US EPA RECORDS CENTER REGION 5
436297

INTEGRATED ASSESSMENT REPORT

Dayton Electroplate

1030 Valley Street
Dayton, Ohio
Montgomery County

Prepared by:

OHIO ENVIRONMENTAL PROTECTION AGENCY
Division of Emergency & Remedial Response

April 24, 1998

INTEGRATED ASSESSMENT REPORT

Dayton Electroplate
1030 Valley Street
Dayton, Ohio 45404

U.S. EPA ID: OHD00427628
April 24, 1998

Prepared & Reviewed by: _____ Date: 7-14-98
Jon R. Watterworth
Senior Site Coordinator, Southwest District Office
Division of Emergency & Remedial Response
Ohio Environmental Protection Agency

Prepared & Reviewed by: _____ Date: 5-1-98
Diane Crosby
Site Investigator, Site Investigation Field Unit-Central Office
Division of Emergency & Remedial Response
Ohio Environmental Protection Agency

Reviewed by: _____ Date: 5/5/98
Jeff Wander
Lead Worker, Site Investigation Field Unit-Central Office
Division of Emergency & Remedial Response
Ohio Environmental Protection Agency

Approved by: _____ Date: 7/21/98
Jeanne Griffin
Early Action Project Manager
Division of Superfund
U.S. Environmental Protection Agency

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1.0 EXECUTIVE SUMMARY

Ohio Environmental Protection Agency (OEPA) personnel conducted an Integrated Assessment (IA) sampling event at the former Dayton Electroplate facility (DE), on April 10, 1997. The DE site ("the site") is located at 1030 Valley Street, Dayton, Montgomery County, Ohio. The IA was performed under the United States Environmental Protection Agency (USEPA) site investigation protocol. The purpose of this IA was to determine if the disposal practices at DE released contaminants into the environment, specifically to soil and groundwater.

The IA was conducted concurrently with a USEPA removal action. USEPA collected soil samples and analyzed them using the toxicity characteristic leaching procedure (TCLP) for cadmium, chromium and lead. The USEPA samples were used to delineate any "hot spot" areas for later removal. However, soils contaminated with cadmium, chromium or lead at levels requiring excavation as part of the removal action were not encountered. IA soil samples detected many chemicals at concentrations exceeding three times background. Arsenic, barium, beryllium, cadmium, chromium, copper, iron, mercury, nickel, zinc, and cyanide were detected at elevated concentrations. Trichloroethene (TCE) was the only volatile organic compound (VOC) detected in soil samples. Several semivolatile organic compounds (SVOCs) and one pesticide, endosulfan I, detected in soil samples, also had concentrations exceeding three times background.

Three screening level groundwater samples were collected during the IA utilizing the OEPA Site Investigation Field Unit (SIFU) Geoprobe™. Tetrachloroethene (PCE) was detected in two samples at concentrations at or exceeding the USEPA maximum contaminant level (MCL) for public water supplies. One or more of the four metals: arsenic, chromium, lead, and nickel, were detected above their respective MCL or established action level (lead) in each of the groundwater samples. No upgradient groundwater sample was collected as part of the IA. Dayton drinking water wells #48 and #49 are located approximately 2500 feet downgradient of the site. These drinking water wells were not sampled as part of the IA.

2.0 INTRODUCTION

The Ohio Environmental Protection Agency (OEPA), Division of Emergency and Remedial Response (DERR) formed a cooperative agreement with the United States Environmental Protection Agency (USEPA), Region V to conduct an Integrated Assessment (IA) of the Dayton Electroplate facility (DE). USEPA I.D. OHD00427628. DE is located at 39^0 46' 48"N latitude and 84^0 09 '48"W longitude. This report was prepared to address potential effects the DE site has on the surrounding areas.

3.0 SITE BACKGROUND

3.1 Site Description

The Dayton Electroplate site (the site) is located at 1030 Valley Street, Dayton, Ohio. Figure 1, Site Location Map, shows the site in relation to the surrounding area. The site is slightly west of the intersection of Valley Street and Stanley Avenue, and borders State Route 4 (SR4) to the south. The Mad River parallels SR4 on its south side. The area surrounding the site is a mix of residential, commercial and industrial zoning. Figure 2, Detailed Site Location Map, shows the site and the immediate neighborhood.

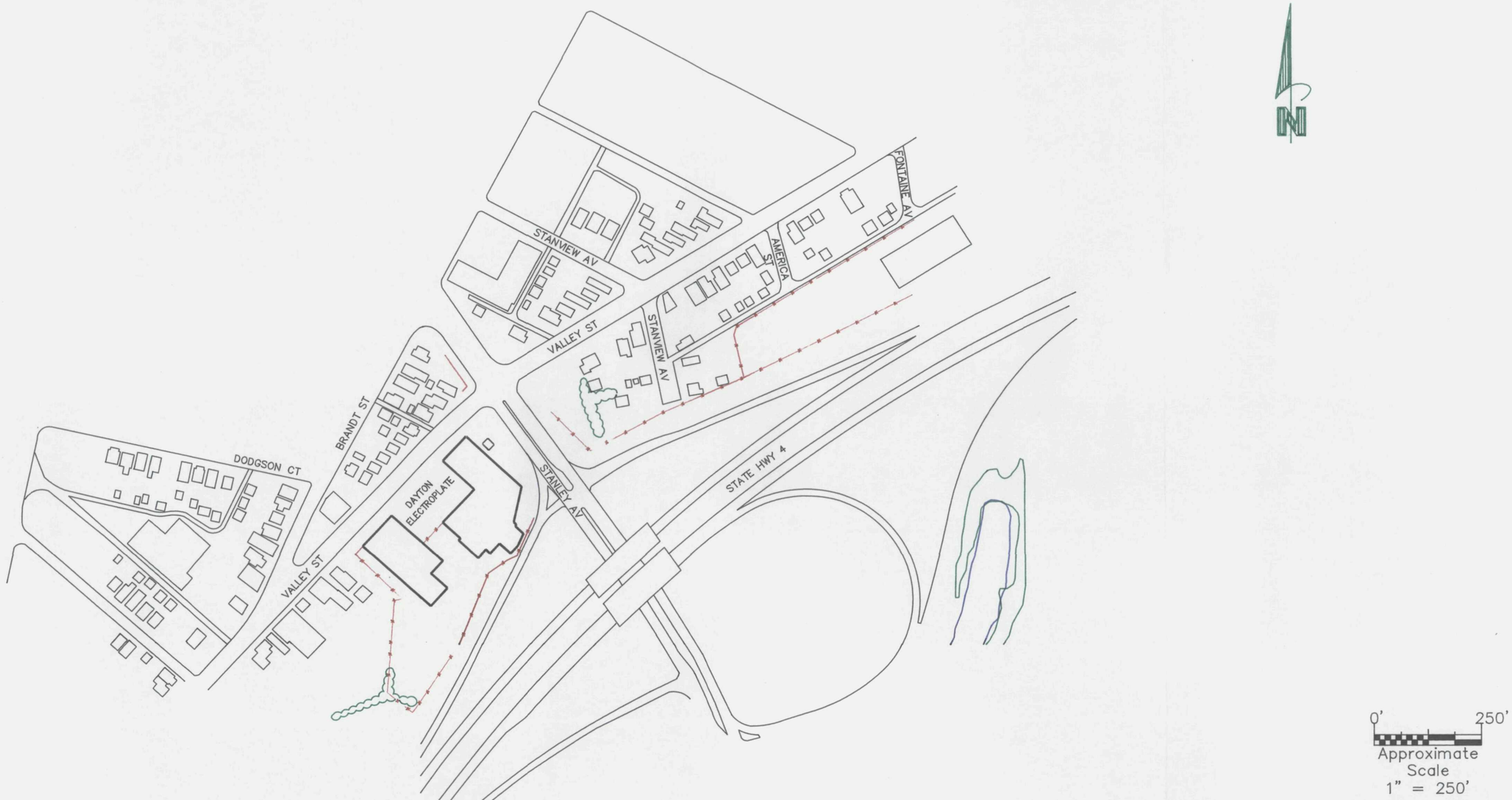
Until recently, the site was used as an industrial/commercial facility. The site consists of a three acre parcel of land within the northeast portion of the City of Dayton. The site has historically been used for coating metals with rustproofing materials by an electroplating process. Recent electroplating operations were housed in three buildings totaling approximately 60,000 square feet, and consisted of four separate plating lines. The three buildings also contained drum storage areas, office space, manufacturing, water treatment areas, and process tanks. The area around the buildings consists of paved and unpaved parking areas bounded by a locked chain-link fence providing limited security to the facility. Figure 3, Site Features Map, shows the identified buildings within DE.

Buildings 1 and 3 were built immediately adjacent to one another and are accessible to one another through interior doorways located along a common wall. Building 2 is not connected to the other buildings but does have underground pipes that run to Building 1. The buildings contained open manufacturing areas, four plating lines, process tanks, drum storage areas, office spaces, a laboratory, and a water treatment area.

Building 1 is located near the center of the site property, it consists of a number of rooms utilized for the offices and support areas associated with the business. A laboratory also existed within the office areas of this building. When the USEPA time critical removal action was initiated in January 1997, the laboratory was found to contain 512 containers of various chemicals. Containers of buffer solutions and indicators as well as nitric acid, sulfuric acid, hydrochloric acid, acetic acid, potassium cyanide, sodium cyanide, and zinc cyanide were all stored within the same cabinet in close proximity to one another. The same cabinet also contained formaldehyde, mercurous acetate, mercuric nitrate, mercuric chloride, mercury bichloride, and elemental mercury. None of the cabinets in the laboratory were locked.

Figure 1:
SITE LOCATION MAP
Scale 1: 24000

Base Map Source: USGS Topographic Map, Dayton North, Ohio, 1992



WOOLPERT LLP
409 East Monument Avenue
Dayton, Ohio 45402-1261
www.woolpert.com
937.461.5660
FAX: 937.461.0743
WOOLPERT

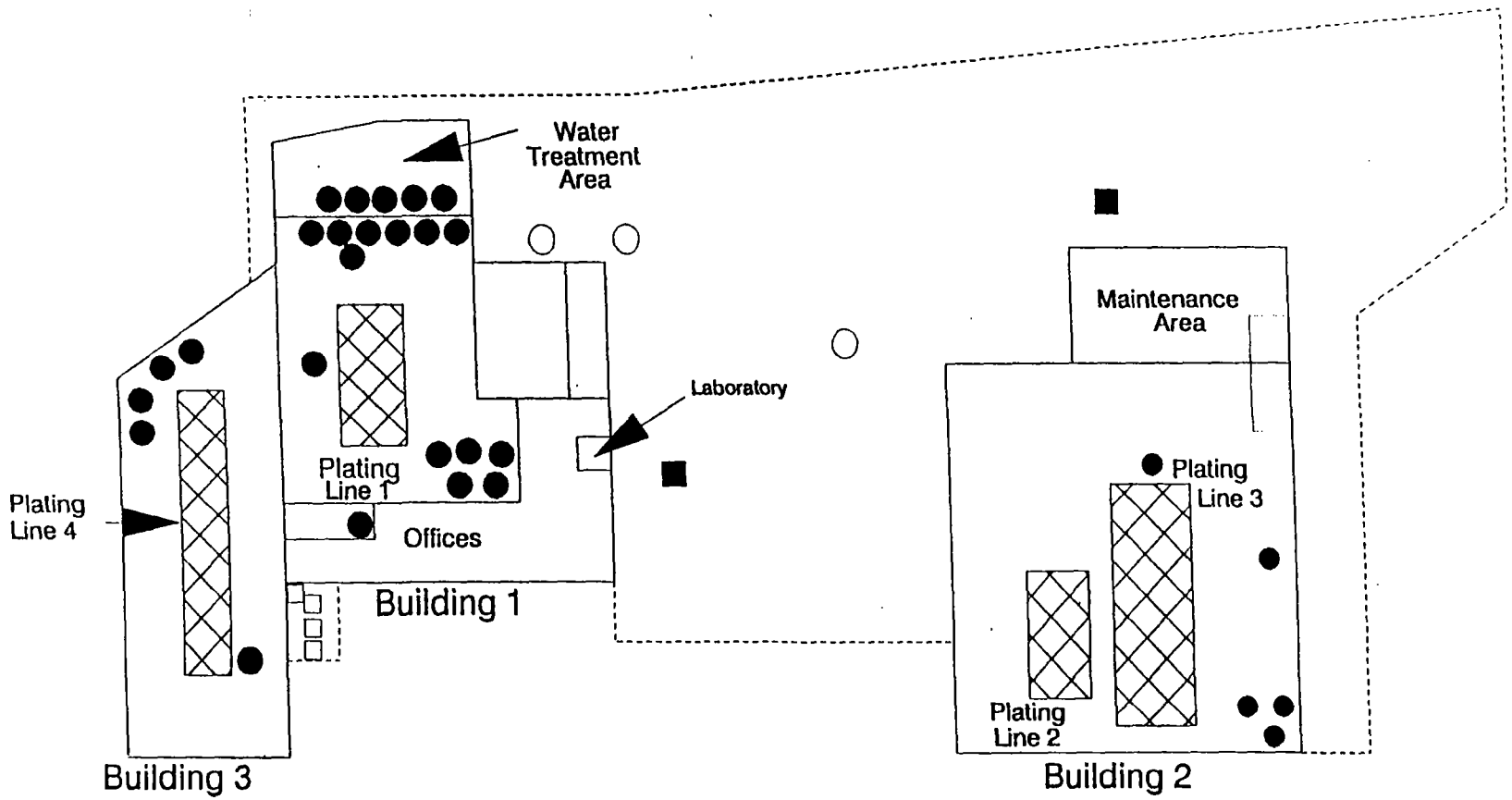
OhioEPA

SITE NAME: DAYTON ELECTROPLATE

CITY OF DAYTON, MONTGOMERY COUNTY

FIGURE 2 DETAILED LOCATION MAP

SCALE: 1" = 250' | DATE: 3/21/98



Valley Street

LEGEND

- Fence
- Plating Line
- Fenced Chemical Storage Area
- Underground Storage Tank
- Manhole
- Storage Tank
- Transformer

ecology and environment, inc.

Region 5 - Superfund Technical Assessment and Response Team

260 Northland Boulevard, Suite 125-B, Cincinnati, Ohio 45246

TITLE	Site Features Map	FIGURE	3
SITE	Dayton Electroplate, Inc.	TDD	S05-9612-004
CITY	Dayton STATE Ohio	SCALE	Not To Scale
SOURCE	Ecology and Environment, Inc.	DATE	1997

Another room, located on the southwestern side of Building 1, was utilized for storage of empty drums. Approximately twenty-one empty 55-gallon drums, seven empty 30-gallon drums, and one empty 20-gallon drum were in this area. The majority of Building I was occupied by a single large room which housed Plating Line 1. Plating Line 1 consisted of 22 separate vats, ranging in capacity from 240 gallons to 33,500 gallons and an overhead drying rack mechanism. Several vats contained strongly acidic liquids and strongly basic liquids. The vats in this plating line contained approximately 38,000 gallons of liquid and solid electroplating wastes.

Four 4,500-gallon open and one closed fiberglass-wrapped emergency storage tanks were located in the northwestern corner of the main room in Building 1. The closed tank contained 240 gallons of acid. The other four were full of rainwater diverted from the roof which was suspected to have been used as rinse water in the plating process. An additional 550-gallon capacity fiberglass-wrapped storage tank was at the southeastern corner of Plating Line 1. Seven additional smaller storage tanks with capacities ranging from 375 to 550 gallons were located in the chemical feed area at the southern end of the main room in Building 1. One of these seven storage tanks was 75% full and the remaining six tanks were 25% full. These tanks contained either acid, base-neutral, or caustic liquid.

A separate room located at the southern end of Building I was utilized as a water treatment area for wastewater pretreatment prior to sewer discharge. This room contained five large, open-top, fiberglass-wrapped storage tanks. In addition, a 20-cubic-yard roll-off box of F006 filter cake was in the southwestern corner of the water treatment area. A large vat was also located in the southeastern corner of this room. The 2,150-gallon vat along with the five storage tanks were nearly full of liquid. There was also an approximately 4,500-gallon capacity clarifier in the room.

Eighty-four 55-gallon drums along with several smaller containers were in Building 1. Drums of unused chemicals, stacked two drums high, were stored on pallets along the western wall. The drums were staged by chemical name, based on small signs located on the wall. However, 55-gallon drums of acids such as nitric (2 drums), sulfuric (12 drums), and hydrochloric (22 drums) were stored adjacent to incompatible drums of basic materials, such as sodium hydroxide (20 drums) and sodium hypochlorite (12 drums).

Building 3 is contained within the same overall structure as Building 1. Building 3 contained Plating Line 4, miscellaneous drums and storage tanks, and an overhead drying rack mechanism. Plating Line 4 consisted of twenty-five separate vats, ranging in capacity from 600 gallons to 16,500 gallons. Most of the vats were full or nearly full of liquids and sludge. However, a group of five of these vats, located at the southeastern end of the plating line, were empty. The contents of the vats had pH values ranging from 1 to 14 standard units. Five storage tanks were located in Building 3 and ranged in size from 550 to 1,200 gallons. Eight 55-gallon drums and fourteen 5-gallon containers were in Building 3. Most of these drums and containers contained chromic acid solution.

Building 2 contained Plating Lines 2 and 3. Plating Line 2 consisted of 19 separate vats, ranging in capacity from approximately 200 to 7,500 gallons. Plating Line 3 contained 25 separate vats, ranging in capacity from 800 to 10,000 gallons. A large steel 10,000-gallon storage tank was in the northwestern corner of Building 2. A second storage tank with an estimated capacity of 2,500 gallons was along the western side of Building 2. The tank contained 35 gallons of acid sludge. A third 1,200-gallon tank was located at the southern end of Plating Line 3. A generator room was located along the western wall of Building 2, between the two storage tanks. Three 30-gallon drums of sodium cyanide and three 30-gallon drums of zinc cyanide were within and just outside of this room.

A group of thirty-two 55-gallon drums was observed along the western wall of Building 2, between the generator room and the 10,000-gallon storage tank. Some drums were labeled as "Autophoretic 35 Activator," additional label information indicated these materials were cleaning compounds which contained hydrofluoric acid. Other drums contained sodium hydroxide, hypochloric acid, and hydrogen peroxide. Drums in this area were stored on the floor and on an overhead storage shelf against the wall with incompatible materials with no segregation between acids and bases. The drums in this area were located within 10 to 15 feet of drums of sodium and zinc cyanide. There were also 10 drums of kerosene located next to Plating Line 3 which were used to run a torpedo heater.

Within and just outside a women's restroom located in the northeastern corner of Building 2 were eleven 55-gallon drums. A red liquid which may have originated from one of the drums was observed in one of the toilets in the restroom. One of the drums in this room was labeled with a hazardous waste label as lacquer rinse and had a start accumulation date of February 21, 1991.

The southern end of Building 2 contained the facility's maintenance department. This room was filled with spare parts and equipment. Pressurized cylinders of acetylene, oxygen, and argon gas were located in this area. In addition, several drums and containers of lubricants were scattered throughout the maintenance area.

A fenced storage area was located in the southwestern corner of the main room of Building 2 outside of the northwestern corner of the maintenance area. The storage area contained a number of drums, small containers, and bags of chemicals such as chromic acid, phosphoric acid, and isopropanol. Drums and containers were stacked on top of each other and on shelves within this area.

On the northern side of the facility were four transformers located in the corner of Buildings 1 and 3. Three transformers were located on the ground on a large concrete pad and one was located on a utility pole. The southern side of the facility had a gravel lot that contained metal debris. An underground fuel storage tank of unknown capacity is located immediately south of building 2. A dock located on the southern side of Building 1 had empty drums stacked on it. Several 375-gallon tanks were located near the water treatment room.

3.2 Site History

In 1924 the site began industrial operations as the Dayton Rustproofing Company. Hazardous waste generation at the site from 1980 to 1984 is documented in OEPA, Division of Hazardous Waste Management (DHWM) files. On June 1, 1984 the present owner, Charles Borum, took control of the site under the name; Dayton Electroplate. DE operations included nickel, chrome, zinc, and clear coatings from June 1984 to June 1988. According to documents submitted to OEPA in 1985, during operations, plating lines at the facility contained a total of 43,905 gallons of zinc cyanide electroplating solutions; 10,945 gallons of nickel electroplating solutions; and 2,930 gallons of chrome electroplating solutions.

In 1988 a complaint was filed with OEPA, alleging that DE had been illegally storing hazardous wastes in a trailer on-site and had been disposing of untreated plating wastes into the City of Dayton sanitary sewer. On June 30, 1988 OEPA conducted an investigation of the complaint. The complaint allegations were not confirmed but the investigation did reveal numerous violations of state and federal hazardous waste laws and regulations. Subsequent inspections revealed that DE had established a hazardous waste facility without obtaining a hazardous waste facility permit, had engaged in illegal storage of listed wastes, and did not initiate a closure plan for illegal storage units including drum storage and roll-off box areas.

On September 20, 1990, an OEPA inspection found that DE could not document Land Disposal Restrictions (LDR) notifications. Another OEPA DHWM inspection conducted April 1, 1991, revealed that a roll-off box containing F006 hazardous waste had been punctured to allow a release onto the ground at the rear of the site. On August 8, 1991 DE was referred to the Environmental Enforcement Section of the Attorney General's Office (AGO) for violation of civil enforcement of state hazardous waste laws.

On June 26, 1992, USEPA issued a Notice of Violation (NOV) to DE. No response was received. OEPA conducted a follow-up inspection on April 16, 1993 and noted that DE did not initiate a closure plan for illegal storage units including drum storage and roll-off box areas. A second NOV was issued by USEPA to DE August 3, 1993 . DE again did not respond. On November 26, 1993, a 104E information request letter was sent to DE by USEPA. On February 14, 1994, OEPA through the AGO filed a complaint for relief and civil penalty against DE including 11 counts of hazardous waste storage violations and failure to submit a closure plan. On March 1, 1994, the facility submitted a State of Ohio Emergency Response Commission facility identification form. The facility identified the following chemicals used in daily operations: hydrofluoric acid, hydrogen chloride, nitric acid, sodium cyanide, and concentrated sulfuric acid. On July 6, 1994, USEPA Resource Conservation and Recovery Act (RCRA) Associate Division Director Norman R. Niedergang issued a Complaint, Findings of Violations, and Compliance Order to DE for RCRA violations. The USEPA Consent Agreement and Final Order (CAFO) was finalized on March 14, 1995, and required DE to provide proper Land Disposal Restriction notification on all future hazardous waste shipments and required payment of a civil penalty of $5,400.

Charles Borum, President, DE, signed a consent order May 4, 1995 with the State of Ohio, to perform a closure of all hazardous waste units at the site. On November 15, 1995, OEPA conducted an inspection of the DE site. The purpose of the inspection was to investigate a complaint alleging storage of hazardous waste at the facility. During the inspection, OEPA noted

uncharacterized drums which reportedly contained wastes from nickel plating tanks at the site. Unlabeled drums containing cyanide filter pads were also observed at the facility. The OEPA inspector also noted that in addition to the drum violations, DE had failed to comply with the terms and conditions of the May 4, 1995 consent order. Later, a contempt order was signed by Mr. Borum for failure to comply with the May 4, 1995 consent order. In April 1996, DE ceased all operations prior to petitioning for Chapter 7 bankruptcy.

OEPA inspected the abandoned site August 28, 1996 and observed acid vapor collecting near the ceiling of plating area #1 and a strong acidic odor permeating the building. OEPA also noted that the plating line was large and that process tanks appeared to be full and in poor condition. On September 12, 1996, OEPA requested assistance from USEPA Region V, Emergency Response Branch to conduct a removal action at the abandoned DE site due to substantial endangerment to both the local population and the environment.

3.3 Previous Site Work

On October 11, 1996, Mark Boden of the Ohio EPA Cessation of Regulated Operations (CRO) program, performed a compliance site inspection and noted violations to CRO rules. Steve Renninger, USEPA On-Scene Coordinator, and members of the Superfund Technical Assessment and Response Team (START), also inspected the site. Approximately 110 full to partially full plating vats, roll-off boxes, and miscellaneous waste tanks containing spent electroplating solutions totaling approximately 105,000 gallons were identified. Approximately 250 55-gallon drums and numerous smaller containers of plating solutions, plating wastes, oxidizers, corrosives, flammable substances, reactive substances and unknowns were observed throughout the site with some stacked two to three high.

During this inspection the START contractor collected drum and plating vat samples later documented to contain acids and bases and cyanide. Acid liquids, some with pH of 1.0 standard units were stored in close proximity to cyanide-containing materials with no means of preventing the possibility of mixing and potential release of hydrogen cyanide gas. Acid and caustic solutions were in open vats readily accessible, posing a direct contact threat to anyone in the facility. In addition, the presence of flammable liquids present in drums and containers throughout the site posed a significant fire hazard. Laboratory analytical results confirmed the existence of acid, caustic, and cyanide solutions, as well as, materials with low flash points. Based upon observations and analytical results, USEPA established that conditions at the abandoned DE site were an imminent and substantial threat to human health and the environment.

On December 31, 1996, the site, which was left abandoned and without security personnel by the owner, had a "breaking and entering" incident. According to police, the vandals accessed the property through a hole in the surrounding fence. They then entered Building 2 through the rear door and proceeded to steal copper from the vats. In several instances, copper was taken from vats that still contained hazardous materials. The unauthorized entry of the thieves demonstrated that the hazardous materials on site were accessible and that accidental mixing of these materials could occur posing a substantial threat to the surrounding population. On January 9, 1997 START initiated sampling and documentation of all wastes on-site.

3.4 Site Geology & Hydrology

According to the Montgomery County, Ohio Soil Survey, soil from the Fox Series originally covered the site. These soils have been disturbed or buried over much of the site. The Fox Series consists of a dark yellowish-brown silt loam plow layer about eight inches thick. The subsoil consists of layers of mainly brown loam, and a reddish-brown and brown sandy clay loam. The subsoil extends to a depth of 29 inches where calcareous sand and gravel occur. Permeability is moderate in the subsoil and is high in the sandy and gravelly substratum.

Montgomery County is covered with extensive deposits of Illinoisan Wisconsin glacial deposits. The site is located on sand and gravel outwash valley train deposits of Wisconsin age overlain by modern river alluvium. These deposits range in thickness from zero feet at the edge of the bedrock valley to a maximum of 230 feet in the center of the river valleys. The unconsolidated materials are coarse sand and gravel with interbedded layers of light brown and light gray, clayey and silty tills. Overlying the glacial sediments is a thin veneer of recent alluvial deposits.

Three hydrogeologic units are defined in the immediate area: 1. a shallow aquifer, 2. a low permeability aquitard, and 3. a deep aquifer. The Ordovician Richmond Shale formation underlies the glacial deposits and composes the nearby bedrock hills. The Richmond Shale is composed of relatively soft, light gray, calcareous shale with inter-bedded layers of limestone.

The site is relatively flat and lies within the original flood plain of the Mad River at an elevation of approximately 755 feet above sea level. The confluence of the Mad and Great Miami Rivers is approximately one and a half miles west-southwest and downstream of the site. Remnants of gravel mining operations lie along the Mad River. The depth to ground water is between 30 and 40 feet below ground surface. The ground water flow direction near the site is down valley (from northeast to southwest) in both the shallow and deep aquifers.

The City of Dayton operates a well field southeast of the site along the Mad River. Dayton municipal wells #48 and #49 are approximately 2500 feet from the site. The Ground Water Resources map of Montgomery County shows Dayton Electroplate to be located near the edge of an area where yields in excess of 1000 gallons per minute may be developed from 85 to 185 feet. Ground-water use in this area is critical and its use is extensive. The site overlies a Class 1 sole source aquifer.

The regional recharge area consists of the entire surface of the buried valley (i.e. the area between the valley's bedrock walls). The Mad River is the primary source of recharge water to the well field. Recharge occurs from leakage through the bottom of the Mad River itself, nearby lakes, and artificial recharge lagoons on Rohrer's Island, east of the site. All unpaved areas near the site contribute some recharge to the underlying aquifer as does ground water flow from the upland areas.

The Ground Water Pollution Potential map of Montgomery County shows the site to be located in an area with a Pollution Potential Index over 200. Within Montgomery County, the Pollution Potential Index ranges from approximately 41 to 206. The pollution potential maps

are based on a weighted rating system which considers depth to water, net recharge, aquifer media, soil media, topography, impact of the vadose zone media, and the hydraulic conductivity of the aquifer. The pollution potential maps indicate the site is located on land which is highly likely to allow contaminants to reach ground water. The site exhibits a combination of critical factors such as shallow depth-to-ground water, a highly permeable sand and gravel aquifer, and moderately permeable overlying soil material. The site overlies part of an extensive and important regional aquifer which is used for drinking, industrial, and agricultural water supplies.

Several industrial sites which are known to have impacted ground water are in the area. The Valley Crest Landfill, Van Dyne Crotty, and the Brandt Street Terminals are all less than one mile upgradient.

4.0 SAMPLING LOCATIONS & DISCUSSION OF RESULTS

Groundwater and soil samples, were collected during the IA investigation sampling event on April 10, 1997. Figures 4, and 5 show the IA groundwater and soil sampling locations. Samples were analyzed by U.S. EPA Contract Laboratory Program (CLP) laboratories. Analyses included the following parameters: volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, TAL metals, and cyanide.

Complete analytical results for the IA investigation are contained in Appendix A. Significant findings based on these data are summarized in Tables 1 and 2. Data were reviewed by USEPA Region V personnel for compliance with the CLP, and validated by Region V Central Regional Laboratory staff.

Additional sampling of soil was conducted by the USEPA START contractor as part of the USEPA Removal Action at the site. Figure 6 shows the USEPA soil sampling locations. Data from the USEPA samples is summarized in Table 5. The raw data is presented in Appendix B. The OEPA Special Investigations Unit (SIU) collected three soil samples from inside the first manhole outside of the DE wastewater treatment system. Figures 3 and 4 show the locations of the three on-site manholes. Data from SIU samples is summarized in Table 6. Raw data for the SIU samples can be found in Appendix C.

A photographic log of sampling locations can be found in Appendix D. Standard quality assurance and quality control (QA/QC) procedures for site investigation field activities were followed during the investigation. These procedures, including sample collection, packaging and shipping, and equipment decontamination, are documented in the Quality Assurance Project Plan (QAPP) for Region V Superfund Site Inspection Activities for Ohio EPA and Ohio EPA Field Standard Operating Procedures.

4.1 Groundwater

Four samples, including a trip blank, were collected to determine if the DE is contributing to groundwater contamination. Figure 3 identifies the groundwater sampling locations. Field samples EBMS0, EBMS1, and EBMS2 were collected using the SIFU Geoprobe™. Samples were collected in the four foot interval from 36 to 40 feet below ground surface. Another field sample was planned to be collected at location GP3 but the boring at that location proved to be dry.

EBMS0 contained elevated levels of arsenic (86.1 ug/l), chromium (285 ug/l), lead (103 ug/l), and nickel (248 ug/l). The maximum contaminant levels (MCL) for arsenic, chromium, and nickel in drinking water are 50 ug/l, 100 ug/l, 100 ug/l , respectively. The action level for lead is 15 ug/l. Sample EBMS1 contained lead at 65.5 ug/l, nickel at 117 ug/l and methylene chloride (dichloromethane) at 5 ug/l. The MCL for dichloromethane is 5 ug/l. Sample EBMS2 contained Chromium at 144 ug/l, lead at 59.4 ug/l, nickel at 278 ug/l, dichloromethane at 9 ug/l and tetrachloroethene (PCE) at 63 ug/l. The MCL for PCE is 5 ug/l. No semivolatile organic compounds or pesticides or PCBs were detected in ground-water samples collected at the site.

4.2 Surface Water

Surface water samples were not collected for the IA. The Mad River is the nearest continually flowing surface water body, approximately 2500 feet from the site.

4.3 Sediment

Sediment samples were not collected for the IA. Since the drainage ditches on-site are not continually flowing water bodies, the solids collected from the ditches were considered to be soil samples.

4.4 Soil

Seven soil samples, including a background sample, were collected for CLP analysis. Figure 5 displays the soil sampling locations. Samples EBMR0, EBMR1, and EBMR2 were collected on the west side of the wastewater treatment building. Sample number EBMR0 was collected utilizing the SIFU Geoprobe™ soil sampler, immediately south of the first manhole outside of the wastewater treatment building. Three four foot cores were taken from zero to twelve feet. Sample EBMR0 was a composite from the four to eight and the eight to twelve foot cores. The remaining samples were collected using stainless steel hand augers at depths ranging from zero to twelve inches. The background soil sample, number EBMR6 was collected from a depth of three to six inches in a grassy area between building 2 and the sidewalk along Valley Street. Many soil samples contained elevated levels of metals. VOCs, SVOCs, and pesticides/PCBs were also detected at elevated concentrations in several samples. Significant hits for soil samples are summarized in Table 2. Individual sample results above three times background are described as follows:

Significant hits of SVOCs in sample EBMR0 include dibenzofuran at 420 ug/kg, fluorene at 500 ug/kg, phenanthrene at 6100 ug/kg, anthracene at 770 ug/kg, and pyrene at 5800 ug/kg. EBMR0 contained endosulfan I at 44 ug/kg. Notable metals with concentrations in excess of three times background in EBMR0 include cadmium at 5.4 mg/kg, and cyanide at 2.8 mg/kg.

