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REMEDIAL INVESTIGATION REPORT

AMERT PARCEL
CLYDE, OHIO

June 2001
Golder Project No. 003-8606

Prepared for:

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Executive Summary

1.0 EXECUTIVE SUMMARY

This Remedial Investigation (RI) report details the sampling and management/monitoring activities and results of the recent subsurface investigative activities at the Amert Parcel (Site). The Site, located one mile southwest of Clyde, Ohio (Figure 1) contains a capped disposal unit (CDU) for porcelain solid disposal and metal-finishing wastes, and a smaller uncapped area to the south underlain by suspected thin accumulations of residuals.

Previous investigative activities had identified the presence of boron in the groundwater downgradient of the CDU. Recently acquired data in 1999 and 2000 regarding the uncapped residuals in the southern portion of the Site indicates the possible continued presence of boron in surface water that emerges from groundwater passing beneath the CDU, and suggests that the existence of the CDU could exacerbate the rate of surface water discharge to the north end of the Site.

In order to evaluate the uncapped residuals and boron in the groundwater, Golder supervised the collection of soil and groundwater samples from a total of 38 soil borings and 13 permanent monitor wells. The analytical results from these activities indicated that:

- approximately 7,000 cubic yards of uncapped residuals are present in the southern portion of the Site;
- antimony, arsenic, lead, and nickel are present in the uncapped residuals at levels above OEPA Direct Contact criteria;
- boron is present in the groundwater under the uncapped residual area at levels above the potable water and phytotoxicity-based action limits identified by Golder in June 2000.

The results outlined above support the conclusions that: 1) uncapped residuals are present in the southern portion of the Site: 2) these uncapped residuals are consistent in texture and contaminant concentrations with other known porcelain sludge historically generated by Whirlpool; 3) the concentrations of groundwater impacts in the vicinity of the CDU are not significantly different than those summarized by the IT report in 1990; and 4) the CDU is not adequately preventing the leaching of boron. Consequently, additional corrective action will be required to address the persistent boron impacts identified in the groundwater, which ultimately discharges to the surface water at the north end of the CDU and on the adjacent low lying properties to the north and west of the Site.

Text

2.0 INTRODUCTION

This Remedial Investigation (RI) report has been submitted to the Whirlpool Corporation (Whirlpool) by Golder Associates Inc. (Golder) in support of the on-going management of the Amert Parcel located in Clyde, Ohio (Site). This RI report is a summary document that details the sampling and management/monitoring activities and results of the recent subsurface investigative activities.

2.1 Site Description

The Site contains a capped disposal unit (CDU) and an uncapped area to the south of the CDU that formerly received porcelain coating and metal-finishing wastes that were produced by the Whirlpool facility located approximately one mile southwest of Clyde, Ohio (Figure 1). According to a 1990 study completed by the IT Corporation, the CDU was utilized by the Clyde plant between 1970 and 1976. No information is currently available regarding the specific source of the uncapped residuals. The Site covers approximately 16 acres of land (Figure 2) located about 2,000 feet off of Maple Street, also called County Road 179. Whirlpool leased this land beginning in May 1970 and then purchased it in 1991.

On June 16, 1970, drawings of the CDU were submitted to the Ohio Department of Health and approved for Industrial Waste Disposal. Construction of the CDU consisted of a 3-foot deep excavation, stockpiling of the cover materials, construction of low retaining berms up to approximately 2 feet above existing grade around the periphery of the site, and placement of the porcelain coating and metal-finishing wastes (residuals). Two overflow pits, consisting of about 0.5 acres each, were to be installed just to the north of the site. Only the west overflow pit was constructed, and then rarely used. The residuals were transported to the Site in a tanker truck as a slurry or sludge and discharge onto the landfill. Disposal of these residuals continued until 1976 when Whirlpool's waste treatment plant was fitted with a vacuum filter. The landfill was closed in 1977 by the construction of a cap consisting of approximately one foot of clay overlain by one foot of sand. Subsequently, a drain tile was installed in 1978. According to the 1990 IT study, the trench is located along the east and south boundaries.

2.2 Summary of Past Studies

Whirlpool began a program of sampling soils, surface waters and groundwater in the vicinity of the landfill beginning in 1975 before the facility was capped and closed. Periodic sampling continued until approximately 1990. Since 1975, two reports have been generated which discuss the CDU:

- 1988: Evaluation of potential effects on plant and animal health, and laboratory studies by Battelle.
- November 1990: Site Investigation report by the IT Corporation.

Investigative activities by Battelle and IT identified the presence of boron in the groundwater downgradient of the CDU. Recently acquired data in 1999 and 2000 regarding the uncapped residuals in the southern portion of the Site indicates the possible continued presence of boron in surface water that emerges from groundwater passing beneath the CDU, and suggests that the existence of the CDU could exacerbate the rate of surface water discharge to the north end of the Site.

2.3 Project Objectives and Scope of Work

2.3.1 Objectives

The overall objective of the work is to characterize the distribution of and develop recommendations for mitigating the leaching of boron from residuals to groundwater and surface water at the Site. Specifically, the original project objectives were to:

1. Delineate the vertical and horizontal extent of other disposal areas for residuals that may be present within the southern and western portions of the Site.
2. Measure current boron concentrations in groundwater in the vicinity of the CDU using existing wells, and determine if boron persists in this area despite the construction of a cap and drain tile.
3. Test for the presence of, and if warranted, develop a work plan to monitor boron concentrations and possible other constituents of concern in on- and off-Site surface water.

4. Develop a work plan to maintain the integrity of the CDU and its ability to mitigate the leaching of boron to the underlying groundwater.

2.3.2 Scope of Work

To meet Objective Nos. 1 and 2 outlined above, Golder executed the following scope of work:

Task 1: Delineate the Extent of Residuals

Task 2: CDU Well Redevelopment and Sampling

Task 3: Data Evaluation and Reporting

Objective No. 3 was not completed as part of this scope of work due to the absence of flowing surface water at the Site during the completion of the site investigative activities. Completion of Objective No. 4 is pending and will be addressed under separate cover.

3.0 FIELD INVESTIGATION AND METHODOLOGY

Golder performed the above referenced Scope of Work activities at the site between October 24 and 31, 2000. Described in the following paragraphs are the activities undertaken during the field investigation effort.

3.1 Task 1: Delineate the Extent of Residuals

Golder conducted delineation activities to determine the vertical and horizontal extent of suspected uncapped residuals in the western (wooded) and southern portions of the site. A total of 38 soil borings were drilled as part of the RI at the locations shown on Figure 2.

3.1.1 Initial Reconnaissance

Before initiating fieldwork, Golder reviewed existing documentation prepared for Whirlpool by IT in order to develop an understanding of historical groundwater elevations, groundwater and surface water quality, and potential relationships between these Site characteristics.

In an effort to develop an understanding of the location(s) of other disposal areas at the Site, Golder researched existing and obtained additional historical aerial photographs from one or more of the following sources:

- Personnel at the Whirlpool-Clyde plant
- Sandusky County Engineering Division
- Environmental Data Resources, Inc., from which Golder frequently obtains publicly available environmental records.
- U.S. Department of Agriculture (Soil Conservation Service).

Following analysis of the air photos, Golder conducted a Site walk-over on October 10, 2000 in order to develop a familiarity with the surrounding physiography and potential boring locations. An additional goal of the Site walk-over was to identify potential short and long-term surface water sampling locations within: 1) the low-lying area north of the CDU, where following heavy rainfall events surface water periodically covers adjacent properties; 2) the western-most portion of the Site that may contribute surface water drainage to private and/or County-operated drains:

and 3) other off-Site topographically low-lying areas. During this initial reconnaissance, Golder observed that no flowing surface water was present at any of the potential surface water sampling locations. Consequently, no surface water sampling was completed as part of the site investigation activities outlined above.

3.1.2 Sampling and Analysis Plan

Prior to the initiation of site work, Golder prepared a Sampling and Analysis Plan (SAP) dated October 2000 that summarized the methods for sample acquisition, analyses, and quality control/assurance. In general, the SAP defined Data Quality Objectives and formally documented procedures for:

- Drilling, soil sampling and groundwater sampling methods.
- Identification of the types and frequency of acquisition for:
  - field duplicate samples;
  - equipment rinsate samples;
  - trip blank samples;
- Procedures for proper handling, packaging and shipment of samples.
- USEPA Standard Methods for sample analysis;
- Laboratory quality assurance/quality control procedures:
  - method blanks;
  - matrix spikes, matrix spike duplicates, and surrogate spikes;
- Laboratory report contents:
  - method detection limits;
  - practical quantitation limits; and
- Laboratory data validation

3.1.3 Subsurface Assessment

To determine the lateral and vertical extent of the residuals, Golder carried out the sampling program by completing a total of 38 soil borings. Soil borings SB101 through SB133 were performed by Great Lakes Geotechnical Services from October 24 and 31, 2000 using a Geoprobe® direct-push drilling rig ("Geoprobe") to collect depth-specific soil samples. Soil samples were collected with 4-foot-long, 2-inch-diameter macro-core tube. Soil borings were completed up to a maximum depth of 10 feet per Task 1 of the SAP. Where wooded and heavily vegetated terrain precluded the use of even an all-terrain vehicle-mounted drill rig, Golder personnel manually advanced five soil borings (SB-134 - SB-138) to approximately 9 feet BG

using a 2-inch hand auger. Upon completion of all soil sampling and groundwater sampling, all boreholes were backfilled with bentonite chips. Soil boring logs are provided in Appendix A.

Drilling equipment and steel tools were thoroughly cleaned between boreholes using Alconox detergent. All non-disposable sampling devices were thoroughly cleaned at the drill site using a scrub brush with water and Alconox detergent. A double rinse with clean potable water completed the cleaning process.

For the Geoprobe-installed soil borings, 2-inch-diameter macro-core samples were collected continuously from the ground surface to the borehole terminus. Upon retrieval to the surface, each soil sample was visually inspected for indications of impact (discoloration, strong odor, etc.), geologically classified, and field screened. Sample descriptions and classifications were documented on Golder boring logs (Appendix A) according to Unified Soil Classification System (USCS) procedures. All soil samples were screened utilizing an organic vapor meter (OVM) equipped with a photoionization detector (PID), and the presence of odors, if any, was noted on the boring logs. Potential residual samples located immediately below the ground surface and/or exhibiting the strongest evidence of impact were submitted for analysis. A total of 10 residual samples, including duplicates, were collected for laboratory analysis from the 38 soil borings completed during the field investigation efforts.

To test for possible leachable constituents (primarily boron), Golder collected a total of seven groundwater samples from the direct-push soil borings using temporary monitor wells. The wells were constructed of 3/4-inch inside diameter (ID) PVC materials with 5-foot long screens (0.010-inch slot) positioned to intersect the groundwater table. Selection of the screened interval for the temporary wells was based on the geology encountered at each boring location and the approximate depth to groundwater that was detected during examination of the retained macro-core soil samples. At each of these locations, Golder positioned the screen across the depth of saturation that was observed during macro-core sampling. Upon acquisition of groundwater samples and removal of the temporary well, each borehole was backfilled with coarse-grained bentonite.

The groundwater was purged and sampled using a peristaltic pump and HDPE drop tubing into the well screen. Each temporary monitor well was purged until a minimum of five casing volumes were removed from each well and/or until the pH, temp, and specific conductivity

stabilized within prescribed tolerances. In accordance with Ohio EPA guidelines, "low-flow" or "micropurging" methods were employed, whereby the sample purge rate will be limited to 0.1 – 0.5 L/min, in an effort to minimize sample turbidity. The samples were not filtered.

The subsurface residual and groundwater samples submitted for laboratory analysis were handled following USEPA chain of custody (COC) and handling protocols. Residual samples were placed in the appropriate pre-cleaned containers. The retained samples were temporarily stored on ice in a cooler. The residual samples were then submitted for analysis of priority metals and boron using USEPA 6020 - series methods. As field screening did not indicate the presence of organic constituents and following consultation with Whirlpool, the residual samples were not analyzed for volatile organic or polynuclear aromatic hydrocarbons.

Residual and groundwater samples were submitted to Aqua-Tech Environmental Laboratory (ATEL) in Marion, Ohio. Copies of the laboratory reports and COC forms for these samples are included in Appendix B.

3.2 Task 2: CDU Well Redevelopment and Sampling

Golder redeveloped the 13 existing monitoring wells installed at the CDU to clear any silt or biological buildup that may have occurred on the well screens. This work was performed simultaneously with the subsurface borings described above in Task 1. Before initiating work with these monitor wells, Golder reviewed historical documentation prepared by IT to become familiar with well construction, historical yield rates, and sampling history.

Re-development was accomplished by means of intermittent surging and over-pumping, and proceeded until each of the following criteria were met:

- At least eight times the volume of water in the well and surrounding filter pack were been removed.
- Turbidity of the discharged water had fallen to a target level of 10 nephelometric turbidity units (NTU), or ceased to appreciably decline.
- The pH, temperature, and specific conductivity of the discharged water stabilized to within prescribed tolerances.

Golder collected groundwater samples from the 13 existing monitor wells on October 30 and 31, 2000. Before collecting the groundwater samples, Golder measured static groundwater elevations using an electronic meter to the nearest 0.01-foot (Table 1). Golder used low-flow sampling techniques at a maximum purge rate of 0.5L/min, in order to minimize disturbance of the surrounding aquifer. Depending on the depth to water, Golder used either a variable rate peristaltic pump with dedicated Teflon-lined HDPE tubing inside each well, or a 2-inch submersible pump that was decontaminated between wells. Purging progressed until field measurements of pH, specific conductivity, and temperature stabilized within prescribed tolerances. The samples were not filtered.

