride (Dichloromethane), ug/l	<5.0	<5.0
1,2-Dichloropropane, ug/l	<5.0	<5.0
cis-1,3-Dichloropropene, ug/l	<5.0	<5.0
trans-1,3-Dichloropropene, ug/l	<5.0	<5.0
Ethylbenzene, ug/l	<5.0	<5.0
Methyl Ethyl Ketone, ug/l	<50	<50
Methyl Iodide, ug/l	<5.0	<5.0
Methacrylonitrile, ug/l	<100	<100
4-methyl-2-pentanone (MIBK), ug/l	<50	<50
Pentachloroethane, ug/l	<25	<25
Styrene, ug/l	<5.0	<5.0
1,1,1,2-Tetrachloroethane, ug/l	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0
Tetrachloroethene, ug/l	<5.0	<5.0
Carbon Tetrachloride, ug/l	<5.0	<5.0
Toluene, ug/l	<5.0	<5.0
Bromoform, ug/l	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0
1,1,1-Trichloroethane, ug/l	<5.0	<5.0
Trichloroethylene, ug/l	<5.0	<5.0
Trichlorofluoromethane, ug/l	<5.0	<5.0
1,2,3-Trichloropropane, ug/l	<5.0	<5.0

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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#	
42363-48	Method Blank	GMT56	
42363-49	Method Blank	GMT56	
PARAMETER	42363-48	42363-49	
Vinyl Acetate, ug/l	<10	<10	
Vinyl chloride, ug/l	<10	<10	
Xylenes, ug/l	<5.0	<5.0	
2-Hexanone, ug/l	<50	<50	
Propionitrile, ug/l	<100	<100	
Methyl methacrylate, ug/l	<5.0	<5.0	
Acrolein, ug/l	<100	<100	
Acrylonitrile, ug/l	<100	<100	
Ethyl methacrylate, ug/l	<5.0	<5.0	
Isobutyl Alcohol, ug/l	<200	<25	
Surrogate - Toluene-d8	92 %	92 %	
Surrogate - 4-Bromofluorobenzene	89 %	89 %	
Surrogate - 1,2-Dichloroethane-d4	88 %	93 %	
Date Analyzed	05.10.94	05.11.94	
Clock ID	2I0510	1I0511	

Received: 05 MAY 94

Ms. Leslie Herd
Geraghty & Miller, Inc.
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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

Page 52

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#	
42363-50	Method Blank	GMT55	
42363-51	Method Blank	GMT55	
PARAMETER	42363-50	42363-51	
Chlorinated Dioxins/Furans-App 9 (8280)			
Tetra CDD, ug/l	<0.0050	<0.0050	
Tetra CDF, ug/l	<0.0050	<0.0050	
Penta CDD, ug/l	<0.0050	<0.0050	
Penta CDF, ug/l	<0.0050	<0.0050	
Hexa CDD, ug/l	<0.0050	<0.0050	
Hexa CDF, ug/l	<0.0050	<0.0050	
Dioxin-2,3,7,8-TCDD (8280), ug/l	<0.0050	<0.0050	
Internal Standard (TCDD)	78 %	94 %	
Date Extracted	05.26.94	05.09.94	
Date Analyzed	05.30.94	05.13.94	

LOG NO: S4-42363

Received: 05 MAY 94

Ms. Leslie Herd
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Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

Page 53

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	SDG#
42363-50	Method Blank	GMT55
42363-51	Method Blank	GMT55
PARAMETER	42363-50	42363-51

Methods: EPA SW-846 and 40 CFR Part 136.

*Matrix Spike Dup result: Beryllium = 0.0481 mg/l;
Cadmium = 0.0393 mg/l; Silver = 0.0474 mg/l;
Arsenic = 0.0450 mg/l; Lead = 0.0486 mg/l;
Selenium = 0.0391 mg/l; Thallium = 0.0464 mg/l;
Mercury = 0.00110 mg/l.

*Matrix Spike Dup results for Dioxins:
TETRA-CDD = 0.0276 ug/l; TETRA-CDF = 0.0292 ug/l;
PENTA-CDD = 0.0560 ug/l; PENTA-CDF = 0.0317 ug/l;
HEXA-CDD = 0.0282 ug/l; HEXA-CDF = 0.0310 ug/l;
TCDD = 0.0276 ug/l.

*F65 = Elevated detection limits were reported
due to sample matrix interference which required
sample dilution prior to analysis.

X (PCB) = The recoveries of the matrix spikes are
outside advisory limits due to the
abundance of the target analyte in the
sample.

Linda A. Wolfe (SLH)
Linda A. Wolfe

Final Page Of Report



FAX Transmittal Sheet

Date: May 9, 1994

Please deliver TO:

Bobbie Heller
Savannah Laboratories
FAX (912) 352-0165

FROM:

Leslie Herd

If transmission is interrupted or
incomplete, please contact:

LYNDIA TAN S
(813) 284-3432

Total Number of Pages (including cover sheet): 5

Project No.: TP0525.020 Project Name: Monsanto - Anniston

Reply by fax to the Main FAX: (813) 961-2599

Message:

BOBBIE - Per our conversation this afternoon, please note that solid samples SD-9 and SD-99 need to be analyzed for Dioxins/Furans in conjunction with the full Appendix IX parameters. Thank you for your assistance.