EBMR1 contained the SVOC bis(2-ethylhexyl)phalate at 2000 ug/kg. EBMR1 also contained 32.3 mg/kg of cadmium, 3610 mg/kg of chromium, 574 mg/kg of copper, 1920 mg/kg of nickel, 18500 mg/kg of zinc, and 208 mg/kg of cyanide.

SVOCs at significant concentrations in EBMR2 include bis(2-ethylhexyl)phalate at 1400 ug/kg, dibenzo(a,h)anthracene at 1200 ug/kg, and benzo(g,h,i)perylene at 13000 ug/kg. Metals of note in EBMR2 are cadmium at 30.8 mg/kg, chromium at 936 mg/kg, copper at 215 mg/kg, nickel at 1460 mg/kg, zinc at 21100 mg/kg, and cyanide at 320 mg/kg.

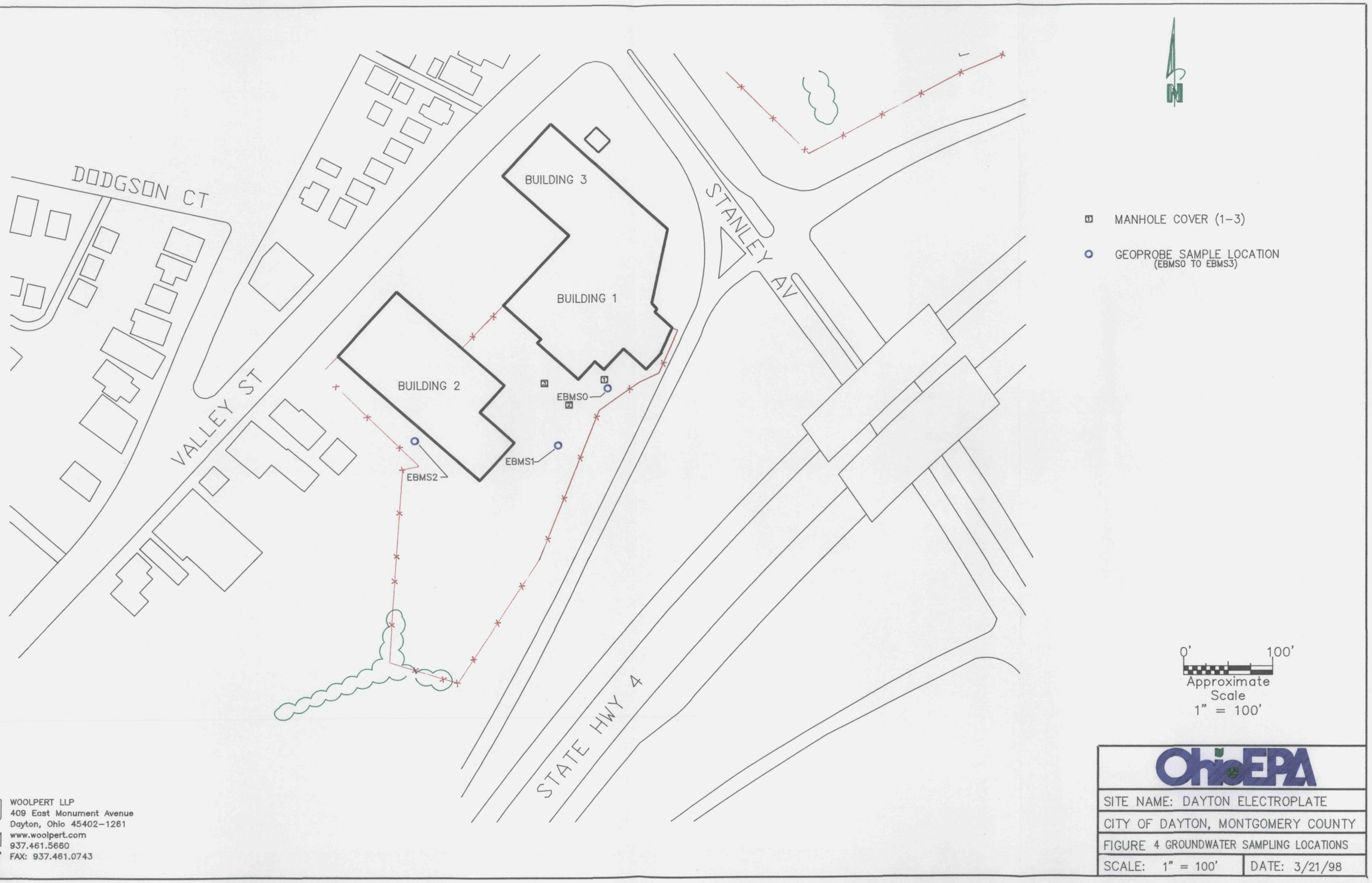
EBMR3 contained endosulfan I at a concentration of 15 ug/kg. EBMR3 also contained zinc and cyanide at 434 mg/kg and 3.8 mg/kg, respectively.

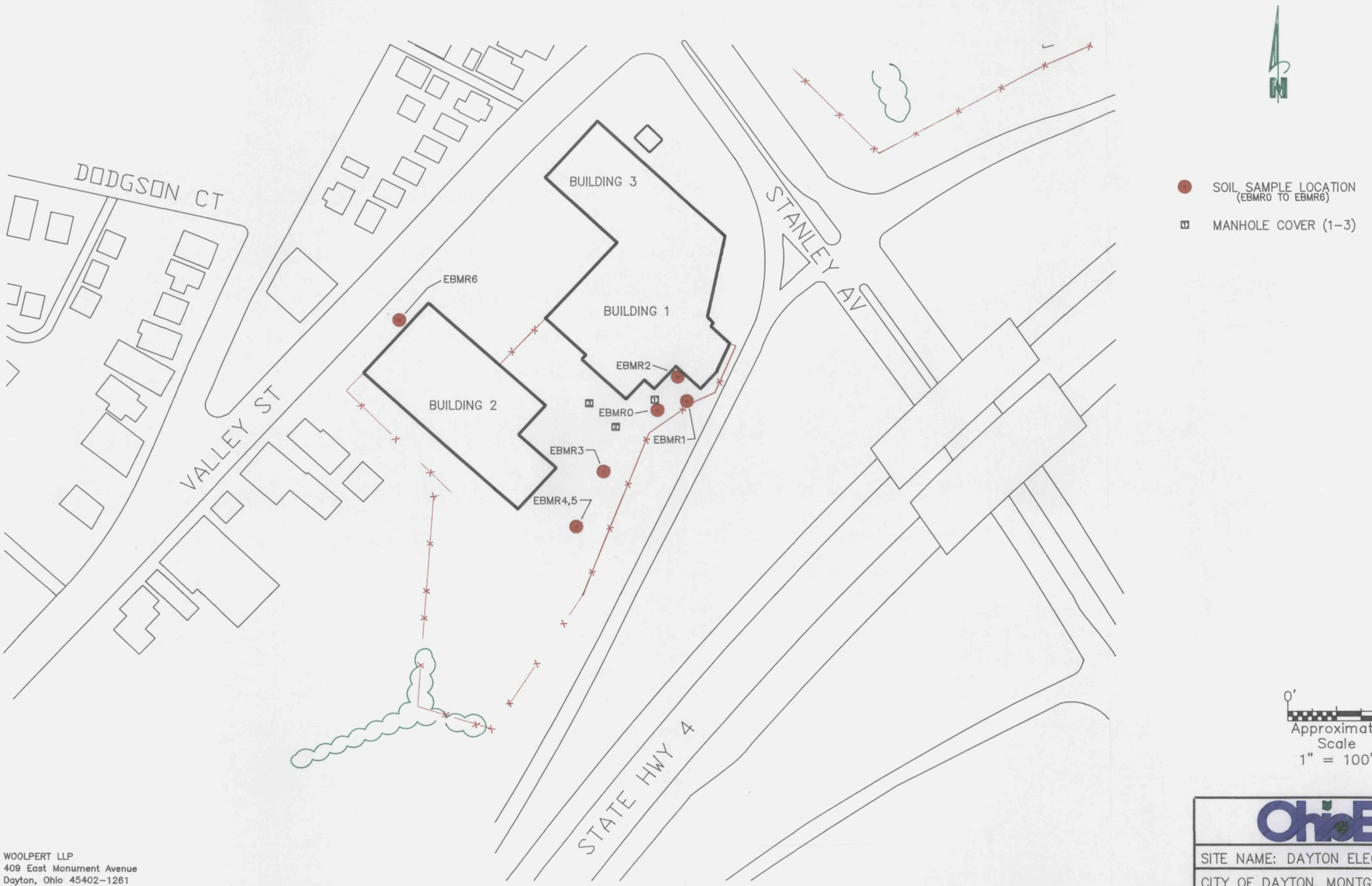
EBMR4 contained trichloroethene at 140 ug/kg. 2,6-dinitrotoluene at a concentration of 1300 ug/kg and 2,4-dinitrotoluene at 2800 ug/kg were also detected in EBMR4. Metals in EBMR4 include arsenic at 32.0 mg/kg, barium at 368 mg/kg, beryllium at 2.6 mg/kg, copper at 4400 mg/kg, mercury at 0.87 mg/kg, and zinc at 2700 mg/kg.

EBMR5, the duplicate of EBMR4 contained 200 ug/kg trichloroethene, 1200 ug/kg 2,6-dinitrotoluene, 2800 ug/kg 2,4-dinitrotoluene, 33.2 mg/kg arsenic, 386 mg/kg barium, 2.7 mg/kg beryllium, 10600 mg/kg chromium, 4730 mg/kg zinc, and 2.5 mg/kg cyanide.

4.5 Air

No air samples were taken as part of the Dayton Electroplate IA.


DODGSON CT
VALLEY ST
BUILDING 1
BUILDING 2
BUILDING 3
STANLEY AV
STATE HWY 4
EBMS0
EBMS1
EBMS2
MANHOLE COVER (1-3)
GEOPROBE SAMPLE LOCATION
(EBMS0 TO EBMS3)
0'
100'
Approximate
Scale
1" = 100'
OhioEPA
SITE NAME: DAYTON ELECTROPLATE
CITY OF DAYTON, MONTGOMERY COUNTY
FIGURE 4 GROUNDWATER SAMPLING LOCATIONS
SCALE: 1" = 100'
DATE: 3/21/98
WOOLPERT LLP
409 East Monument Avenue
Dayton, Ohio 45402-1261
www.woolpert.com
937.461.5660
FAX: 937.461.0743
WOOLPERT



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FAX: 937.461.0743
WOOLPERT

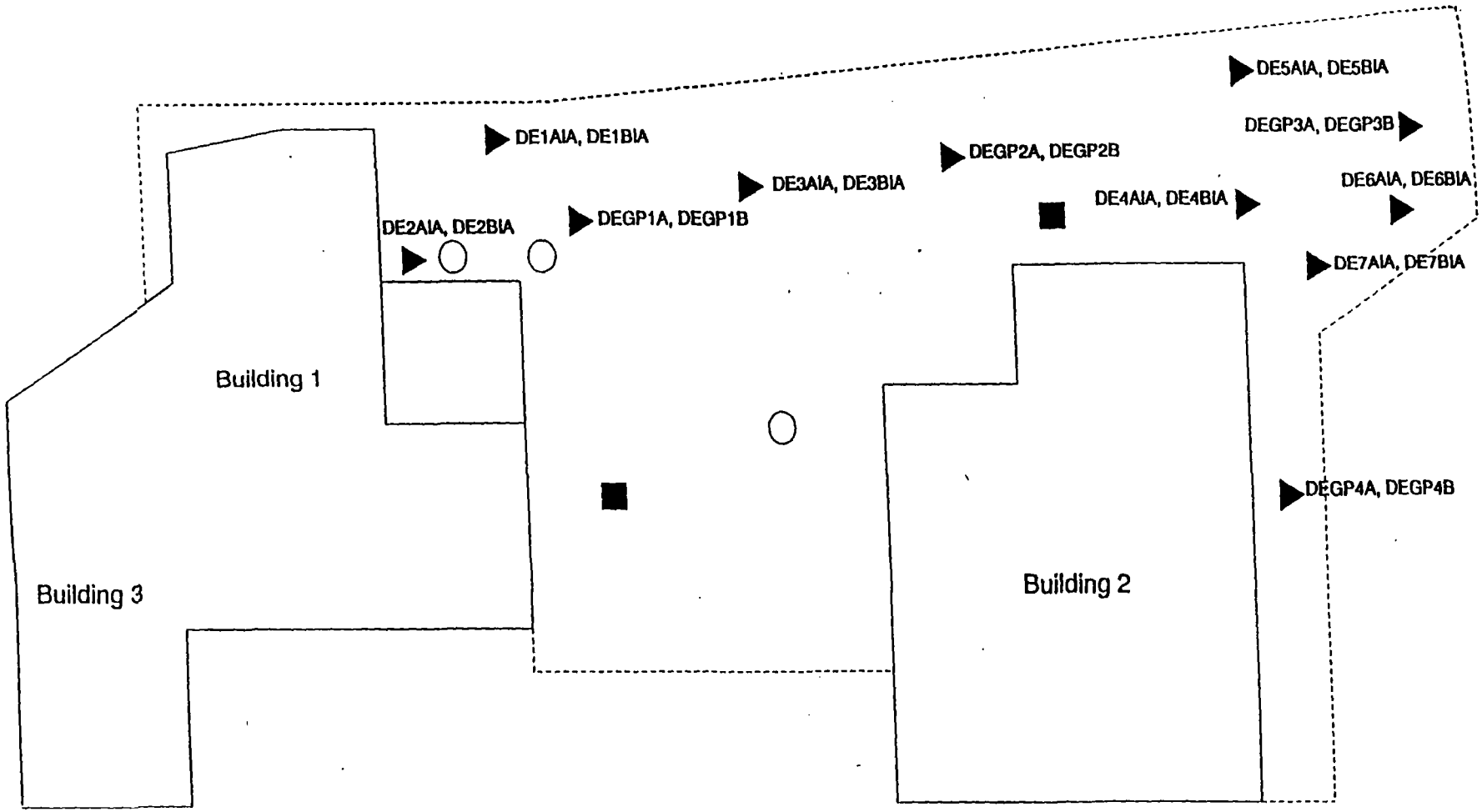
OhioEPA

SITE NAME: DAYTON ELECTROPLATE

CITY OF DAYTON, MONTGOMERY COUNTY

FIGURE 5 SOIL SAMPLING LOCATIONS

SCALE: 1" = 100' | DATE: 3/21/98



LEGEND

- Fence
- Manhole
- Sample Location
- Underground Storage Tank

ecology and environment, inc.

Region 5 - Superfund Technical Assessment and Response Team

260 Northland Boulevard, Suite 125-B, Cincinnati, Ohio 45246

TITLE	Soil Sample Location Map	FIGURE	6
SITE	Dayton Electroplate, Inc.	TDD	S05-9612-004
CITY	Dayton STATE Ohio	SCALE	Not To Scale
SOURCE	Ecology and Environment, Inc.	DATE	1997

5.0 MIGRATION PATHWAYS

5.1 Groundwater Pathway

Contaminated surface soils, a source area for groundwater contamination are not contained or capped and includes most of the unpaved areas between the buildings and the boundary fence line. Additionally, soils along portions of the sewer lines leading from the former wastewater treatment building to the main City trunk line are sources. The concrete bottom of the first of three manholes on the site was eaten away, apparently by corrosive solutions from the wastewater treatment building. The manholes 2 and 3 have new concrete bottoms with corrugated plastic piping to channel flow, indicating that they likely had been similarly damaged in the past. The DERR SIU Manhole Soil samples taken from the bottom of manhole 1 contained elevated levels of cadmium, chromium, cyanide, lead, and zinc. The City of Dayton used a remote sewer camera to view the integrity of the site sewer line to the main trunk line on Valley Street. The line from the manholes to Valley Street was constructed of vitrified tile piping and appeared to be in good condition. Releases to soil along this section of sewer are probably minimal. Dayton workers indicated that the main sewer line manholes on Valley Street had been replaced in the past. It is unknown what their condition was or whether it was related to corrosive discharges from the site. If so, portions of the sewer main may also be contributing to groundwater contamination.

Screening level groundwater samples collected with the Ohio EPA Geoprobe™ contained above MCL concentrations of the following chemicals: methylene chloride, tetrachloroethene, arsenic, chromium, lead, and nickel. Of these, the metals can be attributed to electroplating activities which occurred at the site. The two VOCs may or may not be attributed to the site. Trichloroethene was the only VOC found in soil samples collected at the site.

Monitoring wells should be installed as part of an ESI in order to verify the concentrations of these chemicals in groundwater. Since no upgradient Geoprobe™ sample was collected during the IA, it is especially important that an upgradient monitoring well be installed to determine if the site is a source of PCE or whether the PCE is from an upgradient source. Additional soil sampling to further characterize the extent of soil contamination in the unpaved portion of the site should be accomplished as part of an ESI. The two Dayton municipal production wells located within 2500 feet downgradient of the site should also be sampled as part of an ESI. Neither well was sampled as part of the IA.

5.2 Surface Water Exposure Pathway

Surface water samples were not collected for the IA. The Mad River is the nearest continually flowing surface water body, approximately 2500 feet from the site.

5.3 Sediment

Sediment samples were not collected for the IA. Since the drainage ditches on the site are not continually flowing water bodies, the solids collected from the ditches were considered to be soil samples.

5.4 Soil Exposure Pathway

Soil samples collected contained elevated concentrations of VOCs, SVOCs, pesticides/PCBs, and metals. Access to the unpaved portion of the site is restricted by the locked fence, limiting direct contact with contaminated soils. However, trespassers have entered the property in the past and may do so again. Also, Dayton is actively pursuing reuse of the property, but what that use will be and how the unpaved portions will be utilized is unknown at this time.

5.4 Air Pathway

No air samples were taken as part of the Dayton Electroplate IA. However, dust from the unpaved portions of the site was seen blowing off-site during the IA. Exposure to contaminated soil through inhalation is possible for both on-site workers, the resident population surrounding the site and the transient population traveling in the area.

6.0 REFERENCES

1. Analytical results from the Integrated Assessment sampling event, April 10, 1997
2. Analytical results from Ohio EPA SIU manhole soil sampling, June 4, 1997
3. Analytical results from USEPA TCLP Metals soil sampling, April 10, 1997
4. Dayton Electroplate Integrated Assessment Workplan, March 31, 1997
5. Dayton Electroplate Integrated Assessment site reconnaissance visits, February through March, 1997
6. Dayton Electroplate Integrated Assessment sampling event, April 10, 1997
7. Draft Federal On-Scene Coordinator's Report for The Dayton Electroplate, Inc., Site, USEPA, December 31, 1997
8. Federal Register, 40 CFR Part 300, Hazard Ranking System, Final Rule, December 14, 1990
9. Field log books and notes for the Integrated Assessment sampling event, April 10, 1997
10. Groundwater Pollution Potential Map of Montgomery County, Ohio, ODNR, 1994
11. Groundwater Resources Map of Montgomery County, Ohio, ODNR, 1992
12. National Flood Insurance Rate Map, City of Dayton, Ohio, March 4, 1985
13. Ohio EPA ArcInfo Geographical Information System four mile radius map, utilizing 1990 U.S. Census Data and 1997 Ohio Department of Natural Resources Natural Heritage Data
14. Ohio EPA DDAGW Preliminary Site Evaluation, March 26, 1997
15. Ohio EPA, DHWM Files
16. Rainfall Frequency Atlas of the United States, Technical Paper Number 40, US Department of Commerce
17. Soil Survey of Montgomery County, Ohio, USDA Soil Conservation Service, June 1976.
18. USEPA Pollution Reports (POLREPS), January 10 through June 24, 1997
19. USGS Topographic Map, Dayton North, OH Quadrangle, revised 1992
20. USGS Water Data, USGS Internet Homepage.

Table 1
Dayton Electroplate IA Geoprobe™ Groundwater Sampling
Significant Analytical Results

SAMPLE NUMBER		EBMS0	EBMS1	EBMS2	EBMS3
DATE SAMPLED		4/10/97	4/10/97	4/10/97	4/9/97
TIME SAMPLED		1130	1420	1640	1000
SAMPLE DEPTH		40 feet	40 feet	40 feet	n/a
DESCRIPTION		GP1-GW S of bldg 1	GP2-GW S of bldg 2	GP4-GW W of bldg 2	trip blank
VOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (μg/L)***			
methylene chloride	10 ug/l	2J	**5J**	**9J**	10U
tetrachloroethene	10 ug/l	10U	10U	**63**	10U

TAL METALS/CYANIDE	***CRQL***	***COMPOUND DETECTED (μg/L)***			
arsenic	10 ug/l	**86.1**	48.4	46.7	n/a
chromium	10 ug/l	**285**	93.1	**144**	n/a
lead	3 ug/l	**103J**	**65.5J**	**59.4J**	n/a
nickel	40 ug/l	**248**	**117**	**278**	n/a

TCL ANALYTE QUALIFIERS	**DATA QUALIFIER DEFINITIONS**
U	The analyte was analyzed for, but was not detected above the CRQL.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the CRQL. However, the CRQL is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. Compound may or may not be present.
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

TAL ANALYTE QUALIFIERS	**DATA QUALIFIER DEFINITIONS**
U	The analyte was analyzed for, but was not detected above the CRQL.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the CRQL. However, the CRQL is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. Compound may or may not be present.

Table 2
Dayton Electroplate IA Soil Sampling
Significant Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION (if applicable)		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2 (dup)	back-ground
VOLATILE ORGANIC COMPOUNDS	*CRQL*	*COMPOUND DETECTED (µg/kg)*						
trichloroethene	10 ug/kg	11U	12U	13U	9J	**140**	**200**	12U
SEMIVOLATILE ORGANIC COMPOUNDS	*CRQL*	*COMPOUND DETECTED (µg/kg)*						
2,6-dinitrotoluene	330 ug/kg	370U	380U	2100U	390U	**1300**	**1200**	400U
dibenzofuran	330 ug/kg	**420**	380U	2100U	390U	430U	430U	75J
2,4-dinitrotoluene	330 ug/kg	370U	380U	2100U	390U	**2800**	**2700**	400U
fluorene	330 ug/kg	**500**	380U	2100U	390U	430U	140J	82J
phenanthrene	330 ug/kg	**6100**	350J	2100U	440	150J	2500	1500
anthracene	330 ug/kg	**770**	64J	2100U	98J	18J	**480**	150J
pyrene	330 ug/kg	**5800J**	500	250J	900	200J	2300	1800
bis(2-ethylhexyl)phthalate	330 ug/kg	130J	**2000**	**1400J**	130J	280J	**320J**	91J
dibenzo(a,h)anthracene	330 ug/kg	660	140J	**1200J**	260J	430U	360J	290J
benzo(g,h,i)perylene	330 ug/kg	2000	360J	**13000**	790	110J	780	760
PESTICIDES/PCB	*CRQL*	*COMPOUND DETECTED (µg/kg)*						
endosulfan I	1.7 ug/kg	**44**	9.9U	11R	**15**	2.2R	2.2R	10U

Table 2
Dayton Electroplate IA Soil Sampling
Significant Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION (if applicable)		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2	back-ground
TAL METALS/CYANIDE	*CRDL*	*COMPOUND DETECTED (µg/kg)*						
arsenic	2 mg/kg	11.6J	7.4J	4.0J	14.6J	**32.0J**	**33.2J**	8.2J
barium	40 mg/kg	298J	125J	199J	184J	**368J**	**386J**	121J
beryllium	1 mg/kg	1.2J	0.33J	0.88J	0.78J	**2.6J**	**2.7J**	0.82J
cadmium	1 mg/kg	**5.4J**	**32.3J**	**30.8J**	1.9J	1.8J	2.0J	1.2J
calcium	1000 mg/kg	49700	77800	**97400**	**94300**	23000	22800	28400
chromium	2 mg/kg	17.8	**3610J**	**936**	20	28.2	24	20.2
copper	5 mg/kg	79.4J	**574J**	**215J**	96.9J	**4400J**	**10600J**	60.0J
iron	20 mg/kg	**45100J**	16200J	14500J	22900J	27700J	16200J	14900J
magnesium	1000 mg/kg	21700	33900	**44500**	**45800**	7780	6870	11800
merury	0.1 mg/kg	0.09	0.22	0.22	0.24	**0.87**	0.45	0.29
nickel	8 mg/kg	26.1	**1920**	**1460**	33.8	26.9	29.5	25.9
potassium	1000 mg/kg	1010J	649J	**8720J**	849J	891J	907J	1070J
sodium	1000 mg/kg	**403**	51.9U	**916**	361	**662**	**649**	123
zinc	4 mg/kg	199J	**18500J**	**21100J**	**434J**	**2700J**	**4730J**	181J
cyanide	2 mg/kg	**2.8**	**208**	**320**	**3.8**	1.9	**2.5**	0.37

TCL ANALYTE QUALIFIERS	DATA QUALIFIER DEFINITIONS
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J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
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N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification and the associated numerical value represents its approximate
R	The data are unusable. Compound may or may not be present.
H	Sample result is estimated and biased high.
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R	The data are unusable. Compound may or may not be present.

Table 3
Dayton Electroplate IA Geoprobe™ Groundwater Sampling
Comprehensive Analytical Results

SAMPLE NUMBER		EBMS0	EBMS1	EBMS2	EBMS3
DATE SAMPLED		4/10/97	4/10/97	4/10/97	4/9/97
TIME SAMPLED		1130	1420	1640	1000
SAMPLE DEPTH		40 feet	40 feet	40 feet	n/a
DESCRIPTION		GP1-GW S of bldg 1	GP2-GW S bldg 2	GP4 -GW W of bldg 2	trip blank
VOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/L)***			
chloromethane	10 ug/l	10U	10U	10U	10U
bromomethane	10 ug/l	10U	10U	10U	10U
vinyl chloride	10 ug/l	10U	10U	10U	10U
chloroethane	10 ug/l	10U	10U	10U	10U
methylene chloride	10 ug/l	2J	**5J**	**9J**	10U
acetone	10 ug/l	10UJ	10UJ	10UJ	10U
carbon disulfide	10 ug/l	10U	10U	10U	10U
1,1-dichloroethene	10 ug/l	10UJ	10U	10U	10U
1,1-dichloroethane	10 ug/l	10U	10U	10U	10U
1,2-dichloroethene (total)	10 ug/l	10U	10U	10U	10U
chloroform	10 ug/l	10U	10U	10	10U
1,2-dichloroethane	10 ug/l	10U	10U	10U	10U
2-butanone	10 ug/l	10UJ	10UJ	10UJ	10U
1,1,1-trichloroethane	10 ug/l	10U	10U	10U	10U
cabron tetrachloride	10 ug/l	10U	10U	10U	10U
bromodichloromethane	10 ug/l	10U	10U	10U	10U
1,2-dichloropropane	10 ug/l	10U	10U	10U	10U
cis-1,3-dichloropropene	10 ug/l	10U	10U	10U	10U
trichloroethene	10 ug/l	10UJ	10U	10U	10U
dibromochloromethane	10 ug/l	10U	10U	10U	10U
1,1,2-trichloroethane	10 ug/l	10U	10U	10U	10U
benzene	10 ug/l	10UJ	10U	10U	10U
trans-1,3-dichloropropene	10 ug/l	10U	10U	10U	10U
bromoform	10 ug/l	10U	10U	10U	10U
4-methyl-2-pentanone	10 ug/l	10UJ	10UJ	10UJ	10UJ
2-hexanone	10 ug/l	10UJ	10UJ	10UJ	10UJ
tetrachloroethene	10 ug/l	10U	10U	**63**	10U
1,1,2,2-tetrachloroethane	10 ug/l	10U	10U	10U	10U
toulene	10 ug/l	10UJ	2J	10U	10U
chlorobenzene	10 ug/l	10UJ	10U	10U	10U
ethyl benzene	10 ug/l	10U	10U	10U	10U
styrene	10 ug/l	10U	10U	10U	10U
xylene (total)	10 ug/l	10U	10U	10U	10U

Table 3
Dayton Electroplate IA Geoprobe™ Groundwater Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMS0	EBMS1	EBMS2
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1130	1420	1640
SAMPLE DEPTH		40 feet	40 feet	40 feet
DESCRIPTION		GP1-GW S of bldg 1	GP2-GW S bldg 2	GP4 -GW W of bldg 2
SEMI-VOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/L)***		
phenol	10 ug/l	6J	10U	10U
bis(2-chloroethyl)ether	10 ug/l	10U	10U	10U
2-chlorophenol	10 ug/l	10U	10U	10U
1,3-dichlorobenzene	10 ug/l	10U	10U	10U
1,4-dichlorobenzene	10 ug/l	10U	10U	10U
1,2-dichlorobenzene	10 ug/l	10U	10U	10U
2-methylphenol	10 ug/l	10U	10U	10U
2,2-oxybis(1-chloropropane)	10 ug/l	10U	10U	10U
4-methylphenol	10 ug/l	10U	10U	10U
n-nitroso-di-n-dipropylamine	10 ug/l	10U	10U	10U
hexachloroethane	10 ug/l	10U	10U	10U
nitrobenzene	10 ug/l	10U	10U	10U
isophorone	10 ug/l	10U	10U	10U
2-nitrophenol	10 ug/l	10U	10U	10U
2,4-dimethylphenol	10 ug/l	10U	10U	10U
bis(2-chloroethoxy)methane	10 ug/l	10U	10U	10U
2,4-dichlorophenol	10 ug/l	10U	10U	10U
1,2,4-trichlorobenzene	10 ug/l	10U	10U	10U
naphthalene	10 ug/l	10U	10U	10U
4-chloroaniline	10 ug/l	10U	10U	10U
hexachlorobutadiene	10 ug/l	10U	10U	10U
4-chloro-3-methylphenol	10 ug/l	10U	10U	10U
2-methylnaphthalene	10 ug/l	10U	10U	10U
hexachlorocyclopentadiene	10 ug/l	10U	10U	10U
2,4,6-trichlorophenol	10 ug/l	10U	10U	10U
2,4,5-trichlorophenol	25 ug/l	25U	25U	25U
2-chloronaphthalene	10 ug/l	10U	10U	10U
2-nitroaniline	25 ug/l	25U	25U	25U
dimethylphthlate	10 ug/l	10U	10U	10U
acenaphthalate	10 ug/l	10U	10U	10U
2,6-dinitrotoluene	10 ug/l	10U	10U	10U
3-nitroaniline	25 ug/l	25U	25U	25U
acenaphthene	10 ug/l	10U	10U	10U
2,4-dinitrophenol	25 ug/l	25U	25U	25U
4-nitrophenol	25 ug/l	25U	25U	25U
dibenzofuran	10 ug/l	10U	10U	10U

Table 3
Dayton Electroplate IA Geoprobe™ Groundwater Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMS0	EBMS1	EBMS2
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1130	1420	1640
SAMPLE DEPTH		40 feet	40 feet	40 feet
DESCRIPTION		GP1-GW S of bldg 1	GP2-GW S bldg 2	GP4 -GW W of bldg 2
SEMI-VOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/L)***		
2,4-dinitrotoluene	10 ug/l	10U	10U	10U
diethyolphthalate	10 ug/l	10U	10U	10U
4-chlorophenyl-phenyl ether	10 ug/l	10U	10U	10U
fluorene	10 ug/l	10U	10U	10U
4-nitroaniline	25 ug/l	25U	25U	25U
4,6-dinitro-2-mehylphenol	25 ug/l	25U	25U	25U
n-nitrosodiphenylamine	10 ug/l	10U	10U	10U
4-bromophenyl-phenyl ether	10 ug/l	3J	10U	10U
hexachlorobenzene	10 ug/l	10U	10U	10U
pentachlorophenol	25 ug/l	25U	25U	25U
phenanthrene	10 ug/l	10U	10U	10U
anthracene	10 ug/l	10U	10U	10U
carbazole	10 ug/l	10U	10U	10U
di-n-butylphthalate	10 ug/l	10U	10U	10U
fluoranthene	10 ug/l	10U	10U	10U
pyrene	10 ug/l	10U	10U	10U
butylbenzylphthalalate	10 ug/l	10U	10U	10U
3,3-dichlorobenzidine	10 ug/l	10U	10U	10U
benzo(a)anthracene	10 ug/l	10U	10U	10U
chrysene	10 ug/l	10U	10U	10U
bis(2-ethylhexyl)phthalate	10 ug/l	10U	10U	5J
di-n-octylphthalate	10 ug/l	10UJ	10U	10UJ
benzo(b)fluoranthene	10 ug/l	10U	10U	10U
benzo(k)fluoranthene	10 ug/l	10UJ	10U	10UJ
benzo(a)pyrene	10 ug/l	10U	10U	10U
indeno(1,2,3-cd)pyrene	10 ug/l	10U	10U	10U
dibenzo(a,h)anthracene	10 ug/l	10U	10U	10U
benzo(g,h,i)perylene	10 ug/l	10U	10U	10U