The samples were placed in a cooler and kept at a temperature of approximately 4° C and accompanied by a chain of custody form and transported to ATEL. All samples were analyzed for total boron and priority metals.

On January 10, 2001, Golder collected an additional round of static groundwater elevations in an effort to determine potential seasonal effects on the elevation of the water table (Table 1).

3.3 Task 3 - Data Evaluation and Reporting

Upon completion of Tasks 1 and 2 and receipt of all analytical data from ATEL, Golder performed routine validation activities to verify the representativeness of the results. Following the validation efforts, all geologic/hydrogeologic observations and analytical data were evaluated to confirm the presence and distribution of contamination. In addition, the potential for off-site transport was evaluated by analyzing the groundwater flow directions, gradient, and contaminant distribution. Golder compared detected contamination levels against OEPA VAP Criteria.

The above reference data and information was utilized to develop this written report which describes the site, the areas investigated, methodologies employed, the results of the investigation, and recommendations as they pertain to the objectives of the investigation.

3.4 Variations from Proposed Investigation

As discussed previously, no surface water sampling was completed during the investigative activities due to the absence of flowing surface water at the Site. If warranted, Golder expects that this portion of the work scope can be completed as early as late spring in 2001.

During the completion of soil boring activities in the southern portion of the Site, static water level measurements were inadvertently not made prior to the development and sampling of the temporary monitor wells. Golder does not believe that this data would have significantly effected the depiction of the groundwater flow direction on Figures 2 and 3. Based on previous investigative activities, the Site appears to be underlain by a fairly homogeneous beach sand. In addition, the groundwater flow direction has consistently been to the north-northwest, in the direction of the seasonal surface water located in the northwest portion of the Site.

In order to verify the consistent groundwater flow direction, Golder collected a second round of static water level measurements on January 10, 2001. The results of the January 10 measurements were almost identical to those collected on October 30, 2000.

4.0 PHYSICAL CHARACTERISTICS OF THE SITE

The information provided below has been derived primarily from the previous reports generated for the Site (Section 2.2).

4.1 Bedrock Geology

Sandusky County is located in western north-central Ohio near the axis of a regional structural flexure in the sedimentary bedrock known as the Findlay Arch or the Cincinnati Anticline. The uppermost bedrock unit is part of a group of carbonates (limestone and dolomite) and evaporates (gypsum, anhydrite, and salt). The thickness of the carbonate/evaporate rocks near Clyde is approximately 400 feet. In Sandusky County, the carbonates can be differentiated into the Lockport Dolomite, Greenfield Dolomite, Tymochtee Dolomite, The Raisin River Dolomite, and undifferentiated Lower Devonian Rocks. The uppermost bedrock unit in the Clyde area has been identified as the Raisin River Dolomite (ODNR, 1970)

4.2 Glacial Geology

Overlying the eroded bedrock surface are Pleistocene glacial deposits ranging in thickness from approximately 40 to 80 feet. These glacial deposits are primarily clay- or silt-rich tills with thin interbedded sand or silt layers. In addition, the Site is situated on the northwest flank of the glacial Lake Warren stage strandline that reaches a maximum elevation of around 685 feet at the Site. Because of the southwest-to-northeast orientation of the strandline deposit, its thickness decreases toward the north and northwest portions of the Site. The strandline deposit consists of stratified layers of sand, silty sand, with occasional gravelly zones. Underlying the sand deposit is a continuous layer of hard glacial till consisting of mostly clay and silt, with an estimated combined content of 30 to 45 percent sand and gravel.

4.3 Hydrogeology

According to the IT Group, the principal aquifer in eastern Sandusky County is formed by carbonate rocks at depths ranging from 40 to 80 feet below ground surface. Most of the water wells in eastern Sandusky County are completed in bedrock, and usable quantities of water are

widely available from the upper weathered part of the bedrock, regardless of the particular geologic formation present.

Most of the till and lake-bottom deposits are poor producers of groundwater. However, the shallow-lacustrine shoreline sands form minor aquifers from which small supplies of water could be obtained. Due to the availability of water from the bedrock aquifer, these sands are not utilized as a water source in this area. Further, supplies from this source are subject to significant reduction during drought conditions, and they are vulnerable to contamination from septic tanks and agricultural practices.

A total of 13 permanent monitor wells were previously installed at the Site. Based on current water level measurements, the groundwater flow direction is consistently to the north-northwest. The local horizontal hydraulic gradient ranges from 0.01 ft/ft in the northern portion of the Site to less than 0.008 ft/ft south of the CDU. Static water level measurements collected by Golder during the RI (Table 1) are consistent with these historic observations regarding the direction of the groundwater flow direction at the Site (Figures 3 and 4).

4.4 Hydrology

The subject and adjacent properties are generally flat with little topographic relief (less than 30 feet). The surface of the CDU is slightly hummocky with less than 2 feet of relief. In addition, the CDU surface does not have consistently positive surface drainage. During periods of high groundwater elevations, the drain tile located around the perimeter of the CDU is designed to depress the local water table to eliminate the groundwater from coming into contact with the sludge under the CDU. The drain tile routes the groundwater to an outfall immediately south of monitor well MW-11.

Significant areas of seasonal surface water accumulations occur in three locations at the Site. The first location is a shallow depression area in the northwest corner of the Site and extends off-site to the north and west. Surface water from this area is reportedly drained by shallow surface drain located approximately 500 feet northwest of the Site. The second location is along the western and northern margins of the uncapped residual area in the southern portion of the Site. This area is apparently drained by a 12-inch corrugated metal pipe located under the Site access road. The discharge from this pipe flows off-site and into a shallow gully located to the east of the Site. The

third location is a small area located in the western portion of the Site. This area is reportedly drained by a subsurface drain tile which trends west-southwest, passes beneath County Road 236, and ultimately discharging to South Creek.

5.0 DATA AND ANALYSIS

The following section presents the soil and groundwater samples acquired during the RI. Laboratory analytical reports are summarized in Tables 2 and 3, and shown in plan view in Figures 5 and 6, respectively. The analytical reports are contained in Appendix B.

5.1 Assessment Criteria

Soil and groundwater analytical results were compared against the default OEPA Direct Contact and Potable Groundwater Criteria, respectively. Also used for comparison were the direct contact-based limit developed by Golder in June 2000 and a recommended limit of 500 ug/l for boron based on phytotoxicity to select irrigated crops.

5.2 Extent of Residuals

A total of 38 soil borings (SB-100 - SB-138) were completed at the Site in order to delineate the vertical and horizontal extent of impact associated with residuals located in the southern portion of the Site. Each soil boring was completed to a maximum depth of 10 feet bg. Saturated conditions were encountered between 5 and 9 feet bg. At each boring location, the surface conditions were either grass or marsh vegetation. Between 0 and 5 feet bg, native sands and silts were encountered with residuals detected in 16 of the 38 soil borings within 5 feet of the surface. The thickness of the residuals typically ranged from 0.5 to 4 feet thick, with an average thickness of approximately two feet (Figure 7). Given that the residuals are distributed over an area of 250 feet by 250 feet, Golder estimates of the volume of the residuals to be approximately 7,000 cubic yards.

5.3 Residuals Analytical Results

A single residual sample was taken from 10 of 38 soil borings in order to quantify metal concentrations in the residuals unit. As discussed in Section 3.1.3, these samples were selected primarily on the basis of visual evidence of impacts. The analytical results are summarized in Table 2 and presented on Figure 4. Based on these results, a total of four metals were detected in exceedance of the OEPA Direct Contact limits:

- Antimony in soil samples: SS-1, SB-102, SB-111, SB-115, SB-119 and SB-123;
- Arsenic in soil samples: SS-1, SB-102, SB-111, SB-115, SB-119, SB-123, SB-131 and SB-133;

- Lead in soil samples: SS-1 and SB-119; and
- Nickel in soil samples: SS-1. SB-102, SB-111, SB-115, SB-119 and SB-123.

5.4 Groundwater Analytical Results

5.4.1 Uncapped Residuals Area

A single groundwater sample was collected from seven of the 38 soil borings in order to test for leachable constituents in the residuals. The groundwater sample locations were selected from among the same locations where the most impacted residuals were observed. Results of the groundwater sampling efforts are summarized in Table 3 and presented on Figure 5. Based on these results, a total of five metals were detected in exceedance of the OEPA potable water limits in the groundwater:

- Antimony in groundwater samples: SB-109 and SB-119;
- Arsenic in groundwater samples: SB-109 and SB-131;
- Cadmium in groundwater sample: SB-119;
- Chromium in groundwater samples: SB-109 and SB-119 and
- Nickel in groundwater samples: SB-109, SB-119, SB-123 and SB-131.

In addition, boron was detected in all groundwater samples in excess of Golder's recommended limit of 500 ug/l. The detection of high concentrations of antimony, arsenic, cadmium, chromium, and nickel in the groundwater samples collected in the uncapped residuals area is most likely a result of elevated turbidity of the groundwater samples associated with the lack of a sand filter pack in the temporary monitor wells.

5.4.2 CDU Area

Groundwater samples were collected from all thirteen permanent monitor wells surrounding the CDU. Results of the groundwater sampling efforts are summarized in Table 3 and presented on Figure 5. These results indicate that boron was identified in all of the permanent monitor wells in excess of Golder's recommended limit of 500 ug/l.

increase of boron concentrations in the groundwater as the plume passes underneath the CDU. The similarity of the high boron concentrations between the 1990 and 2000 sampling events is characteristic of the continued loading of the groundwater with boron. In addition, although off-site surface water sampling was not completed as part of this scope of work, the similarity in boron concentrations in the groundwater samples collected from the CDU monitor wells in 1990 and 2000 suggests that boron exceedences in the off-site surface water still exist.

Tables

Tables

TABLE 1

POTENTIOMETRIC DATA
AMERT PARCEL - CLYDE, OHIO

MONITOR WELL ID	Top of Casing Elevation (ft)	10/25/00		1/10/01	
		Depth Below Casing (ft)	Elevation (ft - MSL)	Depth Below Casing (ft)	Elevation (ft - MSL)
MW-1	689.49	11.04	678.45	10.19	679.30
MW-2	689.73	11.22	678.51	10.37	679.36
MW-3	681.62	7.46	674.16	6.97	674.65
MW-4	681.56	7.46	674.10	6.85	674.71
MW-5	687.07	11.72	675.35	11.08	675.99
MW-6	687.75	12.17	675.58	11.51	676.24
MW-7	687.70	12.17	675.53	11.49	676.21
MW-8	686.05	10.3	675.75	9.65	676.40
MW-9	688.16	11.03	677.13	10.38	677.78
MW-10	690.30	12.88	677.42	12.3	678.00
MW-11	674.03	4.22	669.81	3.65	670.38
MW-12	669.20	3.54	665.66	3.00	666.20
SB-1	688.04	19.50	668.54	19.25	668.79