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE MESSAGE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE, AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE.



APPENDIX M

Ditch Sampling Logs

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 3 of 10
Site Location Monasanto / Anniston
Sample I.D. No. SED-3 Coded/Replicate No. —
Date 5/6/94 Time of Sampling: Begin 1200 End —
Weather Sunny / cool / clear
Site Description Stream bed - 100 ft downstream from SED-2.
No water in the ditch.

SAMPLING DATA

Collection Method S. Steel Spoon
Depth Surface (0-1" b/s) Moisture Content moist
Color red brown Odor None
Description Silty sand, some clay

Analyses Required

PEB's (8080)

Container Description

From Lab X or G&M —
250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks VOC composite sample labeled SED-9B

Sampler(s) T. KIRKPATRICK.

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 4 of 10
Site Location Monsanto / Austin
Sample I.D. No. SED-4 Coded/Replicate No. —
Date 5/6/94 Time of Sampling: Begin 1215 End —
Weather Sunny / cool / clear
Site Description 100 ft down stream from SED-3. From stream bed.

SAMPLING DATA

Collection Method S. Steel Spoon
Depth Surface (0-1" b/s) Moisture Content moist
Color red Odor None
Description Silty sand, ~~some~~ ^{more} clay

Analyses Required

PEB's (8080)

Container Description

From Lab X or G&M —
250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks VOC sample for composite labeled SED-9C

Sampler(s) T. KIRKPATRICK.



Site Description ~ 100 ft downstream from SED-4. From stream bed.

Silty sand, some clay

250 ml glass jar

Sampler(s) T. KIRKPATRICK.

Ms. Leslie Herd
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Tampa, FL 33618-2047

Project: LTO#09548/TF052020/Monsanto (SDG GMT55/56/58)
Sampled By: Client

REPORT OF RESULTS

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LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES					SDG#
42363-15	Matrix Spike/Matrix Spike Dup Result (WEL-3)					GMT55
42363-16	MS Expected Value					GMT55
42363-17	MS/MSD % Recovery					GMT55
42363-18	MS/MSD % Recovery Limit					GMT55
42363-19	MS % RPD (Limit)					GMT55
PARAMETER	42363-15	42363-16	42363-17	42363-18	42363-19	
Chlorinated Dioxins/Furans-App 9 (8280)						
Tetra CDD, ug/l	0.0222/*	0.0250	89/110 %	63-137 %	21(<40) %	
Tetra CDF, ug/l	0.0239/*	0.0250	96/117 %	60-142 %	20(<40) %	
Penta CDD, ug/l	0.6743/*	0.0250	2697/224 %	37-163 %	169(<40) %	
Penta CDF, ug/l	0.0253/*	0.0250	101/127 %	52-148 %	23(<40) %	
Hexa CDD, ug/l	0.0219/*	0.0250	88/113 %	42-158 %	25(<40) %	
Hexa CDF, ug/l	0.0228/*	0.0250	91/124 %	58-142 %	31(<40) %	
Dioxin-2,3,7,8-TCDD (8280), ug/l	0.0222/*	0.0250	89/110 %	63-137 %	21(<40) %	
Internal Standard (TCDD)	67/54 %	---	---	---	---	
Date Extracted	05.19.94	---	---	---	---	
Date Analyzed	05.27.94	---	---	---	---	

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 6 of 10

Site Location Monsanto / Anniston

Sample I.D. No. SED - 6 Coded/Replicate No. —

Date 5/6/94 Time of Sampling: Begin 1245 End —

Weather Sunny / cool / clear

Site Description From stream bed, ~~just~~ ^{50 ft} past the fence of

Alabama power substation

SAMPLING DATA

Collection Method S. Steel Spoon

Depth Surface (0-1" b/s) Moisture Content damp

Color red Odor None

Description Silty sand, some clay

Analyses Required

PEB's (8080)

Container Description

From Lab X or G&M —

250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks —

Sampler(s) T. KIRKPATRICK.

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 7 of 10

Site Location Monasanto / Anniston

Sample I.D. No. SED-7 Coded/Replicate No. 1

Date 5/6/94 Time of Sampling: Begin 1305 End —

Weather Sunny / cool / clear

Site Description ~80 ft downstream from SED-7.

SAMPLING DATA

Collection Method S. Steel Spoon

Depth Surface (0-1" b/s) Moisture Content damp

Color red Odor None

Description Silty sand, some clay

Analyses Required

Container Description

PEB's (8080)

From Lab X or G&M —

250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks —

Sampler(s) T. KIRKPATRICK.