Table 3
Dayton Electroplate IA Geoprobe™ Groundwater Sampling
Comprehensive Analytical Results

SAMPLE NUMBER(S)		EBMS0	EBMS1	EBMS2
DATE SAMPLED		4/10/97	4/10/97	4/10/97
TIME SAMPLED		1130	1420	1640
SAMPLE DEPTH		40 feet	40 feet	40 feet
DESCRIPTION		GP1-GW S of bldg 1	GP2-GW S bldg 2	GP4 -GW W of bldg
PESTICIDES/PCBs	***CRQL***	***COMPOUND DETECTED (µg/L)***		
alpha-BH	0.05 ug/l	0.05U	0.05U	0.05U
beta-BHC	0.05 ug/l	0.05U	0.05U	0.05U
delta-BHC	0.05 ug/l	0.05U	0.05U	0.05U
gamma-BHC (Lindane)	0.05 ug/l	0.05U	0.05U	0.05U
heptachlor	0.05 ug/l	0.05UJ	0.05U	0.05U
aldrin	0.05 ug/l	0.05UJ	0.05U	0.05U
heptachlor epoxide	0.05 ug/l	0.05U	0.05U	0.05U
endosulfan I	0.05 ug/l	0.05U	0.05U	0.05U
dieldrin	0.10 ug/l	0.10U	0.10U	0.10U
4,4-DDE	0.10 ug/l	0.10U	0.10U	0.10U
endrin	0.10 ug/l	0.10U	0.10U	0.10U
endosulfan II	0.10 ug/l	0.10U	0.10U	0.10U
4,4-DDD	0.10 ug/l	0.10U	0.10U	0.10U
endosulfan sulfate	0.10 ug/l	0.10U	0.10U	0.10U
4,4-DDT	0.10 ug/l	0.10UJ	0.10U	0.10U
methoxychlor	0.50 ug/l	0.50U	0.50U	0.50U
endrin ketone	0.10 ug/l	0.10U	0.10U	0.10U
endrin aldehyde	0.10 ug/l	0.10U	0.10U	0.10U
alpha-chlordane	0.05 ug/l	0.05U	0.05U	0.05U
gamma-chlordane	0.05 ug/l	0.05U	0.05U	0.05U
toxaphene	5.0 ug/l	5.0U	5.0U	5.0U
aroclor-1016	1.0 ug/l	1.0U	1.0U	1.0U
aroclor-1221	1.0 ug/l	2.0U	2.0U	2.0U
aroclor-1232	2.0 ug/l	1.0U	1.0U	1.0U
aroclor-1242	1.0 ug/l	1.0U	1.0U	1.0U
aroclor-1248	1.0 ug/l	1.0U	1.0U	1.0U
aroclor-1254	1.0 ug/l	1.0U	1.0U	1.0U
aroclor-1260	1.0 ug/l	1.0U	1.0U	1.0U

Table 3
Dayton Electroplate IA Geoprobe™ Groundwater Sampling
Comprehensive Analytical Results

SAMPLE NUMBER(S)		EBMS0	EBMS1	EBMS2
DATE SAMPLED		4/10/97	4/10/97	4/10/97
TIME SAMPLED		1130	1420	1640
SAMPLE DEPTH		40 feet	40 feet	40 feet
DESCRIPTION		GP1-GW S of bldg 1	GP2-GW S of bldg 2	GP4-GW W of bldg 2
TAL METALS/CYANIDE	***CRQL***	***COMPOUND DETECTED (µg/L)***		
aluminum	200 ug/l	32800	20800	13000
antimony	60 ug/l	3.2UJ	3.2UJ	3.6J
arsenic	10 ug/l	**86.1**	48.4	46.7
barium	200 ug/l	466	410	666
beryllium	5 ug/l	1.9J	1.1J	0.75J
cadmium	5 ug/l	2.8	2.0	2.1
calcium	5000 ug/l	826000	513000	296000
chromium	10 ug/l	**285**	93.1	**144**
cobalt	50 ug/l	101	67.6	80.6
copper	25 ug/l	261	161	123
iron	100 ug/l	124000	77700	58400
lead	3 ug/l	**103J**	**65.5J**	**59.4J**
magnesium	5000 ug/l	349000	199000	126000
manganese	15 ug/l	3530	4250	5590
mercury	0.2 ug/l	0.10U	0.10U	0.10U
nickel	40 ug/l	**248**	**117**	**278**
potassium	5000 ug/l	10400	8280	8730
selenium	5 ug/l	2.4UJ	2.4UJ	3.0J
silver	10 ug/l	0.90U	0.90U	1.4
sodium	5000 ug/l	51900	50400	104000
thallium	10 ug/l	2.4U	2.4U	2.4U
vanadium	50 ug/l	83.5	48.9	35.7
zinc	20 ug/l	605	408	286
cyanide	10 ug/l	4.2J	2.1J	3.9J

TCL ANALYTE QUALIFIERS	DATA QUALIFIER DEFINITIONS
U	The analyte was analyzed for, but was not detected above the CRQL.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the CRQL. However, the CRQL is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. Compound may or may not be present.
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

TAL ANALYTE QUALIFIERS	DATA QUALIFIER DEFINITIONS
U	The analyte was analyzed for, but was not detected above the CRQL.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the CRQL. However, the CRQL is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. Compound may or may not be present.

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
VOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
chloromethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
bromomethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
vinyl chloride	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
chloroethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
methylene chloride	10 ug/kg	11	10J	6J	16	10J	13	10J
acetone	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
carbon disulfide	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,1-dichloroethene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,1-dichloroethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,2-dichloroethene (total)	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
chloroform	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,2-dichloroethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
2-butanone	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,1,1-trichloroethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
cabron tetrachloride	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
bromodichloromethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,2-dichloropropane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
cis-1,3-dichloropropene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
trichloroethene	10 ug/kg	11U	12U	13U	9J	**140**	**200**	12U
dibromochloromethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,1,2-trichloroethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
benzene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
trans-1,3-dichloropropene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
bromoform	10 ug/kg	11U	12U	13U	12U	13U	13U	12U

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
VOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
4-methyl-2-pentanone	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
2-hexanone	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
tetrachloroethene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
1,1,2,2-tetrachloroethane	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
toulene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
chlorobenzene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
ethyl benzene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
styrene	10 ug/kg	11U	12U	13U	12U	13U	13U	12U
xylene (total)	10 ug/kg	11U	12U	13U	12U	13U	13U	12U

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
SEMIVOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
phenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
bis(2-chloroethyl)ether	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2-chlorophenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
1,3-dichlorobenzene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
1,4-dichlorobenzene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
1,2-dichlorobenzene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2-methylphenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2,2-oxybis(1-chloropropane)	330 ug/kg	370UJ	380U	2100U	390U	430U	430U	400U
4-methylphenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
n-nitroso-di-n-dipropylamine	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
hexachloroethane	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
nitrobenzene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
isophorone	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2-nitrophenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2,4-dimethylphenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
bis(2-chloroethoxy)methane	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2,4-dichlorophenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
1,2,4-trichlorobenzene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
naphthalene	330 ug/kg	190J	380U	2100U	390U	430U	430U	95J
4-chloroaniline	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
hexachlorobutadiene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
4-chloro-3-methylphenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2-methylnaphthalene	330 ug/kg	160J	85J	2100U	70J	430U	430U	400U
hexachlorocyclopentadiene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2,4,6-trichlorophenol	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
SEMIVOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
2,4,5-trichlorophenol	800 ug/kg	890U	930U	5100U	940U	1000U	1000U	980U
2-chloronaphthalene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
2-nitroaniline	800 ug/kg	890UJ	130J	5100U	940U	1000U	1000U	980U
dimethylphthlate	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
acenaphthalate	330 ug/kg	210J	380U	2100U	95J	430U	430U	400U
2,6-dinitrotoluene	330 ug/kg	370U	380U	2100U	390U	**1300**	**1200**	400U
3-nitroaniline	800 ug/kg	890UJ	930U	5100U	940U	1000U	1000U	980U
acenaphthene	330 ug/kg	200J	380U	2100U	390U	430U	93J	400U
2,4-dinitrophenol	800 ug/kg	890U	930U	5100U	940U	1000U	1000U	980U
4-nitrophenol	800 ug/kg	890UJ	930U	5100U	940U	1000U	1000U	980U
dibenzofuran	330 ug/kg	**420**	380U	2100U	390U	430U	430U	75J
2,4-dinitrotoluene	330 ug/kg	370U	380U	2100U	390U	**2800**	**2700**	400U
diethyolphthalate	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
4-chlorophenyl-phenyl ether	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
fluorene	330 ug/kg	**500**	380U	2100U	390U	430U	140J	82J
4-nitroaniline	800 ug/kg	890U	930U	5100U	940U	1000U	1000U	980U
4,6-dinitro-2-mehylphenol	800 ug/kg	890U	930U	5100U	940U	1000U	1000U	980U
n-nitrosodiphenylamine	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
4-bromophenyl-phenyl ether	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
hexachlorobenzene	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
pentachlorophenol	800 ug/kg	890U	930U	5100U	940U	1000U	1000U	980U
phenanthrene	330 ug/kg	**6100**	350J	2100U	440	150J	2500	1500
anthracene	330 ug/kg	**770**	64J	2100U	98J	18J	**480**	150J
carbazole	330 ug/kg	530	380U	2100U	390U	430U	350J	180J
di-n-butylphthalate	330 ug/kg	370U	98J	2100U	73J	65J	430U	400U

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
SEMIVOLATILE ORGANIC COMPOUNDS	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
fluoranthene	330 ug/kg	5500	630	2100U	1100	190J	2900	2100
pyrene	330 ug/kg	**5800J**	500	250J	900	200J	2300	1800
butylbenzylphthalate	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
3,3-dichlorobenzidine	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
benzo(a)anthracene	330 ug/kg	2600	310J	2100U	740	140J	1500	910
chrysene	330 ug/kg	3100	430	2100U	940	210J	1900	1300
bis(2-ethylhexyl)phthalate	330 ug/kg	130J	**2000**	**1400J**	130J	280J	**320J**	91J
di-n-octylphthalate	330 ug/kg	370U	380U	2100U	390U	430U	430U	400U
benzo(b)fluoranthene	330 ug/kg	1800	390	420J	820	150J	1100	920
benzo(k)fluoranthene	330 ug/kg	1900	330J	240J	820	150J	1300	1000
benzo(a)pyrene	330 ug/kg	2300	350J	1200J	790	130J	1300	890
indeno(1,2,3-cd)pyrene	330 ug/kg	1800	330J	1900J	650	98J	780	710
dibenzo(a,h)anthracene	330 ug/kg	660	140J	**1200J**	260J	430U	360J	290J
benzo(g,h,i)perylene	330 ug/kg	2000	360J	**13000**	790	110J	780	760

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
PESTICIDES/PCBs	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
alpha-BHC	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
beta-BHC	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
delta-BHC	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
gamma-BHC (Lindane)	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
heptachlor	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
aldrin	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
heptachlor epoxide	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
endosulfan I	1.7 ug/kg	**44**	9.9U	11R	**15**	2.2R	2.2R	10U
dieldrin	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3R	20U
4,4-DDE	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3R	180
endrin	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3R	20U
endosulfan II	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3R	20U
4,4-DDD	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3R	20U
endosulfan sulfate	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3R	20U
4,4-DDT	3.3 ug/kg	18U	19U	21R	37	4.3R	4.7J	67
methoxychlor	17.0 ug/kg	94U	99U	110R	99U	22R	22R	100U
endrin ketone	3.3 ug/kg	18U	19U	21R	19U	4.3R	5.1J	20U
endrin aldehyde	3.3 ug/kg	18U	19U	21R	19U	4.3R	4.3	20U
alpha-chlordane	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
gamma-chlordane	1.7 ug/kg	9.4U	9.9U	11R	9.9U	2.2R	2.2R	10U
toxaphene	170.0 ug/kg	940U	990U	1100R	990U	220R	220R	1000U
aroclor-1016	33.0 ug/kg	180U	190U	210R	190U	43R	43R	200U
aroclor-1221	33.0 ug/kg	370U	390U	430R	390U	88R	87R	410U
aroclor-1232	67.0 ug/kg	180U	190U	210R	190U	43R	43R	200U
aroclor-1242	33.0 ug/kg	180U	190U	210R	190U	43R	43R	200U

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
PESTICIDES/PCBs	***CRQL***	***COMPOUND DETECTED (µg/kg)***						
aroclor-1248	33.0 ug/kg	180U	190U	210R	190U	43R	43R	200U
aroclor-1254	33.0 ug/kg	180U	150J	210R	190U	43R	43R	200U
aroclor-1260	33.0 ug/kg	180U	190U	210R	190U	43R	43R	200U
TAL METALS/CYANIDE	***CRDL***	***COMPOUND DETECTED (µg/kg)***						
aluminum	40 mg/kg	5250	3760	21300	4730	12800	13200	7980
antimony	12 mg/kg	0.72UJ	2.1J	0.77UJ	1.1J	1.5J	1.8J	0.78UJ
arsenic	2 mg/kg	11.6J	7.4J	4.0J	14.6J	**32.0J**	**33.2J**	8.2J
barium	40 mg/kg	298J	125J	199J	184J	**368J**	**386J**	121J
beryllium	1 mg/kg	1.2J	0.33J	0.88J	0.78J	**2.6J**	**2.7J**	0.82J
cadmium	1 mg/kg	**5.4J**	**32.3J**	**30.8J**	1.9J	1.8J	2.0J	1.2J
calcium	1000 mg/kg	49700	77800	**97400**	**94300**	23000	22800	28400
chromium	2 mg/kg	17.8	**3610J**	**936**	20	28.2	24	20.2
cobalt	10 mg/kg	5.8	4.4	3.8	4.5	6.1	5.5	6.9
copper	5 mg/kg	79.4J	**574J**	**215J**	96.9J	**4400J**	**10600J**	60.0J
iron	20 mg/kg	**45100J**	16200J	14500J	22900J	27700J	16200J	14900J
lead	0.6 mg/kg	224J	147J	95.8J	274J	230J	248J	135J
magnesium	1000 mg/kg	21700	33900	**44500**	**45800**	7780	6870	11800
manganese	3 mg/kg	417J	368J	251J	405J	350J	314J	744J
merury	0.1 mg/kg	0.09	0.22	0.22	0.24	**0.87**	0.45	0.29
nickel	8 mg/kg	26.1	**1920**	**1460**	33.8	26.9	29.5	25.9
potassium	1000 mg/kg	1010J	649J	**8720J**	849J	891J	907J	1070J
selenium	1 mg/kg	0.54U	0.55U	0.58U	0.71	1.1	0.93	0.78
silver	2 mg/kg	0.6	3.5	1.3	0.38	0.92	1.1	0.26
sodium	1000 mg/kg	**403**	51.9U	**916**	361	**662**	**649**	123

Table 4
Dayton Electroplate IA Soil Sampling
Comprehensive Analytical Results

SAMPLE NUMBERS		EBMR0	EBMR1	EBMR2	EBMR3	EBMR4	EBMR5	EBMR6
DATE SAMPLE COLLECTED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLE COLLECTED		1010	1000	1034	1110	1330	1330	1130
SAMPLE DEPTH		0 - 12"	0 - 4"	3 - 8"	6 - 12"	6 - 10"	6 - 10"	3 - 6"
DESCRIPTION		GP1, SW of manhole 1	bldg 1 loading dock, by fence	loading dock door	S corner bldg 1	SE corner bldg 2	SE corner bldg 2(dup)	back-ground
TAL METALS/CYANIDE	*CRDL*	*COMPOUND DETECTED (µg/kg)*						
thallium	2 mg/kg	0.54U	0.55U	0.58U	0.55U	0.60U	0.61U	0.58U
vanadium	10 mg/kg	17	10.9	24.2	16.1	35.5	36.4	22.4
zinc	4 mg/kg	199J	**18500J**	**21100J**	**434J**	**2700J**	**4730J**	181J
cyanide	2 mg/kg	**2.8**	**208**	**320**	**3.8**	1.9	**2.5**	0.37

TCL ANALYTE QUALIFIERS	DATA QUALIFIER DEFINITIONS
U	The analyte was analyzed for, but was not detected above the CRQL.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the CRQL. However, the CRQL is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tenative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. Compound may or may not be present.
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

TAL ANALYTE QUALIFIERS	DATA QUALIFIER DEFINITIONS
U	The analyte was analyzed for, but was not detected above the CRQL.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the CRQL. However, the CRQL is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. Compound may or may not be present.

Table 5
USEPA TCLP Metals Soil Sampling
Analytical Results

SAMPLE NUMBER		DE1AIA	DE1BIA	DE2AIA	DE2BIA	DE3AIA	DE3BIA
DATE SAMPLED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLED							
DESCRIPTION							
TCLP METALS	***EQL. (mg/l)***	***CONCENTRATION DETECTED (mg/l)***					
cadmium	0.025	0.257	ND	0.375	0.429	ND	ND
chromium	0.050	0.245	0.557	ND	0.103	ND	ND
lead	0.25	ND	ND	ND	ND	ND	ND
SAMPLE NUMBER		DE4AIA	DE4BIA	DE5AIA	DE2BIA	DE3AIA	DE3BIA
DATE SAMPLE		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLED							
DESCRIPTION							
TCLP METALS	***EQL. (mg/l)***	***CONCENTRATION DETECTED (mg/l)***					
cadmium	0.025	ND	0.114	ND	ND	ND	ND
chromium	0.050	ND	ND	ND	ND	ND	ND
lead	0.25	ND	0.355	ND	ND	ND	ND
SAMPLE NUMBER		DE7AIA	DE7BIA	DEGP1A	DEGP1B	DEGP2A	DEGP2B
DATE SAMPLED		4/10/97	4/10/97	4/10/97	4/10/97	4/10/97	4/10/97
TIME SAMPLED							
DESCRIPTION							
TCLP METALS	***EQL. (mg/l)***	***CONCENTRATION DETECTED (mg/l)***					
cadmium	0.025	ND	ND	ND	ND	0.025	ND
chromium	0.050	ND	ND	ND	ND	ND	ND
lead	0.25	ND	ND	ND	ND	1.31	ND

Table 5
USEPA TCLP Metals Soil Sampling
Analytical Results

SAMPLE NUMBER		DEGP3A	DEGP3B	DEGP4A	DEGP4B		
DATE SAMPLED		4/10/97	4/10/97	4/10/97	4/10/97		
TIME SAMPLED							
DESCRIPTION							
TCLP METALS	***EQL. (mg/l)***	***CONCENTRATION DETECTED (mg/l)***					
cadmium	0.025	ND	ND	0.055	0.026		
chromium	0.050	ND	ND	ND	ND		
lead	0.25	ND	ND	ND	ND		

ND = not detected

Table 6
OEPA Manhole 1 Soil Sampling
Analytical results

SAMPLE NUMBER		1A	2A	3A
DATE SAMPLED		6/15/97	6/15/97	6/15/97
TIME SAMPLED		0930 to 1030	0930 to 1030	0930 to 1030
DESCRIPTION		bottom of manhole	bottom of manhole	bottom of manhole
CYANIDE/METALS	***Detection Limit (ug/g)***	***CONCENTRATIONS DETECTED (ug/g)***		
cadmium	1.0	31.1	143	70.1
chromium	2.0	513	469	7990
cyanide	2.0	93.9	32.6	609
lead	0.6	100	62	2900
zinc	4.0	4110	3200	27,800

APPENDIX A
INTEGRATED ASSESSMENT
ANALYTICAL RESULTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

1997

DATE: May 6, 1997

SUBJECT: Review of Data
Received for Review on May 2, 1997

FROM: Stephen L. Ostrodka, Chief (SRT-4J) / L.F.
Superfund Technical Support Section

TO: Data User: OEPA

We have reviewed the data by CADRE for the following case:

SITE NAME: Dayton Electroplate

CASE NUMBER: 25388 SDG NUMBER: MEATL0

Number and Type of Samples: 7 SOIL

Sample Numbers: MEATL0-6

Laboratory: Sentinel Hrs. for Review: 7.5 +0.5

Following are our findings:

All data are usable with the qualifications described in the attached narrative.

L. Finkelberg
05-09-97

CC: Cecilia Luckett
Region 5 TPO
Mail Code: SM-5J

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATL0
Laboratory: Sentinel

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

7 soil samples, numbered MEATL0 through MEATL6 were collected on April 10, 1997. The lab received the samples on April 12, 1997 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM04.0 analysis procedure.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By: J. Harry
Date: 5-6-97

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATL0
Laboratory: Sentinel

1. HOLDING TIME:

HOLDING TIME CRITERIA

INORGANICS

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

No problems were found for this qualification.

2. CALIBRATIONS:

CALIBRATION CRITERIA

INORGANICS

Percent Recovery Limits

	--- Primary ---		-- Expanded ---	
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

3. BLANKS:

LABORATORY BLANKS CRITERIA

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.

Reviewed By: J. Gang 5-6-97
Date:

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATL0
Laboratory: Sentinel

MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

The following results are affected by possible blank contamination and are estimated "J":

Antimony
MEATL1, MEATL3, MEATL4, MEATL5

Beryllium
MEATL0, MEATL1, MEATL2, MEATL3, MEATL4, MEATL5, MEATL6

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

INORGANICS

Percent Recovery Limits

Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-267: The following inorganic samples are associated with a matrix spike recovery which is high (>125%)
Hits are biased high and are qualified "J".
Non-detects are acceptable.

Arsenic
MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %)indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Antimony
MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

Barium
MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

Cadmium

Reviewed By: J. Gary 5-6-97
Date:

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATL0
Laboratory: Sentinel

MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

Copper
MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

Zinc
MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

DC-269: The following inorganic samples are associated with a matrix spike recovery which is extremely low (<30 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "R".

Manganese
MEATL0, MEATL1, MEATL2, MEATL3
MEATL4, MEATL5, MEATL6

No problem was found with the laboratory control sample.

5. LABORATORY AND FIELD DUPLICATE

DC-256: The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) criteria.
Hits and non-detects are qualified "J".

Iron
MEATL0, MEATL1, MEATL2, MEATL3, MEATL4, MEATL5
MEATL6

Lead
MEATL0, MEATL1, MEATL2, MEATL3, MEATL4
MEATL5, MEATL6

DC-330: The following inorganic samples are associated with duplicate results which did not meet absolute difference criteria.
Hits and non-detects are qualified "J".

Cadmium
MEATL0, MEATL1, MEATL2, MEATL3, MEATL4
MEATL5, MEATL6

6. ICP ANALYSIS

Reviewed By: J. Gary 5-6-97
Date:

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATL0
Laboratory: Sentinel

DC-295: The following inorganic samples are associated with an ICP serial dilution percent difference which is not in control. The serial dilution result is greater than the sample result, indicating a potential negative interference. The data must be qualified using professional judgement. All associated data are estimated "J".

Potassium
MEATL0, MEATL1, MEATL2, MEATL3, MEATL4
MEATL5, MEATL6

7. GFAA ANALYSIS

No GFAA analyses were performed on these samples.

8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: J. Gary
Date: 5-6-97

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

FILE NAME: MEATLO DATE: 05/05/97 TIME: 07:59

CRITERIA FILE: FGDRI94

DATA

Original	X Qualified

QUALIFICATIONS PERFORMED

	Quantitation Limit		CRDL Standards
	Percent Moisture	X	ICS
X	Holding Time	X	LCS
X	Calibrations	X	Duplicates
X	Matrix Spikes		Furnace AA QC
	IPC	X	ICP Serial Dilutions
	Internal Standards	X	Sample Results Verification
	SMC/Surrogates	X	Laboratory Blanks
	System Performance		Field QC
	Sample Cleanup		

PRINT NON-DETECTS

X Yes	No

PRINT REJECTED RESULTS

X Yes	No

TAL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: MEATL0

Site: Dayton Electroplate
Laboratory: SENTINEL, INC.

EPA SAMPLE NUMBER:	MEATL0		MEATL1		MEATL2		MEATL3		MEATL4	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW	
DILUTION FACTOR:										
PERCENT SOLID:	86.1		84.6		81.9		86.8		76.5	
INORG										
Aluminum	5250		3760		21300		4730		12800	
Antimony	0.72	UJ	2.1	J	0.77	UJ	1.1	J	1.5	J
Arsenic	11.6	J	7.4	J	4.0	J	14.6	J	32.0	J
Barium	298	J	125	J	199	J	184	J	368	J
Beryllium	1.2	J	0.33	J	0.88	J	0.78	J	2.6	J
Cadmium	5.4	J	32.3	J	30.8	J	1.9	J	1.8	J
Calcium	49700		77800		97400		94300		23000	
Chromium	17.8		3610	J	936		20.0		28.2	
Cobalt	5.8		4.4		3.8		4.5		6.1	
Copper	79.4	J	574	J	215	J	96.9	J	4400	J
Iron	45100	J	16200	J	14500	J	22900	J	27700	J
Lead	224	J	147	J	95.8	J	274	J	230	J
Magnesium	21700		33900		44500		45800		7780	
Manganese	417	J	368	J	251	J	405	J	350	J
Mercury	0.09		0.22		0.22		0.24		0.87	
Nickel	26.1		1920		1460		33.8		26.9	
Potassium	1010	J	649	J	8720	J	849	J	891	J
Selenium	0.54	U	0.55	U	0.58	U	0.71		1.1	
Silver	0.60		3.5		1.3		0.38		0.92	
Sodium	403		51.9	U	916		361		662	
Thallium	0.54	U	0.55	U	0.58	U	0.55	U	0.60	U
Vanadium	17.0		10.9		24.2		16.1		35.5	
Zinc	199	J	18500	J	21100	J	434	J	2700	J
Cyanide	2.8		208		320		3.8		1.9	

FILE NAME: MEATL0 DATE: 05/05/97 TIME: 07:59 CADRE 2.3

Water units are reported in ug/L.
Soil units are reported in mg/Kg.

TAL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: MEATL0

Site: Dayton Electroplate
Laboratory: SENTINEL, INC.

EPA SAMPLE NUMBER:	MEATL5		MEATL6				
REGIONAL SAMPLE NUMBER:							
SAMPLE LOCATION:							
SAMPLE TYPE:	Routine Sample		Routine Sample				
MATRIX/ANALYSIS:	Soil/LOW		Soil/LOW				
DILUTION FACTOR:							
PERCENT SOLID:	77.7		82.5				
INORG							
Aluminum	13200		7980				
Antimony	1.8	J	0.78	UJ			
Arsenic	33.2	J	8.2	J			
Barium	386	J	121	J			
Beryllium	2.7	J	0.82	J			
Cadmium	2.0	J	1.2	J			
Calcium	22800		28400				
Chromium	24.0		20.2				
Cobalt	5.5		6.9				
Copper	10600	J	60.0	J			
Iron	16200	J	14900	J			
Lead	248	J	135	J			
Magnesium	6870		11800				
Manganese	314	J	744	J			
Mercury	0.45		0.29				
Nickel	29.5		25.9				
Potassium	907	J	1070	J			
Selenium	0.93		0.78				
Silver	1.1		0.26				
Sodium	649		123				
Thallium	0.61	U	0.58	U			
Vanadium	36.4		22.4				
Zinc	4730	J	181	J			
Cyanide	2.5		0.37				

FILE NAME: MEATL0 DATE: 05/05/97 TIME: 07:59 CADRE 2.3

Water units are reported in ug/L.
Soil units are reported in mg/Kg.

QC EXCEPTION SUMMARY REPORT

ASE\SAS#: 25388
ATA SET:
AB QC #
ATE: 5-6-97

SITE: Dayton Electroplate
LAB: Sentinel
REVIEWED BY: J. Ganz

MATRIX: Soil
CONC: Low

WATER SAMPLE SPK:
WATER SAMPLE DUP:
SOIL SAMPLE SPK:
SOIL SAMPLE DUP:

FORM #		FORM 1	FORM 2	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 8	FORM 9	FORM 10	FORM 11	FORM 12	FORM 13	FORM 14	FIELD	FIELD	FIELD	FIELD	COMMENTS
ELEMENT	HOLD TIME	INITIAL CALIB	CONTIN CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICS SB	SOIL SPIKE SB	SOIL DUP SPD	ICS AQ	ICS SOIL	INITIAL DILUTION AQUEOUS	INITIAL DILUTION SOIL	AQ DUP SB	AQ SPIKE SB	BLANK	DUP SPD	BLANK	DUP SPD	
ALUMINUM																				
ANTIMONY				4.5				72.8												
ARSENIC								126.3												
BARIUM								67.1												
BERYLLIUM				2.6																
CADMIUM								62.9	>2xCCOL											
CALCIUM																				
CHROMIUM																				
COBALT																				
COPPER								52.0												
IRON									44.4											
LEAD									52.8											
MAGNESIUM																				
MANGANESE								-11.8												
MERCURY																				
NICKEL																				
POTASSIUM													10.8							
SELENIUM																				
SILVER																				
SODIUM																				
THALLIUM																				
TIN																				
VANADIUM																				
ZINC								37.4												
CYANIDE																				

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

SOW No.: ILM04.0

EPA Sample No.	Lab Sample ID.
MEATL0	05579S
MEATL0D	05579S2
MEATL0S	05579DS
MEATL1	05580S
MEATL2	05581S
MEATL3	05582S
MEATL4	05583S
MEATL5	05584S
MEATL6	05585S

RECEIVED
MAY 2 1997
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied? Yes/No YES
Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: The concentration for potassium is estimated due to possible sample matrix interferences.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: for Name: MELVIN V. KILGORE, JR.