TABLE 3

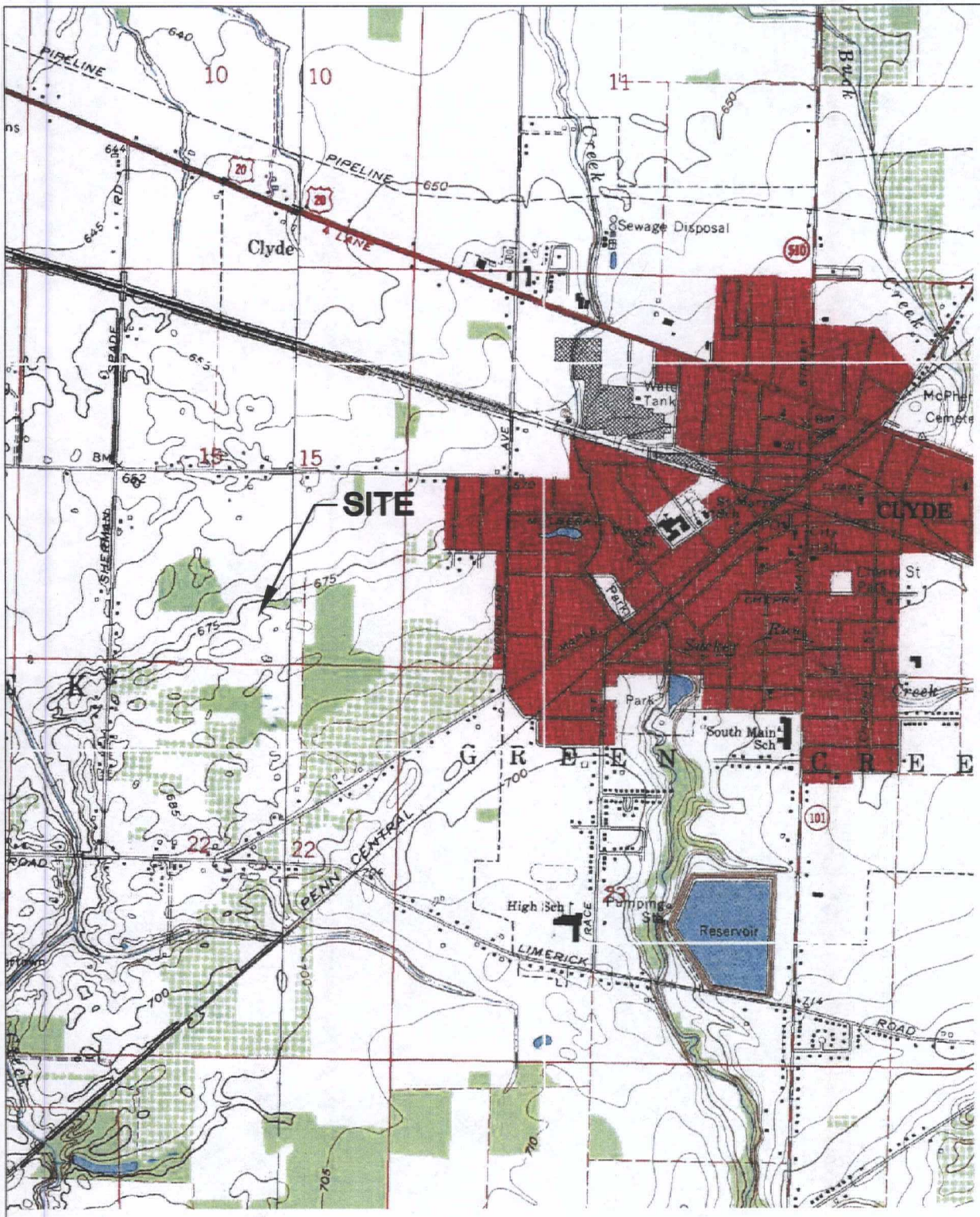
GROUNDWATER ANALYTICAL RESULTS
AMERT PARCEL - CLYDE, OHIO

MATRIX		GROUNDWATER (µg/L)																				
SAMPLE ID:																						
Parameter	OEPA Limit* (µg/L)	SB-102	SB-109	SB-111	SB-115	SB-119	SB-123	SB-131	SB-1	MW-1	MW-2	MW-3	MW-4	MW-4 (DUP)	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12
Antimony	6.2	<3.0	8.7	<3.0	<3.0	15.7	3.7	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Arsenic	50	23	100	20	8.6	41	27	56	<3.0	9.7	4.3	6.6	8.4	8.4	23	13	13	<3.0	<3.0	<3.0	4.5	5.7
Beryllium	31	<0.5	5.4	<0.5	<0.5	3.2	1.8	0.9	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<5.0	<5.0	<0.5	<0.5
Boron	500	15000	78000	9700	4000	13000	32000	23000	860	4600	14000	66000	92000	110000	67000	130000	240000	7000	30000	6900	66000	110000
Cadmium	5	<0.5	1.6	<0.5	<0.5	11	1.2	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	100	<20	130	<20	<20	130	85	62	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Copper	NE	<10	270	19	<10	300	88	61	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Lead	NE	5.4	76	12	4.9	370	76	43	7.1	<2.0	<2.0	<2.0	42	46	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	9.6	<2.0
Mercury	2	<0.2	0.6	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	100	54	140	91	76.0	1500	160	99	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Selenium	NE	<15	<15	<15	<15	<15	<15	<15	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<15	<3.0	<3.0	<3.0	<3.0	<3.0
Silver	78	<10	<10	<10	<10	33	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Thallium	NE	<1.0	1.4	<1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Zinc	4,700	46	270	99	50	3100	330	280	14	<10	<10	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10	<10

Note 1. Limits correspond to Direct Contact Criterion developed by Ohio EPA under Voluntary Action Program (VAP) Rule 8 (does not include boron).
2. Boron criterion recommended by Golder Associates in June 2000 based on phytotoxicity limits from surrounding USEPA Region 5 states.
3. Values in shaded cells exceed corresponding criterion.

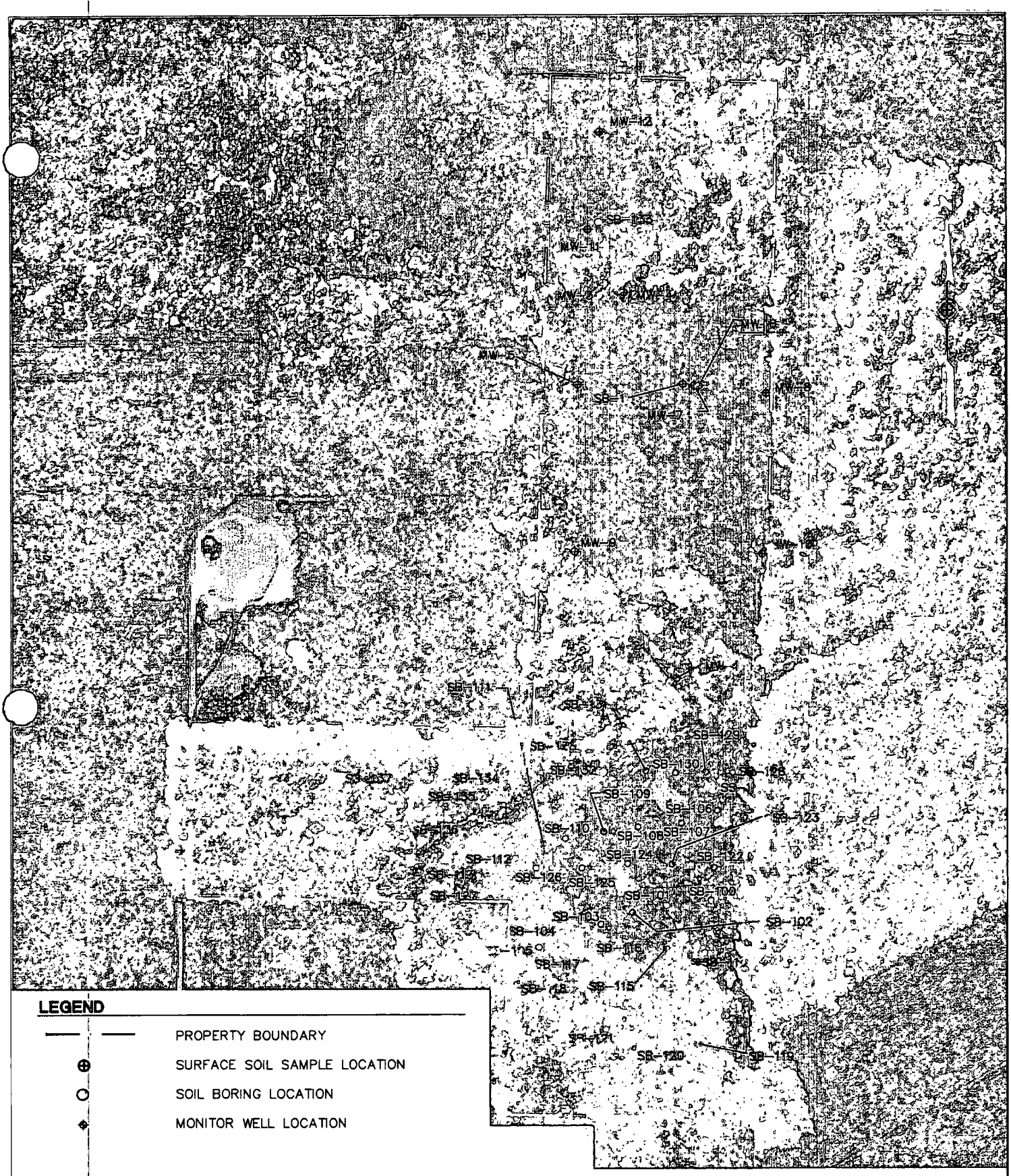
Figures

Figures



REFERENCE: U.S. GEOLOGIC SURVEY 7.5 MINUTE CLYDE, OHIO TOPOGRAPHIC QUADRANGLE MAP, 1969, AND FREMONT EAST, OHIO TOPOGRAPHIC QUADRANGLE MAP, 1980.

JOB No.:	003-8562.003	SCALE:	1"=2000'	**SITE LOCATION MAP AMERT SITE INVESTIGATION CLYDE, OHIO**
DR BY:	JJS	DATE:	10/17/00	
CHK BY:		FILE No.:	8606.003-001	
REV BY:		DR SUBTITLE:		
Golder Associates		WHIRLPOOL CORPORATION		FIGURE 1



LEGEND

- PROPERTY BOUNDARY
- SURFACE SOIL SAMPLE LOCATION
- SOIL BORING LOCATION
- MONITOR WELL LOCATION

ADAPTED FROM 9/95 AERIAL PHOTOGRAPH PROVIDED BY WHIRLPOOL.

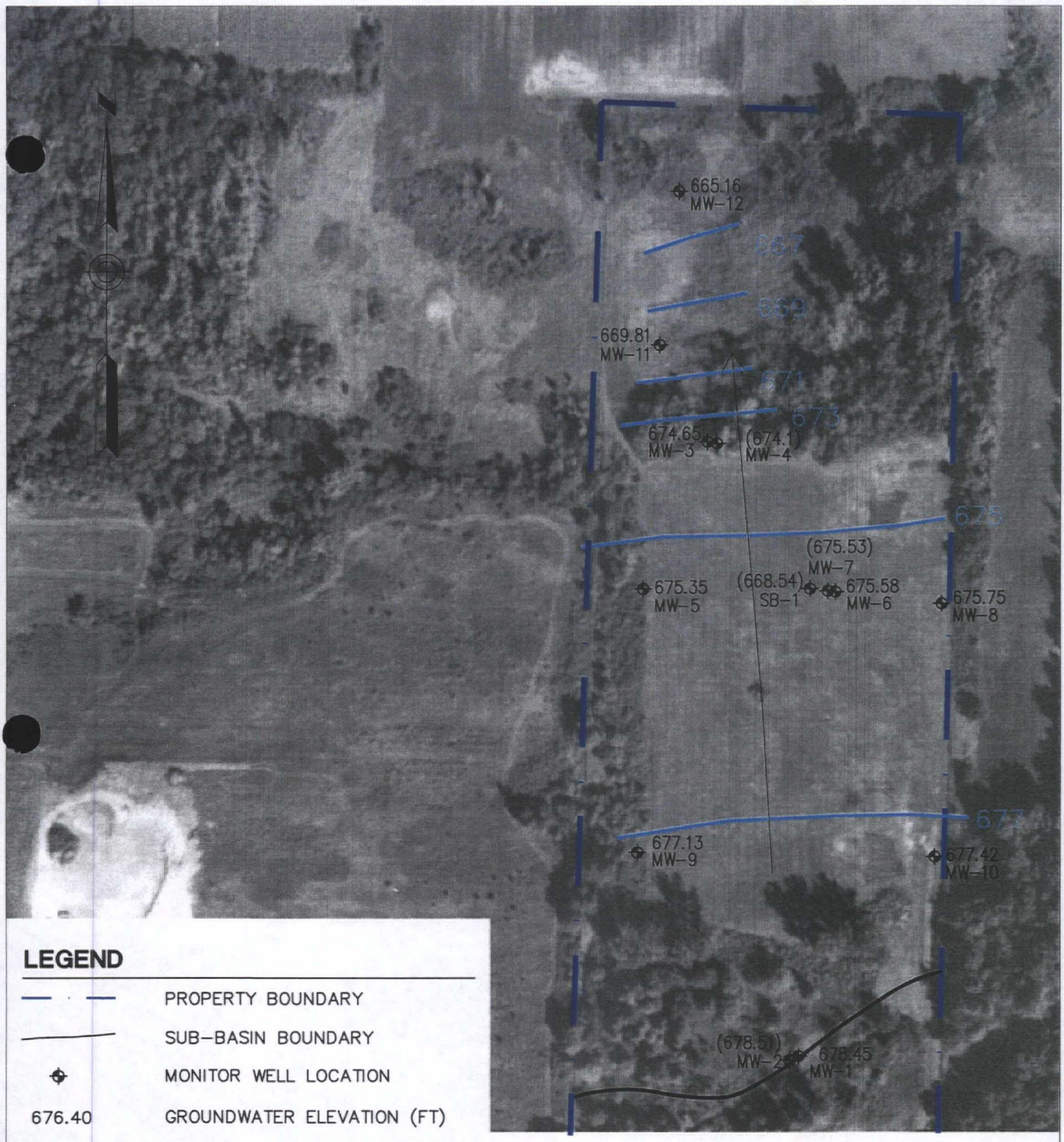
No.:	003-8606.003	SCALE:	1"=300'
BY:	JJS	DATE:	10/17/00
CHK BY:		FILE No.:	8606.003-002
REV BY:		DR SUBTITLE:	

SITE LAYOUT
AMERT SITE INVESTIGATION
CLYDE, OHIO

Golder Associates

WHIRLPOOL CORPORATION

FIGURE 2



LEGEND

— · —	PROPERTY BOUNDARY
———	SUB-BASIN BOUNDARY
⌖	MONITOR WELL LOCATION
676.40	GROUNDWATER ELEVATION (FT)
(668.79)	DEEP WELL GROUNDWATER ELEVATION (FT)
←	GROUNDWATER FLOW DIRECTION
— 671	GROUNDWATER CONTOUR AND ELEVATION (FT)

CONTOUR INTERVAL IS 2 FEET

ADAPTED FROM 9/95 AERIAL PHOTOGRAPH PROVIDED BY WHIRLPOOL.