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 8 of 10
 Site Location Monranto / Anniston
 Sample I.D. No. SED-8A Coded/Replicate No. —
 Date 5/6/94 Time of Sampling: Begin 1320 End —
 Weather Sunny / cool / clear
 Site Description ~ 100 ft downstream from #7 sample. from stream bed

SAMPLING DATA

Collection Method S. Steel Spoon
 Depth Surface (0-1" b/s) Moisture Content ~~damp~~ Saturated
 Color red Odor None
 Description Silty sand, some clay

Analyses Required

PEB's (8080)

Container Description

From Lab X or G&M 250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks Had to label as SED-8A because all composite VOCs are labeled 9A through H. Last two samples will be SED 8A
 Sampler(s) T. KIRKPATRICK. and SED 8B

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 9 of 10

Site Location Monsanto / Austin

Sample I.D. No. SED - 8B Coded/Replicate No. _____

Date 5/6/94 Time of Sampling: Begin 1345 End —

Weather Sunny / cool / clear

Site Description _____

End of drainage ~~AA~~ canal, near RR
Tracks downstream from SED 8A.

SAMPLING DATA

Collection Method S. Steel Spoon

Depth Surface (0-1" b/s) Moisture Content wet

Color Red brown Odor None

Description _____

Silty sand, some clay

Analyses Required

PEB's (8080)

Container Description

From Lab X or G&M _____

250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) _____

Remarks _____

Sampler(s) T. KIRKPATRICK.

SOIL/SEDIMENT SAMPLING LOG

Project No. TF0520020 Page 10 of 10
 Site Location Monasanto / Anniston
 Sample I.D. No. SED-9 Coded/Replicate No. SED-99
 Date 5/6/94 Time of Sampling: Begin 1400 End —
 Weather Sunny / cool / clear
 Site Description Composite sample from locations SED-2 through SED-8B.

SAMPLING DATA

Collection Method S. Steel Spoon
 Depth Surface (0-1" b/s) Moisture Content damp
 Color red / reddish brown Odor None
 Description Silty sand, ^{trace} clay

Analyses Required

Container Description

PEB's (8080) From Lab X or G&M 250 ml glass jar

Sample Monitoring (TIP, OVA, HNU, etc.)

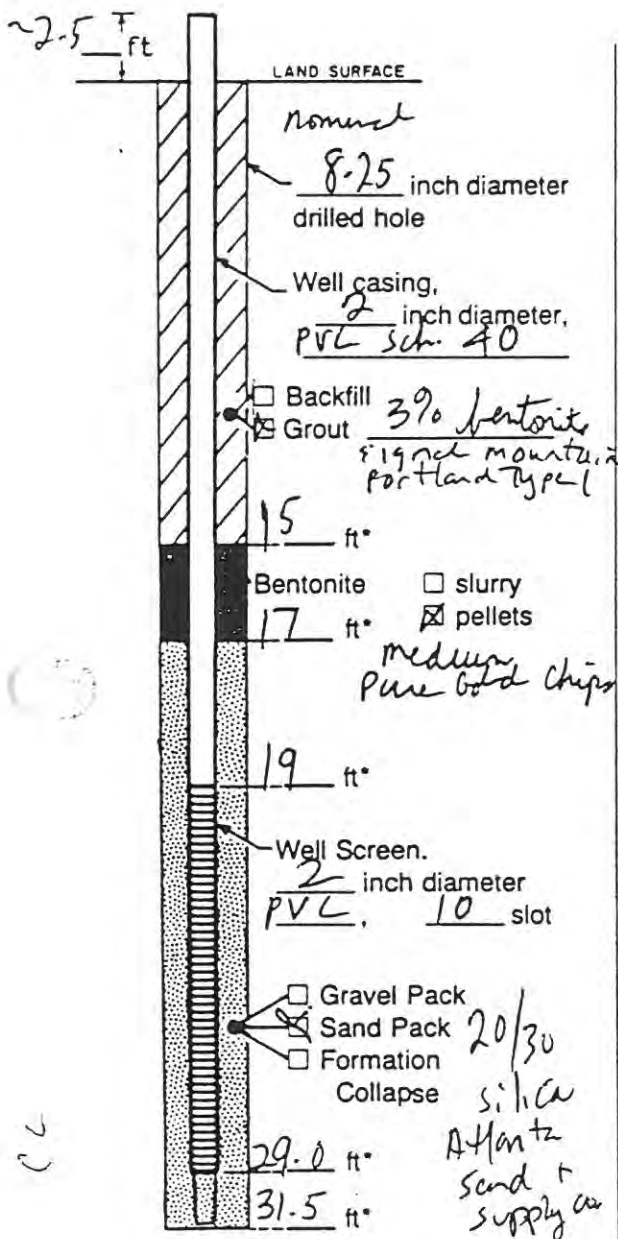
Remarks

Sampler(s) T. KIRKPATRICK.

APPENDIX N

Lithology Logs and Monitoring Well Construction Logs

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project Monsanto Well WEL-1
Town/City Anniston
County _____ State Al
Permit No. _____
Land-Surface Elevation _____
and Datum _____ feet ☐ surveyed ☐ estimated
Installation Dates(s) 4/12/94
Drilling Method Hollow stem auger
Drilling Contractor Miller Drilling Co.
Drilling Fluid None

Development Techniques(s) and Date(s)