Date: 4/28/97 Title: LABORATORY DIRECTOR

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL0

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05579S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 86.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5250			P
7440-36-0	Antimony	0.71	U	N	P
7440-38-2	Arsenic	11.6		N	P
7440-39-3	Barium	298		N	P
7440-41-7	Beryllium	1.2			P
7440-43-9	Cadmium	5.4		N*	P
7440-70-2	Calcium	49700		*	P
7440-47-3	Chromium	17.8		*	P
7440-48-4	Cobalt	5.8	B		P
7440-50-8	Copper	79.4		N*	P
7439-89-6	Iron	45100		*	P
7439-92-1	Lead	224		*	P
7439-95-4	Magnesium	21700			P
7439-96-5	Manganese	417		N	P
7439-97-6	Mercury	0.09	B		CV
7440-02-0	Nickel	26.1		*	P
7440-09-7	Potassium	1010	B	E	P
7782-49-2	Selenium	0.54	U		P
7440-22-4	Silver	0.60	B		P
7440-23-5	Sodium	403	B		P
7440-28-0	Thallium	0.54	U		P
7440-62-2	Vanadium	17.0			P
7440-66-6	Zinc	199		N*	P
	Cyanide	2.8			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

2

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL1

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05580S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 84.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3760			P
7440-36-0	Antimony	2.1	B	N	P
7440-38-2	Arsenic	7.4		N	P
7440-39-3	Barium	125		N	P
7440-41-7	Beryllium	0.33	B		P
7440-43-9	Cadmium	32.3		N*	P
7440-70-2	Calcium	77800		*	P
7440-47-3	Chromium	3610		*	P
7440-48-4	Cobalt	4.4	B		P
7440-50-8	Copper	574		N*	P
7439-89-6	Iron	16200		*	P
7439-92-1	Lead	147		*	P
7439-95-4	Magnesium	33900			P
7439-96-5	Manganese	368		N	P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	1920		*	P
7440-09-7	Potassium	649	B	E	P
7782-49-2	Selenium	0.55	U		P
7440-22-4	Silver	3.5			P
7440-23-5	Sodium	51.9	U		P
7440-28-0	Thallium	0.55	U		P
7440-62-2	Vanadium	10.9	B		P
7440-66-6	Zinc	18500		N*	P
	Cyanide	208			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL2

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05581S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 81.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21300			P
7440-36-0	Antimony	0.77	U	N	P
7440-38-2	Arsenic	4.0		N	P
7440-39-3	Barium	199		N	P
7440-41-7	Beryllium	0.88	B		P
7440-43-9	Cadmium	30.8		N*	P
7440-70-2	Calcium	97400		*	P
7440-47-3	Chromium	936		*	P
7440-48-4	Cobalt	3.7	B		P
7440-50-8	Copper	215		N*	P
7439-89-6	Iron	14500		*	P
7439-92-1	Lead	95.8		*	P
7439-95-4	Magnesium	44500			P
7439-96-5	Manganese	251		N	P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	1460		*	P
7440-09-7	Potassium	8720		E	P
7782-49-2	Selenium	0.58	U		P
7440-22-4	Silver	1.3	B		P
7440-23-5	Sodium	916	B		P
7440-28-0	Thallium	0.58	U		P
7440-62-2	Vanadium	24.2			P
7440-66-6	Zinc	21100		N*	P
	Cyanide	320			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL3

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05582S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 86.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4730			P
7440-36-0	Antimony	1.1	B	N	P
7440-38-2	Arsenic	14.6		N	P
7440-39-3	Barium	184		N	P
7440-41-7	Beryllium	0.78	B		P
7440-43-9	Cadmium	1.9		N*	P
7440-70-2	Calcium	94300		*	P
7440-47-3	Chromium	20.0		*	P
7440-48-4	Cobalt	4.5	B		P
7440-50-8	Copper	96.9		N*	P
7439-89-6	Iron	22900		*	P
7439-92-1	Lead	274		*	P
7439-95-4	Magnesium	45800			P
7439-96-5	Manganese	405		N	P
7439-97-6	Mercury	0.24			CV
7440-02-0	Nickel	33.8		*	P
7440-09-7	Potassium	849	B	E	P
7782-49-2	Selenium	0.71	B		P
7440-22-4	Silver	0.38	B		P
7440-23-5	Sodium	361	B		P
7440-28-0	Thallium	0.55	U		P
7440-62-2	Vanadium	16.1			P
7440-66-6	Zinc	434		N*	P
	Cyanide	3.8			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL4

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05583S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 76.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12800			P
7440-36-0	Antimony	1.5	B	N	P
7440-38-2	Arsenic	32.0		N	P
7440-39-3	Barium	368		N	P
7440-41-7	Beryllium	2.6			P
7440-43-9	Cadmium	1.8		N*	P
7440-70-2	Calcium	23000		*	P
7440-47-3	Chromium	28.2		*	P
7440-48-4	Cobalt	6.1	B		P
7440-50-8	Copper	4400		N*	P
7439-89-6	Iron	27700		*	P
7439-92-1	Lead	230		*	P
7439-95-4	Magnesium	7790			P
7439-96-5	Manganese	350		N	P
7439-97-6	Mercury	0.87			CV
7440-02-0	Nickel	26.9		*	P
7440-09-7	Potassium	891	B	E	P
7782-49-2	Selenium	1.1	B		P
7440-22-4	Silver	0.92	B		P
7440-23-5	Sodium	662	B		P
7440-28-0	Thallium	0.60	U		P
7440-62-2	Vanadium	35.5			P
7440-66-6	Zinc	2700		N*	P
	Cyanide	1.9			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL5

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05584S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 77.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13200			P
7440-36-0	Antimony	1.8	B	N	P
7440-38-2	Arsenic	33.2		N	P
7440-39-3	Barium	386		N	P
7440-41-7	Beryllium	2.7			P
7440-43-9	Cadmium	2.0		N*	P
7440-70-2	Calcium	22800		*	P
7440-47-3	Chromium	24.0		*	P
7440-48-4	Cobalt	5.5	B		P
7440-50-8	Copper	10600		N*	P
7439-89-6	Iron	16200		*	P
7439-92-1	Lead	248		*	P
7439-95-4	Magnesium	6870			P
7439-96-5	Manganese	314		N	P
7439-97-6	Mercury	0.45			CV
7440-02-0	Nickel	29.5		*	P
7440-09-7	Potassium	907	B	E	P
7782-49-2	Selenium	0.93	B		P
7440-22-4	Silver	1.1	B		P
7440-23-5	Sodium	649	B		P
7440-28-0	Thallium	0.61	U		P
7440-62-2	Vanadium	36.4			P
7440-66-6	Zinc	4730		N*	P
	Cyanide	2.5			CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATL6

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Lab Sample ID: 05585S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 82.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7980			P
7440-36-0	Antimony	0.78	U	N	P
7440-38-2	Arsenic	8.2		N	P
7440-39-3	Barium	121		N	P
7440-41-7	Beryllium	0.82	B		P
7440-43-9	Cadmium	1.2		N*	P
7440-70-2	Calcium	28400		*	P
7440-47-3	Chromium	20.2		*	P
7440-48-4	Cobalt	6.9	B		P
7440-50-8	Copper	60.0		N*	P
7439-89-6	Iron	14900		*	P
7439-92-1	Lead	135		*	P
7439-95-4	Magnesium	11800			P
7439-96-5	Manganese	744		N	P
7439-97-6	Mercury	0.29			CV
7440-02-0	Nickel	25.9		*	P
7440-09-7	Potassium	1070	B	E	P
7782-49-2	Selenium	0.78	B		P
7440-22-4	Silver	0.26	B		P
7440-23-5	Sodium	123	B		P
7440-28-0	Thallium	0.58	U		P
7440-62-2	Vanadium	22.4			P
7440-66-6	Zinc	181		N*	P
	Cyanide	0.37	B		CA

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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BLANKS

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	-23.0	B	16.8	U	-20.4	B	-21.1	B	-4.018	B	P
Antimony	4.5	B	3.2	U	3.2	U	3.2	U	0.640	U	P
Arsenic	2.1	U	2.1	U	2.1	U	2.1	U	0.420	U	P
Barium	0.8	U	1.4	B	0.8	U	0.8	U	0.160	U	P
Beryllium	0.1	U	0.1	U	0.1	U	0.1	U	0.020	U	P
Cadmium	1.2	U	1.2	U	1.2	U	1.2	U	0.240	U	P
Calcium	-81.2	B	-44.2	B	-74.2	B	-71.3	B	-16.381	B	P
Chromium	4.7	U	4.7	U	4.7	U	4.7	U	0.940	U	P
Cobalt	1.6	U	1.6	U	1.6	U	1.6	U	0.320	U	P
Copper	2.5	U	2.5	U	2.5	U	2.5	U	0.500	U	P
Iron	22.9	U	22.9	U	22.9	U	22.9	U	4.580	U	P
Lead	1.7	B	1.4	U	1.6	B	1.4	U	0.280	U	P
Magnesium	58.9	U	75.4	B	58.9	U	58.9	U	11.780	U	P
Manganese	1.7	U	1.7	U	1.7	U	1.7	U	0.340	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.050	U	CV
Nickel	5.1	U	5.1	U	5.1	U	5.1	U	1.020	U	P
Potassium	20.8	U	20.8	U	20.8	U	28.4	B	4.160	U	P
Selenium	2.4	U	2.4	U	2.4	U	2.4	U	0.480	U	P
Silver	0.9	U	0.9	U	0.9	U	0.9	U	0.180	U	P
Sodium	226.0	U	226.0	U	226.0	U	226.0	U	45.200	U	P
Thallium	2.4	U	2.4	U	2.4	U	2.4	U	0.480	U	P
Vanadium	2.7	U	2.7	U	2.7	U	2.7	U	0.540	U	P
Zinc	10.3	U	10.3	U	10.3	U	19.4	B	2.060	U	P
Cyanide	0.7	U	0.7	U	0.7	U	0.7	U	0.035	U	CA

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BLANKS

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			-21.4	B	-54.6	B					P
Antimony			3.2	U	3.2	U					P
Arsenic			2.1	U	3.2	B					P
Barium			0.8	U	0.8	U					P
Beryllium			0.1	U	2.6	B					P
Cadmium			1.2	U	1.2	U					P
Calcium			-79.5	B	-87.2	B					P
Chromium			4.7	U	4.7	U					P
Cobalt			1.6	U	1.6	U					P
Copper			2.5	U	-8.8	B					P
Iron			22.9	U	22.9	U					P
Lead			1.4	U	2.0	B					P
Magnesium			58.9	U	58.9	U					P
Manganese			1.7	U	1.7	U					P
Mercury											NR
Nickel			5.1	U	5.1	U					P
Potassium			20.8	U	73.1	B					P
Selenium			2.4	U	2.4	U					P
Silver			0.9	U	0.9	U					P
Sodium			226.0	U	226.0	U					P
Thallium			2.4	U	2.4	U					P
Vanadium			2.7	U	2.7	U					P
Zinc			10.3	U	10.3	U					P
Cyanide	0.7	U	0.7	U	0.7	U					CA

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BLANKS

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.1	U	2.1	U	2.1	U					P
Barium	0.8	U	0.9	B	1.2	B					P
Beryllium											NR
Cadmium	1.2	U	1.2	U	1.2	U					P
Calcium											NR
Chromium											NR
Cobalt											NR
Copper	2.5	U	2.5	U	2.5	U					P
Iron											NR
Lead											NR
Magnesium											NR
Manganese	1.7	U	1.7	U	1.7	U					P
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc	10.3	U	10.3	U	10.3	U					P
Cyanide											NR

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SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEATL0S

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 86.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	80.5586		0.7147	U	110.61	72.8	N	P
Arsenic	75-125	22.7448		11.5635		8.85	126.3	N	P
Barium	75-125	595.3385		298.4707		442.45	67.1	N	P
Beryllium	75-125	11.6905		1.1617		11.06	95.2		P
Cadmium	75-125	12.3648		5.4027		11.06	62.9	N	P
Calcium									NR
Chromium	75-125	58.9348		17.7816		44.25	93.0		P
Cobalt	75-125	111.4199		5.8257	B	110.61	95.5		P
Copper	75-125	108.2113		79.4430		55.31	52.0	N	P
Iron									NR
Lead		199.0235		224.3708		4.42	-573.5		P
Magnesium									NR
Manganese	75-125	403.6606		416.6642		110.61	-11.8	N	P
Mercury	75-125	0.6333		0.0906	B	0.55	98.7		CV
Nickel	75-125	135.0514		26.0929		110.61	98.5		P
Potassium									NR
Selenium	75-125	2.6640		0.5360	U	2.21	120.5		P
Silver	75-125	10.0844		0.5964	B	11.06	85.8		P
Sodium									NR
Thallium	75-125	9.7234		0.5360	U	11.06	87.9		P
Vanadium	75-125	128.4254		17.0274		110.61	100.7		P
Zinc	75-125	240.8265		199.4432		110.61	37.4	N	P
Cyanide	75-125	7.2543		2.7947		5.75	77.6		CA

Comments:

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POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEATL0A

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		504.13		3.20	U	120.0	420.1		P
Arsenic		142.33		51.77		103.6	87.4		P
Barium		3837.94		1336.31		2672.6	93.6		P
Beryllium									NR
Cadmium		66.74		24.19		48.4	87.9		P
Calcium									NR
Chromium									NR
Cobalt									NR
Copper		1056.37		355.68		711.4	98.5		P
Iron									NR
Lead									NR
Magnesium									NR
Manganese		5387.16		1865.49		3731.0	94.4		P
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc		2519.39		892.95		1785.9	91.1		P
Cyanide									NR

Comments:

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DUPLICATES

EPA SAMPLE NO.

MEATL0D

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 86.1 % Solids for Duplicate: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		5250.6361		5496.0946		4.6		P
Antimony		0.7147	U	0.6819	U			P
Arsenic		11.5635		12.6612		9.1		P
Barium		298.4707		245.0931		19.6		P
Beryllium	1.1	1.1617		0.9812	B	16.8		P
Cadmium	1.1	5.4027		2.0644		89.4	*	P
Calcium		49749.6726		61262.2381		20.7	*	P
Chromium		17.7816		23.1568		26.3	*	P
Cobalt		5.8257	B	4.6865	B	21.7		P
Copper		79.4430		59.4679		28.8	*	P
Iron		45121.6649		28732.5983		44.4	*	P
Lead		224.3708		130.6055		52.8	*	P
Magnesium		21669.6953		23798.0547		9.4		P
Manganese		416.6642		377.4137		9.9		P
Mercury		0.0906	B	0.1018	B	11.6		CV
Nickel	8.9	26.0929		37.5716		36.1	*	P
Potassium		1009.4939	B	925.5504	B	8.7		P
Selenium		0.5360	U	0.7608	B	200.0		P
Silver		0.5964	B	0.9262	B	43.3		P
Sodium		402.6173	B	331.9667	B	19.2		P
Thallium		0.5360	U	0.5115	U			P
Vanadium	11.2	17.0274		18.1886		6.6		P
Zinc		199.4432		155.3726		24.8	*	P
Cyanide	0.6	2.7947		2.2790		20.3		CA

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ICP SERIAL DILUTIONS

EPA SAMPLE NO.

MEATL0L

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Aluminum	23508.15		21280.66		9.5		P
Antimony	3.20	U	16.00	U			P
Arsenic	51.77		59.87		15.6		P
Barium	1336.31		1349.82		1.0		P
Beryllium	5.20		5.30	B	1.9		P
Cadmium	24.19		24.86	B	2.8		P
Calcium	222739.23		227191.32		2.0		P
Chromium	79.61		83.62		5.0		P
Cobalt	26.08	B	24.97	B	4.3		P
Copper	355.68		377.42		6.1		P
Iron	202018.72		206659.28		2.3		P
Lead	1004.55		1062.35		5.8		P
Magnesium	97019.56		101068.94		4.2		P
Manganese	1865.49		1911.12		2.4		P
Mercury							NR
Nickel	116.82		122.66	B	5.0		P
Potassium	4519.71	B	5007.74	B	10.8	E	P
Selenium	2.40	U	12.00	U			P
Silver	2.67	B	4.50	U	100.0		P
Sodium	1802.60	B	1542.07	B	14.5		P
Thallium	2.40	U	12.00	U			P
Vanadium	76.24		79.34	B	4.1		P
Zinc	892.95		942.72		5.6		P

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U.S. EPA - CLP

10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

ICP ID Number: P3 Date: 04/11/97

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	16.8	P
Antimony	206.80		60	3.2	P
Arsenic	189.00		10	2.1	P
Barium	493.40		200	0.8	P
Beryllium	313.00		5	0.1	P
Cadmium	226.50		5	1.2	P
Calcium	317.90		5000	32.7	P
Chromium	267.70		10	4.7	P
Cobalt	228.60		50	1.6	P
Copper	324.70		25	2.5	P
Iron	271.40		100	22.9	P
Lead	220.30		3	1.4	P
Magnesium	279.00		5000	58.9	P
Manganese	257.60		15	1.7	P
Mercury			0.2		NR
Nickel	231.60		40	5.1	P
Potassium	766.40		5000	20.8	P
Selenium	196.00		5	2.4	P
Silver	328.00		10	0.9	P
Sodium	330.20		5000	226.0	P
Thallium	190.80		10	2.4	P
Vanadium	292.40		50	2.7	P
Zinc	206.20		20	10.3	P
Cyanide			10		NR

Comments:
P3: THERMO JARRELL ASH

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U.S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

ICP ID Number: Date: 04/11/97

Flame AA ID Number: C2

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.1	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide			10		NR

Comments:
C2: BACHARACH

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U.S. EPA - CLP

10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

ICP ID Number: Date: 04/11/97

Flame AA ID Number: C1

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide	578.00		10	0.7	CA

Comments:
C1: LACHAT

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U.S. EPA - CLP

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PREPARATION LOG

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Method: P

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	04/18/97	1.02	200
MEATL0	04/18/97	1.04	200
MEATL0A	04/18/97	1.04	200
MEATL0D	04/18/97	1.09	200
MEATL0L	04/18/97	1.04	200
MEATL0S	04/18/97	1.05	200
MEATL1	04/18/97	1.03	200
MEATL2	04/18/97	1.01	200
MEATL3	04/18/97	1.01	200
MEATL4	04/18/97	1.05	200
MEATL5	04/18/97	1.02	200
MEATL6	04/18/97	1.00	200
PBS	04/18/97	1.00	200

3A

U.S. EPA - CLP

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PREPARATION LOG

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	04/24/97	0.20	100
MEATL0	04/24/97	0.20	100
MEATL0D	04/24/97	0.21	100
MEATL0S	04/24/97	0.21	100
MEATL1	04/24/97	0.21	100
MEATL2	04/24/97	0.21	100
MEATL3	04/24/97	0.20	100
MEATL4	04/24/97	0.20	100
MEATL5	04/24/97	0.21	100
MEATL6	04/24/97	0.21	100
PBS	04/24/97	0.20	100

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U.S. EPA - CLP

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PREPARATION LOG

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATL0

Method: CA

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	04/16/97	1.00	50
MEATL0	04/16/97	1.00	50
MEATL0D	04/16/97	1.00	50
MEATL0S	04/16/97	1.01	50
MEATL1	04/16/97	1.01	50
MEATL2	04/16/97	1.01	50
MEATL3	04/16/97	1.01	50
MEATL4	04/16/97	1.00	50
MEATL5	04/16/97	1.00	50
MEATL6	04/16/97	1.00	50
PBS	04/16/97	1.00	50
S100	04/16/97		50

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EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analyis)

SAS No. (if applicable): —
Case No.: 2[illegible]

1. Matrix (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Field QC
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (specify in Column A)

2. Preservative (Enter In Column D)
   1. HCl
   2. HNO3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (specify in Column D)
   N. Not preserved

2. Region No.: 5
Sampling Co.: OhioEPA
4. Date Shipped: 4-11-97
Carrier: Federal Express
6. Date Received -- Received by: 04/12/97
Sampler (Name): Diane Crosby
Airbill Number: 1677931020
Laboratory Contract Number: 68-D6-0001
Unit Price: $ 65.00
Sampler Signature: [illegible]
5. Ship To: Am. Analytical & Tech. Serv. Inc 11950 Industriplex BLVD. Baton Rouge, LA 70809-5191
ATTN: Sample Custodian
7. Transfer to:
Date Received
Received by
Contract Number
Price

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI (✓), ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MEATM0	2	L	G	2		X						5-146601-602	GP1-GW	4-10-97 11:30	EBMS0				
MEATM0	2	L	G	3			X					5-146603-604	GP1-GW	4-10-97 11:30	EBMS0				
MEATM1	2	L	G	2		X						5-146605	GP2-GW	4-10-97 1420	EBMS1				
MEATM1	2	L	G	3			X					5-146606	GP2-GW	4-10-97 1420	EBMS1				
MEATM2	2	L	G	2		X						5-146607	GP4-GW	4-10-97 1640	EBMS2				
MEATM2	2	L	G	3			X					5-146608	GP4-GW	4-10-97 1640	EBMS2				
MEATL0	5	L	G	6		X	X					5-146919	GP-1	4-10-97 10:10	EBMR0				
MEATL1	5	L	G	6		X	X					5-146923	Bldg 1, Lead OK	4-10-97 10:00	EBMR1				
MEATL2	5	L	G	6		X	X					5-146927	Dock Door	4-10-97 10:24	EBMR2				
MEATL3	5	L	G	6		X	X					5-146931	S. Corner Bldg. 1	4-10-97 11:40	EBMR3				

Shipment for Case Complete? (Y/N): Y
Page: 1 of 2
Sample(s) to be Used for Laboratory QC: MEATL0 / MEATM0
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 49609 - 49610

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Diane Crosby	4-11-97 11:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
			04/12/97 09:23		

A21-012-6 REV. 3/93

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

SAS No. (If applicable): —
Case No.: 25388

1. Matrix (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Field QC
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (specify in Column A)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaOH
   4. H_2SO_4
   5. $K_2CR_2O_7$
   6. Ice only
   7. Other (specify in Column D)
   N. Not preserved

2. Region No.: 5
Sampling Co.: Ohio EPA
4. Date Shipped: 4-11-97
Carrier: Federal Express
6. Date Received – Received by: 04/12/97
Laboratory Contract Number: 68-D6-0001
Unit Price: $66.00
Sampler (Name): Diane Crosby
Airbill Number: 1677934020
Sampler Signature: Diane Crosby
5. Ship To: Am. Analytical & Tech. Serv. Inc. 11950 Industriplex BLVD. Baton Rouge, LA 70809-5
ATTN: Sample Custodian
7. Transfer to:
Date Received
Received by
Contract Number
Price

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI (X), ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MEATL4	5	L	G	6		X	X	X				5-146935	SE corner Bldg 2	4-10-97 13:30	EBMR4				
MEATL5	5	L	G	6		X	X					5-146939	Bldg. 2	4-10-97 1330	EBMR5				
MEATL6	5	L	G	6		X	X					5-146943	BK6	4-10-97 1130	EBMR6				

TL4

Shipment for Case Complete? (Y/N): Y
Page 2 of 2
Sample(s) to be Used for Laboratory QC: MEATLØ / MEATMØ
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 49609-49610

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Diane Crosby	4-11-97 11:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
			04/12/97 09:23		

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A21-012-8 REV. 3/93

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: (1) CERCLIS No: OH

Case No: 25388 Site Name Location: Dayton Electroplate

Contractor or EPA Lab: Sentinel Data User: OEPA

No. of Samples: 7 Date Sampled or Data Received: 5-2-97

Have Chain-of-Custody records been received? Yes ✓ No ___
Have traffic reports or packing lists been received? Yes ✓ No ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ___
If no, which traffic report or packing list numbers are missing?

___ ___ ___ ___

___ ___ ___ ___

Are basic data forms in? Yes ✓ No ___
No of samples claimed: 7 No. of samples received: 7

Received by: Lynette Burnett Date: 5-2-97

Received by LSSS: Lynette Burnett Date: 5-2-97

Review started: 5-6-97 Reviewer Signature: J. Gary

Total time spent on review: 7.5 +0.5 Date review completed: 5-6-95

Copied by: Lynette Burnett Date: 5-13-97

Mailed to user by: Lynette Burnett Date: 5-13-97

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: ___ Date: ___

Data review received by: ___ Date: ___

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

___

___

Received by Data Mgmt. Coordinator for Files. Data: ___

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: May 7, 1997

SUBJECT: Review of Data
Received for Review on May 2, 1997

FROM: Stephen L. Ostrodka, Chief (SRT-4J)
Superfund Technical Support Section /L.F.

TO: Data User: OEPA

e have reviewed the data by CADRE for the following case:

SITE NAME: Dayton Electroplate

ASE NUMBER: 25388 (2) SDG NUMBER: MEATM0

umber and Type of Samples: 3 water

Sample Numbers: MEATM0-2

aboratory: Sentinel Hrs. for Review: 2.5 +0.5

Following are our findings:

All data are usable with the qualifications described in the attached narrative.

L. Finkelberg

05-09-97

C: Cecilia Luckett
Region 5 TPO
Mail Code: SM-5J

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATM0
Laboratory: Sentinel

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

3 water samples, numbered MEATM0 through MEATM2, were collected on April 10, 1997. The lab received the samples on April 12, 1998 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM04.0 analysis procedure.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By: J. Hann
Date: 5-7-97

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATM0
Laboratory: Sentinel

1. HOLDING TIME:

HOLDING TIME CRITERIA

INORGANICS

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

No problems were found for this qualification.

. . CALIBRATIONS:

CALIBRATION CRITERIA

INORGANICS

Percent Recovery Limits

	--- Primary ---		-- Expanded ---	
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

. . BLANKS:

LABORATORY BLANKS CRITERIA

DC-284: The following inorganic samples are associated with blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Hits are qualified "J"; non-detects are acceptable.

Cyanide
MEATM0, MEATM1, MEATM2

Reviewed By: J. Gary 5-7-97
Date:

Case Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATM0
Laboratory: Sentinel

Antimony
MEATM2

Beryllium
MEATM0, MEATM1, MEATM2

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.

MEATM0, MEATM1, MEATM2

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

INORGANICS

Percent Recovery Limits

Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %)indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Antimony
MEATM0, MEATM1, MEATM2

Selenium
MEATM0, MEATM1, MEATM2

No problems were found with the laboratory check sample.

5. LABORATORY AND FIELD DUPLICATE

No problems were found for this qualification.

6. ICP ANALYSIS

DC-295: The following inorganic samples are associated with an ICP serial dilution percent difference which is not in criteria. The serial dilution result is greater than the sample result, indicating a potential negative interference. The data must be qualified using professional judgement. All associated data are estimated "J".

Reviewed By: J. Gary 5-7-97
Date:

ase Number : 25388
Site Name: Dayton Electroplate

SDG Number: MEATM0
Laboratory: Sentinel

Lead
MEATM0, MEATM1, MEATM2

. **GFAA ANALYSIS**

No GFAA analyses were performed on these samples.

8. **SAMPLE RESULTS**

All data, except those qualified above, are acceptable.

Reviewed By: J. Gary 5-7-97
Date:

ADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

TAL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: MEATM0

Site: Dayton Electroplate
Laboratory: SENTINEL, INC.

EPA SAMPLE NUMBER:	MEATM0		MEATM1		MEATM2					
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample					
MATRIX/ANALYSIS:	Water/LOW		Water/LOW		Water/LOW					
DILUTION FACTOR:										
PERCENT SOLID:										
INORG										
Aluminum	32800		20800		13000					
Antimony	3.2	UJ	3.2	UJ	3.6	J				
Arsenic	86.1		48.4		46.7					
Barium	466		410		666					
Beryllium	1.9	J	1.1	J	0.75	J				
Cadmium	2.8		2.0		2.1					
Calcium	826000		513000		296000					
Chromium	285		93.1		144					
Cobalt	101		67.6		80.6					
Copper	261		161		123					
Iron	124000		77700		58400					
Lead	103	J	65.5	J	59.4	J				
Magnesium	349000		199000		126000					
Manganese	3530		4250		5590					
Mercury	0.10	U	0.10	U	0.10	U				
Nickel	248		117		278					
Potassium	10400		8280		8730					
Selenium	2.4	UJ	2.4	UJ	3.0	J				
Silver	0.90	U	0.90	U	1.4					
Sodium	51900		50400		104000					
Thallium	2.4	U	2.4	U	2.4	U				
Vanadium	83.5		48.9		35.7					
Zinc	605		408		286					
Cyanide	4.2	J	2.1	J	3.9	J				

FILE NAME: MEATM0 DATE: 05/05/97 TIME: 08:12 CADRE 2.3

Water units are reported in ug/L

FILE NAME: MEATMO DATE: 05/05/97 TIME: 08:12

CRITERIA FILE: FGDRI94

DATA

Original	X Qualified

QUALIFICATIONS PERFORMED

	Quantitation Limit		CRDL Standards
	Percent Moisture	X	ICS
X	Holding Time	X	LCS
	Calibrations	X	Duplicates
	Matrix Spikes		Furnace AA QC
	IPC	X	ICP Serial Dilutions
	Internal Standards	X	Sample Results Verification
	SMC/Surrogates	X	Laboratory Blanks
	System Performance		Field QC
	Sample Cleanup		

PRINT NON-DETECTS

Yes	No

PRINT REJECTED RESULTS

Yes	No

Page___of___

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 25388
DATA SET: _____
LAB QC # _____
DATE: 5-6-97

SITE: Dayton Electroplate
LAB: Sentinel
REVIEWED BY: J. Ganz

MATRIX: Water
CONC: Low

WATER SAMPLE SPK: _____
WATER SAMPLE DUP: _____
SOIL SAMPLE SPK: _____
SOIL SAMPLE DUP: _____

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 8	FORM 8	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD	COMMENTS
ELEMENT	HOLD TIME	INITIAL CALIB	CONTIN CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICS SR	SOIL SPIKE SR	SOIL DUP RPD	ICS AQ	ICS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP SR	AQ SPIKE SR	BLANK	DUP RPD	BLANK	DUP RPD	
ALUMINUM																				
ANTIMONY		4.5	L												69.2					
ARSENIC																				
BARIUM																				
BERYLLIUM			2.6																	
CADMIUM																				
CALCIUM																				
CHROMIUM																				
COBALT																				
COPPER																				
IRON																				
LEAD												14.7								
MAGNESIUM																				
MANGANESE																				
MERCURY															131.3					
NICKEL																				
POTASSIUM																				
SELENIUM															74.2					
SILVER																				
SODIUM																				
THALLIUM																				
TIN																				
VANADIUM																				
ZINC																				
CYANIDE		1.3			1.203															

Tb: 2
[illegible] all

CN: all

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

ab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

OW No.: ILM04.0

EPA Sample No.	Lab Sample ID.
MEATM0	05586S
MEATM0D	05586S2
MEATM0S	05586DS
MEATM1	05587S
MEATM2	05588S

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MAY 2 1997
US EPA REGIONAL LAB.
535 S. CLARK ST.
CHICAGO, ILLINOIS 60605

ere ICP interelement corrections applied? Yes/No YES
ere ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: A temperature blank was not included. Samples for LW TM analysis were received with a pH of 7.

certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for ther than the conditions detailed above. Release of the data contained n this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: for Name: MELVIN V. KILGORE, JR.

ate: 4/28/97 Title: LABORATORY DIRECTOR

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATM0

ab Name: SENTINEL, INC. Contract: 68-D6-0001

ab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Lab Sample ID: 05586S

evel (low/med): LOW Date Received: 04/12/97

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32900			P
7440-36-0	Antimony	3.2	U	N	P
7440-38-2	Arsenic	86.1			P
7440-39-3	Barium	466			P
7440-41-7	Beryllium	1.9	B		P
7440-43-9	Cadmium	2.8	B		P
7440-70-2	Calcium	826000			P
7440-47-3	Chromium	285			P
7440-48-4	Cobalt	101			P
7440-50-8	Copper	261			P
7439-89-6	Iron	124000			P
7439-92-1	Lead	103		E	P
7439-95-4	Magnesium	349000			P
7439-96-5	Manganese	3530			P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	248			P
7440-09-7	Potassium	10400			P
7782-49-2	Selenium	2.4	U	N	P
7440-22-4	Silver	0.90	U		P
7440-23-5	Sodium	51900			P
7440-28-0	Thallium	2.4	U		P
7440-62-2	Vanadium	83.5			P
7440-66-6	Zinc	605			P
	Cyanide	4.2	B		CA

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

2

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATM1

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Lab Sample ID: 05587S

Level (low/med): LOW Date Received: 04/12/97

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20800			P
7440-36-0	Antimony	3.2	U	N	P
7440-38-2	Arsenic	48.4			P
7440-39-3	Barium	411			P
7440-41-7	Beryllium	1.1	B		P
7440-43-9	Cadmium	2.0	B		P
7440-70-2	Calcium	513000			P
7440-47-3	Chromium	93.1			P
7440-48-4	Cobalt	67.6			P
7440-50-8	Copper	161			P
7439-89-6	Iron	77700			P
7439-92-1	Lead	65.5		E	P
7439-95-4	Magnesium	199000			P
7439-96-5	Manganese	4250			P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	117			P
7440-09-7	Potassium	8280			P
7782-49-2	Selenium	2.4	U	N	P
7440-22-4	Silver	0.90	U		P
7440-23-5	Sodium	50400			P
7440-28-0	Thallium	2.4	U		P
7440-62-2	Vanadium	48.9	B		P
7440-66-6	Zinc	408			P
	Cyanide	2.1	B		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

3

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEATM2

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

ab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Lab Sample ID: 05588S

evel (low/med): LOW Date Received: 04/12/97

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	3.6	B	N	P
7440-38-2	Arsenic	46.7			P
7440-39-3	Barium	666			P
7440-41-7	Beryllium	0.75	B		P
7440-43-9	Cadmium	2.1	B		P
7440-70-2	Calcium	296000			P
7440-47-3	Chromium	144			P
7440-48-4	Cobalt	80.6			P
7440-50-8	Copper	123			P
7439-89-6	Iron	58400			P
7439-92-1	Lead	59.4		E	P
7439-95-4	Magnesium	126000			P
7439-96-5	Manganese	5590			P
7439-97-6	Mercury	0.10	U	N	CV
7440-02-0	Nickel	278			P
7440-09-7	Potassium	8730			P
7782-49-2	Selenium	3.1	B	N	P
7440-22-4	Silver	1.4	B		P
7440-23-5	Sodium	104000			P
7440-28-0	Thallium	2.4	U		P
7440-62-2	Vanadium	35.7	B		P
7440-66-6	Zinc	286			P
	Cyanide	3.9	B		CA

Color Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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BLANKS

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	-23.0	B	16.8	U	-20.4	B	-21.1	B	-19.710	B	P
Antimony	4.5	B	3.2	U	3.2	U	3.2	U	3.200	U	P
Arsenic	2.1	U	2.1	U	2.1	U	2.1	U	2.100	U	P
Barium	0.8	U	1.4	B	0.8	U	0.8	U	0.800	U	P
Beryllium	0.1	U	0.1	U	0.1	U	0.1	U	0.100	U	P
Cadmium	1.2	U	1.2	U	1.2	U	1.2	U	1.200	U	P
Calcium	-81.2	B	-44.2	B	-74.2	B	-71.3	B	-85.545	B	P
Chromium	4.7	U	4.7	U	4.7	U	4.7	U	4.700	U	P
Cobalt	1.6	U	1.6	U	1.6	U	1.6	U	1.600	U	P
Copper	2.5	U	2.5	U	2.5	U	2.5	U	2.500	U	P
Iron	22.9	U	22.9	U	22.9	U	22.9	U	22.900	U	P
Lead	1.7	B	1.4	U	1.6	B	1.4	U	1.400	U	P
Magnesium	58.9	U	75.4	B	58.9	U	58.9	U	58.900	U	P
Manganese	1.7	U	1.7	U	1.7	U	1.7	U	1.700	U	P
Mercury	0.1	U	0.1	U	0.1	U			0.100	U	CV
Nickel	5.1	U	5.1	U	5.1	U	5.1	U	5.100	U	P
Potassium	20.8	U	20.8	U	20.8	U	28.4	B	20.800	U	P
Selenium	2.4	U	2.4	U	2.4	U	2.4	U	2.400	U	P
Silver	0.9	U	0.9	U	0.9	U	0.9	U	0.900	U	P
Sodium	226.0	U	226.0	U	226.0	U	226.0	U	226.000	U	P
Thallium	2.4	U	2.4	U	2.4	U	2.4	U	-2.747	B	P
Vanadium	2.7	U	2.7	U	2.7	U	2.7	U	2.700	U	P
Zinc	10.3	U	10.3	U	10.3	U	19.4	B	10.300	U	P
Cyanide	1.3	B	0.7	U	0.7	U			1.203	B	CA

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BLANKS

ab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

reparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			-21.4	B	-54.6	B					P
Antimony			3.2	U	3.2	U					P
Arsenic			2.1	U	3.2	B					P
Barium			0.8	U	0.8	U					P
Beryllium			0.1	U	2.6	B					P
Cadmium			1.2	U	1.2	U					P
Calcium			-79.5	B	-87.2	B					P
Chromium			4.7	U	4.7	U					P
Cobalt			1.6	U	1.6	U					P
Copper			2.5	U	-8.8	B					P
Iron			22.9	U	22.9	U					P
Lead			1.4	U	2.0	B					P
Magnesium			58.9	U	58.9	U					P
Manganese			1.7	U	1.7	U					P
Mercury											NR
Nickel			5.1	U	5.1	U					P
Potassium			20.8	U	73.1	B					P
Selenium			2.4	U	2.4	U					P
Silver			0.9	U	0.9	U					P
Sodium			226.0	U	226.0	U					P
Thallium			2.4	U	2.4	U					P
Vanadium			2.7	U	2.7	U					P
Zinc			10.3	U	10.3	U					P
Cyanide											NR

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SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEATM0S

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		37386.2910		32852.2980		2000.00	226.7		P
Antimony	75-125	345.8640		3.2000	U	500.00	69.2	N	P
Arsenic	75-125	134.9120		86.1150		40.00	122.0		P
Barium	75-125	2477.2800		465.8980		2000.00	100.6		P
Beryllium	75-125	51.4120		1.8650	B	50.00	99.1		P
Cadmium	75-125	48.7010		2.8160	B	50.00	91.8		P
Calcium									NR
Chromium	75-125	468.9840		285.1160		200.00	91.9		P
Cobalt	75-125	594.7240		100.6920		500.00	98.8		P
Copper	75-125	531.9210		261.2120		250.00	108.3		P
Iron		129855.0980		123832.4190		1000.00	602.3		P
Lead		127.7680		102.7240		20.00	125.2		P
Magnesium									NR
Manganese		4112.4400		3532.4510		500.00	116.0		P
Mercury	75-125	1.3130		0.1000	U	1.00	131.3	N	CV
Nickel	75-125	732.5800		247.7560		500.00	97.0		P
Potassium									NR
Selenium	75-125	7.4240		2.4000	U	10.00	74.2	N	P
Silver	75-125	50.6130		0.9000	U	50.00	101.2		P
Sodium									NR
Thallium	75-125	45.7540		2.4000	U	50.00	91.5		P
Vanadium	75-125	577.7380		83.5350		500.00	98.8		P
Zinc	75-125	1121.4980		604.8230		500.00	103.3		P
Cyanide	75-125	101.1207		4.1814	B	100.00	96.9		CA

Comments:

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POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEATM0A

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		515.65		3.20	U	120.0	429.7		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium		8.21		2.40	U	10.0	82.1		P
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

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DUPLICATES

EPA SAMPLE NO.