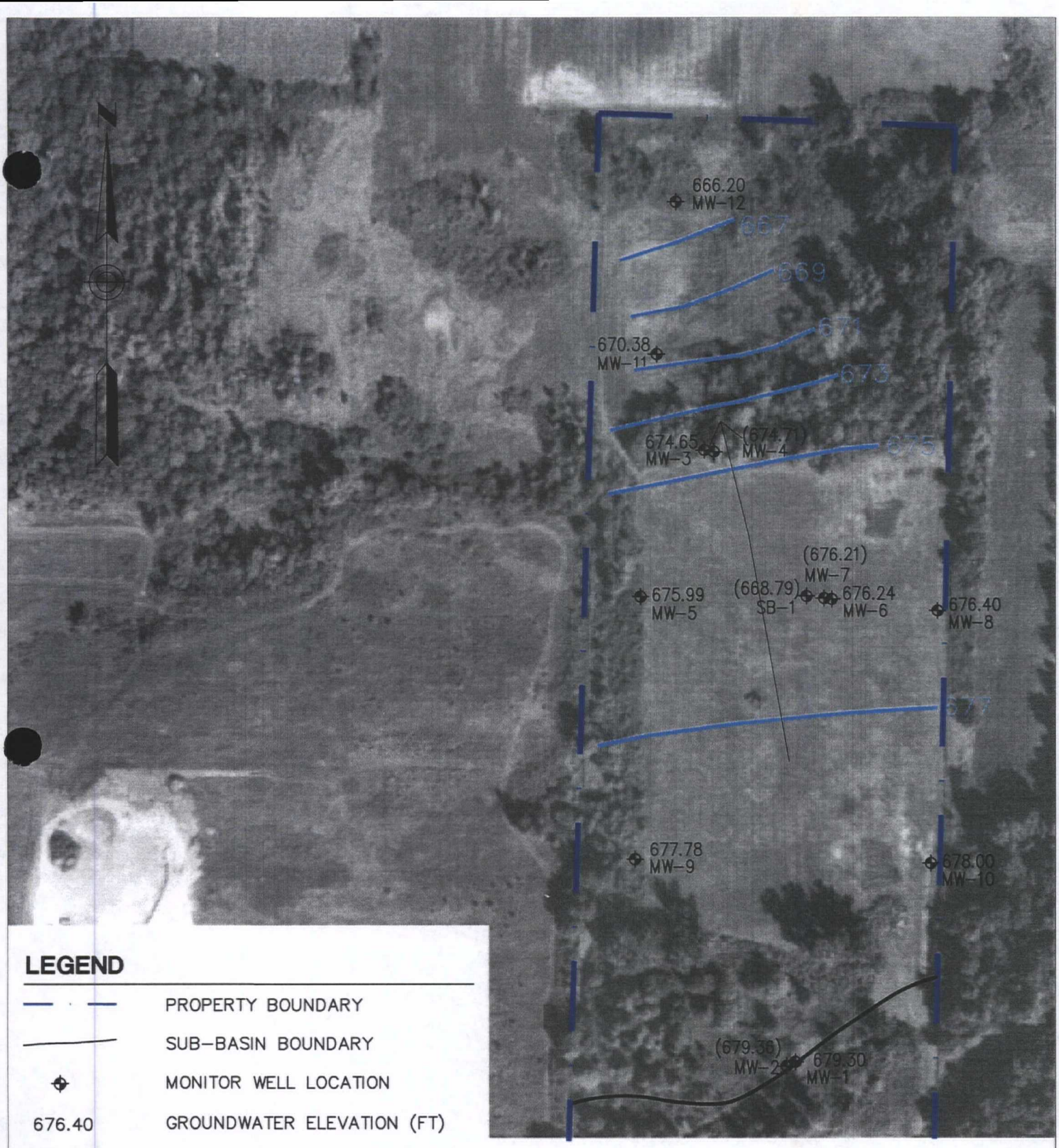
No.:	003-8606.003	SCALE:	1"=300'
BY:	JJS	DATE:	01/23/01
CHK BY:		FILE No.:	8606.003-003
REV BY:		DR SUBTITLE:	

POTENTIOMETRIC SURFACE ELEVATION
OCTOBER 30, 2000
AMERT SITE INVESTIGATION
CLYDE, OHIO

Golder Associates

WHIRLPOOL CORPORATION

FIGURE **3**



LEGEND

— · —	PROPERTY BOUNDARY
———	SUB-BASIN BOUNDARY
⌖	MONITOR WELL LOCATION
676.40	GROUNDWATER ELEVATION (FT)
(668.79)	DEEP WELL GROUNDWATER ELEVATION (FT)
←	GROUNDWATER FLOW DIRECTION
— 671	GROUNDWATER CONTOUR AND ELEVATION (FT)

CONTOUR INTERVAL IS 2 FEET

ADAPTED FROM 9/95 AERIAL PHOTOGRAPH PROVIDED BY WHIRLPOOL.

No.:	003-8606.003	SCALE:	1"=300'
Y:	JJS	DATE:	01/23/01
CHK BY:		FILE No.:	8562.003-004
REV BY:		DR SUBTITLE:	

POTENTIOMETRIC SURFACE ELEVATION
JANUARY 10, 2001
AMERT SITE INVESTIGATION
CLYDE, OHIO

Golder Associates

WHIRLPOOL CORPORATION

FIGURE 4

LEGEND

SB-111 200 ● SOIL BORING WITH BORON CONCENTRATION IN RED (ppm)

⊕ SURFACE SOIL SAMPLE LOCATION

ADAPTED FROM 9/95 AERIAL PHOTOGRAPH PROVIDED BY WHIRLPOOL.

No.:	003-8606.003	SCALE:	APPROX. 1"=120'
BY:	JJS	DATE:	12/00
CHK BY:		FILE No.:	8606.003-005
REV BY:		DR SUBTITLE:	

BORON CONCENTRATIONS-SOIL
AMERT SITE INVESTIGATION
CLYDE, OHIO

Golder Associates

WHIRLPOOL CORPORATION

FIGURE 5

LEGEND

—— ——	PROPERTY BOUNDARY
———	SUB-BASIN BOUNDARY
⊕	SURFACE SOIL SAMPLE LOCATION
●	SOIL BORING LOCATION
◆	MONITOR WELL LOCATION
———	BORON ISOPLETH (LOG SCALE)
4,000	BORON CONCENTRATION (ug/L)

ADAPTED FROM 9/95 AERIAL PHOTOGRAPH PROVIDED BY WHIRLPOOL.

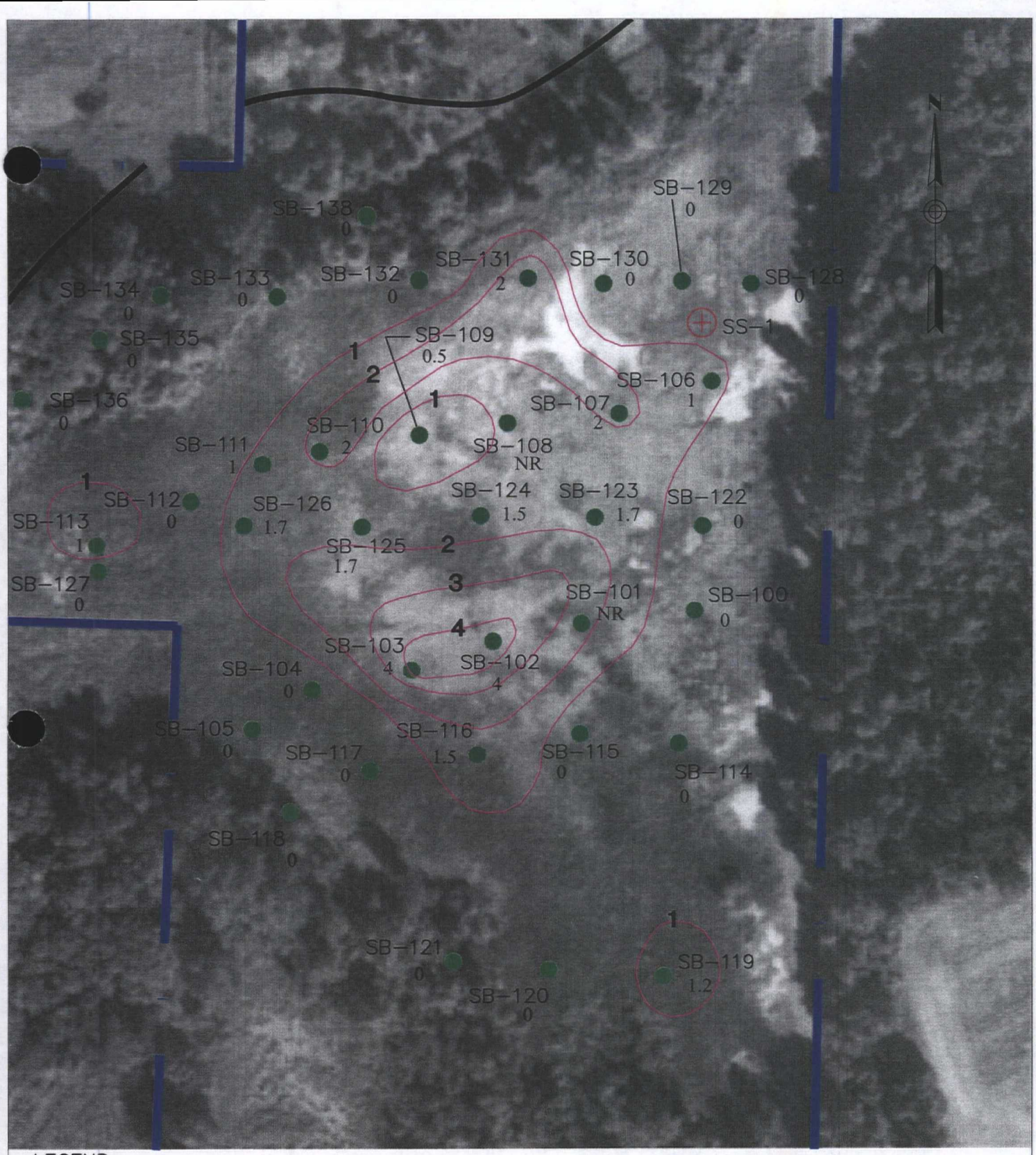
No.:	003-8606.003	SCALE:	1"=300'
BY:	JJS	DATE:	10/17/00
CHK BY:		FILE No.:	8606.003-006
REV BY:		DR SUBTITLE:	

BORON CONCENTRATIONS-GROUNDWATER
AMERT SITE INVESTIGATION
CLYDE, OHIO

Golder Associates

WHIRLPOOL CORPORATION

FIGURE **6**



LEGEND

121 0 — SOIL BORING

NR — NO RECOVERY

CONTOUR INTERVAL IS 1 FOOT

ADAPTED FROM 9/95 AERIAL PHOTOGRAPH PROVIDED BY WHIRLPOOL.

Job No.:	003-8606.003	SCALE:	APPROX. 1"=120'
DRAWN:	JJS	DATE:	12/00
CHK BY:		FILE No.:	8606.003-007
REV BY:		DR SUBTITLE:	

SLUDGE THICKNESS
AMERT SITE INVESTIGATION
CLYDE, OHIO

Golder Associates

WHIRLPOOL CORPORATION

FIGURE 7

Appendix A

Appendix A

Soil Boring Logs

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 100

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Thick Vegetation		0.0						
1		TOPSOIL with ORGANICS.								
2				2.5	1	2" DO	3/5			
3										
4										
5	5" X 2" Macro Core / Geoprobe	Sandy SILT with trace of clay dark brown, damp. Glass Shards throughout sample.								
6										
7					2	2" DO	5/5			
8										
9		Saturated conditions at 9 feet below grade.								
10		E.O.B		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 101

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/24/00

DATUM:

DRILLER: Great Lakes

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Thick Vegetation		0.0						
1										
2		No Recovery			1	2" DO	0/5			
3										
4										
5				5.0						
6										
7	5' X 2" Macro Core / Geoprobe	Saturated conditions at 7 feet below grade.			2	2" DO	4/5			
8										
9		Dark brown, very wet, coarse to fine SAND with traces of silt.								
10										
11										
12					3	2" DO	5/5			
13										
14										
15		E.O.B		15.0						
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 102

BORING DATE: 10/24/00

DRILLER: Fibertec Inc.

SHEET 1 OF 1

DATUM:

DEPTH FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS TW 102
		Thick Vegetation								
0	5' X 2" Macro Core / Geoprobe			0.0						
1		Light brown to green SLUDGE with some sand and orgaincs and a trace of fines.								
2					1	2" DO	5/5			Soil Sample SB102
3										
4				4.0						
5		Saturated conditions at 5 feet below grade.								Groundwater Sample; 0.01-Slot PVC
6										
8		Dark brown, very wet, SAND with traces of silt.			2	2" DO	5/5			
9										
10										
11										
12					3	2" DO	5/5			
13										
14										
15		E.O.B		15.0						
16										

DATA INPUT BY

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 103

BORING DATE: 10/24/00

DRILLER: Great Lakes Geotechnical Services

SHEET 1 OF 1

DATUM:

DEPTH FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5' X 2" Macro Core / Geoprobe	Thick Vegetation		0.0						
1		Light brown and gree, damp, SLUDGE with trace of sand and orgaincs and fines.								
2					1	2" DO	5/5			
3										
4				4.0						
5		Saturated conditions at 5 feet below grade.								
6										
7					2	2" DO	5/5			
8		Dark grey, very wet, fine to coarse grained SAND with traces of gravel								
9										
10										
11										
12					3	2" DO	5/5			
13										
14										
15		E.O.B		15.0						
16										

DATA INPUT BY

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 104

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5' X 2" Macro Core / Geoprobe	Thick Vegetation		0.0						
1										
2					1	2" DO	5/5			
3		Light to dark brown fine to coarse wet SAND with traces of coarse gravel and organics.								
4										
5		Saturated conditions at 5 feet below grade.								
6										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 105

BORING DATE: 10/24/00

DRILLER: Great Lakes

DATUM:

DEPTH FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Thick Vegetation		0.0						
1										
2					1	2" DO	3/5			
3		Dark grey, very wet fine to coarse SAND with a trace of fines and organics.								
4		Saturated conditions at 4 feet below grade.								
5	5' x 2" Macro Core / Geoprobe									
6										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

DATA W... ADB

PROJECT: 993-8534

LOCATION: Clyde, OH

RECORD OF BOREHOLE SB 106

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS. INSTALLATIONS
0		Gravel & vegitation								
		Brown SLUDGE with trace fine sand.		0.0						
1				1.0						
2					1	2" DO	4/5			
3										
4		Dark brown silty fine to coarse grained SAND with a trace of fines.								
5	5' x 2" Macro Core / Geoprobe									
6		Saturated conditions at 6 feet below grade.								
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 107

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh		0.0						
1		Light to dark brown SLUDGE.								
2				2.0						
3		Dark brown SAND with some gravel and traces of fines and organics.			1	2" DO	4/5			
4										
5		Saturated conditions at 5 feet below grade.								
				5.5						
6	5" x 2" Macro Core / Geoprobe									
8					2	2" DO	5/5			
9		Dark grey, wet fine to coarse grained SAND, with traces of fines and gravel.								
10										
11										
12					3	2" DO				
13										
14										
15		E.O.B.		15.0						
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 108

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh		0.0						
1										
2		No Recovery.			1	2" DO	0/5			
3										
4										
5	5" x 2" Macro Core / Geoprobe			5.0						
6		Saturated conditions at 6 feet below grade.								
7		Dark grey, very wet fine SAND with traces of fines.			2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 109

BORING DATE: 10/24/00

DRILLER: Fibertec Inc.