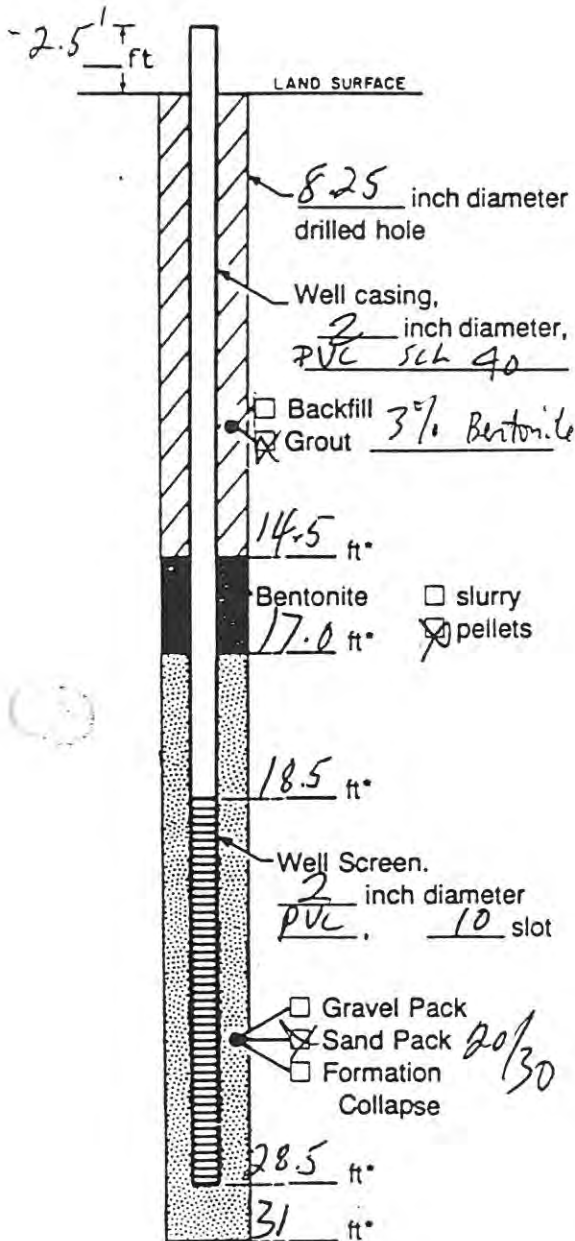
Bailer 4/14/94

Fluid Loss During Drilling None gallons
Water Removed During Development ~28 gallons
Static Depth to Water 6.22 feet below M.P.
Pumping Depth to Water 6.5 - 8.5 (Bailer) feet below M.P.
Pumping Duration ~2 hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Monitor well

Remarks 8 50 lb bags of sand used.
No problems

Prepared by Kar Mupin

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project Monsanto Well WFL-2
Town/City Anniston
County _____ State AL
Permit No. _____
Land-Surface Elevation _____ feet
and Datum _____ ☐ surveyed
☐ estimated
Installation Date(s) 4/12/94
Drilling Method Hollow stem auger
Drilling Contractor Miller Drilling Co
Drilling Fluid none

Development Techniques(s) and Date(s)

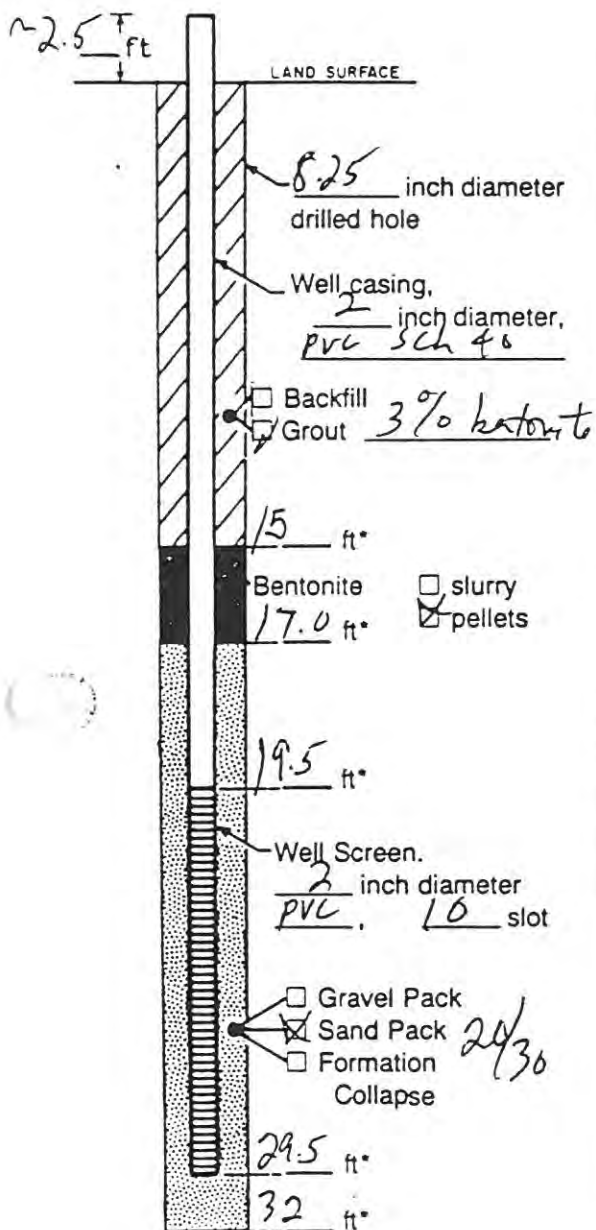
Bailer 4/14/94

Fluid Loss During Drilling _____ gallons
Water Removed During Development ~30 gallons
Static Depth to Water 6.84 feet below M.P.
Pumping Depth to Water 7-9 (Bailer) feet below M.P.
Pumping Duration 2 hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Monitor

Remarks 8.5 bags (50 lb.) of sand used
No problem

Prepared by Kes Mutch

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project Monsanti Well WEL-3

Town/City Anniston

County _____ State AL

Permit No. _____

Land-Surface Elevation _____ feet ☐ surveyed ☐ estimated

Installation Date(s) 4/13/94

Drilling Method Hollow stem auger

Drilling Contractor Miller Drilling Co.