MEATM0D

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		32852.2980		32747.1700		0.3		P
Antimony		3.2000	U	5.0170	B	200.0		P
Arsenic		86.1150		87.0290		1.1		P
Barium	200.0	465.8980		462.7260		0.7		P
Beryllium		1.8650	B	1.8570	B	0.4		P
Cadmium		2.8160	B	2.8060	B	0.4		P
Calcium		826389.3540		832194.9370		0.7		P
Chromium		285.1160		286.7890		0.6		P
Cobalt	50.0	100.6920		100.5890		0.1		P
Copper		261.2120		258.9630		0.9		P
Iron		123832.4190		123747.5930		0.1		P
Lead		102.7240		102.1550		0.6		P
Magnesium		349036.8330		348860.2290		0.1		P
Manganese		3532.4510		3521.9670		0.3		P
Mercury		0.1000	U	0.1000	U			CV
Nickel		247.7560		246.6630		0.4		P
Potassium	5000.0	10371.6940		10289.0360		0.8		P
Selenium		2.4000	U	2.4000	U			P
Silver		0.9000	U	0.9000	U			P
Sodium		51910.9620		51569.5870		0.7		P
Thallium		2.4000	U	2.4000	U			P
Vanadium	50.0	83.5350		83.6900		0.2		P
Zinc		604.8230		607.2700		0.4		P
Cyanide		4.1814	B	3.5442	B	16.5		CA

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ICP SERIAL DILUTIONS

EPA SAMPLE NO.

MEATM0L

ab Name: SENTINEL, INC. Contract: 68-D6-0001

ab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Aluminum	32852.30		29779.92		9.4		P
Antimony	3.20	U	28.06	B			P
Arsenic	86.12		104.15		20.9		P
Barium	465.90		469.70	B	0.8		P
Beryllium	1.86	B	2.12	B	14.0		P
Cadmium	2.82	B	6.00	U	100.0		P
Calcium	826389.35		855910.46		3.6		P
Chromium	285.12		304.52		6.8		P
Cobalt	100.69		104.39	B	3.7		P
Copper	261.21		264.36		1.2		P
Iron	123832.42		127542.56		3.0		P
Lead	102.72		117.81		14.7	E	P
Magnesium	349036.83		356092.84		2.0		P
Manganese	3532.45		3658.90		3.6		P
Mercury							NR
Nickel	247.76		266.24		7.5		P
Potassium	10371.69		10897.28	B	5.1		P
Selenium	2.40	U	12.00	U			P
Silver	0.90	U	4.50	U			P
Sodium	51910.96		49666.82		4.3		P
Thallium	2.40	U	12.00	U			P
Vanadium	83.54		89.53	B	7.2		P
Zinc	604.82		658.24		8.8		P

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

ab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

ICP ID Number: P3 Date: 04/11/97

lame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	16.8	P
Antimony	206.80		60	3.2	P
Arsenic	189.00		10	2.1	P
Barium	493.40		200	0.8	P
Beryllium	313.00		5	0.1	P
Cadmium	226.50		5	1.2	P
Calcium	317.90		5000	32.7	P
Chromium	267.70		10	4.7	P
Cobalt	228.60		50	1.6	P
Copper	324.70		25	2.5	P
Iron	271.40		100	22.9	P
Lead	220.30		3	1.4	P
Magnesium	279.00		5000	58.9	P
Manganese	257.60		15	1.7	P
Mercury			0.2		NR
Nickel	231.60		40	5.1	P
Potassium	766.40		5000	20.8	P
Selenium	196.00		5	2.4	P
Silver	328.00		10	0.9	P
Sodium	330.20		5000	226.0	P
Thallium	190.80		10	2.4	P
Vanadium	292.40		50	2.7	P
Zinc	206.20		20	10.3	P
Cyanide			10		NR

omments:
P3: THERMO JARRELL ASH

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

ICP ID Number: Date: 04/11/97

Flame AA ID Number: C2

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.1	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide			10		NR

Comments:
C2: BACHARACH

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SENTINEL, INC. Contract: 68-D6-0001

Lab Code: SENTIN Case No.: 25388 SAS No.: SDG No.: MEATM0

ICP ID Number: Date: 04/11/97

Flame AA ID Number: C1

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide	578.00		10	0.7	CA

Comments:
C1: LACHAT

21

EPA United States Environmental Protection Agency Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

SAS No. (if applicable): —

Case No.: 25388

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO_3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not preserved

2. Region No.: 5

Sampling Co.: Ohio EPA

Sampler (Name): Diane Crosby

Sampler Signature: Diane Crosby

3. Purpose*
Lead: SF, PRP, ST, FED
Early Action: CLEM, PA, REM, RI, SI (X), ESI
Long-Term Action: FS, RD, RA, O&M, NPLD

4. Date Shipped: 4-11-97

Carrier: Federal Express

Airbill Number: 1677934020

5. Ship To: Am. Analytical & Tech. Serv. Inc
11950 Industriplex BLVD.
Baton Rouge, LA 70809-5
ATTN: Sample Custodian

6. Date Received -- Received by: 04/12/97

Laboratory Contract Number: 68-D6-0001

Unit Price: $65.00

7. Transfer to:

Date Received:

Received by:

Contract Number:

Price:

CLP Sample Numbers (from labels)	A Matrix (from Box 1) / Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) / Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MEATL4	5	L	G	6		X	X					5-146935	SE corner Bldg 2	4-10-97 13:30	EBMR4				
MEATL5	5	L	G	6		X	X					5-146939	Bldg. 2	4-10-97 1330	EBMR5				
MEATL6	5	L	G	6		X	X					5-146943	BKG	4-10-97 1130	EBMR6				

TL4

Shipment for Case Complete? (Y/N): Y

Page 2 of 2

Sample(s) to be Used for Laboratory QC: MEATLØ / MEATMØ

Additional Sampler Signatures:

Chain of Custody Seal Number(s): 49609-49610

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Diane Crosby	4-11-97 11:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	
			04/12/97 09:23		

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-6 REV. 3/93

355498

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analyis)

SAS No. (if applicable): —
Case No.: 25222

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not preserved

2. Region No.: 5
Sampling Co.: Ohio EPA
Sampler (Name): Diane Crosby
Sampler Signature: [signature]

3. Purpose*
Lead: SF / PRP / ST / FED
Early Action: CLEM / PA / REM / RI / X SI / ESI
Long-Term Action: FS / RD / RA / O&M / NPLD

4. Date Shipped: 4-11-97
Carrier: Federal Express
Airbill Number: 1677934020

5. Ship To: Am. Analytical & Tech. Serv. Inc
11950 Industriplex BLVD.
Baton Rouge, LA 70809-5191
ATTN: Sample Custodian

6. Date Received -- Received by: 04/12/97 [signature]
Laboratory Contract Number: 68-D6-0001
Unit Price: $65.00
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
MEATMØ	2	L	G	2		X						5-146601-602	GP1-GW	4-10-97 11:30	EBMSØ				
MEATMØ	2	L	G	3			X					5-146603-604	GP1-GW	4-10-97 11:30	EBMSØ				
MEATM1	2	L	G	2		X	X					5-146605	GP2-GW	4-10-97 1420	EBMS1				
MEATM1	2	L	G	3			X					5-146606	GP2-GW	4-10-97 1420	EBMS1				
MEATM2	2	L	G	2		X						5-146607	GP4-GW	4-10-97 1640	EBMS2				
MEATM2	2	L	G	3			X					5-146608	GP4-GW	4-10-97 1640	EBMS2				
MEATLØ	5	L	G	6		X	X					5-146919	GP-1	4-10-97 10:10	EBMRØ				
MEATL1	5	L	G	6		X	X					5-146923	Bldg 1, Load DK	4-10-97 10:00	EBMR1				
MEATL2	5	L	G	6		X	X					5-146927	Dock Door	4-10-97 10:34	EBMR2				
MEATL3	5	L	G	6		X	X					5-146931	S. Corner Bldg 1	4-10-97 11:10	EBMR3				

Shipment for Case Complete? (Y/N): Y
Page: 1 of 2
Sample(s) to be Used for Laboratory QC: MEATLØ / MEATMØ
Additional Sampler Signatures:
Chain of Custody Seal Number(s): 44609 - 49610

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	4-11-97 11:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) [signature]	Date / Time: 04/12/97 09:23	Remarks: Is custody seal intact? Y/N/none	

A21-012-6 REV. 3/93

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

355497

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: _____ CERCLIS No: OH

Case No: 25388 Site Name Location: Dayton Electroplate

Contractor or EPA Lab: Sentinel Data User: OEPA

No. of Samples: 3 Date Sampled or Data Received: 5-2-97

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 3 No. of samples received: 3

Received by: Lynette Burnett Date: 5-2-97

Received by LSSS: Lynette Burnett Date: 5-2-97

Review started: 5-7-97 Reviewer Signature: J. Gang

Total time spent on review: 2.5 +0.5 Date review completed: 5-7-97

Copied by: Lynette Burnett Date: 5-13-97

Mailed to user by: Lynette Burnett Date: 5-13-97

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: May 23, 1997

SUBJECT: Review of Data
Received for Review on May 22, 1997

FROM: Stephen L. Ostrodka, Chief (SRT-4J) for Steve Ostrodka Richard L Bynik 5/29/97
Superfund Technical Support Section

TO: Data User: OEPA

We have reviewed the data for the following case:

SITE NAME: Dayton Electroplate (OH)

CASE NUMBER: 25388 SDG NUMBER: EBMR0

Number and Type of Samples: 7 soil and 4 water samples

Sample Numbers: EBMR0-EBMR6, EBMS0-EBMS3

Laboratory: AATS Hrs. for Review: 15+1=16

Following are our findings:

The data are usable and acceptable with the qualifications described in the attached narrative.

Richard L Bynik

CC: Brian Freeman
Region 5 TPO
Mail Code: SM-5J

Case Number : 25388
Site Name: Dayton Electroplate (OH)

SDG Number: EBMR0
Laboratory: AATS

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Seven soil and four water samples, numbered EBMR0-EBMR6, EBMS0-EBMS3 were collected on 04/09-10/97. The lab received the samples on 04/12/97 in good condition. Sample EBMS3 was analyzed for the VOA analytes only. Samples EBMR0-EBMR6, EBMS0-EBMS2 were analyzed according to CLP SOW OLM03.0 3/90.

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: May 23, 1997

Case Number : 25388
Site Name: Dayton Electroplate (OH)

SDG Number: EBMR0
Laboratory: AATS

1. HOLDING TIME

No problems found for this qualification.

2 GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems found for this qualification.

3 CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has relative response factors (RRFs) outside primary criteria. Hits are flagged "J" and non-detects are qualified "UJ".

2-Hexanone
EBMS0MS, EBMS0MSD, EBMS3, VBLK1L

The following volatile samples are associated with an initial calibration percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Acetone, 2-Butanone, 4-Methyl-2-Pentanone, 2-Hexanone
EBMS2, VBLK1M

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Acetone, 2-Butanone, 2-Hexanone
EBMS0, EBMS1, VBLK1N, VHBLK1N

4-Methyl-2-Pentanone
EBMS0, EBMS0MS, EBMS0MSD, EBMS1, EBMS3, VBLK1L
VBLK1N, VHBLK1N

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Acetone, 2-Butanone, 2-Hexanone
EBMS0, EBMS1, VBLK1N, VHBLK1N

The following semivolatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Benzo(k)fluoranthene
EBMS0, EBMS0MS, EBMS0MSD, EBMS2, SBLKFC

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: May 23, 1997

Case Number : 25388
S te Name: Dayton Electroplate (OH)

SDG Number: EBMR0
Laboratory: AATS

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

2,2'-oxybis(1-Chloropropane), 2-Nitroaniline, 3-Nitroaniline, 4-Nitrophenol
EBMR0, EBMR0MS, EBMR0MSD, SBLK6M

Di-n-octylphthalate
EBMS0, EBMS0MS, EBMS0MSD, EBMS2, SBLKFC

4 METHOD BLANKS

No problems found for this qualification.

5 SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The following undiluted pesticide samples have surrogate percent recoveries of less than 10%. Hits are qualified "J" and non-detects are qualified "R".

EBMR2, EBMR4, EBMR5

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The relative percent difference (RPD) between the following volatile matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

EBMS0MS, EBMS0MSD
1,1-Dichloroethene, Trichloroethene, Benzene, Toluene
Chlorobenzene

The following volatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

EBMR0MSD
Chlorobenzene

EBMS0MS
Trichloroethene, Benzene, Toluene, Chlorobenzene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery below 10%. Hits are qualifie "J" and non-detects are qualified "R" for the unspiked sample.

EBMR0MS, EBMR0MSD
Pyrene

The relative percent difference (RPD) between the following

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: May 23, 1997

Case Number : 25388
Site Name: Dayton Electroplate (OH)

SDG Number: EBMR0
Laboratory: AATS

semivolatile matrix spike and matrix spike duplicate recoveries is outside criteria. Hits and non-detects are qualified as above for the unspiked sample.

EBMR0MS, EBMR0MSD
Pyrene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery high but they were less than or equal to 100%. Hits and non-detects are not flag for the unspiked sample.

EBMR0MS, EBMR0MSD
2,4-Dinitrotoluene

EBMS0MS
4-Nitrophenol

The following semivolatile matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are not flag for the unspiked sample.

EBMS0MSD
4-Nitrophenol

The relative percent difference (RPD) between the following pesticide matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

EBMS0MS, EBMS0MSD
Heptachlor, Aldrin, 4,4'-DDT

. FIELD BLANK AND FIELD DUPLICATE

Sample EBMS3 is a trip blank and it is clean.

. INTERNAL STANDARDS

The following semivolatile samples have internal standard area counts that are outside the lower limit of primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

EBMR0MS
Pyrene, Butylbenzylphthalate, 3,3'-Dichlorobenzidine, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate

. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: May 23, 1997

Case Number : 25388
Site Name: Dayton Electroplate (OH)

SDG Number: EBMR0
Laboratory: AATS

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EBMR0MS, EBMR0MSD, EBMR1, EBMR2, EBMR4, EBMR6, EBMS0, EBMS2
Methylene Chloride

EBMR3
Trichloroethene

EBMS1
Methylene Chloride, Toluene

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EBMR0
Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene
bis(2-Ethylhexyl)phthalate

EBMR0DL
Dibenzofuran, Fluorene, Anthracene, Carbazole
Dibenz(a,h)anthracene

EBMR0MS, EBMR0MSD
Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Dibenzofuran
Fluorene, bis(2-Ethylhexyl)phthalate

EBMR1
2-Methylnaphthalene, 2-Nitroaniline, Phenanthrene, Anthracene,
Di-n-butylphthalate, Benzo(a)anthracene, Benzo(k)fluoranthene,
Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene,
Benzo(g,h,i)perylene

EBMR2
Pyrene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene,
Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene,
Dibenz(a,h)anthracene

EBMR3
2-Methylnaphthalene, Acenaphthylene, Anthracene,
Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate,
Dibenz(a,h)anthracene

EBMR4
Phenanthrene, Anthracene, Di-n-butylphthalate, Fluoranthene
Pyrene, Benzo(a)anthracene, Chrysene,
bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene,
Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene,

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: May 23, 1997

Case Number : 25388
ite Name: Dayton Electroplate (OH)

SDG Number: EBMR0
Laboratory: AATS

Benzo(g,h,i)perylene

EBMR5
Acenaphthene, Dibenzofuran, Fluorene, Carbazole
bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

EBMR6
Naphthalene, Dibenzofuran, Fluorene, Anthracene
Carbazole, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

EBMS0
Phenol, 4-Bromophenyl-phenylether

EBMS0MSD, EBMS2
bis(2-Ethylhexyl)phthalate

SBLKFC
Di-n-butylphthalate

The following pesticide samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EBMR1
Aroclor-1254

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

12. ADDITIONAL INFORMATION

The results of Phenanthrene, Fluoranthene, pyrene and Chrysene for sample EBMR0 were quantitated outside the calibration range. For the analyte that exceeded the calibration range in the original sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration.

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: May 23, 1997

..ADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

TCL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

EPA SAMPLE NUMBER:	EBMR0		EBMR0MS		EBMR0MSD		EBMR1		EBMR2	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:	GP1		GP1		GP1		BLDG1		DOCK DOOR	
SAMPLE TYPE:	Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	10		10		10		14		22	
VOA										
Chloromethane	11	U	11	U	11	U	12	U	13	U
Bromomethane	11	U	11	U	11	U	12	U	13	U
Vinyl Chloride	11	U	11	U	11	U	12	U	13	U
Chloroethane	11	U	11	U	11	U	12	U	13	U
Methylene Chloride	11		10	J	9	J	10	J	6	J
Acetone	11	U	11	U	11	U	12	U	13	U
Carbon Disulfide	11	U	11	U	11	U	12	U	13	U
1,1-Dichloroethene	11	U	47		42		12	U	13	U
1,1-Dichloroethane	11	U	11	U	11	U	12	U	13	U
1,2-Dichloroethene (total)	11	U	11	U	11	U	12	U	13	U
Chloroform	11	U	11	U	11	U	12	U	13	U
1,2-Dichloroethane	11	U	11	U	11	U	12	U	13	U
2-Butanone	11	U	11	U	11	U	12	U	13	U
1,1,1-Trichloroethane	11	U	11	U	11	U	12	U	13	U
Carbon Tetrachloride	11	U	11	U	11	U	12	U	13	U
Bromodichloromethane	11	U	11	U	11	U	12	U	13	U
1,2-Dichloropropane	11	U	11	U	11	U	12	U	13	U
cis-1,3-Dichloropropene	11	U	11	U	11	U	12	U	13	U
Trichloroethene	11	U	44		41		12	U	13	U
Dibromochloromethane	11	U	11	U	11	U	12	U	13	U
1,1,2-Trichloroethane	11	U	11	U	11	U	12	U	13	U
Benzene	11	U	43		39		12	U	13	U
trans-1,3-Dichloropropene	11	U	11	U	11	U	12	U	13	U
Bromoform	11	U	11	U	11	U	12	U	13	U
4-Methyl-2-Pentanone	11	U	11	U	11	U	12	U	13	U
2-Hexanone	11	U	11	U	11	U	12	U	13	U
Tetrachloroethene	11	U	11	U	11	U	12	U	13	U
1,1,2,2-Tetrachloroethane	11	U	11	U	11	U	12	U	13	U
Toluene	11	U	40		38		12	U	13	U
Chlorobenzene	11	U	36		32		12	U	13	U
Ethylbenzene	11	U	11	U	11	U	12	U	13	U
Styrene	11	U	11	U	11	U	12	U	13	U
Xylene (total)	11	U	11	U	11	U	12	U	13	U

FILE NAME: EBMR0 DATE: 05/22/97 TIME: 15:31 CADRE 2.3

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

EPA SAMPLE NUMBER:	EBMR3		EBMR4		EBMR5		EBMR6		EBMS0	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:	BLDG1		BLDG2		BLDG2		BKG		GP1-GW	
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW		Water/LOW	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:	15		24		23		18			
VOA										
Chloromethane	12	U	13	U	13	U	12	U	10	U
Bromomethane	12	U	13	U	13	U	12	U	10	U
Vinyl Chloride	12	U	13	U	13	U	12	U	10	U
Chloroethane	12	U	13	U	13	U	12	U	10	U
Methylene Chloride	16		10	J	13		10	J	2	J
Acetone	12	U	13	U	13	U	12	U	10	UJ
Carbon Disulfide	12	U	13	U	13	U	12	U	10	U
1,1-Dichloroethene	12	U	13	U	13	U	12	U	10	UJ
1,1-Dichloroethane	12	U	13	U	13	U	12	U	10	U
1,2-Dichloroethene (total)	12	U	13	U	13	U	12	U	10	U
Chloroform	12	U	13	U	13	U	12	U	10	U
1,2-Dichloroethane	12	U	13	U	13	U	12	U	10	U
2-Butanone	12	U	13	U	13	U	12	U	10	UJ
1,1,1-Trichloroethane	12	U	13	U	13	U	12	U	10	U
Carbon Tetrachloride	12	U	13	U	13	U	12	U	10	U
Bromodichloromethane	12	U	13	U	13	U	12	U	10	U
1,2-Dichloropropane	12	U	13	U	13	U	12	U	10	U
cis-1,3-Dichloropropene	12	U	13	U	13	U	12	U	10	U
Trichloroethene	9	J	140		200		12	U	10	UJ
Dibromochloromethane	12	U	13	U	13	U	12	U	10	U
1,1,2-Trichloroethane	12	U	13	U	13	U	12	U	10	U
Benzene	12	U	13	U	13	U	12	U	10	UJ
trans-1,3-Dichloropropene	12	U	13	U	13	U	12	U	10	U
Bromoform	12	U	13	U	13	U	12	U	10	U
4-Methyl-2-Pentanone	12	U	13	U	13	U	12	U	10	UJ
2-Hexanone	12	U	13	U	13	U	12	U	10	UJ
Tetrachloroethene	12	U	13	U	13	U	12	U	10	U
1,1,2,2-Tetrachloroethane	12	U	13	U	13	U	12	U	10	U
Toluene	12	U	13	U	13	U	12	U	10	UJ
Chlorobenzene	12	U	13	U	13	U	12	U	10	UJ
Ethylbenzene	12	U	13	U	13	U	12	U	10	U
Styrene	12	U	13	U	13	U	12	U	10	U
Xylene (total)	12	U	13	U	13	U	12	U	10	U

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: EBMRO

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

EPA SAMPLE NUMBER:	EBMSOMS		EBMSOMSD		EBMS1		EBMS2		EBMS3	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:	GP1-GW		GP1-GW		GP2-GW		GP4-GW		TRIP BLANK	
SAMPLE TYPE:	Matrix Spike		Matrix Spike Dup		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Water/LOW		Water/LOW		Water/LOW		Water/LOW		Water/LOW	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:										
VOA										
Chloromethane	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	10	U	10	U	5	J	9	J	10	U
Acetone	10	U	10	U	10	UJ	10	UJ	10	U
Carbon Disulfide	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	35		45		10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	10	U	10	U	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10		10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	U	10	UJ	10	UJ	10	U
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Trichloroethene	33		41		10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Benzene	37		48		10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2-Hexanone	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Tetrachloroethene	10	U	10	U	10	U	63		10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
Toluene	38		47		2	J	10	U	10	U
Chlorobenzene	34		44		10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U
Xylene (total)	10	U	10	U	10	U	10	U	10	U

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

EPA SAMPLE NUMBER:	VBLK1L		VBLK1M		VBLK1N		VBLK2A		VHBLK1N	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Method Blank		Method Blank		Method Blank		Method Blank		Storage Blank	
MATRIX/ANALYSIS:	Water/LOW		Water/LOW		Water/LOW		Soil/LOW		Water/LOW	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:							0			
VOA										
Chloromethane	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	10	U	10	U	10	U	10	U	10	U
Acetone	10	U	10	UJ	10	UJ	10	U	10	UJ
Carbon Disulfide	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	10	U	10	U	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	UJ	10	UJ	10	U	10	UJ
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Benzene	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	10	UJ	10	UJ	10	UJ	10	U	10	UJ
2-Hexanone	10	UJ	10	UJ	10	UJ	10	U	10	UJ
Tetrachloroethene	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U
Xylene (total)	10	U	10	U	10	U	10	U	10	U

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

Case No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

EPA SAMPLE NUMBER:	EBMR0		EBMR0DL		EBMR0MS		EBMR0MSD		EBMR1	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:	GP1		GP1		GP1		GP1		BLDG1	
SAMPLE TYPE:	Routine Sample		Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample	
MATRIX/ANALYSIS:	Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW	
DILUTION FACTOR:	1.0		3.0		1.0		1.0		1.0	
PERCENT MOISTURE:	10		10		10		10		14	
BNA										
Phenol	370	U	1100	U	1500		1600		380	U
bis(2-Chloroethyl)ether	370	U	1100	U	370	U	370	U	380	U
2-Chlorophenol	370	U	1100	U	1500		1500		380	U
1,3-Dichlorobenzene	370	U	1100	U	370	U	370	U	380	U
1,4-Dichlorobenzene	370	U	1100	U	1300		1300		380	U
1,2-Dichlorobenzene	370	U	1100	U	370	U	370	U	380	U
2-Methylphenol	370	U	1100	U	370	U	370	U	380	U
2,2'-oxybis(1-Chloropropane)	370	UJ	1100	U	370	UJ	370	UJ	380	U
4-Methylphenol	370	U	1100	U	370	U	370	U	380	U
N-Nitroso-di-n-propylamine	370	U	1100	U	1600		1600		380	U
Hexachloroethane	370	U	1100	U	370	U	370	U	380	U
Nitrobenzene	370	U	1100	U	370	U	370	U	380	U
Isophorone	370	U	1100	U	370	U	370	U	380	U
2-Nitrophenol	370	U	1100	U	370	U	370	U	380	U
2,4-Dimethylphenol	370	U	1100	U	370	U	370	U	380	U
bis(2-Chloroethoxy)methane	370	U	1100	U	370	U	370	U	380	U
2,4-Dichlorophenol	370	U	1100	U	370	U	370	U	380	U
1,2,4-Trichlorobenzene	370	U	1100	U	1500		1500		380	U
Naphthalene	190	J	1100	U	360	J	250	J	380	U
4-Chloroaniline	370	U	1100	U	370	U	370	U	380	U
Hexachlorobutadiene	370	U	1100	U	370	U	370	U	380	U
4-Chloro-3-methylphenol	370	U	1100	U	1700		1900		380	U
2-Methylnaphthalene	160	J	1100	U	180	J	140	J	85	J
Hexachlorocyclopentadiene	370	U	1100	U	370	U	370	U	380	U
2,4,6-Trichlorophenol	370	U	1100	U	370	U	370	U	380	U
2,4,5-Trichlorophenol	890	U	2700	U	890	U	890	U	930	U
2-Chloronaphthalene	370	U	1100	U	370	U	370	U	380	U
2-Nitroaniline	890	UJ	2700	U	890	UJ	890	UJ	130	J
Dimethylphthalate	370	U	1100	U	370	U	370	U	380	U
Acenaphthylene	210	J	1100	U	190	J	160	J	380	U
2,6-Dinitrotoluene	370	U	1100	U	370	U	370	U	380	U
3-Nitroaniline	890	UJ	2700	U	890	UJ	890	UJ	930	U
Acenaphthene	200	J	1100	U	1600		1600		380	U
2,4-Dinitrophenol	890	U	2700	U	890	U	890	U	930	U
4-Nitrophenol	890	UJ	2700	U	2100	J	2200	J	930	U
Dibenzofuran	420		410	J	300	J	240	J	380	U
2,4-Dinitrotoluene	370	U	1100	U	1700		1800		380	U
Diethylphthalate	370	U	1100	U	370	U	370	U	380	U
4-Chlorophenyl-phenylether	370	U	1100	U	370	U	370	U	380	U
Fluorene	500		480	J	360	J	290	J	380	U
4-Nitroaniline	890	U	2700	U	890	U	890	U	930	U
4,6-Dinitro-2-methylphenol	890	U	2700	U	890	U	890	U	930	U
N-Nitrosodiphenylamine (1)	370	U	1100	U	370	U	370	U	380	U
4-Bromophenyl-phenylether	370	U	1100	U	370	U	370	U	380	U
Hexachlorobenzene	370	U	1100	U	370	U	370	U	380	U
Pentachlorophenol	890	U	2700	U	2000		2000		930	U
Phenanthrene	6100		6500		4900		4000		350	J
Anthracene	770		760	J	550		450		64	J
Carbazole	530		510	J	540		420		380	U
Di-n-butylphthalate	370	U	1100	U	370	U	370	U	98	J
Fluoranthene	5500		7000		4600		3900		630	
Pyrene	5800	J	6300	J	5700	J	5100		500	
Butylbenzylphthalate	370	U	1100	U	370	UJ	370	U	380	U
3,3'-Dichlorobenzidine	370	U	1100	U	370	UJ	370	U	380	U
Benzo(a)anthracene	2600		2600		2000	J	1700		310	J
Chrysene	3100		3100		2600	J	2200		430	
bis(2-Ethylhexyl)phthalate	130	J	1100	U	140	J	190	J	2000	
Di-n-octylphthalate	370	U	1100	U	370	U	370	U	380	U
Benzo(b)fluoranthene	1800		1900		1500		1400		390	
Benzo(k)fluoranthene	1900		2500		1600		1200		330	J
Benzo(a)pyrene	2300		2500		1900		1500		350	J
Indeno(1,2,3-cd)pyrene	1800		2000		1500		1200		330	J
Dibenz(a,h)anthracene	660		740	J	580		450		140	J
Benzo(g,h,i)perylene	2000		2200		1700		1300		360	J