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) ⊕ O	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS: TW 109
0		Vegetation & Marsh								
		TOPSOIL		0.0						
1		Greenish brown SLUDGE.		1.0						Soil Sample SB109
2		Black sandy FILL		1.5	1	2" DO	4/5			
3				3.0						
4										
5										Groundwater Sample; 0.01 Slot PVC
6		Saturated conditions at 6 feet below grade.								
7	5' x 2" Macro Core; Geoprobe				2	2" DO	5/5			
8		Dark grey, very wet, fine to coarse SAND with a trace of fines and organics.								
9										
10										
11										
12					3	2" DO	5/5			
13										
14										
15		E.O.B.		15.0						
16										

DATA IN ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 110

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/24/00

DATUM:

DRILLER: Great Lakes

DEPTH FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5' x 2" Macro Core; Geoprobe	Vegetation & Marsh		0.0						
1		Light brown to green SLUDGE with trace sands and organics.								
2		Black, dense FILL.		2.0	1	2" DO	4/5			
3				3.0						
4										
5		Saturated conditions at 5 feet below grade.								
6		Dark grey, fine to coarse, wet SAND.								
7										
					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 111

BORING DATE: 10/24/00

DRILLER: Fibertec Inc.

SHEET 1 OF

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS TW 111
0		Thick Vegitation								
		Light brown and green SLUDGE with sand.		0.0						
1				1.0						Soil Sample SB111
2		Black, dense FILL with trace sand.			1	2" DO	3/5			
3				3.0						
4	5' x 2" Macro Core / Geoprobe									
5		Saturated conditions at 5 feet below grade.								Groundwater Sample / 0.01 Slot PVC
6		Dark grey, very wet, fine to coarse SAND with a trace of fines and gravel.								
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT: A1TB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 111

BORING DATE: 10/24/00

DRILLER: Great Lakes Geotechnical Services

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Thick Vegitation								
		Light brown and green SLUDGE with sand.		0.0						
1				1.0						Soil Sample SB111
2		Black, dense FILL with trace sand.			1	2" DO	3/5			
3				3.0						
4										
5	5" x 2" Macro Core / Geoprobe	Saturated conditions at 5 feet below grade.								
6		Dark grey, very wet, fine to coarse SAND with a trace of fines and gravel.								
7										
					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 112

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/24/00

DATUM:

DRILLER: Great Lakes

DEPTH FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Thick Vegetation		0.0						
		Marshy, wet, black ORGANICS.								
1		Black sandy, dense FILL.		1.0						
2				2.0	1	2" DO	4/5			
3										
4										
5	5" x 2" Macro Core / Geoprobe	Grey, darkening with depth, fine to coarse SAND with traces of gravel and fines.								
6		Saturated conditions at 6 feet below grade.								
					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT ADH

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 113

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5' x 2" Macro Core / Geoprobe	Thick Vegitation								
		Light brown, SLUDGE with organics.		0.0						
1				1.0						
2		Black, dense, wet FILL with a trace of sand.			1	2" DO	4/5			
3										
4		(layer of red brick).		4.2						
5										
6		Saturated conditions at 6 feet below grade. Dark grey, very wet, fine to coarse SAND with a trace of gravel and fines.								
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 114

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5" x 2" Macro Core / Geoprobe	Vegetation & Marsh		0.0						
1										
2		Dark grey, darkening with depth, fine to coarse SAND with some gravel and a trace of fines.			1	2" DO	4/5			
3										
4										
5				5.0						
6		Saturated conditions at 6 feet below grade.								
7		Light brown, dakening to grey with depth, fine to coarse SAND with traces of gravel and fines.			2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 115

BORING DATE: 10/25/00

DRILLER: Fibertec Inc.

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS TW 119
0	5" x 2" Macro Core; Geoprobe	Vegetation & Marsh								
		Dark brown surface materials and ORGANICS.		0.0						
1				1.0						
2					1	2" DO	2/5			
3		Dark brown and black FILL with some coarse sand and gravel.							Soil Sample SB115	
4										
5		(layer of garbage debris).							Groundwater Sample	0.01 Slot PVC
6		Saturated conditions at 6 feet below grade.		6.0						
					2	2" DO	3/5			
8		Grey, very wet, fine SAND with traces of fines.								
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT: ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 116

BORING DATE: 10/24/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS. INSTALLATIONS
0	5" x 2" Macro Core / Geoprobe	Vegetation & Marsh								
		Light brown to green SLUDGE with traces of fines and sand.		0.0						
		Black to brown, wet, PEAT material with some gravel and traces of sand and fines.		1.5	1	2" DO	3/5			
		Saturated conditions at 5.5 feet below grade.		5.0						
		Dark grey, very wet, fine to coarse SAND with trace amounts of fines.			2	2" DO	4/5			
10		E.O.B.		10.0						

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

DATA INP ADR

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 117

BORING DATE: 10/24/00

DRILLER: Great Lakes Geotechnical Services

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS. :NSTALLATICNS
0		Vegetation & Marsh		0.0						
1										
2		Dark grey, wet fine grained SAND with traces of fines.			1	2" DO	3/5			
3										
4		Saturated conditions at 4 feet below grade.								
5	5' x 2" Macro Core / Geoprobe									
5										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 118

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh		0.0						
1										
2					1	2" DO	4/5			
3										
4										
5	5' x 2" Macro Core / Geoprobe	Dark grey, very wet, fine SAND with traces of fines and gravel.								
6		Saturated conditions at 6 feet below grade.								
8					2	2" DO	5/5			
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 119

BORING DATE: 10/25/00

DRILLER: Great Lakes Geotechnical Services

SHEET 1 OF 1

DATUM:

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh								
1	5" x 2" Macro Core / Geoprobe	GRAVEL AND SAND.		0.0						
2		Light brown SLUDGE.		1.8	1	2" DO	5/5			Soil Sample SB119
3		Dark grey, very wet, fine to coarse SAND with traces of gravel and fines		3.0						
4		Saturated conditions at 5 feet below grade.								
5				5.1						
6		Dark grey, very wet, fine to coarse grained SAND with traces of gravel.			2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 120

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh								
		ORGANICS.		0.0						
				0.3						
1		Saturated conditions at 1 foot below grade.								
2					1	2" DO	4/5			
3										
4		Dark grey, very wet, fine to coarse SAND with traces of fine gravel.								
5	5' x 2" Macro Core / Geoprobe									
6										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 121

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh								
		ORGANICS.		0.0						
				0.3						
1										
2		Saturated conditions at 2 feet below grade.			1	2" DO	4/5			
3										
4	5" x 2" Macro Core / Geoprobe	Dark grey, very wet, fine to coarse grained SAND with trace ammounts of fine to coarse gravel and trace amounts of fines.								
5										
6										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 122

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5' x 2" Macro Core; Geoprobe	Vegetation & Marsh								
		ORGANICS.		0.0						
		Waste FILL with glass, brick, sand and gravel.		0.3						
2		Dark to light brown, wet fine to coarse grained SAND with trace ammount of fines and gravel.		2.0	1	2" DO	4/5			
5		Saturated conditions at 6 feet below grade.			2	2" DO	5/5			
10		E.O.B.		10.0						

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 123

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/25/00

DATUM:

DRILLER: Fibertec Inc.

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS: TW 123
0		Vegetation & Marsh								
		ORGANICS.		0.0						
				0.3						
1		Light brown and green SLUDGE with trace ammounts of fines and fine sand.								Soil Sample SB123
2				2.0						
					1	2" DO	4/5 Φ			
3										
4										
	5' x 2" Macro Core / Geoprobe	Light brown, wet, fine SAND with trace ammounts of fines.								
5										Groundwater Sample — 0.01 Slot PVC
6										
7		Saturated conditions at 7 feet below grade.								
					2	2" DO	5/5 Φ			
8				8.0						
9		Dark grey, very wet fine SAND with trace ammounts of fines and gravel.								
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 124

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh								
		ORGANICS.		0.0						
		Light brown and green SLUDGE with trace ammounts of fines and fine sand.		0.3						
1										
2				1.8						
					1	2" DO	4/5			
3										
4		Dark grey, wet fine to coarse grained SAND with trace ammounts of fines.								
5	5' x 2" Macro Core / Geoprobe	Saturated conditions at 5 feet below grade.								
6										
7										
					2	2" DO	5/5			
8										
9		(absence of trace fines).								
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 125

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS. INSTALLATIONS
0		Vegetation & Marsh								
		ORGANICS.		0.0						
		Green SLUDGE with trace ammounts of fines and fine sand.		0.3						
1										
2				2.0						
					1	2" DO	4/5			
3										
4		Dark grey, wet fine to coarse grained SAND with trace ammounts of fines and gravel.								
5	5' x 2" Macro Core / Geoprobe									
6		Saturated conditions at 6 feet below grade.								
7										
					2	2" DO	5/5			
8										
9		(increased ammounts of gravel).								
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

DATA ADR

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 126

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS. INSTALLATIONS
0		Vegetation & Marsh								
	5" x 2" Macro Core / Geoprobe	ORGANICS.		0.0						
		Green SLUDGE. Saturated conditions at 1.8 feet below grade.		0.3						
1										
2		Dark brown, very wet silty, fine to coarse grained SAND.		2.0	1	2" DO	5/5			
3										
4		Light brown very wet, silty, fine to coarse grained SAND.		3.8						
5										
6		Dark grey, very wet, fine to coarse grained SAND with traces of fines and gravel.		5.8	2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
15										

DATA INPUT ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 127

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/25/00

DATUM:

DRILLER: Great Lakes

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ ○ 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh								
		ORGANICS.		0.0						
				0.3						
1										
		Dark brown, very wet silty SAND and trace ammounts of clay.								
2					1	2" DO	4/5			
3										
4		Saturated conditions at 4 feet below grade.		3.8						
5	5' x 2" Macro Core / Geoprobe									
6		Dark grey. very wet fine to coarse grained SAND with trace ammounts of fines and gravel.								
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE
1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy
CHECKED: AGH

ADB DATA

PROJECT: 993-8534

RECORD OF BOREHOLE SB 128

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/25/00

DATUM:

DRILLER: Great Lakes

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5" x 2" Macro Core Geoprobe	Vegetation & Marsh								
		ORGANICS.		0.0						
		Black, loose, silty, SANDY TOPSOIL, native.		0.3						
2				2.0	1	2" DO	5/5			
5		Saturated conditions at 5 feet below grade.								
6		Dark grey, very wet, fine to coarse grained SAND with trace ammounts of fines.								
7					2	2" DO	5/5			
10		E.O.B.		10.0						

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 129

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	5" x 2" Macro Core / Geoprobe	Vegetation & Marsh		0.0						
1		Black, loose, damp, TOPSOIL with organics.								
2				2.0	1	2" DO	4/5			
3										
4										
5		Saturated conditions at 5 feet below grade.								
6		Dark grey, wet, fine to coarse grained SAND with trace ammounts of fines.								
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

DATA ADD

PROJECT: 993-8534

LOCATION: Clyde, Ohio

RECORD OF BOREHOLE SB 130

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Vegetation & Marsh		0.0						
1		Black, loose, damp TOPSOIL with organics.								
2				2.0						
3					1	2" DO	4/5			
4										
5	1½ x 2" Macro Core / Geoprobe	Dark grey, very wet, fine to coarse grained SAND with tace ammounts of fines								
6		Saturated conditions at 6 feet below grade.								
7										
8					2	2" DO	5/5			
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 131

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/25/00

DATUM:

DRILLER: Fibertec Inc.