Drilling Fluid None

Development Techniques(s) and Date(s) Bair 9/14/94

Fluid Loss During Drilling None gallons

Water Removed During Development ~27 gallons

Static Depth to Water 7.67 feet below M.P.

Pumping Depth to Water 8-10 (Bailer) feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

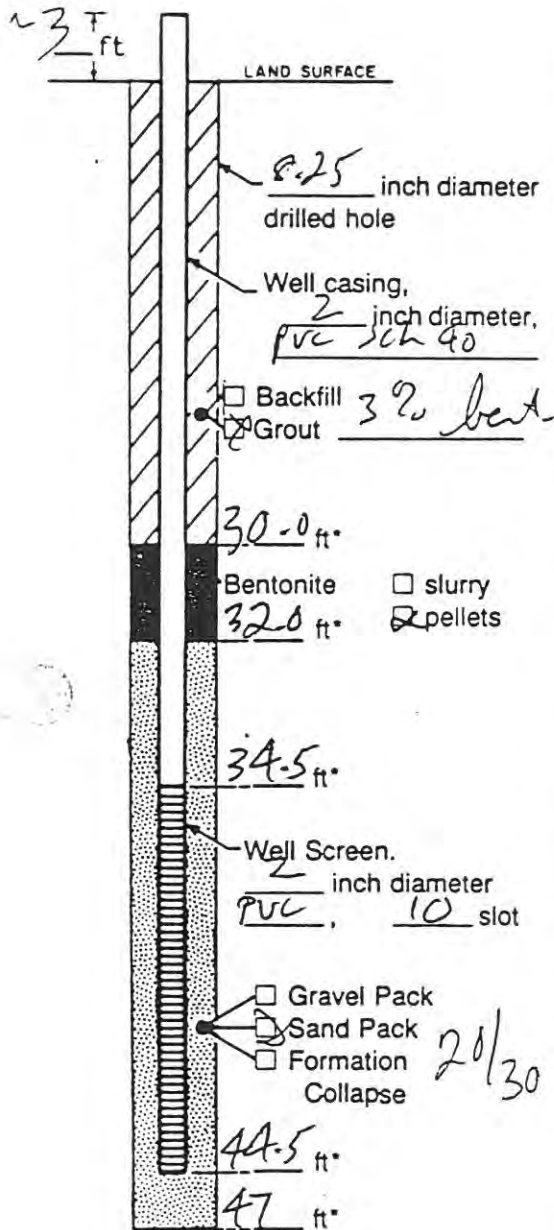
Specific Capacity _____ gpm/ft

Well Purpose Monitor

Remarks 8 50 lb bags of sack used. No problems

Prepared by Ken Vukobratovic

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project Monsanto Well WEL-4
Town/City Anniston
County Al State Al
Permit No. _____
Land-Surface Elevation _____
and Datum _____ feet ☐ surveyed ☐ estimated
Installation Date(s) 4/14/94
Drilling Method Hollow-stem auger
Drilling Contractor Miller Drilling Co.
Drilling Fluid none

Development Techniques(s) and Date(s)

Bailer 4/15/94
Bailed dry

Fluid Loss During Drilling none gallons
Water Removed During Development ~15 gallons
Static Depth to Water 41 feet below M.P.
Pumping Depth to Water 41-47 (wet dry) feet below M.P.
Pumping Duration 2.5 hours
Yield _____ gpm Date 4/15/94
Specific Capacity _____ gpm/ft
Well Purpose Monitor well

Remarks Did not find water till ~48' bl.
Bailed dry, little or no sediment
after completion of development.

Prepared by Ken Mink

SAMPLE/CORE LOG

Boring/Well HEL-1 Project/No. TFO525.020 Page 1 of 1
 Site Location Moncanto, Anniston Drilling Started 4/12/94 Drilling Completed 4/12/94
 Total Depth Drilled 32 feet Hole Diameter 8 1/4 inches Type of Sample/ Coring Device split spoon
 Length and Diameter of Coring Device 2' x 2" Sampling Interval every 5' feet
 Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated Datum _____
 Drilling Fluid Used none Drilling Method Hollow stem
 Drilling Contractor Miller Drilling Driller Todd Helper Mike
 Prepared By Ken Mullen Hammer Weight n/a Hammer Drop n/a inches