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

ase No: 25388
JG No: EBMR0

Site: Dayton ..ectroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

FPA SAMPLE NUMBER:	EBMR2		EBMR3		EBMR4		EBMR5		EBMR6	
EGIONAL SAMPLE NUMBER:										
AMPLE LOCATION:	DOCK DOOR		BLDG1		BLDG2		BLDG2		BKG	
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW		Soil/LOW	
ILUTION FACTOR:	5.0		1.0		1.0		1.0		1.0	
ERCENT MOISTURE:	22		15		24		23		18	
BNA										
henol	2100	U	390	U	430	U	430	U	400	U
is(2-Chloroethyl)ether	2100	U	390	U	430	U	430	U	400	U
2-Chlorophenol	2100	U	390	U	430	U	430	U	400	U
1,3-Dichlorobenzene	2100	U	390	U	430	U	430	U	400	U
,4-Dichlorobenzene	2100	U	390	U	430	U	430	U	400	U
,2-Dichlorobenzene	2100	U	390	U	430	U	430	U	400	U
-Methylphenol	2100	U	390	U	430	U	430	U	400	U
2,2'-oxybis(1-Chloropropane)	2100	U	390	U	430	U	430	U	400	U
-Methylphenol	2100	U	390	U	430	U	430	U	400	U
-Nitroso-di-n-propylamine	2100	U	390	U	430	U	430	U	400	U
exachloroethane	2100	U	390	U	430	U	430	U	400	U
Nitrobenzene	2100	U	390	U	430	U	430	U	400	U
Isophorone	2100	U	390	U	430	U	430	U	400	U
-Nitrophenol	2100	U	390	U	430	U	430	U	400	U
,4-Dimethylphenol	2100	U	390	U	430	U	430	U	400	U
bis(2-Chloroethoxy)methane	2100	U	390	U	430	U	430	U	400	U
2,4-Dichlorophenol	2100	U	390	U	430	U	430	U	400	U
,2,4-Trichlorobenzene	2100	U	390	U	430	U	430	U	400	U
aphthalene	2100	U	390	U	430	U	430	U	95	J
-Chloroaniline	2100	U	390	U	430	U	430	U	400	U
Hexachlorobutadiene	2100	U	390	U	430	U	430	U	400	U
4-Chloro-3-methylphenol	2100	U	390	U	430	U	430	U	400	U
-Methylnaphthalene	2100	U	70	J	430	U	430	U	400	U
exachlorocyclopentadiene	2100	U	390	U	430	U	430	U	400	U
2,4,6-Trichlorophenol	2100	U	390	U	430	U	430	U	400	U
2,4,5-Trichlorophenol	5100	U	940	U	1000	U	1000	U	980	U
-Chloronaphthalene	2100	U	390	U	430	U	430	U	400	U
-Nitroaniline	5100	U	940	U	1000	U	1000	U	980	U
imethylphthalate	2100	U	390	U	430	U	430	U	400	U
Acenaphthylene	2100	U	95	J	430	U	430	U	400	U
2,6-Dinitrotoluene	2100	U	390	U	1300		1200		400	U
-Nitroaniline	5100	U	940	U	1000	U	1000	U	980	U
cenaphthene	2100	U	390	U	430	U	93	J	400	U
2,4-Dinitrophenol	5100	U	940	U	1000	U	1000	U	980	U
4-Nitrophenol	5100	U	940	U	1000	U	1000	U	980	U
ibenzofuran	2100	U	390	U	430	U	95	J	75	J
2,4-Dinitrotoluene	2100	U	390	U	2800		2700		400	U
iethylphthalate	2100	U	390	U	430	U	430	U	400	U
4-Chlorophenyl-phenylether	2100	U	390	U	430	U	430	U	400	U
Fluorene	2100	U	390	U	430	U	140	J	82	J
-Nitroaniline	5100	U	940	U	1000	U	1000	U	980	U
,6-Dinitro-2-methylphenol	5100	U	940	U	1000	U	1000	U	980	U
N-Nitrosodiphenylamine (1)	2100	U	390	U	430	U	430	U	400	U
4-Bromophenyl-phenylether	2100	U	390	U	430	U	430	U	400	U
exachlorobenzene	2100	U	390	U	430	U	430	U	400	U
entachlorophenol	5100	U	940	U	1000	U	1000	U	980	U
henanthrene	2100	U	440		150	J	2500		1500	
Anthracene	2100	U	98	J	18	J	480		150	J
Carbazole	2100	U	390	U	430	U	350	J	180	J
i-n-butylphthalate	2100	U	73	J	65	J	430	U	400	U
luoranthene	2100	U	1100		190	J	2900		2100	
Pyrene	250	J	900		200	J	2300		1800	
Butylbenzylphthalate	2100	U	390	U	430	U	430	U	400	U
3,3'-Dichlorobenzidine	2100	U	390	U	430	U	430	U	400	U
enzo(a)anthracene	2100	U	740		140	J	1500		910	
hrysene	2100	U	940		210	J	1900		1300	
bis(2-Ethylhexyl)phthalate	1400	J	130	J	280	J	320	J	91	J
Di-n-octylphthalate	2100	U	390	U	430	U	430	U	400	U
enzo(b)fluoranthene	420	J	820		150	J	1100		920	
enzo(k)fluoranthene	240	J	820		150	J	1300		1000	
Benzo(a)pyrene	1200	J	790		130	J	1300		890	
Indeno(1,2,3-cd)pyrene	1900	J	650		98	J	780		710	
ibenz(a,h)anthracene	1200	J	260	J	430	U	360	J	290	J
enzo(g,h,i)perylene	13000		790		110	J	780		760	

ater units are reported in ug/L.
oil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

ase No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

PA SAMPLE NUMBER:	EBMS0		EBMS0MS		EBMS0MSD		EBMS1		EBMS2	
EGIONAL SAMPLE NUMBER:										
AMPLE LOCATION:	GP1-GW		GP1-GW		GP1-GW		GP2-GW		GP4-GW	
SAMPLE TYPE:	Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Water/LOW		Water/LOW		Water/LOW		Water/LOW		Water/LOW	
ILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
ERCENT MOISTURE:										
BNA										
henol	6	J	130		150		10	U	10	U
bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	140		140		10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
,4-Dichlorobenzene	10	U	92		93		10	U	10	U
,2-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	110		100		10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
sophorone	10	U	10	U	10	U	10	U	10	U
-Nitrophenol	10	U	10	U	10	U	10	U	10	U
,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
,2,4-Trichlorobenzene	10	U	94		97		10	U	10	U
aphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
-Chloro-3-methylphenol	10	U	140		140		10	U	10	U
-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U	25	U	25	U	25	U
-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
-Nitroaniline	25	U	25	U	25	U	25	U	25	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
-Nitroaniline	25	U	25	U	25	U	25	U	25	U
cenaphthene	10	U	96		98		10	U	10	U
2,4-Dinitrophenol	25	U	25	U	25	U	25	U	25	U
4-Nitrophenol	25	U	150		160		25	U	25	U
ibenzofuran	10	U	10	U	10	U	10	U	10	U
,4-Dinitrotoluene	10	U	100		100		10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
luorene	10	U	10	U	10	U	10	U	10	U
-Nitroaniline	25	U	25	U	25	U	25	U	25	U
,6-Dinitro-2-methylphenol	25	U	25	U	25	U	25	U	25	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	3	J	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
entachlorophenol	25	U	150		150		25	U	25	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
arbazole	10	U	10	U	10	U	10	U	10	U
i-n-butylphthalate	10	U	10	U	10	U	10	U	10	U
luoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	99		96		10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	10	U
enzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	8	J	10	U	5	J
i-n-octylphthalate	10	UJ	10	UJ	10	UJ	10	U	10	UJ
enzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
enzo(k)fluoranthene	10	UJ	10	UJ	10	UJ	10	U	10	UJ
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
ibenz(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
enzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U

ater units are reported in ug/L.
oil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

ase No: 25388
DG No: EBMRO

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

PA SAMPLE NUMBER:	SBLK6M		SBLKFC							
EGIONAL SAMPLE NUMBER:										
AMPLE LOCATION:										
SAMPLE TYPE:	Method Blank		Method Blank							
MATRIX/ANALYSIS:	Soil/LOW		Water/LOW							
ILUTION FACTOR:	1.0		1.0							
ERCENT MOISTURE:	0									
BNA										
henol	330	U	10	U						
is(2-Chloroethyl)ether	330	U	10	U						
2-Chlorophenol	330	U	10	U						
1,3-Dichlorobenzene	330	U	10	U						
,4-Dichlorobenzene	330	U	10	U						
,2-Dichlorobenzene	330	U	10	U						
2-Methylphenol	330	U	10	U						
2,2'-oxybis(1-Chloropropane)	330	UJ	10	U						
-Methylphenol	330	U	10	U						
-Nitroso-di-n-propylamine	330	U	10	U						
exachloroethane	330	U	10	U						
Nitrobenzene	330	U	10	U						
sophorone	330	U	10	U						
-Nitrophenol	330	U	10	U						
,4-Dimethylphenol	330	U	10	U						
bis(2-Chloroethoxy)methane	330	U	10	U						
2,4-Dichlorophenol	330	U	10	U						
,2,4-Trichlorobenzene	330	U	10	U						
aphthalene	330	U	10	U						
-Chloroaniline	330	U	10	U						
Hexachlorobutadiene	330	U	10	U						
-Chloro-3-methylphenol	330	U	10	U						
-Methylnaphthalene	330	U	10	U						
exachlorocyclopentadiene	330	U	10	U						
2,4,6-Trichlorophenol	330	U	10	U						
2,4,5-Trichlorophenol	800	U	25	U						
-Chloronaphthalene	330	U	10	U						
-Nitroaniline	800	UJ	25	U						
imethylphthalate	330	U	10	U						
Acenaphthylene	330	U	10	U						
,6-Dinitrotoluene	330	U	10	U						
-Nitroaniline	800	UJ	25	U						
cenaphthene	330	U	10	U						
2,4-Dinitrophenol	800	U	25	U						
4-Nitrophenol	800	UJ	25	U						
ibenzofuran	330	U	10	U						
,4-Dinitrotoluene	330	U	10	U						
iethylphthalate	330	U	10	U						
4-Chlorophenyl-phenylether	330	U	10	U						
luorene	330	U	10	U						
-Nitroaniline	800	U	25	U						
,6-Dinitro-2-methylphenol	800	U	25	U						
N-Nitrosodiphenylamine (1)	330	U	10	U						
4-Bromophenyl-phenylether	330	U	10	U						
exachlorobenzene	330	U	10	U						
entachlorophenol	800	U	25	U						
henanthrene	330	U	10	U						
Anthracene	330	U	10	U						
arbazole	330	U	10	U						
i-n-butylphthalate	330	U	5	J						
luoranthene	330	U	10	U						
Pyrene	330	U	10	U						
Butylbenzylphthalate	330	U	10	U						
,3'-Dichlorobenzidine	330	U	10	U						
enzo(a)anthracene	330	U	10	U						
hrysene	330	U	10	U						
bis(2-Ethylhexyl)phthalate	330	U	10	U						
i-n-octylphthalate	330	U	10	UJ						
enzo(b)fluoranthene	330	U	10	U						
enzo(k)fluoranthene	330	U	10	UJ						
Benzo(a)pyrene	330	U	10	U						
Indeno(1,2,3-cd)pyrene	330	U	10	U						
ibenz(a,h)anthracene	330	U	10	U						
enzo(g,h,i)perylene	330	U	10	U						

ater units are reported in ug/L.
oil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

ase No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

PA SAMPLE NUMBER:	EBMR0		EBMR0MS		EBMR0MSD		EBMR1		EBMR2	
EGIONAL SAMPLE NUMBER:										
AMPLE LOCATION:	GP1		GP1		GP1		BLDG1		DOCK DOOR	
SAMPLE TYPE:	Routine Sample		Matrix Spike		Matrix Spike Dup		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/		Soil/		Soil/		Soil/		Soil/	
ILUTION FACTOR:	5.0		5.0		5.0		5.0		5.0	
ERCENT MOISTURE:	10		12		12		14		22	
PES										
lpha-BHC	9.4	U	9.7	U	9.7	U	9.9	U	11	R
eta-BHC	9.4	U	9.7	U	9.7	U	9.9	U	11	R
delta-BHC	9.4	U	9.7	U	9.7	U	9.9	U	11	R
amma-BHC (Lindane)	9.4	U	12		12		9.9	U	11	R
eptachlor	9.4	U	15		17		9.9	U	11	R
ldrin	9.4	U	13		14		9.9	U	11	R
Heptachlor epoxide	9.4	U	9.7	U	9.7	U	9.9	U	11	R
Endosulfan I	44		9.7	U	9.7	U	9.9	U	11	R
ieldrin	18	U	24		26		19	U	21	R
,4'-DDE	18	U	19	U	19	U	19	U	21	R
Endrin	18	U	30		34		19	U	21	R
Endosulfan II	18	U	19	U	19	U	19	U	21	R
',4'-DDD	18	U	19	U	19	U	19	U	21	R
ndosulfan sulfate	18	U	19	U	19	U	19	U	21	R
,4'-DDT	18	U	35		37		19	U	21	R
Methoxychlor	94	U	96	U	96	U	99	U	110	R
Endrin ketone	18	U	19	U	19	U	19	U	21	R
ndrin aldehyde	18	U	19	U	19	U	19	U	21	R
lpha-Chlordane	9.4	U	9.7	U	9.7	U	9.9	U	11	R
gamma-Chlordane	9.4	U	9.7	U	9.7	U	9.9	U	11	R
Toxaphene	940	U	960	U	960	U	990	U	1100	R
roclor-1016	180	U	190	U	190	U	190	U	210	R
roclor-1221	370	U	380	U	380	U	390	U	430	R
roclor-1232	180	U	190	U	190	U	190	U	210	R
Aroclor-1242	180	U	190	U	190	U	190	U	210	R
Aroclor-1248	180	U	190	U	190	U	190	U	210	R
roclor-1254	180	U	190	U	190	U	150	J	210	R
roclor-1260	180	U	190	U	190	U	190	U	210	R

FILE NAME: EBMR0 DATE: 05/22/97 TIME: 15:31 CADRE 2.3

ater units are reported in ug/L.
oil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

ase No: 25388
JOG No: EBMRO

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

EPA SAMPLE NUMBER:	EBMR3		EBMR4		EBMR5		EBMR6		EBMSO	
EGIONAL SAMPLE NUMBER:										
AMPLE LOCATION:	BLDG1		BLDG2		BLDG2		BKG		GP1-GW	
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS:	Soil/		Soil/		Soil/		Soil/		Water/	
ILUTION FACTOR:	5.0		1.0		1.0		5.0		1.0	
ERCENT MOISTURE:	14		24		23		18			
PES										
lpha-BHC	9.9	U	2.2	R	2.2	R	10	U	0.05	U
eta-BHC	9.9	U	2.2	R	2.2	R	10	U	0.05	U
delta-BHC	9.9	U	2.2	R	2.2	R	10	U	0.05	U
gamma-BHC (Lindane)	9.9	U	2.2	R	2.2	R	10	U	0.05	U
eptachlor	9.9	U	2.2	R	2.2	R	10	U	0.05	UJ
ldrin	9.9	U	2.2	R	2.2	R	10	U	0.05	UJ
Heptachlor epoxide	9.9	U	2.2	R	2.2	R	10	U	0.05	U
Endosulfan I	15		2.2	R	2.2	R	10	U	0.05	U
ieldrin	19	U	4.3	R	4.3	R	20	U	0.10	U
,4'-DDE	19	U	4.3	R	4.3	R	180		0.10	U
ndrin	19	U	4.3	R	4.3	R	20	U	0.10	U
Endosulfan II	19	U	4.3	R	4.3	R	20	U	0.10	U
4,4'-DDD	19	U	4.3	R	4.3	R	20	U	0.10	U
ndosulfan sulfate	19	U	4.3	R	4.3	R	20	U	0.10	U
,4'-DDT	37		4.3	R	4.7	J	67		0.10	UJ
Methoxychlor	99	U	22	R	22	R	100	U	0.50	U
Endrin ketone	19	U	4.3	R	5.1	J	20	U	0.10	U
ndrin aldehyde	19	U	4.3	R	4.3	R	20	U	0.10	U
lpha-Chlordane	9.9	U	2.2	R	2.2	R	10	U	0.05	U
gamma-Chlordane	9.9	U	2.2	R	2.2	R	10	U	0.05	U
Toxaphene	990	U	220	R	220	R	1000	U	5.0	U
Aroclor-1016	190	U	43	R	43	R	200	U	1.0	U
roclor-1221	390	U	88	R	87	R	410	U	2.0	U
roclor-1232	190	U	43	R	43	R	200	U	1.0	U
Aroclor-1242	190	U	43	R	43	R	200	U	1.0	U
Aroclor-1248	190	U	43	R	43	R	200	U	1.0	U
roclor-1254	190	U	43	R	43	R	200	U	1.0	U
roclor-1260	190	U	43	R	43	R	200	U	1.0	U

FILE NAME: EBMRO DATE: 05/22/97 TIME: 15:31 CADRE 2.3

ater units are reported in ug/L.
oil units are reported in ug/Kg.

ICL QUALIFIED SPREADSHEET

ase No: 25388
SDG No: EBMR0

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

PA SAMPLE NUMBER:	EBMS0MS		EBMS0MSD		EBMS1		EBMS2		PBLK2	
EGIONAL SAMPLE NUMBER:										
AMPLE LOCATION:	GP1-GW		GP1-GW		GP2-GW		GP4-GW			
SAMPLE TYPE:	Matrix Spike		Matrix Spike Dup		Routine Sample		Routine Sample		Method Blank	
MATRIX/ANALYSIS:	Water/		Water/		Water/		Water/		Water/	
ILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
ERCENT MOISTURE:										
PES										
pha-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
eta-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
delta-BHC	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
gamma-BHC (Lindane)	0.35		0.35		0.05	U	0.05	U	0.05	U
eptachlor	0.34		0.26		0.05	U	0.05	U	0.05	U
drin	0.38		0.26		0.05	U	0.05	U	0.05	U
Heptachlor epoxide	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Endosulfan I	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
ieldrin	0.84		0.73		0.10	U	0.10	U	0.10	U
,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ndrin	0.90		0.77		0.10	U	0.10	U	0.10	U
Endosulfan II	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
',4'-DDD	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ndosulfan sulfate	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
,4'-DDT	0.80		0.42		0.10	U	0.10	U	0.10	U
Methoxychlor	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Endrin ketone	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
ndrin aldehyde	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
pha-Chlordane	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
gamma-Chlordane	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Toxaphene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
roclor-1016	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
roclor-1221	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
roclor-1232	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1242	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1248	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
roclor-1254	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
roclor-1260	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

ater units are reported in ug/L.
oil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

ıse No: 25388
ɔJG No: EBMRO

Site: Dayton Electroplate (OH)
Laboratory: AMER ANALYTICAL TECH SERV

FPA SAMPLE NUMBER:	PBLK8					
EGIONAL SAMPLE NUMBER:						
AMPLE LOCATION:						
SAMPLE TYPE:	Method Blank					
MATRIX/ANALYSIS:	Soil/					
ILUTION FACTOR:	1.0					
ERCENT MOISTURE:	0					
PES						
lpha-BHC	1.7	U				
eta-BHC	1.7	U				
delta-BHC	1.7	U				
gamma-BHC (Lindane)	1.7	U				
eptachlor	1.7	U				
ldrin	1.7	U				
Heptachlor epoxide	1.7	U				
Endosulfan I	1.7	U				
ieldrin	3.3	U				
,4'-DDE	3.3	U				
ndrin	3.3	U				
Endosulfan II	3.3	U				
4,4'-DDD	3.3	U				
ndosulfan sulfate	3.3	U				
,4'-DDT	3.3	U				
Methoxychlor	17	U				
Endrin ketone	3.3	U				
ndrin aldehyde	3.3	U				
lpha-Chlordane	1.7	U				
amma-Chlordane	1.7	U				
Toxaphene	170	U				
Aroclor-1016	33	U				
roclor-1221	67	U				
roclor-1232	33	U				
Aroclor-1242	33	U				
Aroclor-1248	33	U				
roclor-1254	33	U				
roclor-1260	33	U				

ater units are reported in ug/L.
oil units are reported in ug/Kg.

TICS

ample	TIC	Ret.Time	Conc.	Units	Flags
VBLK1M					
	UNKNOWN	15.72	8	UG/L	J
SBLK6M					
	UNKNOWN	6.22	160	UG/KG	J
	UNKNOWN	8.08	150	UG/KG	J
	UNKNOWN	9.07	90	UG/KG	J
	UNKNOWN	14.77	74	UG/KG	J
EBMR0					
	UNKNOWN	7.30	160	UG/KG	J
	UNKNOWN	11.77	150	UG/KG	J
	UNKNOWN	15.25	150	UG/KG	J
	UNKNOWN PAH	16.95	390	UG/KG	J
	PERYLENE	19.30	190	UG/KG	JN
	4H-CYCLOPENTA[DEF]PHENANTHRE	14.05	160	UG/KG	JN
	NAPHTHALENE, 1,4,6-TRIMETHYL	11.43	130	UG/KG	JN
	11H-BENZO[B]FLUORENE	15.72	200	UG/KG	JN
	11H-BENZO[B]FLUORENE	15.90	270	UG/KG	JN
	BENZO[B]NAPHTHO[2,3-D]FURAN	15.55	86	UG/KG	JN
	PYRENE, 2-METHYL-	16.07	430	UG/KG	JN
	PHENANTHRENE, 2,5-DIMETHYL-	14.77	120	UG/KG	JN
	NAPHTHALENE, 1,8-DIMETHYL-	10.35	260	UG/KG	JN
	ANTHRACENE, 1-METHYL-	13.90	120	UG/KG	JN
	ANTHRACENE, 2-METHYL-	13.87	79	UG/KG	JN
	7H-BENZ[DE]ANTHRACEN-7-ONE	16.72	170	UG/KG	JN
	7H-BENZ[DE]ANTHRACEN-7-ONE	17.05	230	UG/KG	JN
	9,10-ANTHRACENEDIONE	14.38	100	UG/KG	JN
	NAPHTHALENE, 1-METHYL-	9.52	120	UG/KG	JN
EBMR0DL					
	UNKNOWN PAH	14.02	370	UG/KG	J
	UNKNOWN PAH	16.92	490	UG/KG	J
	PERYLENE	19.25	510	UG/KG	JN
	BENZ[A]ANTHRACENE, 8-METHYL-	17.88	2100	UG/KG	JN
	PYRENE, 2-METHYL-	15.70	230	UG/KG	JN
	PYRENE, 2-METHYL-	15.87	400	UG/KG	JN
	PYRENE, 2-METHYL-	16.03	530	UG/KG	JN
	PHENANTHRENE, 2,5-DIMETHYL-	14.73	280	UG/KG	JN
	NAPHTHALENE, 1,7-DIMETHYL-	10.32	250	UG/KG	JN
	ANTHRACENE, 2-METHYL-	13.88	490	UG/KG	JN
	7H-BENZ[DE]ANTHRACEN-7-ONE	17	220	UG/KG	JN
	9,10-ANTHRACENEDIONE	14.35	400	UG/KG	JN
EBMR1					
	UNKNOWN	13.50	230	UG/KG	J
	UNKNOWN	15.95	340	UG/KG	J
	UNKNOWN	16.05	390	UG/KG	J
	UNKNOWN	16.48	510	UG/KG	J
	UNKNOWN	16.70	580	UG/KG	J
	UNKNOWN	18.02	550	UG/KG	J
	UNKNOWN	18.13	440	UG/KG	J
	UNKNOWN	18.70	750	UG/KG	J
	UNKNOWN	20.23	690	UG/KG	J
	UNKNOWN	20.73	720	UG/KG	J
	UNKNOWN	21.38	730	UG/KG	J
	UNKNOWN	21.78	890	UG/KG	J
	UNKNOWN	22.90	1100	UG/KG	J
	UNKNOWN	23.38	510	UG/KG	J
E R2					
	UNKNOWN	17.20	4300	UG/KG	J
	UNKNOWN	23.05	3500	UG/KG	J
	UNKNOWN	24.15	2600	UG/KG	J
	UNKNOWN PAH	19.88	2100	UG/KG	J
	UNKNOWN PAH	22.62	2600	UG/KG	J
EBMR4					
	ALDOL CONDENSATION	6.33	160	UG/KG	J
	UNKNOWN	8.17	120	UG/KG	J
	UNKNOWN	11.60	120	UG/KG	J
	UNKNOWN	13.42	350	UG/KG	J
	UNKNOWN PHTHALIC ACID	15.22	130	UG/KG	J
	PENTANOIC ACID, PENTYL ESTER	8.38	280	UG/KG	JN
	NONANE, 3-METHYL-	9	97	UG/KG	JN
	1-PENTADECANOL	14.73	570	UG/KG	JN
	ANTHRACENE, 9-METHYL-	13.90	97	UG/KG	JN
EE 25					
	UNKNOWN	8.15	150	UG/KG	J

	UNKNOWN	9.7	150	UG/KG	J
	UNKNOWN	17.	160	UG/KG	J
	UNKNOWN	18.48	360	UG/KG	J
	UNKNOWN	20.07	180	UG/KG	J
	UNKNOWN	20.48	430	UG/KG	J
	UNKNOWN	21.82	380	UG/KG	J
	UNKNOWN	23.90	420	UG/KG	J
	UNKNOWN PAH	14.02	200	UG/KG	J
	1-OCTADECANOL	14.72	380	UG/KG	JN
	PERYLENE	19.27	1000	UG/KG	JN
	PENTANOIC ACID, PENTYL ESTER	8.37	260	UG/KG	JN
	11H-BENZO[B]FLUORENE	15.87	380	UG/KG	JN
	ANTHRACENE, 9-DODECYLTETRADE	21.45	290	UG/KG	JN
	NAPHTHALENE, 1,3-DIMETHYL-	10.32	170	UG/KG	JN
	NAPHTHALENE, 2-PHENYL-	14.30	210	UG/KG	JN
	ANTHRACENE, 2-METHYL-	13.88	150	UG/KG	JN
	7H-BENZ[DE]ANTHRACEN-7-ONE	17.02	94	UG/KG	JN
EBMR6					
	UNKNOWN	7.27	210	UG/KG	J
	UNKNOWN	18.68	240	UG/KG	J
	UNKNOWN	21.77	550	UG/KG	J
	UNKNOWN	22.88	320	UG/KG	J
	1-NONADECANOL	14.72	290	UG/KG	JN
	PERYLENE	19.27	1100	UG/KG	JN
	PYRENE, 1-METHYL-	15.87	86	UG/KG	JN
	PYRENE, 2-METHYL-	16.03	230	UG/KG	JN
	NAPHTHALENE, 2,3-DIMETHYL-	10.32	130	UG/KG	JN
	ANTHRACENE, 1-METHYL-	14.02	150	UG/KG	JN
	ANTHRACENE, 2-METHYL-	13.87	210	UG/KG	JN
	7H-BENZ[DE]ANTHRACEN-7-ONE	16.68	300	UG/KG	JN
	7H-BENZ[DE]ANTHRACEN-7-ONE	17.02	470	UG/KG	JN
	9,10-ANTHRACENEDIONE	14.35	220	UG/KG	JN
E R3					
	UNKNOWN	7.27	180	UG/KG	J
	UNKNOWN	15.07	280	UG/KG	J
	UNKNOWN	17.48	380	UG/KG	J
	UNKNOWN	17.75	310	UG/KG	J
	UNKNOWN	18.02	180	UG/KG	J
	UNKNOWN	18.13	170	UG/KG	J
	UNKNOWN	19.87	450	UG/KG	J
	UNKNOWN	20.72	520	UG/KG	J
	UNKNOWN	23.90	860	UG/KG	J
	BENZALDEHYDE	6.33	99	UG/KG	JN
	BENZO[B]NAPHTHO[2,1-D]THIOPH	16.87	150	UG/KG	JN
	2-METHYLCHRYSENE	17.90	200	UG/KG	JN
	PHENANTHRENE, 2,5-DIMETHYL-	14.53	120	UG/KG	JN
	HEXADECANOIC ACID	13.90	280	UG/KG	JN
	NAPHTHALENE, 1,3-DIMETHYL-	10.30	120	UG/KG	JN
S .KFC					
	UNKNOWN	6.30	2	UG/L	J
EBMSO					
	UNKNOWN	14.33	1	UG/L	J
	UNKNOWN	18.82	2	UG/L	J
	HEXADECANOIC ACID	14.05	1	UG/L	JN

Missing Contents Error Report

SDG NO: EBMRO
CASE NO: 25388

LABORATORY: AMER ANALYTIC
AGENCY INPUT FILE: EBMRO.OAS

FIELD DESCRIPTION	CADRE KEY		
Analysis Time	Record Type 20	Line 5491	Format HH:MM
Analysis Time	Record Type 20	Line 5969	Format HH:MM
Sulfur Cleanup	Record Type 27	Line 6033	Format RANGE
Sulfur Cleanup	Record Type 27	Line 6494	Format RANGE
Analysis Time	Record Type 20	Line 7370	Format HH:MM
Analysis Time	Record Type 20	Line 7848	Format HH:MM
Sulfur Cleanup	Record Type 27	Line 7912	Format RANGE
Sulfur Cleanup	Record Type 27	Line 8373	Format RANGE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: _____ CERCLIS No: OH

Case No: 25388 Site Name Location: Dayton Electroplate

Contractor or EPA Lab: AATS Data User: OEPA

No. of Samples: 11 Date Sampled or Data Received: 5-20-97

Have Chain-of-Custody records been received? Yes ✓ No ✓
Have traffic reports or packing lists been received? Yes ✓ No _____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No _____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No _____
No of samples claimed: 11 No. of samples received: 11

Received by: Lynette Burnett Date: 5-20-97

Received by LSSS: Lynette Burnett Date: 5-20-97

Review started: 5-22-97 Reviewer Signature: Stephanie N. Tobin

Total time spent on review: 5 hrs 5-23-97 Date review completed: 5-23-97

Copied by: Lynette Burnett Date: 6-2-97

Mailed to user by: Lynette Burnett Date: 6-2-97

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

APPENDIX B
USEPA TCLP METALS SOIL SAMPLING
ANALYTICAL RESULTS

Ross Analytical Services, Inc.
16433 Foltz Industrial Parkway • Strongsville, Ohio 44136
(216) 572-3200 • Fax (216) 572-7620 • 1-800-325-7737

CERTIFICATE OF ANALYSIS

Client:

Ecology & Environment
6777 Engle Road
Suite N
Middleburg Hts, Ohio 44130
Attn: Jeff Kimble/Fax 216-243-6923

Work Order #: 97-04-102
Client Code: SMITH_TECH
Report Date: 04/21/97
Work ID: Soils for TCLP-Pb,Cd,& Cr
Date Received: 04/11/97

SAMPLE IDENTIFICATION

Lab Number	Sample Description	Lab Number	Sample Description
01	Soil DE1AIA	02	Soil DE1BIA
03	Soil DE2AIA	04	Soil DE2BIA
05	Soil DE3AIA	06	Soil DE3BIA
07	Soil DE4AIA	08	Soil DE4BIA
09	Soil DE5AIA	10	Soil DE5BIA
11	Soil DE6AIA	12	Soil DE6BIA
13	Soil DE7AIA	14	Soil DE7B1A
15	Soil DEGP1A	16	Soil DEGP1B
17	Soil DEGP2A	18	Soil DEGP2B
19	Soil DEGP3A	20	Soil DEGP3B
21	Soil DEGP4A	22	Soil DEGP4B

Enclosed are the analytical results for the samples listed above. Analyses were performed by the methods referenced in the Test Methodologies section, while any special circumstances are described in the Report Comments section. Unless otherwise noted, sample results are not moisture-corrected. Most analytes are reported relative to an Estimated Quantitation Limit (EQL), which is the lowest concentration that can be reliably measured under routine laboratory conditions. Questions or comments concerning the enclosed results should be directed to your Client Services Representative.

Certificate approved by
Carol L. Turner

REPORT COMMENTS

The holding time for all ICP metals analyses is 180 days from collection.

Work Order # 97-04-102 **Ross Analytical Services, Inc** **Reported: 04/21/97**

INORGANIC QC SUMMARY

Laboratory Control Sample

Target	LCS4616 % Recovery	LCS4625 % Recovery
Cadmium	94	93
Chromium	96	96
Lead	96	94

LCS4616 was analyzed along with Lab Nos. 01 through 18.
LCS4625 was analyzed along with Lab Nos. 19 through 22.

Matrix Spike/Matrix Spike Duplicate Pair
Performed on the TCLP leachate of Soil DE1AIA (Lab No. 01)

Target	MS % Recovery	MSD % Recovery	RPD
Cadmium	88	89	1
Chromium	90	91	1
Lead	90	91	1

Matrix Spike/Matrix Spike Duplicate Pair
Performed on the TCLP leachate of Soil DEGP3A (Lab No. 19)

Target	MS % Recovery	MSD % Recovery	RPD
Cadmium	88	88	0
Chromium	93	91	2
Lead	91	90	1

TEST METHODOLOGIES

The bottle leaching step of TCLP (for metals and semivolatile organics) was performed by EPA Method 1311. Matrix spikes, if any, were added at the time of digestion or extraction for further analyses.

Metals were determined in aqueous samples and leachates by digestion with nitric and hydrochloric acids as in EPA Method 3010A, followed by Inductively Coupled Plasma Emission Spectroscopy as in EPA Method 6010A unless noted otherwise.