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) ⊕ ○ 1 2 3 4	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS TW 131
0		Vegetation & Marsh		0.0						
1		Green to black SLUDGE with trace ammounts of topsoil, organics and sand.								Soil Sample SB131
2				2.0	1	2" DO	4/5			
3										
4		Dark grey, very wet fine to coarse grained SAND with trace ammounts of fines and gravel.								
5	5" x 2" Macro Core / Geoprobe	Saturated conditions at 5 feet below grade.								Groundwater Sample; 0.01 Slot PVC
6										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DATA INPUT: ADB

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

PROJECT: 993-8534

RECORD OF BOREHOLE SB 132

SHEET 1 OF 1

LOCATION: Clyde, Ohio

BORING DATE: 10/25/00

DATUM:

DRILLER: Great Lakes Geotechnical Services

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS. INSTALLATIONS
0		Vegetation & Marsh								
		TOPSOIL AND ORGANICS.		0.0						
1				1.0						
2					1	2" DO	4/5			
3										
4	5" x 2" Macro Core / Geoprobe	Dark grey, very wet fine to coarse SAND with a trace of fines and gravel.								
5		Saturated conditions at 5 feet below grade.								
6										
7					2	2" DO	5/5			
8										
9										
10		E.O.B.		10.0						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: Josh Guy

CHECKED: AGH

DATA ADB

PROJECT: 993-8534

LOCATION: Whirlpool, Clyde OH

RECORD OF BOREHOLE SB 134

BORING DATE: 10/25/00

DRILLER: Great Lakes

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	Hand Auger 2" x 4'	Grassy								
		Silty SAND, brown, fine, slightly moist, no odor.		0.0						Soil Sample SB34A
4		Sandy GRAVEL, dark brown to grey, fine to medium, slightly moist, no odor		4.0						
5		Sandy GRAVEL, dark brown, fine to medium, slightly moist, no odor.		5.0						Soil Sample SB34B
8		Silty SAND, dark brown, fine, moist, no odor.		7.5						
9		E.O.B. = 9' bgl		9.0						

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: JSJ

CHECKED: DPR

DATA: JSJ

PROJECT: 993-8534

LOCATION: Whirlpool, Clyde OH

RECORD OF BOREHOLE SB 135

BORING DATE: 10/25/00

DRILLER: Fibertec Inc.

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) ⊕ O 1 2 3 4	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS TW 135
0	Hand Auger 2" x 4'	Grassy		0.0						
1										
2		Silty SAND, brown, fine slightly moist to dry, no odor.								Soil Sample SB135
3										
4										
5										Groundwater Sample; 0.01 Slot PVC
6				6.0						
7		Silty SAND, brown, fine, dry to slightly moist, no odor.								
8										
9				8.5						
10		Sandy GRAVEL, grey, moist, no odor.								
11		E.O.B. = 11' bgl		11.0						
12										
13										
14										
15										
16										

DATA INP JSJ

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: JSJ

CHECKED: DPR

PROJECT: 993-8534

RECORD OF BOREHOLE SB 136

SHEET 1 OF 1

LOCATION: Whirlpool, Clyde OH

BORING DATE: 10/25/00

DATUM:

DRILLER: Fibertec Inc.

DEPTH FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	% RECOVERY	PID Readings for Soils (ppm) ⊕ / O (1 2 3 4)	ADDITIONAL LAB. TESTING	MONITORING INSTALLATIONS: TW 136
0	Hand Auger 2" x 4'	Grassy		0.0						
1		Silty SAND, brown, fine, slightly moist to dry, no odor.								
2				2.0						
3										Soil Sample
4		Silty SAND, orangish brown, fine to medium, slightly moist, no odor								
5										Groundwater Sample — 0.01 Slot PVC
6										
7		Sandy GRAVEL, grey, fine to medium, slightly moist, no odor.		7.0						
8		Sandy GRAVEL, grey, fine to medium, moist, no odor		8.0						
9		E.O.B. = 9' bgl		9.0						
10										
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: JSJ

CHECKED: DPR

DATA INPUT: JSJ

PROJECT: 993-8534

RECORD OF BOREHOLE SB 137

SHEET 1 OF 1

LOCATION: Whirlpool, Clyde OH

BORING DATE: 10/25/00

DATUM:

DRILLER: Great Lakes

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	ELEV. DEPTH (ft)	SAMPLES NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) 1 2 3 4	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0		Grassy								
	Hand Auger 2" x 4'	Silty SAND, brown, fine to medium, slightly moist to dry, no odor, some roots.		0.0						
1										
2		Silty SAND, yellowish brown, fine, slightly moist, no odor.		2.0						
3		Silty SAND, yelloish brown to grey, fine, slightly moist, no odor		3.0						Soil Sample SB37
4		Silty SAND, dark grey, fine, slightly moist, no odor.		4.0						
5		Silty SAND, grey, fine, moist, no odor.		5.0						
6		E.O.B. = 6' bgl		6.0						
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										

DEPTH SCALE
1 inch to 2 feet

Golder Associates

LOGGED: JSJ
CHECKED: DPR

JSJ

DATA

PROJECT: 993-8534

LOCATION: Whirlpool, Clyde OH

RECORD OF BOREHOLE SB 138

BORING DATE: 10/25/00

DRILLER: Great Lakes

SHEET 1 OF 1

DATUM:

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	RECOV (%)	PID Readings for Soils (ppm) ⊕ O (1 2 3 4)	ADDITIONAL LAB. TESTING	FIELD MEASUREMENTS, INSTALLATIONS
0	Hand Auger 2" x 4"	Grassy		0.0						
1		Silty SAND, orangish brown, fine to medium, slightly moist to dry, no odor.								
2										
3										
4										
5										
6		Sandy GRAVEL, grey, fine to medium, slightly moist, no odor.		6.0						
7										
8										
9										
10		Silty SAND, brown, fine, slightly moist, no odor		9.5						
11		Silty SAND, grey, fine, slightly moist, no odor		11.0						
12		E.O.B. = 12' bgl		12.0						
13										
14										
15										
16										

DEPTH SCALE

1 inch to 2 feet

Golder Associates

LOGGED: JSJ

CHECKED: DPR

Appendix B

Laboratory Analytical Data

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *21-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28434
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-1
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 10:08 AM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	9.7	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	4600	UG/L	11/6/00	BLD	23333
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K. Johnson

Deborah K. Johnson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28435 **Your Sample ID:** MW-2
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 10:36 AM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
B-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	4.3	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	14000	UG/L	11/6/00	BLD	23333
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K. Johnson

Deborah K. Johnson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28436
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-10
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 11:20 AM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	6900	UG/L	11/6/00	BLD	23333
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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ATEL

Aqua Tech Environmental Laboratories, Inc.

Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K Johnson

Deborah K. Johnson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28437
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-9
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 12:01 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	30000	UG/L	11/6/00	BLD	23333
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K. Johnson

Deborah K. Johnson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28438
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-5
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 12:36 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	23	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	67000	UG/L	11/6/00	BLD	23333
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K Johnson

Deborah K. Johnson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28439
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-8
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 1:14 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
B-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	7000	UG/L	11/6/00	BLD	23333
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333

Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K. Johnson

Deborah K. Johnson

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CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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PHONE 740-389-5991 • 1-800-873-2835 • FAX 740-389-1481

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28440 **Your Sample ID:** SB-1
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 3:39 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	860	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	7.1	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	14	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Deborah K Johnson

Deborah K. Johnson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28441
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: Rinsate 1
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 2:15 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
B-MS	6020	Boron, B	< 50	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
PP-METALS		Priority Pollutant Metals	--				0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The results for the Selenium matrix spike/matrix spike duplicate were biased low, however, the %RPD was less than 20%. The sample result should be qualified due to a matrix effect. The analytical run was not rejected since the method quality control checks were within limits.

End of Report

Report Approved By: Deborah K Johnson

Deborah K. Johnson

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This comment is a mistake Rinsate used for MS/D & appears

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ATEL

Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1		- QC Calculations - QC2	Lower Limit	Upper Limit
23309	MAR00-28440	D	AG	0	UG/L		0 %D	(<5 x MDL)			20
23333	MAR00-28440	D	AS	.4973	UG/L		0 %D	(<5 x MDL)			20
23387	MAR00-28440	D	B	816.8109	UG/L		5 %D				20
23309	MAR00-28440	D	BE	0	UG/L		0 %D	(<5 x MDL)			20
23333	MAR00-28440	D	CD	.018	UG/L		144 %D *	(<5 x MDL)			20
23309	MAR00-28440	D	CR	0	UG/L		200 %D *	(<5 x MDL)			20
23309	MAR00-28440	D	CU	0	UG/L		0 %D	(<5 x MDL)			20
23309	MAR00-28440	D	NI	1.63	UG/L		200 %D *	(<5 x MDL)			20
23333	MAR00-28440	D	PB	7.4921	UG/L		6 %D	(<5 x MDL)			20
23333	MAR00-28440	D	SB	.217	UG/L		17 %D	(<5 x MDL)			20
23288	MAR00-28440	D	SE	0	UG/L		0 %D	(<5 x MDL)			20
23333	MAR00-28440	D	TL	0	UG/L		0 %D	(<5 x MDL)			20
23309	MAR00-28440	D	ZN	13.49	UG/L		5 %D	(<5 x MDL)			20
23309	MAR00-28441	M	AG	94.34	UG/L	100	97 %R:		1 %RPD	80	120
23309	MAR00-28441	S	AG	95.12	UG/L	100	97 %R:			80	120
23333	MAR00-28441	M	AS	20.9571	UG/L	20	104 %R:		6 %RPD	75	125
23333	MAR00-28441	S	AS	19.6619	UG/L	20	98 %R:			75	125
23387	MAR00-28441	M	B	127.5362	UG/L	100	97 %R:		8 %RPD	75	125
23387	MAR00-28441	S	B	117.6627	UG/L	100	87 %R:			75	125
23309	MAR00-28441	M	BE	85.8	UG/L	100	88 %R:		4 %RPD	80	120
23309	MAR00-28441	S	BE	88.9	UG/L	100	91 %R:			80	120
23333	MAR00-28441	M	CD	9.8132	UG/L	10	98 %R:		2 %RPD	75	125
23333	MAR00-28441	S	CD	9.6038	UG/L	10	96 %R:			75	125
23309	MAR00-28441	M	CR	879.8	UG/L	1000	88 %R:		2 %RPD	80	120
23309	MAR00-28441	S	CR	897.79	UG/L	1000	90 %R:			80	120
23309	MAR00-28441	M	CU	890.65	UG/L	1000	89 %R:		1 %RPD	80	120
23309	MAR00-28441	S	CU	900.37	UG/L	1000	90 %R:			80	120
23309	MAR00-28441	M	NI	877.9	UG/L	1000	87 %R:		2 %RPD	80	120
23309	MAR00-28441	S	NI	893.83	UG/L	1000	89 %R:			80	120
23333	MAR00-28441	M	PB	10.0382	UG/L	10	98 %R:		3 %RPD	75	125
23333	MAR00-28441	S	PB	9.7495	UG/L	10	95 %R:			75	125
23333	MAR00-28441	M	SB	19.1031	UG/L	20	96 %R:		7 %RPD	75	125

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Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1	- QC Calculations - QC2	Lower Limit	Upper Limit
23333	MAR00-28441	S	SB	17.845	UG/L	20	90 %R:		75	125
23288	MAR00-28441	M	SE	16.39	UG/L	20	82 %R:	3 %RPD	80	120
23288	MAR00-28441	S	SE	16.94	UG/L	20	85 %R:		80	120
23333	MAR00-28441	M	TL	10.0186	UG/L	10	100 %R:	4 %RPD	75	125
23333	MAR00-28441	S	TL	9.6424	UG/L	10	97 %R:		75	125
23309	MAR00-28441	M	ZN	871.01	UG/L	1000	87 %R:	2 %RPD	80	120
23309	MAR00-28441	S	ZN	884.6	UG/L	1000	88 %R:		80	120

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CHAIN-OF-CUSTODY

ATEL

Aqua Tech Environmental Laboratories, Inc.

Client Name:	Golder Associates
Project Name:	Whirlpool / Amert / Ohio
Project No:	003-8606
Sampler:	Danny Yip

Sample ID	Date	Time	grab/ comp	Matrix	ATEL Lab Number	# of Cont.	Analysis Required
MW-1	10/31/00	10:08		ground water	28434	2	metals and Boron
MW-2	10/31/00	10:36		ground water	28435	2	Metals and Boron
MW-10	10/31/00	11:20		ground water	28436	2	Metals and Boron
MW-9	10/31/00	12:01		ground water	28437	2	Metals and Boron
MW-~~8~~5	10/31/00	12:36		ground water	28438	2	Metals and Boron
MW-8	10/31/00	13:14		ground water	28439	2	Metals and Boron
SB-1	10/31/00	15:39		ground water	28440	2	Metals and Boron
remote 1	10/31/00	14:15		~~ground~~ rense water	28441	2	Metals and Boron

SEND RESULTS TO:

Person: Mr Andy Harris

Company: Golder Associates Inc

Street: 16 821 Wood Rd

City: Lansing State: MI Zip: 48906

Phone: 517 482 2262 Fax: 517 482 2460

ATEL Quote #: Company PO #:

Relinquished by: Kevin Gorelman	**Date/Time** 31 Oct 00	**Received by:** Carl Smith	**Date/Time** 10/31/00
Relinquished by:	**Date/Time**	**Received by:**	**Date/Time**
Relinquished by:	**Date/Time**	**Received at Laboratory by:** 11/1/00	**Date/Time** 1500

Comments:

Method of Shipment

Cooler Temperature °C

Canton: 5300 Fulton Drive NW, Canton, Ohio 44718, 800-635-3222 fax 330-494-2961

Marion: 1776 Marion-Waldo Rd., Marion, Ohio 43302, 800-873-2835 fax 740-389-1481

Sanford: 936 N Horner Boulevard, Sanford, North Carolina 27330, 800-522-2832 fax 919-774-7068

Tucson: 2700 E Bilby Rd. Bldg. A, Tucson, Arizona 85706, 800-879-2835 fax 520-573-6550

Melmore: 6878 S State Rt. 100, Melmore, Ohio 44845, 800-858-8869 fax 419-397-2229

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *16-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28270 **Your Sample ID:** MW-12
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 12:10 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	5.7	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	110000	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/3/00	BLD	23295
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/3/00	BLD	23295
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/3/00	BLD	23295
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/3/00	BLD	23295
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/3/00	BLD	23295

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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ATEL

Aqua Tech Environmental Laboratories, Inc.

Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *16-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28271 **Your Sample ID:** MW-11
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 1:07 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	4.5	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	66000	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/3/00	BLD	23295
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/3/00	BLD	23295
PB-MS	200.8/6020	Lead, Pb	9.6	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/3/00	BLD	23295
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/3/00	BLD	23295
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/3/00	BLD	23295

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The results for the Selenium matrix spike/matrix spike duplicate were biased low, however, the %RPD was less than 20%. The sample result should be qualified due to a matrix effect. The analytical run was not rejected since the method quality control checks were within limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *16-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28272 **Your Sample ID:** MW-3
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 1:01 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	6.6	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	66000	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/3/00	BLD	23295
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/3/00	BLD	23295
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/3/00	BLD	23295
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/3/00	BLD	23295
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/3/00	BLD	23295

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *16-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28273 **Your Sample ID:** MW-4
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 3:31 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	8.4	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	92000	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/3/00	BLD	23295
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/3/00	BLD	23295
PB-MS	200.8/6020	Lead, Pb	42	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/3/00	BLD	23295
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/3/00	BLD	23295
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/3/00	BLD	23295

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053.NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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PHONE 740-389-5991 • 1-800-873-2835 • FAX 740-389-1481

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28276 **Your Sample ID:** Dup 1 (MW-4)
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	8.4	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	110000	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/9/00	BLD	23378
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/9/00	BLD	23378
PB-MS	200.8/6020	Lead, Pb	46	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/9/00	BLD	23378
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/9/00	BLD	23378
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/9/00	BLD	23378

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *16-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28274 **Your Sample ID:** MW-6
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 4:36 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	13	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	130000	UG/L	11/9/00	KRG	23387
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/3/00	BLD	23295
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/3/00	BLD	23295
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/3/00	BLD	23295
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/3/00	BLD	23295
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/3/00	BLD	23295

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Selenium was outside the recommended quality control limits. The Selenium Practical Quantitation Limit has been elevated due to matrix intereferences.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28275 **Your Sample ID:** MW-7
Date Logged-In: 11/1/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirlpool/Amert **Date Submitted to Lab:** 10/31/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/30/00 5:03 PM Yip

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	13	UG/L	11/6/00	BLD	23333
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/9/00	KRG	23387
B-MS	6020	Boron, B	240000	UG/L	11/9/00	KRG	23387
CD-GFAA	3113B/7131	Cadmium, Cd	< 0.5	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/9/00	BLD	23378
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/9/00	BLD	23378
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/9/00	BLD	23378
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	11/2/00	ROH	23288
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/9/00	BLD	23378
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/9/00	BLD	23378

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1	- QC Calculations - QC2	Lower Limit	Upper Limit
23295	MAR00-28270	D	AG	0	UG/L		0 %D (<5 x MDL)			20
23333	MAR00-28270	D	AS	4.3083	UG/L		29 %D * (<5 x MDL)			20
23387	MAR00-28270	D	B	111985.4	UG/L		0 %D			20
23387	MAR00-28270	D	BE	.0134	UG/L		200 %D * (<5 x MDL)			20
23333	MAR00-28270	D	CD	0	UG/L		0 %D (<5 x MDL)			20
23295	MAR00-28270	D	CR	0	UG/L		0 %D (<5 x MDL)			20
23295	MAR00-28270	D	CU	1.93	UG/L		0 %D (<5 x MDL)			20
23295	MAR00-28270	D	NI	.83	UG/L		134 %D * (<5 x MDL)			20
23333	MAR00-28270	D	PB	.0776	UG/L		47 %D * (<5 x MDL)			20
23333	MAR00-28270	D	SB	.1075	UG/L		60 %D * (<5 x MDL)			20
23288	MAR00-28270	D	SE	0	UG/L		0 %D (<5 x MDL)			20
23333	MAR00-28270	D	TL	0	UG/L		0 %D (<5 x MDL)			20
23295	MAR00-28270	D	ZN	0	UG/L		200 %D * (<5 x MDL)			20
23295	MAR00-28271	M	AG	107.94	UG/L	100	107 %R:	4 %RPD	80	120
23295	MAR00-28271	S	AG	103.6	UG/L	100	103 %R:		80	120
23333	MAR00-28271	M	AS	24.8809	UG/L	20	102 %R:	0 %RPD	75	125
23333	MAR00-28271	S	AS	24.9934	UG/L	20	102 %R:		75	125
23387	MAR00-28271	M	BE	5.3625	UG/L	5	107 %R:	7 %RPD	75	125
23387	MAR00-28271	S	BE	5.0114	UG/L	5	100 %R:		75	125
23333	MAR00-28271	M	CD	9.8328	UG/L	10	98 %R:	3 %RPD	75	125
23333	MAR00-28271	S	CD	9.5592	UG/L	10	96 %R:		75	125
23295	MAR00-28271	M	CR	982.56	UG/L	1000	98 %R:	4 %RPD	80	120
23295	MAR00-28271	S	CR	939.86	UG/L	1000	94 %R:		80	120
23295	MAR00-28271	M	CU	998.01	UG/L	1000	100 %R:	5 %RPD	80	120
23295	MAR00-28271	S	CU	953.74	UG/L	1000	95 %R:		80	120
23295	MAR00-28271	M	NI	998.53	UG/L	1000	99 %R:	6 %RPD	80	120
23295	MAR00-28271	S	NI	938.23	UG/L	1000	93 %R:		80	120
23333	MAR00-28271	M	PB	19.0231	UG/L	10	94 %R:	3 %RPD	75	125
23333	MAR00-28271	S	PB	19.5157	UG/L	10	99 %R:		75	125
23333	MAR00-28271	M	SB	19.8653	UG/L	20	99 %R:	2 %RPD	75	125
23333	MAR00-28271	S	SB	19.4702	UG/L	20	98 %R:		75	125
23288	MAR00-28271	M	SE	12.5	UG/L	20	63 %R: *	1 %RPD	80	120

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Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1	- QC Calculations - QC2	Lower Limit	Upper Limit
23288	MAR00-28271	S	SE	12.39	UG/L	20	62 %R: *		80	120
23333	MAR00-28271	M	TL	10.077	UG/L	10	100 %R:	1 %RPD	75	125
23333	MAR00-28271	S	TL	10.2166	UG/L	10	101 %R:		75	125
23295	MAR00-28271	M	ZN	974.32	UG/L	1000	97 %R:	6 %RPD	80	120
23295	MAR00-28271	S	ZN	922	UG/L	1000	92 %R:		80	120
23345	MAR00-28275	S	CD	3.138	UG/L	2.91	104 %R:		75	125

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CHAIN-OF-CUSTODY

ATEL

Aqua Tech Environmental Laboratories, Inc.

ph ok unless noted

Client Name: Golder Associates

Project Name: Whirlpool Amert Ohio

Project No: 003-8606

Sampler: Danny Yip

Sample ID	Date	Time	grab/ comp	Matrix	ATEL Lab Number	# of Cont.	Analysis Required
MW-12	10/30/00	1210		ground water	28270	2	ph >2 => <2 (10mL) Boron and metals
MW-11	10/30/00	1307		ground water	28271	2	ph >2 => <2 (10mL) Boron and metals
MW-3	10/30/00	1301		ground water	28272	2	Boron and metals
MW-4	10/30/00	~~1500~~ 1531		ground water	28273	2	Boron and metals
MW-6	10/30/00	1636		ground water	28274	2	Boron and metals
MW-7	10/30/00	1703		ground water	28275	2	Boron and metals
Dup 1 (MW-4)	10/30/00			ground water	28276	2	Boron and metals

SEND RESULTS TO:

Person: Mr Andy Harris

Company: Golder Associates Inc

Street: 16 821 Ward Rd

City: Lansing State: MI Zip: 48906

Phone: (517) 482 2262 Fax: (517) 482-2460

ATEL Quote #: _____ Company PO #: _____

Relinquished by:	Date/Time	Received by:	Date/Time
Kevin Gorehan	10/31/00 820	[illegible]	10/31
		Received at Laboratory by: [illegible]	10/31/00 1600

Comments:

Method of Shipment

Cooler Temperature °C

Canton: 5300 Fulton Drive NW, Canton, Ohio 44718, 800-635-3222 fax 330-494-2961

Marion: 1776 Marion-Waldo Rd., Marion, Ohio 43302, 800-873-2835 fax 740-389-1481

Sanford: 936 N Horner Boulevard, Sanford, North Carolina 27330, 800-522-2832 fax 919-774-7068

Tucson: 2700 E Bilby Rd. Bldg. A, Tucson, Arizona 85706, 800-879-2835 fax 520-573-6550

Melmore: 6878 S State Rt. 100, Melmore, Ohio 44845, 800-858-8869 fax 419-397-2229

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Aqua Tech Environmental Laboratories, Inc.

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- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28434 **Your Sample ID:** MW-1
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 10:08 AM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	9.7	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	4600	UG/L	11/6/00	BLD	23333
PP-METALS		Priority Pollutant Metals					

End of Report

Report Approved By:

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28435 **Your Sample ID:** MW-2
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 10:36 AM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
[illegible]MS	200.8/6020	Arsenic, As	4.3	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	14000	UG/L	11/6/00	BLD	23333
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: [signature]

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28436
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-10
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 11:20 AM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	6900	UG/L	11/6/00	BLD	23333
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: Debra K Johnson

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PHONE 740-389-5991 • 1-800-873-2835 • FAX 740-389-1481

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28437 **Your Sample ID:** MW-9
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 12:01 PM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	30000	UG/L	11/6/00	BLD	23333
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: _____

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28438
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: MW-5
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 12:36 PM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
B-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	23	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	67000	UG/L	11/6/00	BLD	23333
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: Debra K. Johnson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28439 **Your Sample ID:** MW-8
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 1:14 PM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	7000	UG/L	11/6/00	BLD	23333
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: Debra K. Johnson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28440 **Your Sample ID:** SB-1
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 3:39 PM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	7.1	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	14	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	860	UG/L	11/9/00	KRG	23387
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: Debra K Johnson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *26-Feb-01*
Original Report Date: 20-Nov-00
Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28441
Date Logged-In: 11/3/00
Matrix: Water
Project #: Whirl/Amert/OH

Your Sample ID: Rinsate 1
Sample Source: RCRA
Client Project #: 003-8606
Date Submitted to Lab: 11/1/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 2:15 PM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
AS-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	< 50	UG/L	11/9/00	KRG	23387
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: Debra K. Johnson

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Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
23387	LCS	AS	C	10.616	UG/L	10	106 %R:		50	150
23333	LCS	AS	C	20.3755	UG/L	20	102 %R:		50	150
23387	LCS	B	C	53.7059	UG/L	50	107 %R:		50	150
23333	LCS	B	C	97.2128	UG/L	100	97 %R:		50	150
23387	LCS	BE	C	5.3709	UG/L	5	107 %R:		50	150
23333	LCS	BE	C	8.9985	UG/L	10	90 %R:		50	150
23333	LCS	CD	C	10.1968	UG/L	10	102 %R:		50	150
23333	LCS	PB	C	10.2387	UG/L	10	102 %R:		50	150
23333	LCS	SB	C	21.5382	UG/L	20	108 %R:		50	150
23387	LCS	SI	C	.9147	MG/L	0.96	95 %R:		50	150
23333	LCS	TL	C	10.1911	UG/L	10	102 %R:		50	150
23333	LCS	U	C	100.7427	UG/L	100	101 %R:		50	150
23387	LCSA 10.31.3	AS	C	219.0758	UG/L	200	110 %R:		50	150
23387	LCSA 10.31.3	SI	C	5.8548	MG/L	5	117 %R:		50	150
23309	LCSA 11.1.2	FE	C	1.81	MG/L	2	91 %R:		80	120
23309	LCSA 11.1.2	K	C	8.80478	MG/L	10	88 %R:		80	120
23387	LCSA 11.1.3	B	C	118.7816	UG/L	100	119 %R:		50	150
23387	LCSA 11.1.3	BE	C	10.4179	UG/L	10	104 %R:		50	150
23288	LCSA 11.1.3	SE	C	19.53	UG/L	20	98 %R:		70	125
23309	LCSA 11.2.2	AG	C	.09123	MG/L	0.1	91 %R:		80	120
23309	LCSA 11.2.2	BE	C	.08838	MG/L	0.1	88 %R:		80	120
23309	LCSA 11.2.2	CR	C	.85374	MG/L	1	85 %R:		80	120
23309	LCSA 11.2.2	CU	C	.86731	MG/L	1	87 %R:		80	120
23309	LCSA 11.2.2	NI	C	.85063	MG/L	1	85 %R:		80	120
23309	LCSA 11.2.2	ZN	C	.84892	MG/L	1	85 %R:		80	120
23387	LCSA 11.2.3	B	C	113.9929	UG/L	100	114 %R:		50	150
23387	LCSA 11.2.3	BE	C	9.7618	UG/L	10	98 %R:		50	150
23288	LCSA 11.2.3	SE	C	16.1	UG/L	20	81 %R:		70	125
23320	LCSA 11.6	HG	C	2.34	UG/L	2.5	94 %R:		70	120
23309	LCSA 11.6.2	CR	C	.91927	MG/L	1	92 %R:		80	120
23309	LCSA 11.6.2	CU	C	.91204	MG/L	1	91 %R:		80	120
23309	LCSA 11.6.2	FE	C	1.85929	MG/L	2	93 %R:		80	120
23309	LCSA 11.6.2	MN	C	.89002	MG/L	1	89 %R:		80	120
23309	LCSA 11.6.2	NI	C	.9162	MG/L	1	92 %R:		80	120
23309	LCSA 11.6.2	PB	C	2.08198	MG/L	2.1	99 %R:		80	120
23309	LCSA 11.6.2	ZN	C	.90007	MG/L	1	90 %R:		80	120
23333	LCSA10.31.3	PB	C	11.0566	UG/L	10	111 %R:		50	150
23333	LCSA11.11.3	AS	C	19.7594	UG/L	20	99 %R:		50	150
23333	LCSA11.11.3	CD	C	9.1721	UG/L	10	92 %R:		50	150