Sample/Core Depth (feet below land surface)		Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample/Core Description
From	To			
0	4			Surface rubble, mixture of clayey sand & rock, some organics
4	6	20"		Fill material - clayey sand, brownish orange, silty, some organics; damp
6	9	24"		Clay, slightly sandy, some silt, mottled brownish orange & tan, cohesive; damp - moist
14	16	24"		see above - pebble zone ~1" thick at 15' blz - dry & sandy.
19	21	24"		Clay, sandy, some silt, mottled brownish orange & tan, some lenses of sand but appears to be dry; overall a damp sample.
24	26	20"		Same as above - bottom 1' of spoon is moist to wet. Poss. water @ 25' blz
29	31	22"		Same as above - moist - wet
				STOP at 32' blz

SAMPLE/CORE LOG

Boring/Well WE-2 Project/No. TF0525.020 Page 1 of 1
 Site Location Moments, Amherst Drilling Started 4/12/99 Drilling Completed 4/12/99
 Total Depth Drilled 32 feet Hole Diameter 8.25 inches Type of Sample/
 Length and Diameter of Coring Device 2' x 2" Coring Device split spoon
 Sampling Interval every 5 feet
 Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated Datum _____
 Drilling Fluid Used none Drilling Method Hollow-stem auger
 Drilling Contractor Miller Drilling Driller Todd Helper Mike
 Prepared By Ken Miller Hammer Weight 17/2 Hammer Drop 1/4 inches

Sample/Core Depth
(feet below land surface)
 From To Core Recovery (feet) % Time/Hydraulic Pressure or Blows per 6 inches

Sample/Core Description

0	4'			fill material - rocks + sandy clay - some silt; damp
4	6	6"		fill material - clay, sandy w/ some silt, dark brownish orange, some pebble chips; damp
9	11	—		NO sample - cuttings are clay, sandy w/ some silt, dark brownish-orange; damp to moist
14	16	24"		Clay, slightly sandy, some silt, brownish orange w/ dark brown to black thin lenses (argillites?); very compact; damp
19	21	24"		Same as above
24	26	24"		Same as above - slightly more moist
29	31	24"		Same as above - damp to moist
				Stop at 32' H ₂

SAMPLE/CORE LOG

Boring/Well WEL-3 Project/No. TF0525.020 Page 1 of 1
 Site Location Monsanto Drilling Started 4/13/94 Drilling Completed 4/13/94
 Total Depth Drilled 32 feet Hole Diameter 8.25 inches Type of Sample/ Coring Device split spoon
 Length and Diameter of Coring Device 2' x 2" Sampling Interval every 5 feet
 Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated Datum _____
 Drilling Fluid Used None Drilling Method Hollow stem auger
 Drilling Contractor Mulla Drilling Co. Driller Todd Helper Mike
 Prepared By Ken Muhl Hammer n/a Hammer Drop n/a inches

Sample/Core Depth (feet below land surface) Core Recovery (feet) Time/Hydraulic Pressure or Blows per 6 inches

Sample/Core Description

From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	Sample/Core Description
0	4			Fill material, sandy clay, reddish-orange, pebbles + rock fragments, some organics; damp
4	6	24		same to 5' bl - then clay, slightly sandy, some silt, reddish brown w/ (F.G.) fine mottling, compact + firm; damp
9	11	24		Clay, trace sand, F.G., silty, mottled reddish brown + tan, chert fragments (weathered); compact; damp.
14	16	18		Same as above but with more chert fragments. Chert lens at ~15.5' bl - no water evident
19	21	20		Same as above
24	26	24		Same as above
29	31	24		Same as above
				Stop @ 32' bl

SAMPLE/CORE LOG

Boring/Well WEL-4 Project/No. TF8525-020 Page 1 of 1

Site Location Monasanto, Amador Drilling Started 4/13/94 Drilling Completed 4/14/94

Total Depth Drilled 47 feet Hole Diameter 8.25 inches Type of Sample/ Coring Device split spoon

Length and Diameter of Coring Device 2' x 2" Sampling Interval every 5 feet

Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated Datum _____

Drilling Fluid Used none Drilling Method Hollow stem auger

Drilling Contractor Muller Drilling Co. Driller Todd Helper Nike

Prepared By Ken Muhl Hammer Weight n/a Hammer Drop n/a inches

Sample/Core Depth (feet below land surface) Core Recovery (feet) Time/Hydraulic Pressure or Blows per 6 inches

Sample/Core Description

0	4			Fill material - clay, sandy, silty, dark reddish brown; damp
4	6	24		Same to ~4.5' bls then clay, sandy, F.G., silty, reddish brown + tan mottling, small rock fragments; damp
9	11	24		Same as above - Hard zone @ 11' bls (chert)
14	16	24		Same as above - chert zone ~2" thick at 15.5' bls, dry, somewhat more pebbles in sample
19	21	14		Same as above
24	26	24		Same as above
32	31	24		Same as above
34	36	24		Same as above
39	41	24		Same as above, darker; wet at bottom of spoon.
41	47			Same as above; wet

4/14/94

APPENDIX O

Groundwater Sampling Logs

WATER SAMPLING LOG

Project/No. TF052020 Monsanto

Page _____ of _____

Site Location Anniston Alabama

Site/Well No. DMW-1B

Coded/
Replicate No. —

Date 5/3/94

Weather cloudy w/ rain

Time Sampling
Began _____

Time Sampling
Completed _____

EVACUATION DATA

Description of Measuring Point (MP) TOC

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP _____ Water Level Elevation _____