Work Order # 97-04-102 **Ross Analytical Services, Inc** **Reported: 04/21/97**

Sample Description Soil DE1AIA Lab No. 01
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.257	88	0.025
7440-47-3	Chromium	0.245	90	0.050
7439-92-1	Lead	<EQL	90	0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

0000005

Sample Description Soil DE1BIA Lab No. 02
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	0.557		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE2AIA Lab No. 03

Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.375		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

0000085

Sample Description Soil DE2BIA Lab No. 04
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.429		0.025
7440-47-3	Chromium	0.103		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE3AIA Lab No. 05

Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE3BIA Lab No. 06

Test Description TCLP list metals Test Code TCMETS

0000010

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE4AIA Lab No. 07
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE4BIA Lab No. 08
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.114		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	0.355		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE5AIA Lab No. 09
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE5BIA Lab No. 10
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE6AIA Lab No. 11
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE6BIA Lab No. 12
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE7AIA Lab No. 13
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DE7B1A Lab No. 14
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP1A Lab No. 15
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP1B Lab No. 16
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP2A Lab No. 17
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.025		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	1.31		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP2B Lab No. 18

Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/14/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/15/97 OTHER METALS ANALYZED 04/15/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP3A Lab No. 19
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/15/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/16/97 OTHER METALS ANALYZED 04/16/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL	90	0.025
7440-47-3	Chromium	<EQL	93	0.050
7439-92-1	Lead	<EQL	91	0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

00004223

Sample Description Soil DEGP3B Lab No. 20
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/15/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/16/97 OTHER METALS ANALYZED 04/16/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	<EQL		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP4A Lab No. 21
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/15/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR _____

OTHER METALS DIGESTED 04/16/97 OTHER METALS ANALYZED 04/16/97 DILUTION FACTOR 1

UNITS mg/L

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.055		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

Work Order # 97-04-102 Ross Analytical Services, Inc Reported: 04/21/97

Sample Description Soil DEGP4B Lab No. 22
Test Description TCLP list metals Test Code TCMETS

TCLP BEGUN 04/15/97

MERCURY DIGESTED _____ MERCURY ANALYZED _____ DILUTION FACTOR 1

OTHER METALS DIGESTED 04/16/97 OTHER METALS ANALYZED 04/16/97 DILUTION FACTOR _____

UNITS mg/1

CAS No.	METAL	RESULT	PERCENT RECOVERY	EQL
7440-38-2	Arsenic	NA		0.50
7440-39-3	Barium	NA		0.020
7440-43-9	Cadmium	0.026		0.025
7440-47-3	Chromium	<EQL		0.050
7439-92-1	Lead	<EQL		0.25
7439-97-6	Mercury	NA		0.0020
7782-49-2	Selenium	NA		0.50
7440-22-4	Silver	NA		0.050

Note - Copper, nickel, and zinc are not required by Federal RCRA regulations but are required by some states.

7440-50-8	Copper	NA		0.10
7440-02-0	Nickel	NA		0.10
7440-66-6	Zinc	NA		0.10

MDL'S & EQL'S

Excel File: icpmdl.xls
Client: INT_MDL
W.O.#: NA

Method: 6010A
Date Completed: 06/05/96

Matrix: Water
TJA Enviro 36

Element	Run Date	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Standard Deviation	MDL 3.143*SD(7)	True Value	EQL (ug/L)	Mean	Average % Rec	% RSD
Aluminum	6/4/96	117.35	118.09	120.8	128.39	135.34	121.53	118.04	6.69149	21.03	100	100	122.7914	122.79	5.45
Antimony	6/4/96	93.53	87.93	96.98	101.5	87.26	88.57	93.32	5.26355	16.54	100	100	92.7271	92.73	5.68
Arsenic	6/4/96	183.37	199.22	200.19	189.08	185.56	201.83	181.21	8.70770	27.37	200	100	191.4943	95.75	4.55
Barium	6/4/96	4.32	4.23	4.14	4.23	4.14	4.05	3.95	0.12375	0.39	4	4	4.1514	103.79	2.98
Beryllium	6/4/96	2.02	1.82	1.91	2.03	2.06	2.04	1.94	0.08753	0.28	2	2	1.9743	98.71	4.43
Boron	6/5/96	31.83	29.57	30.84	29.57	31.93	31.46	28.69	1.28031	4.02	25	50	30.5557	122.22	4.19
Cadmium	6/4/96	4.81	4.62	5.29	4.72	5	4.62	4.72	0.24261	0.76	5	5	4.8257	96.51	5.03
Calcium	6/4/96	216.18	220.8	215.92	233.62	261.32	239.19	220.15	16.57442	52.09	200	200	229.5971	114.80	7.22
Chromium	6/4/96	10.49	10.14	10.83	12.89	13.07	9.27	8.76	1.66097	5.22	10	10	10.7786	107.79	15.41
Cobalt	6/4/96	12.2	12.2	11.26	12.21	13.14	10.31	11.26	0.92077	2.89	10	10	11.7971	117.97	7.81
Copper	6/4/96	24.61	23.38	22.15	22.15	24.2	21.32	21.32	1.33957	4.21	20	20	22.7329	113.66	5.89
Iron	6/4/96	117.08	114.96	111.61	112.51	151.94	112.34	113.92	14.55840	45.76	100	100	119.1943	119.19	12.21
Lead	6/4/96	44.39	50.3	46.9	54.54	65.54	47.7	47.74	7.14669	22.46	50	50	51.0157	102.03	14.01
Lithium	6/5/96	8.79	10.16	9.78	9.78	8.72	9.93	8.49	0.68395	2.15	10	20	9.3786	93.79	7.29
Magnesium	6/4/96	109.37	110.72	108.68	110.1	121.04	99.31	118.92	7.17549	22.55	100	100	111.1629	111.16	6.45
Manganese	6/4/96	4.36	4.86	4.53	5.54	5.54	4.86	4.7	0.46363	1.46	5	5	4.9129	98.26	9.44
Molybdenum	6/4/96	11.58	9.92	10.25	10.91	9.26	9.59	10.91	0.82670	2.60	10	10	10.3457	103.46	7.99
Nickel	6/4/96	21.08	21.25	18.69	20.86	21.22	19.61	19.12	1.08943	3.42	20	20	20.2614	101.31	5.38
Potassium	6/4/96	148.48	177.13	135.46	195.37	182.34	158.9	153.69	21.13021	66.41	200	200	164.4814	82.24	12.85
Selenium	6/4/96	87.72	88.21	104.73	74.6	82.62	86.27	103.52	10.90052	34.26	100	100	89.6671	89.67	12.16
Silicon	6/5/96	264.59	264.54	263.82	273.02	295.41	270.58	257.85	12.24755	38.49	250	500	269.9729	107.99	4.54
Silver	6/5/96	9.22	8.89	9.23	8.11	10.01	8.76	9.52	0.60213	1.89	10	10	9.1057	91.06	6.61
Sodium	6/4/96	479.79	487.01	499.63	611.48	517.67	510.46	501.44	44.30678	139.26	500	500	515.3543	103.07	8.60
Strontium	6/6/96	6.02	5.99	5.84	5.72	5.46	5.65	5.87	0.19797	0.62	5	20	5.7929	115.86	3.42
Thallium	6/6/96	114.12	120.45	103.35	119.46	134.37	181.77	127.26	25.36167	79.71	125	200	128.6829	102.95	19.71
Tin	6/4/96	101.41	100.74	99.07	107.77	103.75	107.43	107.09	3.58587	11.27	100	100	103.8943	103.89	3.45
Titanium	6/4/96	14.65	18.37	14.66	12.76	16.46	18.35	14.63	2.10956	6.63	20	50	15.6971	78.49	13.44
Vanadium	6/4/96	9.3	8.92	10.5	10.15	10.5	9.76	9.65	0.59810	1.88	10	10	9.8257	98.26	6.09
Zinc	6/5/96	21.37	19.66	21.37	24.95	22.51	23.65	20.81	1.79611	5.65	20	20	22.0457	110.23	8.15
Zirconium	6/5/96	23.68	27.63	28.65	27.76	29.2	21.97	27.13	2.69594	8.47	30	30	26.5743	88.58	10.14

MDLS 1996/1997

000026

APPENDIX C
OEPA MANHOLE 1 SOIL SAMPLING
ANALYTICAL RESULTS

interoffice
MEMORANDUM

to: Diane Crosby, DERR CO
from: RC Richard Ciotola, QA Officer DES
subject: Sediment samples S1464 - S1466
date: June 18, 1997

The results for sediment samples S1464 - S1466 are estimated. These three samples were analyzed on 6/13/97. Cyanide values exceeded the calibration curve of the instrument. Samples were diluted and reanalyzed on the same day. Sample S1464 was analyzed in duplicate. The relative percent difference (RPD) of the duplicates exceeded the laboratory's acceptance criteria. The analyst feels that the poor duplication may be result of a heterogeneous sample matrix. Other matrix interferences may also be present. S1466 was oily, and turned green during the distillation process. The other two samples also turned green during the preparation. Other quality control data from this analysis were within the control limits. If you have any questions or comments please feel free to contact me (614.644.4267).

1A	PPM	DETECTION LIMIT
Cyanide	93.9	2
Chromium	513	2
Zinc	4110	4
Cadmium	31.1	1
Lead	100	0.6

2A	PPM	
Cyanide	32.6	2
Chromium	469	2
Zinc	3200	4
Cadmium	143	1
Lead	62	0.6

3A	PPM	
Cyanide	609	2
Chromium	7990	2
Zinc	27,800	4
Cadmium	70.1	1
Lead	2900	0.6

Dayton Electroplate
June 5, 1997

manhole Soil Sampling Results

External ID 970605 - SI
Dayton Electroplate

LIMS Number [illegible]
Date Received MM 06 DD 05 YY 97

Client Name(check one)
- DAPC
- DDAGW
- DERR ✓
- DHWM
- DSW
- DSIWM
- ODNR
- Other

OEPA District(check one)
- CO ✓
- CDO
- NEDO
- NWDO
- SEDO
- SWDO
- Other

Bill to (Project) DERR

Collection Date 9 30-1030

	MM	DD	YY	HH DC	MM
Grab ☒	6	5	97	[illegible]	/
(or) Composite ☐ Begin	6	5	97		/
End	6	5	97		/

Frequency & Duration of Composite Sample

Sample Type(check one)
- Ancient
- Complaint
- Compliance
- Litigation ✓
- NPS
- Survey
- Other

Field QC
- Field Duplicate
- Field Blank
- Trip Blank
- Equip blank ✓

Matrix(check one)
- Air Canister
- Air Filter
- Air Foam(PUF)
- Drinking water
- Filter Cartridge
- Ground water
- Oil
- Paint
- Particulate
- ~~Sediment/Soil~~ ✓
- Surface water
- Tissue Base Line
- Tissue Consum.
- Waste water
- Other

Collected By Cliff Morton

Report Analysis to Diane Crosby

County

Container Information

Number	Type	Preservative
	Air Canister	
	Air Filter	
	Air Foam(PUF)	
	Amber 525	N/P
	Amber 525	HCl or Na_2SO_3
	Amber BNA	
	Amber Pest/PCB	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
1	Sed	~~[illegible]~~ CN
1	Sed	Metals
	Sterile(Bacteria)	
	Vial	HCl &/or $Na_2S_2O_3$
	Vial	N/P

Field Measurements

Parameter	Results
Chlorine,mg/l P50060	
Cond.,umhos/cm P94	
DO,mg/l P299	
Flow,cfs P81	
Gage Ht, ft	
pH, su P400	
Temp,°C P10	
Other	

Sample Location
Dayton Electroplate
Equipment Blank

Field Comments

Lab Comments
* Zn verified on 6/12/97

Fish Matrix, Additional Information

Latitude/Longitude

Common Name

Fish Type
- Whole Body Composite (WBC)
- Skin On Fillet Composite (SOFC)
- Skin Off Fillet Composite (SFFC)
- Whole Body (WB)
- Skin On Fillet (SOF)
- Skin Off Fillet (SFF)

Off-Site Information

	MM	DD	YY
Date Fish Ground	/	/	
Date Received	/	/	
Ground By			

LIMS Number

Date Received MM 06 DD 05 YY 97

External ID 970605 - SI
Dayton Electroplate

Client Name(check one)
- OAPC
- DDAGW
- DERR ✓
- DHWM
- DSW
- DSIWM
- DDNR
- Other

OEPA District(check one)
- CO ✓
- CDO
- NEDO
- NWDO
- SEDO
- SWDO
- Other

Bill to (Project) DERR

Collection Date

	MM	DD	YY	HH	MM
Grab ☒	6	5	97	09	30-1030
(or) Composite ☐ Begin	~~6~~	~~5~~	~~97~~		
End	~~6~~	~~5~~	~~97~~		

Frequency & Duration of Composite Sample

Sample Type(check one)
- Ambient
- Complaint
- Compliance
- Litigation ✓
- NPS
- Survey
- Other

Field QC
- Field Duplicate
- Field Blank
- Trip Blank

Matrix(check one)
- Air Canister
- Air Filter
- Air Foam(PUF)
- Drinking water
- Filter Cartridge
- Ground water
- Oil
- Paint
- Particulate
- Sediment/Soil ✓
- Surface water
- Tissue Base Line
- Tissue Consum.
- Waste water
- Other

Collected By Cliff Morton

Report Analysis to Diane Crosby

County

Container Information

Number	Type	Preservative
	Air Canister	
	Air Filter	
	Air Foam(PUF)	
	Amber 525	N/P
	Amber 525	HCl or Na_2SO_3
	Amber BNA	
	Amber Pest/PCB	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
1	Sed	~~Pesticides~~ CN
1	Sed	Metals
	Sterile(Bacteria)	
	Vial	HCl &/or $Na_2S_2O_3$
	Vial	N/P

Field Measurements

Parameter	Results
Chlorine,mg/l P50060	
Cond.umhos/cm P94	
DO,mg/l P299	
Flow,cfs P81	
Gage Ht, ft	
pH, su P400	
Temp.°C P10	
Other	

Sample Location
Dayton Electroplate
Manhole 1A

Field Comments

Lab Comments
* Cyanide result estimated (See IOC)

Fish Matrix, Additional Information

Latitude/Longitude

Common Name

Fish Type
- Whole Body Composite (WBC) ☐
- Skin On Fillet Composite (SOFC) ☐
- Skin Off Fillet Composite (SFFC) ☐
- Whole Body (WB) ☐
- Skin On Fillet (SOF) ☐
- Skin Off Fillet (SFF) ☐

Off-Site Information

	MM	DD	YY
Date Fish Ground	/	/	
Date Received	/	/	
Ground By			

External ID 970605-SI
Dayton Electroplate

UMS Number
Date Received MM 06 DD 05 YY 97

Client Name(check one)
- DAPC
- ODAGW
- DERR ✓
- DHWM
- DSW
- DSIWM
- ODNR
- Other

OEPA District(check one)
- CO ✓
- CDO
- NEDO
- NWDO
- SEDO
- SWDO
- Other

Bill to (Project) DERR

Collection Date
Grab ☒ (or) Composite ☐
MM DD YY HH MM
6/5/97 0930 1030
Begin ~~6/5/97~~ / /
End ~~6/5/97~~ / /
Frequency & Duration of Composite Sample

Sample Type(check one)
- Ambient
- Complaint
- Compliance
- Litigation ✓
- NPS
- Survey
- Other

Field QC
- Field Duplicate
- Field Blank
- Trip Blank

Matrix(check one)
- Air Canister
- Air Filter
- Air Foam(PUF)
- Drinking water
- Filter Cartridge
- Ground water
- Oil
- Paint
- Particulate
- Sediment/Soil ✓
- Surface water
- Tissue Base Line
- Tissue Consum.
- Waste water
- Other

Collected By Cliff Morton

Report Analysis to Diane Crosby

County

Container Information		
Number	Type	Preservative
	Air Canister	
	Air Filter	
	Air Foam(PUF)	
	Amber 525	N/F
	Amber 525	HCl or Na_2SO_3
	Amber BNA	
	Amber Pest/PCB	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/F
	Cubitainer	N/F_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
1	Sed	~~Fecal~~ CN
1	Sed	Metals
	Sterile(Bacteria)	
	Vial	HCl &/or $Na_2S_2O_3$
	Vial	N/F

Field Measurements	
Parameter	Results
Chlorine,mg/l P50060	
Cond,umho/cm P94	
DO,mg/l P299	
Flow,cfs P61	
Gage Ht, ft	
pH, su P400	
Temp,°C P10	
Other	

Sample Location
Dayton Electroplate
Manhole 2A

Field Comments

Lab Comments
* Cyanide result estimated (see ROC)

Fish Matrix, Additional Information

Latitude/Longitude

Common Name

Fish Type
- Whole Body Composite (WBC) ☐
- Skin On Fillet Composite (SOFC) ☐
- Skin Off Fillet Composite (SFFC) ☐
- Whole Body (WB) ☐
- Skin On Fillet (SOF) ☐
- Skin Off Fillet (SFF) ☐

Off-Site Information
Date Fish Ground MM / DD / YY
Date Received / /
Ground By

External ID 970605 - SI
Dayton Electroplate

LIMS Number [illegible]
Date Received MM 06 DD 05 YY 97

Client Name(check one)
- DAPC ☐
- DDAGW ☐
- DERR ☑
- DHWM ☐
- DSW ☐
- DSIWM ☐
- ODNR ☐
- Other

OEPA District(check one)
- CO ☑
- CDO ☐
- NEDO ☐
- NWDO ☐
- SEDO ☐
- SWDO ☐
- Other

Bill to (Project) DERR

Collection Date
Grab ☒ (or) Composite ☐
MM 6 DD 5 YY 97 HH ~~930~~ MM ~~1030~~ DC
Begin ~~6/5/97~~ /
End ~~6/5/97~~ /
Frequency & Duration of Composite Sample

Sample Type(check one)
- Ambient ☐
- Complaint ☐
- Compliance ☐
- Litigation ☑
- NPS ☐
- Survey ☐
- Other

Field QC
- Field Duplicate ☐
- Field Blank ☐
- Trip Blank ☐

Matrix(check one)
- Air Canister ☐
- Air Filter ☐
- Air Foam(PUF) ☐
- Drinking water ☐
- Filter Cartridge ☐
- Ground water ☐
- Oil ☐
- Paint ☐
- Particulate ☐
- Sediment/Soil ☑
- Surface water ☐
- Tissue Base Line ☐
- Tissue Consum. ☐
- Waste water ☐
- Other

Collected By Cliff Morton

Report Analysis to Diane Crosby

County

Container Information		
Number	Type	Preservative
	Air Canister	
	Air Filter	
	Air Foam(PUF)	
	Amber 525	N/P
	Amber 525	HCl or Na_2SO_3
	Amber BNA	
	Amber Pest/PCB	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
1	Sed	~~Freeze~~ CN
1	Sed	Metals
	Sterile(Bacteria)	
	Vial	HCl &/or $Na_2S_2O_3$
	Vial	N/P

Field Measurements	
Parameter	Results
Chlorine,mg/l P50080	
Cond.,umho/cm P94	
DO,mg/l P299	
Flow,cfs P61	
Gage,Ht, ft	
pH, su P400	
Temp,°C P10	
Other	

Sample Location
Dayton Electroplate
Manhole 3A

Field Comments
* Cyanide result estimated (See IOC)

Lab Comments

Fish Matrix, Additional Information

Latitude/Longitude

Common Name

Fish Type
- Whole Body Composite (WBC) ☐
- Skin On Fillet Composite (SOFC) ☐
- Skin Off Fillet Composite (SFFC) ☐
- Whole Body (WB) ☐
- Skin On Fillet (SOF) ☐
- Skin Off Fillet (SFF) ☐

Off-Site Information
Date Fish Ground MM / DD / YY
Date Received / /
Ground By

	BOD-20,mg/L	P324			
	BOD-5,mg/L	P310			
	BOD-ULT,mg/L	P319			
	CBOD-20,mg/L	P80087			
	CBOD-5,mg/L	P80082			
	CBOD-ULT,mg/L	P319			
	COD,mg/L	P340			
	Conductivity,umhos/cm	P95			
	Oil&Grease,mg/L	P556			
	pH,su	P403			
	Solids_Diss(filt),mg/L	P70300			
	Solids_Suspd(nonfilt),mg/L	P530			
	Solids_Total,mg/L	P500			
	TOC,mg/L	P680			

	Bacteria Parameters	Storet	Results	Date	Analyst
	E. coli,#/100ml	P31648			
	Fecal Strept.,#/100ml	P31679			
	Fecal Coliform,#/100ml	P31616			
	Total Coliform,#/100ml	P31501			
	MMO-MUG, P/A				

	Nutrient Parameters	Storet	Results	Date	Analyst
	Acidity,Total $CaCO_3$,mg/L	P70508			
	Alkalinity,Total $CaCO_3$,mg/L	P410			
	Ammonia,mg/L	P610			
	Chloride,mg/L	P940			
	Cyanide_Free (WAD),ug/L	P718			
✓	Cyanide_Total,~~ug/L~~ µg/L	P720	1009	6-13	SL
	Fluoride,mg/L	P951			
	Nitrate+Nitrite,mg/L	P630			
	Nitrite,mg/L	P615			
	Phenolics,ug/L	P32730			
	Phenolics w/man dist,ug/L	P32730			
	Phosphorous, Diss,mg/L	P666			
	Phosphorous, Diss LL,mg/L	P666			
	Phosphorous, Total,mg/L	P665			
	Phosphorous, Total LL,mg/L	P665			
	Sulfate,mg/L	P945			
	TKN(Tot Kjeldahl Nitrogen),mg/L	P625			

	ICP Name(Higher Level MDL)				
	Aluminum, total,ug/L	P1005			
	Barium, total,ug/L	P1007			
	Calcium, total,mg/L	P916			
✓	Chromium, total,~~ug/L~~ µg/L	P1034	7990	6-12	BK
	Copper, total,ug/L	P1042			
	Iron, total,ug/L	P1045			
	~~Lead,total,ug/L~~				
	Magnesium, total,mg/L	P927			
	Manganese, total,ug/L	P1055			
	Nickel, total,ug/L	P1067			
	Potassium, total,mg/L	P937			
*	Silica, total,mg/L	P956			
	Sodium, total,mg/L	P929			
	Strontium, total,ug/L	P1082			
✓	Zinc, total,~~ug/L~~ µg/L	P1092	27800	6-12	BK
	Hardness, Total,mg/L	P900			

	Non-ICP(Lower Level MDL)				
*	Antimony, total,ug/L	P1097			
	Arsenic, total,ug/L	P1002			
*	Beryllium, total,ug/L	P1012			
✓	Cadmium, total,~~ug/L~~ µg/L	P1027	70.1	6-12	BK
*	Cobalt, total,ug/L	P1037			
	Copper, LL, total,ug/L	P1042			
*	CR^{+6}, Diss Hexa Chrom, ug/L	P1220			
✓	Lead, total,~~ug/L~~ µg/L	P1051	2900	6-12	BK
*	Mercury, total,ug/L	P71900			
	Selenium, total,ug/L	P1147			
*	Silver, total,ug/L	P1077			
*	Thallium, total,ug/L	P1059			
*	Tin, total,ug/L	P1102			
*	Vanadium, total,ug/L	P1087			

	Miscellaneous	Storet	Results	Date	Analyst
	% Lipids,%				
	% Solids,%	P70318			
	Turbidity,ntu	P52079			
	Toxicity(Bioassay)		Reported Separately		
	Particle Size		Reported Separately		

Inorganics Data Approved By RC On 970618

Organic Tests (Reported Separately)

	Waste Water Analysis	Date	Analyst
	VOC, 624 (incl. up to 10 TICs)		
	BNA, 625 (incl. up to 10 TICs)		
	BN (PAH's), 625 (incl. up to 10 TICs)		
	Acid (Phenols), 625 (incl. up to 10 TICs)		
	Organochl. Pesticides, 608		
	PCB's, 608		
	Chlordane, 608		
	Toxaphene, 608		
	Additional TIC's (up to 20 TICs)		
	Drinking Water Analysis		
	VOC's, 524.2 (incl. up to 10 TICs)		
	Herbicides, 525.2 (incl. up to 10 TICs)		
	Organochl. Pesticides, 505		
	PCB, 508A		
	Chlordane, 505		
	Toxaphene, 505		

	SW846 Analysis	Date	Analyst
	VOC, 8260 (incl. up to 10 TICs)		
	BNA, 8270 (incl. up to 10 TICs)		
	BN (PAH's), 8270 (incl. up to 10 TICs)		
	Acid (Phenols), 8270 (incl. up to 10 TICs)		
	Organochl. Pesticides, 8080		
	PCB's, 8080		
	Chlordane, 8080		
	Toxaphene, 8080		
	Additional TIC's (up to 20 TICs)		
	Air Analysis		
	Air Canister, TO-14 (incl. up to 10 TICs)		
	Canister Clean, TO-14		
	Air Foam (PUF), TO-13 (incl. up to 10 TICs)		
	Additional TIC's (up to 20 TICs)		

Organics Data Reported By _____ On _____

	BOD-20,mg/L	P324			
	BOD-5,mg/L	P310			
	BOD-ULT,mg/L	P319			
	CBOD-20,mg/L	P80007			
	CBOD-5,mg/L	P80082			
	CBOD-ULT,mg/L	P319			
	COD,mg/L	P340			
	Conductivity,uhmos/cm	P95			
	Oil&Grease,mg/L	P556			
	pH,su	P403			
	Solids_Diss(filt),mg/L	P70300			
	Solids_Suspd(non-filt),mg/L	P530			
	Solids_Total,mg/L	P500			
	TOC,mg/L	P680			

	Bacteria Parameters	Storet	Results	Date	Analyst
	E. coli,#/100ml	P31648			
	Fecal Strept.,#/100ml	P31675			
	Fecal Coliform,#/100ml	P31616			
	Total Coliform,#/100ml	P31501			
	MMO-MUG, P/A				

	Nutrient Parameters	Storet	Results	Date	Analyst
	Acidity,Total $CaCO_3$,mg/L	P70508			
	Alkalinity Total $CaCO_3$,mg/L	P410			
	Ammonia,mg/L	P610			
	Chloride,mg/L	P940			
	Cyanide_Free (WAD),ug/L	P718			
✓	Cyanide_Total,ug/L µg/l	P720	32.6	6-13	SL *
	Fluoride,mg/L	P951			
	Nitrate+Nitrite,mg/L	P630			
	Nitrite,mg/L	P615			
	Phenolics,ug/L	P32730			
	Phenolics w/man dist,ug/L	P32730			
	Phosphorous, Diss,mg/L	P666			
	Phosphorous, Diss LL,mg/L	P666			
	Phosphorous, Total,mg/L	P665			
	Phosphorous, Total LL,mg/L	P665			
	Sulfate,mg/L	P945			
	TKN(Tot Kjeldahl Nitrogen),mg/L	P625			

	ICP Flame(Higher Level MDL)				
	Aluminum, total,ug/L	P1005			
	Barium, total,ug/L	P1007			
	Calcium, total,mg/L	P916			
✓	Chromium, total,ug/L µg/l	P1034	469	6-12	BK
	Copper, total,ug/L	P1042			
	Iron, total,ug/L	P1045			
	~~Lead, total,ug/L~~				
	Magnesium, total,mg/L	P927			
	Manganese, total,ug/L	P1055			
	Nickel, total,ug/L	P1067			
	Potassium, total,mg/L	P937			
*	Silica, total,mg/L	P952			
	Sodium, total,mg/L	P929			
	Strontium, total,ug/L	P1082			
✓	Zinc, total,ug/L µg/l	P1092	3200	6-12	BK
	Hardness, Total,mg/L	P900			

	Non-ICP(Lower Level MDL)				
*	Antimony, total,ug/L	P1097			
	Arsenic, total,ug/L	P1002			
*	Beryllium, total,ug/L	P1012			
✓	Cadmium, total,ug/L µg/l	P1027	143	6-12	BK
*	Cobalt, total,ug/L	P1037			
	Copper, LL, total,ug/L	P1042			
*	CR^{+6}, Diss Hexa Chrom, ug/L	P1220			
✓	Lead, total,ug/L µg/l	P1051	62	10/10	PS
*	Mercury, total,ug/L	P71900			
	Selenium, total,ug/L	P1147			
*	Silver, total,ug/L	P1077			
*	Thallium, total,ug/L	P1059			
*	Tin, total,ug/L	P1102			
*	Vanadium, total,ug/L	P1087			

	Miscellaneous	Storet	Results	Date	Analyst
	% Lipids,%				
	% Solids,%	P70318			
	Turbidity,ntu	P82078			
	Toxicity(Bioassay)		Reported Separately		
	Particle Size		Reported Separately		

Inorganics Data Approved By RC On 970618

Organic Tests (Reported Separately)

	Waste Water Analysis	Date	Analyst
	VOC, 624 (incl. up to 10 TICs)		
	BNA, 625 (incl. up to 10 TICs)		
	BN (PAH's), 625 (incl. up to 10 TICs)		
	Acid (Phenols), 625 (incl. up to 10 TICs)		
	Organochl. Pesticides, 608		
	PCB's, 608		
	Chlordane, 608		
	Toxaphene, 608		
	Additional TIC's (up to 20 TICs)		
	Drinking Water Analysis		
	VOC's, 524.2 (incl. up to 10 TICs)		
	Herbicides, 525.2 (incl. up to 10 TICs)		
	Organochl. Pesticides, 505		
	PCB, 508A		
	Chlordane, 505		
	Toxaphene, 505		

	SW846 Analysis	Date	Analyst
	VOC, 8260 (incl. up to 10 TICs)		
	BNA, 8270 (incl. up to 10 TICs)		
	BN (PAH's), 8270 (incl. up to 10 TICs)		
	Acid (Phenols), 8270 (incl. up to 10 TICs)		
	Organochl. Pesticides, 8080		
	PCB's, 8080		
	Chlordane, 8080		
	Toxaphene, 8080		
	Additional TIC's (up to 20 TICs)		
	Air Analysis		
	Air Canister, TO-14 (incl. up to 10 TICs)		
	Canister Clean, TO-14		
	Air Foam (PUF), TO-13 (incl. up to 10 TICs)		
	Additional TIC's (up to 20 TICs)		

Organics Data Reported By _____ On _____

	BOD-20,mg/L	P324			
	BOD-5,mg/L	P310			
	BOD-ULT,mg/L	P319			
	CBOD-20,mg/L	P80087			
	CBOD-5,mg/L	P80082			
	CBOD-ULT,mg/L	P319			
	COD,mg/L	P340			
	Conductivity,umhos/cm	P95			
	Oil&Grease,mg/L	P556			
	pH,su	P403			
	Solids_Diss(filt),mg/L	P70300			
	Solids_Suspd(nonfilt),mg/L	P530			
	Solids_Total,mg/L	P500			
	TOC,mg/L	P680			

	Bacteria Parameters	Storet	Results	Date	Analyst
	E. coli,#/100ml	P31648			
	Fecal Strept.,#/100ml	P31679			
	Fecal Coliform,#/100ml	P31616			
	Total Coliform,#/100ml	P31501			
	MMO-MUG, P/A				

	Nutrient Parameters	Storet	Results	Date	Analyst
	Acidity,Total $CaCO_3$,mg/L	P70508			
	Alkalinity,Total $CaCO_3$,mg/L	P410			
	Ammonia,mg/L	P610			
	Chloride,mg/L	P940			
	Cyanide_Free (WAD),ug/L	P718			
✓	Cyanide_Total,ug/L ug/g	P720	93.9	10-13	SG
	Fluoride,mg/L	P951			
	Nitrate+Nitrite,mg/L	P630			
	Nitrite,mg/L	P615			
	Phenolics,ug/L	P32730			
	Phenolics w/man dist,ug/L	P32730			
	Phosphorous, Diss,mg/L	P666			
	Phosphorous, Diss LL,mg/L	P666			
	Phosphorous, Total,mg/L	P665			
	Phosphorous, Total LL,mg/L	P665			
	Sulfate,mg/L	P945			
	TKN(Tot Kjeldahl Nitrogen),mg/L	P625			

			Results	Date	Analyst
	ICP Flame(Higher Level MDL)				
	Aluminum, total,ug/L	P1005			
	Barium, total,ug/L	P1007			
	Calcium, total,mg/L	P916			
✓	Chromium, total,ug/L ug/g	P1034	513	6-12	BK
	Copper, total,ug/L	P1042			
	Iron, total,ug/L	P1045			
	~~Lead, total,ug/L~~				
	Magnesium, total,mg/L	P927			
	Manganese, total,ug/L	P1055			
	Nickel, total,ug/L	P1067			
	Potassium, total,mg/L	P937			
*	Silica, total,mg/L	P956			
	Sodium, total,mg/L	P929			
	Strontium, total,ug/L	P1082			
✓	Zinc, total,ug/L ug/g	P1092	4110	6-12	BK
	Hardness, Total,mg/L	P900			
	Non-ICP(Lower Level MDL)				
*	Antimony, total,ug/L	P1097			
	Arsenic, total,ug/L	P1002			
*	Beryllium, total,ug/L	P1012			
✓	Cadmium, total,ug/L ug/g	P1027	31.1	6-12	BK
*	Cobalt, total,ug/L	P1037			
	Copper, LL, total,ug/L	P1042			
*	CR^{+6}, Diss Hexa Chrom, ug/L	P1032			
✓	Lead, total,ug/L ug/g	P1051	100	6/10	BS
*	Mercury, total,ug/L	P71900			
	Selenium, total,ug/L	P1147			
*	Silver, total,ug/L	P1077			
*	Thallium, total,ug/L	P1059			
*	Tin, total,ug/L	P1102			
*	Vanadium, total,ug/L	P1087			

	Miscellaneous	Storet	Results	Date	Analyst
	% Lipids,%				
	% Solids,%	P70318			
	Turbidity,ntu	P82079			
	Toxicity(Bioassay)		Reported Separately		
	Particle Size		Reported Separately		

Inorganics Data Approved By RC On 970618

Organic Tests (Reported Separately)

	Waste Water Analysis	Date	Analyst
	VOC, 624 (incl. up to 10 TICs)		
	BNA, 625 (incl. up to 10 TICs)		
	BN (PAH's), 625 (incl. up to 10 TICs)		
	Acid (Phenols), 625 (incl. up to 10 TICs)		
	Organochl. Pesticides, 608		
	PCB's, 608		
	Chlordane, 608		
	Toxaphene, 608		
	Additional TIC's (up to 20 TICs)		
	Drinking Water Analysis		
	VOC's, 524.2 (incl. up to 10 TICs)		
	Herbicides, 525.2 (incl. up to 10 TICs)		
	Organochl. Pesticides, 505		
	PCB, 508A		
	Chlordane, 505		
	Toxaphene, 505		

	SW846 Analysis	Date	Analyst
	VOC, 8260 (incl. up to 10 TICs)		
	BNA, 8270 (incl. up to 10 TICs)		
	BN (PAH's), 8270 (incl. up to 10 TICs)		
	Acid (Phenols), 8270 (incl. up to 10 TICs)		
	Organochl. Pesticides, 8080		
	PCB's, 8080		
	Chlordane, 8080		
	Toxaphene, 8080		
	Additional TIC's (up to 20 TICs)		
	Air Analysis		
	Air Canister, TO-14 (incl. up to 10 TICs)		
	Canister Clean, TO-14		
	Air Foam (PUF), TO-13 (incl. up to 10 TICs)		
	Additional TIC's (up to 20 TICs)		

Organics Data Reported By _____ On

	COD-20,mg/L	P324			
	BOD-5,mg/L	P310			
	BOD-ULT,mg/L	P319			
	CBOD-20,mg/L	P80087			
	CBOD-5,mg/L	P80082			
	CBOD-ULT,mg/L	P319			
	COD,mg/L	P340			
	Conductivity,umos/cm	P95			
	Oil&Grease,mg/L	P556			
	pH,su	P403			
	Solids_Diss(filt),mg/L	P70300			
	Solids_Suspd(nonfilt),mg/L	P530			
	Solids_Total,mg/L	P500			
	TOC,mg/L	P680			

	Bacteria Parameters	Storet	Results	Date	Analyst
	E. coli,#/100ml	P31648			
	Fecal Strept.,#/100ml	P31679			
	Fecal Coliform,#/100ml	P31616			
	Total Coliform,#/100ml	P31501			
	MMO-MUG, P/A				

	Nutrient Parameters	Storet	Results	Date	Analyst
	Acidity,Total $CaCO_3$,mg/L	P70508			
	Alkalinity Total $CaCO_3$,mg/L	P410			
	Ammonia,mg/L	P610			
	Chloride,mg/L	P940			
	Cyanide_Free (WAD),ug/L	P718			
✓	Cyanide_Total,ug/L	P720	<10	10-13	SET
	Fluoride,mg/L	P951			
	Nitrate+Nitrite,mg/L	P630			
	Nitrite,mg/L	P615			
	Phenolics,ug/L	P32730			
	Phenolics w/man dist,ug/L	P32730			
	Phosphorous, Diss,mg/L	P666			
	Phosphorous, Diss LL,mg/L	P666			
	Phosphorous, Total,mg/L	P665			
	Phosphorous, Total LL,mg/L	P665			
	Sulfate,mg/L	P945			
	TKN(Tot Kjeldahl Nitrogen),mg/L	P625			

	ICP/Flame(Higher Level MDL)				
	Aluminum, total,ug/L	P1005			
	Barium, total,ug/L	P1007			
	Calcium, total,mg/L	P916			
✓	Chromium, total,ug/L	P1034	<30	6-12	BL
	Copper, total,ug/L	P1042			
	Iron, total,ug/L	P1045			
	~~Lead, total,ug/L~~				
	Magnesium, total,mg/L	P927			
	Manganese, total,ug/L	P1055			
	Nickel, total,ug/L	P1067			
	Potassium, total,mg/L	P937			
*	Silica, total,mg/L	P956			
	Sodium, total,mg/L	P929			
	Strontium, total,ug/L	P1082			
✓	Zinc, total,ug/L	P1092	12*	6-12	BL
	Hardness, Total,mg/L	P900			

	Non-ICP(Lower Level MDL)				
*	Antimony, total,ug/L	P1097			
	Arsenic, total,ug/L	P1002			
*	Beryllium, total,ug/L	P1012			
✓	Cadmium, total,ug/L	P1027	<5	6-12	BL
*	Cobalt, total,ug/L	P1037			
	Copper, LL, total,ug/L	P1042			
*	CR^{+6}, Diss Hexa Chrom, ug/L	P1032			
✓	Lead, total,ug/L	P1051	<2	6/10	PS
*	Mercury, total,ug/L	P71900			
	Selenium, total,ug/L	P1147			
*	Silver, total,ug/L	P1077			
*	Thallium, total,ug/L	P1059			
*	Tin, total,ug/L	P1102			
*	Vanadium, total,ug/L	P1087			

	Miscellaneous	Storet	Results	Date	Analyst
	% Lipids,%				
	% Solids,%	P70318			
	Turbidity,ntu	P52079			
	Toxicity(Bioassay)		Reported Separately		
	Particle Size		Reported Separately		

Inorganics Data Approved By RC On 970618

Organic Tests (Reported Separately)

	Waste Water Analysis	Date	Analyst
	VOC, 624 (incl. up to 10 TICs)		
	NA, 625 (incl. up to 10 TICs)		
	N (PAH's), 625 (incl. up to 10 TICs)		
	Acid (Phenols), 625 (incl. up to 10 TICs)		
	rganochl. Pesticides, 608		
	CB's, 608		
	lordane, 608		
	Toxaphene, 608		
	ditional TIC's (up to 20 TICs)		
	inking Water Analysis		
	C's, 524.2 (incl. up to 10 TICs)		
	Herbicides, 525.2 (incl. up to 10 TICs)		
	ganochl. Pesticides, 505		
	B, 508A		
	ordane, 505		
	Toxaphene, 505		

	SW846 Analysis	Date	Analyst
	VOC, 8260 (incl. up to 10 TICs)		
	BNA, 8270 (incl. up to 10 TICs)		
	BN (PAH's), 8270 (incl. up to 10 TICs)		
	Acid (Phenols), 8270 (incl. up to 10 TICs)		
	Organochl. Pesticides, 8080		
	PCB's, 8080		
	Chlordane, 8080		
	Toxaphene, 8080		
	Additional TIC's (up to 20 TICs)		
	Air Analysis		
	Air Canister, TO-14 (incl. up to 10 TICs)		
	Canister Clean, TO-14		
	Air Foam (PUF), TO-13 (incl. up to 10 TICs)		
	Additional TIC's (up to 20 TICs)		

anics Data Reported By _____ On _____

APPENDIX D
SITE PHOTOGRAPHIC LOG

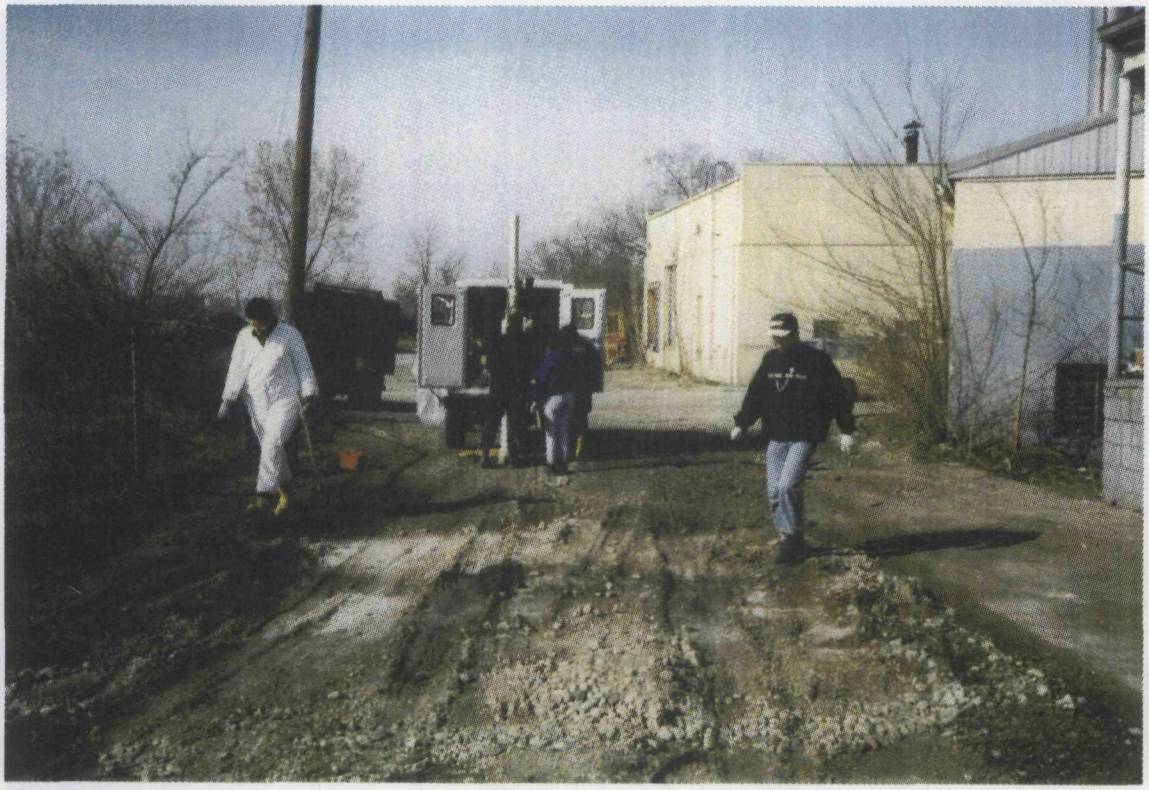


Photo 1
Description: Geoprobe™ location for IA samples EBMS0 and EBMR0 and USEPA samples DEGP1A and DEGP1B.
Photo Orientation: West
Date: April 10, 1997

Photo 2
Description: Location for IA sample EBMR1 and USEPA samples DE1AIA and DE1BIA, next to concrete pad along south fenceline.
Photo Orientation: East
Date: April 10, 1997

Photo 3

Description: Location of IA sample EBMR2 and USEPA samples DE2AIA, DE2BIA, next to loading dock outside wastewater treatment area.

Photo Orientation: North

Date: April 10, 1997

Photo 4
Description: Location of IA sample EBMR2 and USEPA samples DE2AIA, DE2BIA, next to loading dock outside wastewater treatment area.
Photo Orientation: East
Date: April 10, 1997

Photo 5
Description: Location of IA sample EBMR3 and USEPA samples DE3AIA, DE3BIA, south of southeast corner of building 2.
Photo Orientation: South
Date: April 10, 1997

Photo 6
Description: Location of IA samples EBMR4 and EBMR5 and USEPA samples DEGP2A, DEGP2B, south of building 2.
Photo Orientation: Northeast
Date: April 10, 1997

Photo 7
Description: Location of IA samples EBMR4 and EBMR5 and USEPA samples DEGP2A, DEGP2B, south of building 2.
Photo Orientation: South
Date: April 10, 1997

Photo 8
Description: Location of IA background soil sample EBMR6, between building 2 and the sidewalk along Valley Street.
Photo Orientation: East
Date: April 10, 1997

Photo 9
Description: Location of USEPA samples DE4AIA and DE4BIA, south of the southwest corner of building 2.
Photo Orientation: North
Date: April 10, 1997

Photo 10
Description: Location of USEPA samples DEGP3A and DEGP3B, southwest of building 2.
Photo Orientation: Northeast
Date: April 10, 1997

Photo 11
Description: Location of USEPA samples DEG5AIA, DE5BIA, south of building 2.
Photo Orientation: East
Date: April 10, 1997

Photo 12
Description: Location of USEPA samples DE7AIA and DE7BIA, west of building 2.
Photo Orientation: North
Date: April 10, 1997

Photo 13
Description: IA Geoprobe™ location GP3, southwest of building 2. No groundwater sample was collected at this location.
Photo Orientation: South
Date: April 10, 1997

Photo 14
Description: IA Geoprobe™ location GP3, southwest of building 2. No groundwater sample was collected at this location.
Photo Orientation: East
Date: April 10, 1997

Photo 15
Description: Location of USEPA samples DEGP4A and DEGP4B along west wall of building 2.
Photo Orientation: North
Date: April 10, 1997

Photo 16

Description: IA Geoprobe™ location GP3, southwest of building 2. No groundwater sample was collected at this location.

Photo Orientation: Northeast

Date: April 10, 1997

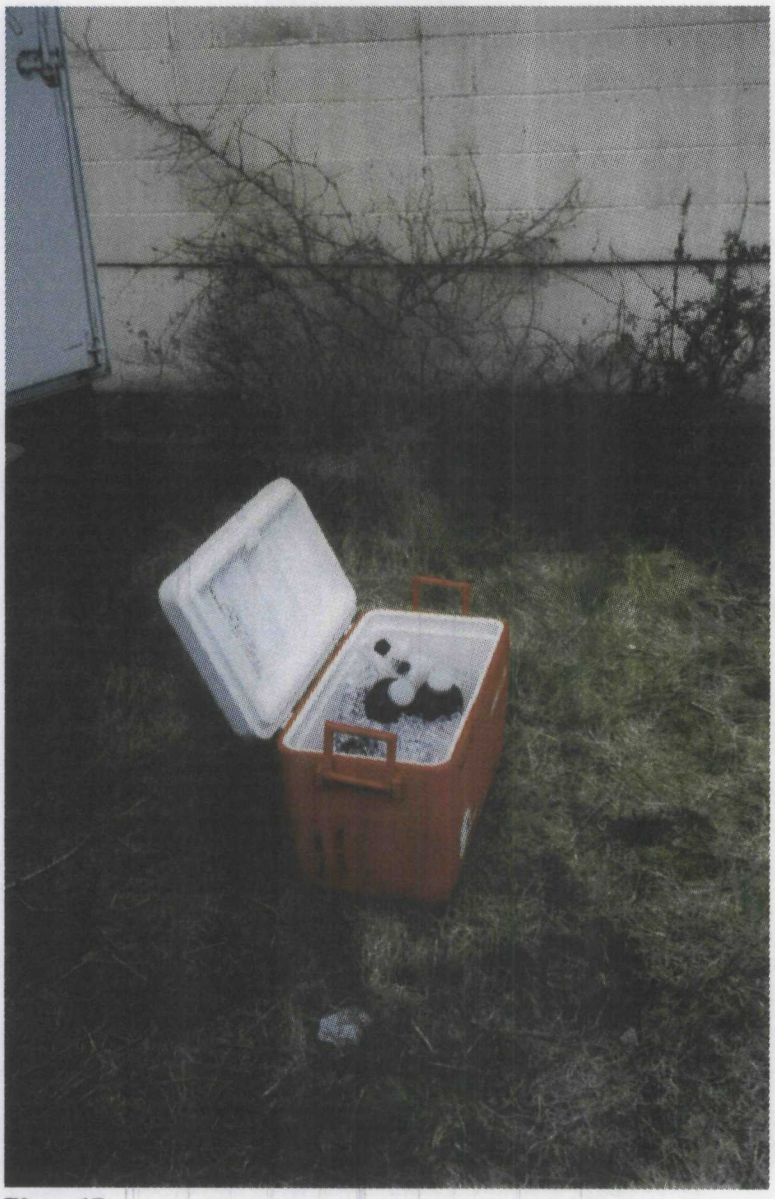


Photo 17
Description: Geoprobe™ location GP4, west of building 2. IA sample EBMS2 was collected at this location.
Photo Orientation: Northeast
Date: April 10, 1997

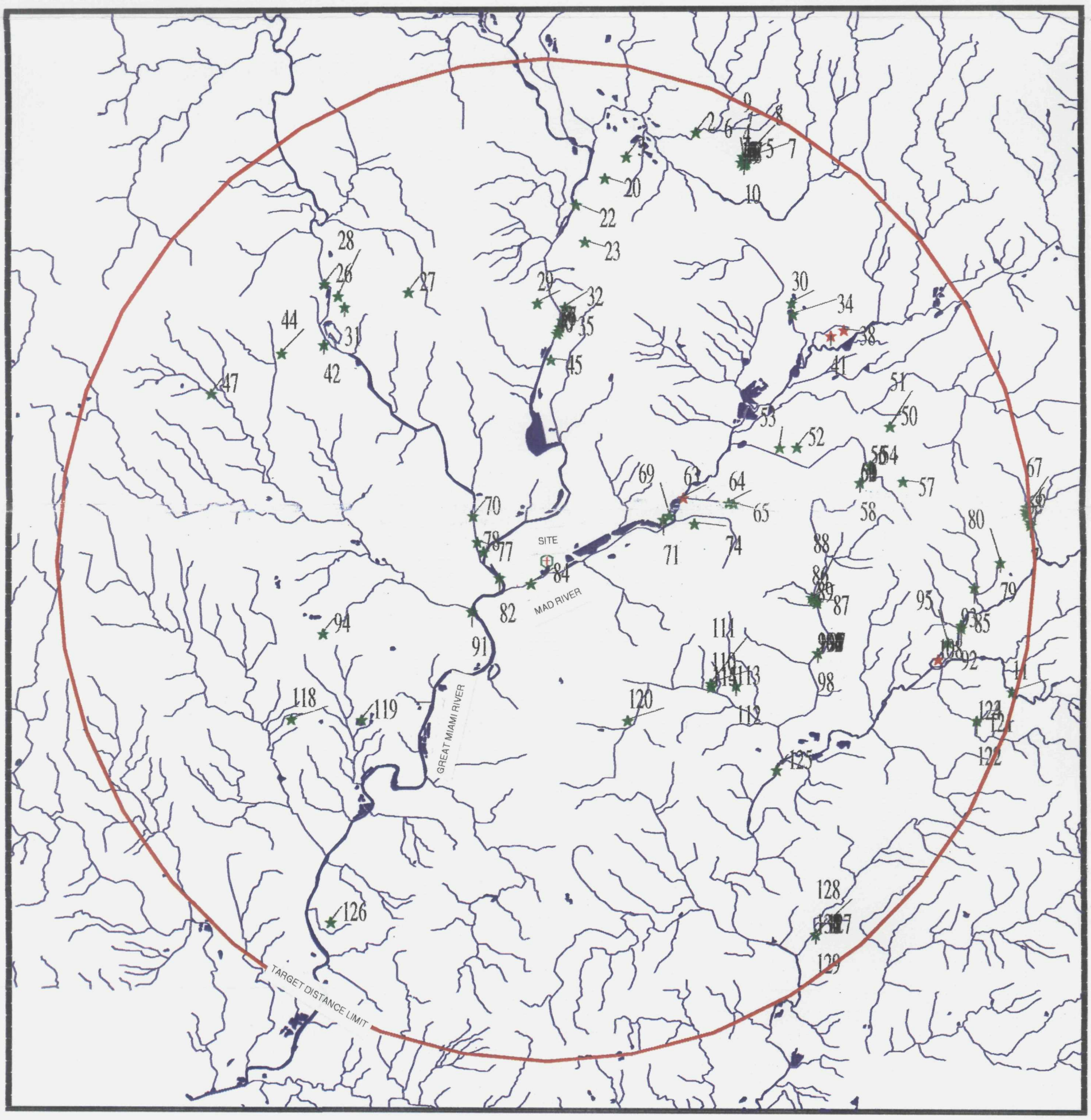
APPENDIX E
SENSITIVE ENVIRONMENTS MAP

OhioEPA

Division of Emergency & Remedial Response

GEOGRAPHIC INFORMATION SYSTEM 15-MILE RADIUS MAP

ENDANGERED SPECIES
DAYTON ELECTROPLATING



★ FEDERAL ENDANGERED SPECIES

★ STATE ENDANGERED SPECIES

LIMIT OF RADIUS FROM SITE

STREAM

SITE

0 5 MILES

N W E S

MAR 13 1997
SOUTHWEST DISTRICT

ENDANGERED SPECIES REPORT WITHIN RADIUS

ID #	FEDERAL CODE	STATE CODE	CLASS CODE	LOCATION CODE	DISTANCE (MILES)	SCIENTIFIC NAME	COMMON NAME
2		P	SP	N	13.668	009ONOSMODIUM HISPIDISSIMUM	FALSE GROMWELL
3		S	SA	C	12.398	001TAXIDEA TAXUS	BADGER
4		P	SP	C	13.583	010CAREX RETROFLEXA VAR. RETROFLEXA	REFLEXED SEDGE
5		P	SP	C	13.527	006CACALIA PLANTAGINEA	FEN INDIAN-PLANTAIN
6		P	SP	C	13.527	016LONICERA PROLIFERA	GRAPE HONEYSUCKLE
7		P	SP	C	13.527	029CAREX SUBERECTA	PRAIRIE STRAW SEDGE
8		P	SP	C	13.527	009SCLERIA VERTICILLATA	LOW NUT-RUSH
9		P	SP	C	13.527	017SOLIDAGO OHIOENSIS	OHIO GOLDENROD
10		P	SP	C	13.527	007CAREX STERILIS	FEN SEDGE
11		P	SP	C	13.402	010CACALIA PLANTAGINEA	FEN INDIAN-PLANTAIN
12		P	SP	C	13.402	009TRIGLOCHIN PALUSTRE	MARSH ARROW-GRASS
13		P	SP	C	13.402	009CLADIUM MARISCOIDES	TWIG-RUSH
14		P	SP	C	13.402	022SOLIDAGO OHIOENSIS	OHIO GOLDENROD
16		P	SP	C	13.402	013RHYNCHOSPORA ALBA	WHITE BEAK-RUSH
17		S	SA	C	13.473	003ETHEOSTOMA EXILE	IOWA DARTER
18		T	SP	N	13.415	008UTRICULARIA INTERMEDIA	FLAT-LEAVED BLADDERWORT
19		P	SP	C	13.372	015JUNCUS BALTICUS	BALTIC RUSH
20		S	SA	G	11.650	002TAXIDEA TAXUS	BADGER
22		T	SP	N	10.757	004VERATRUM WOODII	WOOD'S HELLEBORE
23		P	SP	C	9.675	007LONICERA PROLIFERA	GRAPE HONEYSUCKLE
26		E	SA	C	10.771	002VILLOSA FABALIS	RAYED BEAN
27		T	SA	N	9.133	025BARTRAMIA LONGICAUDA	UPLAND SANDPIPER
28		P	SP	C	10.226	016ARABIS HIRSUTA VAR. ADPRESSIPILIS	SOUTHERN HAIRY ROCK-CRESS
29		P	SP	N	7.753	010POA LANGUIDA	WEAK SPEAR-GRASS
30		S	SA	C	10.819	031ETHEOSTOMA EXILE	IOWA DARTER
31		P	SP	C	9.843	001FRAXINUS TOMENTOSA	PUMPKIN ASH
32		P	SP	C	7.659	038TRILLIUM NIVALE	SNOW TRILLIUM
34		S	SA	C	10.601	011ETHEOSTOMA EXILE	IOWA DARTER
35		T	SP	C	7.253	006VERATRUM WOODII	WOOD'S HELLEBORE
36		T	SP	C	7.058	007VERATRUM WOODII	WOOD'S HELLEBORE
37		P	SP	C	7.058	011LONICERA PROLIFERA	GRAPE HONEYSUCKLE
38	LT	T	SP	C	11.479	010PLATANTHERA LEUCOPHAEA	PRAIRIE FRINGED ORCHID
39		T	SP	N	6.942	005PENSTEMON PALLIDUS	DOWNY WHITE BEARD-TONGUE
40		T	SP	C	6.864	005VIBURNUM MOLLE	SOFT-LEAVED ARROW-WOOD
41	LT	T	SP	C	11.060	013PLATANTHERA LEUCOPHAEA	PRAIRIE FRINGED ORCHID
42		P	SP	C	9.455	002FRAXINUS TOMENTOSA	PUMPKIN ASH
44		P	SP	C	10.276	003FRAXINUS TOMENTOSA	PUMPKIN ASH
45		P	SP	C	6.075	009VIBURNUM RUFIDULUM	SOUTHERN BLACK-HAW
47		T	SA	N	11.468	004ORCONECTES SLOANII	SLOAN'S CRAYFISH
50		P	SP	C	11.316	025ONOSMODIUM HISPIDISSIMUM	FALSE GROMWELL
51		P	SP	C	11.316	024SOLIDAGO OHIOENSIS	OHIO GOLDENROD
52		T	SP	G	8.432	004CAREX MESOCHOREA	MIDLAND SEDGE
53		T	SA	N	7.945	034BARTRAMIA LONGICAUDA	UPLAND SANDPIPER
54		T	SP	C	10.362	006SELAGINELLA ECLIPES	MIDWEST SPIKEMOSS
55		P	SP	C	10.362	010SPIRANTHES OVALIS	LESSER LADIES'-TRESSES
56		P	SP	C	10.362	023ONOSMODIUM HISPIDISSIMUM	FALSE GROMWELL
57		P	SP	C	11.226	025SOLIDAGO OHIOENSIS	OHIO GOLDENROD

ENDANGERED SPECIES REPORT WITHIN RADIUS

ID #	FEDERAL CODE	STATE CODE	CLASS CODE	LOCATION CODE	DISTANCE (MILES)	SCIENTIFIC NAME	COMMON NAME
58		P	SP	C	9.936	035GENTIANOPSIS PROCERA	SMALL FRINGED GENTIAN
59		P	SP	C	9.936	023PRENANTHES RACEMOSA	PRAIRIE RATTLESNAKE-ROOT
60		T	SP	C	9.936	008TRIGLOCHIN MARITIMUM	SEASIDE ARROW-GRASS
61		P	SP	C	9.936	006EQUISETUM VARIEGATUM	VARIEGATED SCOURING-RUSH
62		T	SP	C	9.936	005SELAGINELLA ECLIPES	MIDWEST SPIKEMOSS
63	LE	E	SA	C	4.634	006MYOTIS SODALIS	INDIANA BAT
64		E	SA	C	5.889	026CISTOTHORUS PLATENSIS	SEDGE WREN
65		P	SP	N	6.024	020PANICUM COLUMBIANUM	AMERICAN PANIC-GRASS
66		P	SP	C	14.873	015LONICERA PROLIFERA	GRAPE HONEYSUCKLE
67		P	SP	N	14.827	007VERBESINA HELIANTHOIDES	HAIRY WING-STEM
68		P	SP	N	14.844	004CAREX SUBERECTA	PRAIRIE STRAW SEDGE
69		S	SA	N	4.035	005SISTRURUS CATENATUS	EASTERN MASSASAUGA
70		T	SA	C	2.646	037EPIOBLASMA TRIQUETRA	SNUFFBOX
71		P	SP	C	3.814	024ONOSMODIUM HISPIDISSIMUM	FALSE GROMWELL
73		T	SP	N	14.926	010ASPLENIUM RUTA-MURARIA	WALL-RUE
74		S	SA	C	4.697	020SISTRURUS CATENATUS	EASTERN MASSASAUGA
75		P	SP	C	14.932	014LONICERA PROLIFERA	GRAPE HONEYSUCKLE
76		P	SP	C	14.932	050TRILLIUM NIVALE	SNOW TRILLIUM
77		E	SP	N	2.215	004PENSTEMON LAEVIGATUS	SMOOTH BEARD-TONGUE
78		T	SP	N	1.970	010DESCURAINIA PINNATA	TANSY-MUSTARD
79		P	SP	C	13.930	038ONOSMODIUM HISPIDISSIMUM	FALSE GROMWELL
80		P	SP	C	13.930	004ELEOCHARIS INTERMEDIA	MATTED SPIKERUSH
82		T	SA	C	1.532	010UNIOMERUS TETRALASMUS	PONDHORN
84		S	SA	P	0.805	041MOXOSTOMA CARINATUM	RIVER REDHORSE
85		P	SP	N	13.158	004LONICERA PROLIFERA	GRAPE HONEYSUCKLE
86		P	SP	C	8.229	015SCIRPUS PURSHIANUS	PURSH'S BULRUSH
87		T	SP	C	8.397	004SELAGINELLA ECLIPES	MIDWEST SPIKEMOSS
88		T	SP	N	8.282	013EQUISETUM SYLVATICUM	WOODLAND HORSETAIL
89		P	SP	C	8.409	027JUNCUS BALTICUS	BALTIC RUSH
91		E	SA	G	2.735	006NYCTANASSA VIOLACEA	YELLOW-CROWNED NIGHT-HERON
92		P	SP	C	12.871	016SILENE REGIA	ROYAL CATCHFLY
93		S	SA	P	12.884	015LAMPSILIS FASCIOLA	WAVY-RAYED LAMPMUSSEL
94		T	SA	C	7.197	015CLONOPHIS KIRTLANDII	KIRTLAND'S SNAKE
95		T	SA	C	12.559	055TRUNCILLA DONACIFORMIS	FAWNSFOOT
97		S	SA	C	8.770	017RALLUS LIMICOLA	VIRGINIA RAIL
98		P	SP	C	8.770	021JUNCUS BALTICUS	BALTIC RUSH
99		P	SP	C	8.770	013CAREX CRYPTOLEPIS	LITTLE YELLOW SEDGE
100		P	SP	C	8.770	010DESCHAMPSIA CAESPITOSA	TUFTED HAIRGRASS
101		P	SP	C	8.770	010SOLIDAGO OHIOENSIS	OHIO GOLDENROD
102		P	SP	C	8.770	004SALIX MYRICOIDES	BLUE-LEAVED WILLOW
103		P	SP	C	8.770	011CACALIA PLANTAGINEA	FEN INDIAN-PLANTAIN
104		P	SP	C	8.770	010CAREX UTRICULATA	BEAKED SEDGE
105		P	SP	C	8.770	015TRIGLOCHIN PALUSTRE	MARSH ARROW-GRASS
106		P	SP	C	8.770	003CAREX SUBERECTA	PRAIRIE STRAW SEDGE
108	LE	E	SA	C	12.368	037PLEUROBEMA CLAVA	CLUBSHELL
110		P	SP	C	6.226	034PRENANTHES RACEMOSA	PRAIRIE RATTLESNAKE-ROOT
111		P	SP	C	6.226	033SOLIDAGO OHIOENSIS	OHIO GOLDENROD

ENDANGERED SPECIES REPORT WITHIN RADIUS

ID #	FEDERAL CODE	STATE CODE	CLASS CODE	LOCATION CODE	DISTANCE (MILES)	SCIENTIFIC NAME	COMMON NAME
112		P	SP	G	6.902	005CACALIA PLANTAGINEA	FEN INDIAN-PLANTAIN
113		P	SP	G	6.902	006SCLERIA VERTICILLATA	LOW NUT-RUSH
114		S	SA	C	6.305	014CLEMMYS GUTTATA	SPOTTED TURTLE
115		P	SP	C	6.305	035SOLIDAGO OHIOENSIS	OHIO GOLDENROD
116		E	SA	G	14.817	001EXOGLOSSUM LAURAE	TONGUETIED MINNOW
118		S	SA	G	9.156	016OPHEODRYS AESTIVUS	ROUGH GREEN SNAKE
119		E	SA	N	7.400	030CISTOTHORUS PLATENSIS	SEDGE WREN
120		S	SA	N	5.354	005OPHEODRYS AESTIVUS	ROUGH GREEN SNAKE
121		P	SP	C	14.047	015CACALIA PLANTAGINEA	FEN INDIAN-PLANTAIN
122		T	SP	C	14.047	007SELAGINELLA ECLIPES	MIDWEST SPIKEMOSS
123		P	SP	C	14.047	022ZIGADENUS ELEGANS VAR. GLAUCUS	WAND-LILY
124		P	SP	C	14.047	031SOLIDAGO OHIOENSIS	OHIO GOLDENROD
125		T	SA	C	9.414	052EPIOBLASMA TRIQUETRA	SNUFFBOX
126		T	SP	C	12.687	001JUNCUS INTERIOR	INLAND RUSH
127		P	SP	C	13.866	023JUNCUS BALTICUS	BALTIC RUSH
128		P	SP	C	13.866	013CACALIA PLANTAGINEA	FEN INDIAN-PLANTAIN
129		P	SP	C	13.866	012DESCHAMPSIA CAESPITOSA	TUFTED HAIRGRASS
130		T	SP	C	13.866	013SATUREJA ARKANSANA	LIMESTONE SAVORY
131		T	SP	C	13.866	002SELAGINELLA ECLIPES	MIDWEST SPIKEMOSS
132		P	SP	C	13.866	017TRIGLOCHIN PALUSTRE	MARSH ARROW-GRASS
133		P	SP	C	13.866	030SOLIDAGO OHIOENSIS	OHIO GOLDENROD
134		P	SP	C	13.866	014SPIRANTHES OVALIS	LESSER LADIES'-TRESSES
135		P	SP	C	13.866	024CAREX CRAWEI	CRAWE'S SEDGE
136		P	SP	C	13.866	017SCLERIA VERTICILLATA	LOW NUT-RUSH
137		P	SP	C	13.866	029ONOSMODIUM HISPIDISSIMUM	FALSE GROMWELL