Held _____ Depth to Water Below MP _____ Diameter of Casing 2.0

Wet _____ Water Column in Well _____ Gallons Pumped/Bailed
Prior to Sampling _____

Gallons per Foot _____

Gallons in Well _____ Sampling Pump Intake Setting
(feet below land surface) _____

Evacuation Method Dedicated pump

SAMPLING DATA/FIELD PARAMETERS

Color _____ Odor _____ Appearance _____ Temperature NA °F/°C

Other (specific ion; OVA; HNU; etc.) _____

Specific Conductance,
umhos/cm NA pH NA

Sampling Method and Material Teflon bailer (VOC's) and peristaltic pump (all others) Dedicated

Constituents Sampled	Container Description	Preservative
VOCs (EPA 8240)	From Lab <u>X</u> or G&M _____ 3 x 40 ml glass vial	HCl & ice
BNA's Herbicide, Pesticide	6 x 1 liter amber glass	none & ice
Cyanide (EPA 9012)	1 x 500 ml plastic	NaOH & ice
Metals (6010, 7000's)	1 x 250 ml plastic	HN03 & ice
Sulfide	1 x 250 ml plastic	ZnOAc & ice
Dioxins	2 x 1 liter glass	none & ice

Remarks Sampled by Jerry Hopper - well purged dry, then was

Sampling Personnel allowed to recharge and was sampled.

J. Kirkpatrick / Jerry Hopper

WELL CASING VOLUMES

GAL./FT.	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 0.50	6" = 1.47

WATER SAMPLING LOG

Project/No. TF052020 Monsanto Page of
 Site Location Anniston Alabama
 Site/Well No. WEL-1 Coded/Replicate No. Date 5/4/94
 Weather cloudy, cold, rain Time Sampling Began 0920 Time Sampling Completed 1020

Collected: 1000

EVACUATION DATA

Description of Measuring Point (MP) TOC
 Height of MP Above/Below Land Surface MP Elevation
 Total Sounded Depth of Well Below MP 33.20 Water-Level Elevation
 Held Depth to Water Below MP 8.60 Diameter of Casing 2.0
 Water Column in Well 24.60 Gallons Pumped/Bailed Prior to Sampling ~ 20 gallons
 Gallons per Foot x .16 19.6 gallons
 Gallons in Well 3.93 x 5 = Sampling Pump Intake Setting (feet below land surface) ~ 20' b/s
 Evacuation Method peristaltic pump via teflon tubing bottom to top (variable)
disk 5/4-94

SAMPLING DATA/FIELD PARAMETERS

Color none Odor none Appearance clear Temperature 16 °F/°C
 Other (specific ion; OVA; HNU; etc.)

Specific Conductance, umhos/cm 120 pH 6.17

Sampling Method and Material Teflon bailer (VOC's) and Peristaltic pump (all others)

Constituents Sampled	Container Description	Preservative
VOCs (EPA 8240)	From Lab <u>X</u> or G&M <u> </u>	Hcl & ice
BNA's Herbicide, Pesticide	3 x 40 ml glass vial	none & ice
Cyanide (EPA 9012)	6 x 1 liter amber glass	NaOH & ice
Metals (6010, 7000's)	1 x 500 ml plastic	HNO3 & ice
Sulfide	1 x 250 ml plastic	ZnOAC & ice
Dioxins	2 x 1 liter glass	none & ice

Remarks

Sampling Personnel Collected EQUIP. BLANK-1 prior to sampling WEL-1

J. Kirkpatrick

WELL CASING VOLUMES			
GAL./FT.	1-1/4" = 0.06	2" = 0.16	3" = 0.37
	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 0.50
			4" = 0.65
			6" = 1.47

WATER SAMPLING LOG

Project/No. TF052020 Monsanto Page of

Site Location Anniston Alabama

Site/Well No. WEL - 2 Coded/Replicate No. Date 5/3/94

Weather cloudy, dr Time Sampling Began 1020 Time Sampling Completed 1140

EVACUATION DATA *collected: 15:00 1120*

Description of Measuring Point (MP) TOC

Height of MP Above/Below Land Surface MP Elevation

Total Sounded Depth of Well Below MP 35.05 Water-Level Elevation

Held Wet Depth to Water Below MP 7.93 Diameter of Casing 2.0

Water Column in Well 27.12 Gallons Pumped/Bailed Prior to Sampling ~ 22 gallons

Gallons per Foot x.16 21.7 gallons

Gallons in Well 4.34 x 5 Sampling Pump Intake Setting (feet below land surface) ~ 20' b/s.

Evacuation Method peristaltic pump via teflon tubing

SAMPLING DATA/FIELD PARAMETERS

Color: none Odor: none Appearance: clear Temperature 16 °F 60

Other (specific ion; OVA; HNU; etc.)

Specific Conductance, umhos/cm 110 pH 5.43

Sampling Method and Material Teflon bailer (VOC's) and Peristaltic pump (all others)

Constituents Sampled	Container Description	Preservative
<u>VOCs (EPA 8240)</u>	From Lab <u>X</u> or G&M <u> </u>	<u>Hcl & ice</u>
<u>BNA's Herbicide, Pesticide</u>	<u>3 x 40 ml glass vial</u>	<u>none & ice</u>
<u>Cyanide (EPA 9012)</u>	<u>6 x 1 liter amber glass</u>	<u>NaOH & ice</u>
<u>Metals (6010, 7000's)</u>	<u>1 x 500 ml plastic</u>	<u>HNO3 & ice</u>
<u>Sulfide</u>	<u>1 x 250 ml plastic</u>	<u>ZnOAC & ice</u>
<u>Dioxins</u>	<u>2 x 1 liter glass</u>	<u>none & ice</u>

Remarks

Sampling Personnel

J. Kirkpatrick

WELL CASING VOLUMES

GAL./FT.	1-1/4" = 0.06	<u>2" = 0.16</u>	3" = 0.37	4" = 0.65
	1-1/2" = 0.09	2-1/4" = 0.26	3-1/2" = 0.50	6" = 1.47

WATER SAMPLING LOG

Project/No. TF052020 Monsanto Page of
 Site Location Anniston Alabama
 Site/Well No. WEL-3 Coded/Replicate No. WEL-93 Date 5/3/94
 Weather cloudy, drizzle, cold Time Sampling Began 1150 Time Sampling Completed 1410

EVACUATION DATA

collected: 1300

Description of Measuring Point (MP) TOC
 Height of MP Above/Below Land Surface MP Elevation
 Total Sounded Depth of Well Below MP 35.02 Water-Level Elevation
 Held Water level Depth to Water Below MP 8.09 Diameter of Casing 2.0
 Water Column in Well 26.03 Gallons Pumped/Bailed Prior to Sampling 21 gallons
 Gallons per Foot 4.16
 Gallons in Well 4.16 x 5 = 20.08 Sampling Pump Intake Setting (feet below land surface) ~20' 6" to top

Evacuation Method peristaltic pump

SAMPLING DATA/FIELD PARAMETERS

Color gray Odor none Appearance sl. turbid Temperature 17 °F/6
 Other (specific ion; OVA; HNU; etc.)

Specific Conductance, umhos/cm 90 pH 6.73

Sampling Method and Material Teflon bailer (VOC's) and Peristaltic pump (all others)

Constituents Sampled	Container Description	Preservative
VOCs (EPA 8240)	From Lab <u>X</u> or G&M <u> </u> 3 x 40 ml glass vial	Hcl & ice
BNA's Herbicide, Pesticide	6 x 1 liter amber glass	none & ice
Cyanide (EPA 9012)	1 x 500 ml plastic	NaOH & ice
Metals (6010, 7000's)	1 x 250 ml plastic	HNO3 & ice
Sulfide	1 x 250 ml plastic	ZnOAC & ice
Dioxins	2 x 1 liter glass	none & ice

Remarks Collected duplicate (well-93) here - plus MS + MSD

Sampling Personnel

J. Kirkpatrick

WELL CASING VOLUMES

GAL./FT.	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 0.50	6" = 1.47

WATER SAMPLING LOG

Project/No. TF052020 Monsanto

Page _____ of _____

Site Location Anniston Alabama

Site/Well No. WEL-4

Coded/
Replicate No. _____

Date 5/3/94

Weather cloudy / drizzle / cold

Time Sampling
Began 1100

Time Sampling Completed 1540

Collected : 1530

EVACUATION DATA

Description of Measuring Point (MP) TOC

Height of MP Above/Below Land Surface MP Elevation

Total Sounded Depth of Well Below MP 50.75 Water-Level Elevation —

Held 1 Depth to Water Below MP 38.89 Diameter of Casing 2.0

Well 11.84 Water Column in Well 11.84 Gallons Pumped/Bailed Prior to Sampling 6.7 gallons

Gallons per Foot $\times 1.6$ 6.76

Gallons in Well 1.89×4^2 Sampling Pump Intake Setting
(feet below land surface) NA

Evacuation Method teflon boiler on ss teflon coated cord

SAMPLING DATA/FIELD PARAMETERS

Color orange Odor none Appearance furry Temperature 17 °F/°C

Other (specific ion; OVA; HNU; etc.) _____

Specific Conductance, $\mu\text{mhos/cm}$ 90 pH 5.86

Sampling Method and Material Teflon bailer (VOC's) and Peristaltic pump (all others)

Constituents Sampled	Container Description From Lab <u>X</u> or G&M _____	Preservative
VOCs (EPA 8240)	3 x 40 ml glass vial	Hcl & ice
<u>BNA's Herbicide, Pesticide</u>	<u>6 x 1 liter amber glass</u>	<u>none & ice</u>
Cyanide (EPA 9012)	1 x 500 ml plastic	NaOH & ice
<u>Metals (6010, 7000's)</u>	<u>1 x 250 ml plastic</u>	<u>HN03 & ice</u>
Sulfide	1 x 250 ml plastic	ZnOAc & ice
Dioxins	2 x 1 liter glass	none & ice

Remarks _____

Sampling Personnel _____

J. Kirkpatrick

WELL CASING VOLUMES

GAL./FT.	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-1/2" = 0.09	2-1/2" = 0.28	3-1/2" = 0.50	6" = 1.47