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

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Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1			-- QC Calculations -- QC2	Lower Limit	Upper Limit
23333	LCSA11.11.3	PB	C	10.4652	UG/L	10	105	%R:			50	150
23333	LCSA11.11.3	SB	C	20.1511	UG/L	20	101	%R:			50	150
23333	LCSA11.11.3	TL	C	10.2783	UG/L	10	103	%R:			50	150
23333	LCSA11.2.3	AS	C	17.4578	UG/L	20	87	%R:			50	150
23333	LCSA11.2.3	B	C	92.7144	UG/L	100	93	%R:			50	150
23333	LCSA11.2.3	CD	C	8.1883	UG/L	10	82	%R:			50	150
23333	LCSA11.2.3	PB	C	9.3476	UG/L	10	93	%R:			50	150
23333	LCSA11.2.3	SB	C	17.1341	UG/L	20	86	%R:			50	150
23333	LCSA11.2.3	TL	C	9.3488	UG/L	10	93	%R:			50	150
23288	LCSAL 11.2.3	SE	C	.1829	MG/L	0.2	91	%R:			80	120
23309	LCSAL 11.6.2	AG	C	.91384	MG/L	1	91	%R:			80	120
23309	LCSAL 11.6.2	BA	C	18.45369	MG/L	20	92	%R:			80	120
23309	LCSAL 11.6.2	CD	C	.18685	MG/L	0.2	93	%R:			80	120
23309	LCSAL 11.6.2	CR	C	.9568	MG/L	1	96	%R:			80	120
23309	LCSAL 11.6.2	PB	C	.94117	MG/L	1	94	%R:			80	120
23309	LFB	FE	C	4.83133	MG/L	5	97	%R:			80	120
23309	LFB	MN	C	2.36489	MG/L	2.5	95	%R:			80	120
23320	LFB1 11.6	HG	C	1.97	UG/L	2	99	%R:			85	115
23320	LFB2 11.6	HG	C	1.99	UG/L	2	100	%R:			85	115
23387	MAR00-28291	AS		3.8573	UG/L							
23309	MAR00-28440D	AG	D	0	UG/L		200	%D	* (<5 x MDL)			20
23333	MAR00-28440D	AS	D	.4973	UG/L		0	%D	(<5 x MDL)			20
23387	MAR00-28440D	B	D	816.8109	UG/L		5	%D				20
23309	MAR00-28440D	BE	D	0	UG/L		200	%D	* (<5 x MDL)			20
23333	MAR00-28440D	CD	D	.018	UG/L		144	%D	* (<5 x MDL)			20
23309	MAR00-28440D	CR	D	0	UG/L		200	%D	* (<5 x MDL)			20
23309	MAR00-28440D	CU	D	0	UG/L		200	%D	* (<5 x MDL)			20
23309	MAR00-28440D	NI	D	1.63	UG/L		200	%D	* (<5 x MDL)			20
23333	MAR00-28440D	PB	D	7.4921	UG/L		6	%D	(<5 x MDL)			20
23333	MAR00-28440D	SB	D	.217	UG/L		17	%D	(<5 x MDL)			20
23288	MAR00-28440D	SE	D	0	UG/L		0	%D	(<5 x MDL)			20
23333	MAR00-28440D	TL	D	0	UG/L		0	%D	(<5 x MDL)			20
23309	MAR00-28440D	ZN	D	13.49	UG/L		5	%D	(<5 x MDL)			20
23309	MAR00-28441M	AG	M	94.34	UG/L	100	94	%R:		1 %RPD	80	120
23333	MAR00-28441M	AS	M	20.9571	UG/L	20	104	%R:		6 %RPD	75	125
23387	MAR00-28441M	B	M	127.5362	UG/L	100	97	%R:		8 %RPD	75	125
23309	MAR00-28441M	BE	M	85.8	UG/L	100	86	%R:		4 %RPD	80	120
23333	MAR00-28441M	CD	M	9.8132	UG/L	10	98	%R:		2 %RPD	75	125
23309	MAR00-28441M	CR	M	879.8	UG/L	1000	88	%R:		2 %RPD	80	120

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

1776 MARION-WALDO RD. • P.O. BOX 436 • MARION, OH 43301-0436
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ATEL

Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23309	MAR00-28441M	CU	M	890.65	UG/L	1000	89 %R:	1 %RPD	80	120
23309	MAR00-28441M	NI	M	877.9	UG/L	1000	87 %R:	2 %RPD	80	120
23333	MAR00-28441M	PB	M	10.0382	UG/L	10	98 %R:	3 %RPD	75	125
23333	MAR00-28441M	SB	M	19.1031	UG/L	20	96 %R:	7 %RPD	75	125
23288	MAR00-28441M	SE	M	16.39	UG/L	20	82 %R:	3 %RPD	80	120
23333	MAR00-28441M	TL	M	10.0186	UG/L	10	100 %R:	4 %RPD	75	125
23309	MAR00-28441M	ZN	M	871.01	UG/L	1000	87 %R:	2 %RPD	80	120
23309	MAR00-28441S	AG	S	95.12	UG/L	100	95 %R:		80	120
23333	MAR00-28441S	AS	S	19.6619	UG/L	20	98 %R:		75	125
23387	MAR00-28441S	B	S	117.6627	UG/L	100	87 %R:		75	125
23309	MAR00-28441S	BE	S	88.9	UG/L	100	89 %R:		80	120
23333	MAR00-28441S	CD	S	9.6038	UG/L	10	96 %R:		75	125
23309	MAR00-28441S	CR	S	897.79	UG/L	1000	90 %R:		80	120
23309	MAR00-28441S	CU	S	900.37	UG/L	1000	90 %R:		80	120
23309	MAR00-28441S	NI	S	893.83	UG/L	1000	89 %R:		80	120
23333	MAR00-28441S	PB	S	9.7495	UG/L	10	95 %R:		75	125
23333	MAR00-28441S	SB	S	17.845	UG/L	20	90 %R:		75	125
23288	MAR00-28441S	SE	S	16.94	UG/L	20	85 %R:		80	120
23333	MAR00-28441S	TL	S	9.6424	UG/L	10	97 %R:		75	125
23309	MAR00-28441S	ZN	S	884.6	UG/L	1000	88 %R:		80	120
23320	MAR00-28472S	HG	S	.0197	MG/L	0.02	97 %R:		50	150
23288	MAR00-28472S	SE	S	.937	MG/L	1	94 %R:		50	150
23309	MAR00-28475S	AG	S	4.47275	MG/L	5	89 %R:		50	150
23309	MAR00-28475S	BA	S	90.6645	MG/L	100	90 %R:		50	150
23309	MAR00-28475S	CD	S	.895	MG/L	1	88 %R:		50	150
23309	MAR00-28475S	CR	S	4.5946	MG/L	5	92 %R:		50	150
23320	MAR00-28475S	HG	S	.0189	MG/L	0.02	94 %R:		50	150
23309	MAR00-28475S	PB	S	4.7139	MG/L	5	94 %R:		50	150
23309	MAR00-28476D	FE	D	1334.68	UG/L		1 %D			20
23309	MAR00-28476D	MN	D	527.81	UG/L		0 %D			20
23309	MAR00-28477M	FE	M	2268.75	UG/L	2000	86 %R:	1 %RPD	80	120
23309	MAR00-28477M	MN	M	1159.57	UG/L	1000	86 %R:	0 %RPD	80	120
23309	MAR00-28477S	FE	S	2287.06	UG/L	2000	86 %R:		80	120
23309	MAR00-28477S	MN	S	1154.32	UG/L	1000	85 %R:		80	120
23309	MAR00-28505S	AG	S	4.235	MG/L	5	85 %R:		50	150
23309	MAR00-28505S	BA	S	92.71055	MG/L	100	90 %R:		50	150
23309	MAR00-28505S	CD	S	.96135	MG/L	1	94 %R:		50	150
23309	MAR00-28505S	CR	S	4.6174	MG/L	5	92 %R:		50	150
23320	MAR00-28505S	HG	S	.0193	MG/L	0.02	95 %R:		50	150

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
23309	MAR00-28505S	PB	S	4.93055	MG/L	5	92 %R:		50	150
23288	PBL 11.2.3	SE	C	-.00072	MG/L		0			
23309	PBL 11.6.2	AG	C	-.0038	MG/L					
23309	PBL 11.6.2	BA	C	-.00016	MG/L					
23309	PBL 11.6.2	CD	C	.00374	MG/L					
23309	PBL 11.6.2	CR	C	-.00272	MG/L					
23309	PBL 11.6.2	PB	C	.01005	MG/L					
23387	PBW 10.31.3	AS	C	0	UG/L					
23387	PBW 10.31.3	SI	C	0	MG/L					
23309	PBW 11.1.2	FE	C	.085	MG/L					
23309	PBW 11.1.2	K	C	-.09081	MG/L					
23387	PBW 11.1.3	B	C	5.4377	UG/L					
23387	PBW 11.1.3	BE	C	0	UG/L					
23288	PBW 11.1.3	SE	C	-.83	UG/L		0			
23309	PBW 11.2.2	AG	C	-.00225	MG/L					
23309	PBW 11.2.2	BE	C	-.00263	MG/L					
23309	PBW 11.2.2	CR	C	-.00379	MG/L					
23309	PBW 11.2.2	CU	C	.00581	MG/L					
23309	PBW 11.2.2	NI	C	.0001	MG/L					
23309	PBW 11.2.2	ZN	C	.0014	MG/L					
23387	PBW 11.2.3	B	C	5.5007	UG/L					
23387	PBW 11.2.3	BE	C	0	UG/L					
23288	PBW 11.2.3	SE	C	-.54	UG/L		0			
23309	PBW 11.6.2	CR	C	-.00245	MG/L					
23309	PBW 11.6.2	FE	C	.00732	MG/L					
23309	PBW 11.6.2	MN	C	-.001	MG/L					
23309	PBW 11.6.2	NI	C	-.00755	MG/L					
23309	PBW 11.6.2	PB	C	-.01123	MG/L					
23309	PBW 11.6.2	ZN	C	-.00014	MG/L					
23309	PBW-D 11.1	FE	C	.00981	MG/L					
23309	PBW-D 11.1	MN	C	-.00077	MG/L					
23320	PBW1 11.6	HG	C	0	UG/L		0			
23333	PBW10.31.3	PB	C	.0296	UG/L					
23333	PBW11.1.3	AS	C	.4491	UG/L					
23333	PBW11.1.3	CD	C	.0139	UG/L		0			
23333	PBW11.1.3	PB	C	.0616	UG/L					
23333	PBW11.1.3	SB	C	.0963	UG/L					
23333	PBW11.1.3	TL	C	0	UG/L		0			
23333	PBW11.2.3	AS	C	.1267	UG/L		0			

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

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- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
23333	PBW11.2.3	B	C	.5237	UG/L		0			
23333	PBW11.2.3	CD	C	.0001	UG/L		0			
23333	PBW11.2.3	PB	C	.0191	UG/L		0			
23333	PBW11.2.3	SB	C	.1462	UG/L		0			
23333	PBW11.2.3	TL	C	0	UG/L		0			
23320	PBW2 11.6	HG	C	0	UG/L		0			

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

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ATEL

Aqua Tech Environmental Laboratories, Inc.

RECEIVED

FEB 16 2001

- CERTIFICATE OF ANALYSIS (REPRINT) -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906
Attn: Andy Lewis

Report Date: *13-Feb-01*
Original Report Date: 20-Nov-00

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28441 **Your Sample ID:** Rinsate 1
Date Logged-In: 11/3/00 **Sample Source:** RCRA
Matrix: Water **Client Project #:** 003-8606 **PO#:** Amert/Whrlp/OH
Project #: Whirl/Amert/OH **Date Submitted to Lab:** 11/1/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/31/00 2:15 PM Yip

Test Grou	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
[illegible]-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/6/00	BLD	23333
[illegible]-MS	200.8/6020	Arsenic, As	< 3.0	UG/L	11/6/00	BLD	23333
BE-ICP	200.7/6010B	Beryllium, Be	< 5.0	UG/L	11/6/00	ROH	23309
CD-MS	200.8/6020	Cadmium, Cd	< 0.5	UG/L	11/6/00	BLD	23333
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	11/6/00	ROH	23309
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	11/6/00	ROH	23309
PB-MS	200.8/6020	Lead, Pb	< 2.0	UG/L	11/6/00	BLD	23333
HG	245.1/7470	Mercury, Hg	< 0.2	UG/L	11/6/00	TMB	23320
NI-ICP	200.7/6010B	Nickel, Ni	< 20	UG/L	11/6/00	ROH	23309
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	11/6/00	ROH	23309
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/6/00	BLD	23333
ZN-ICP	200.7/6010B	Zinc, Zn	< 10	UG/L	11/6/00	ROH	23309
SE-GFAA	3113B/7740	Selenium, Se	< 3.0	UG/L	11/2/00	ROH	23288
B-MS	6020	Boron, B	< 50	UG/L	11/9/00	KRG	23387
PP-METALS		Priority Pollutant Metals	--				

End of Report

Report Approved By: [signature]

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28101 **Your Sample ID:** SB-136
Date Logged-In: 10/30/00 **Sample Source:** RCRA
Matrix: ~~Water~~ Soil **Client Project #:** **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlp/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/26/00 2:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	< 0.6	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	< 1.3	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	< 1	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	< 6.3	MG/KG	11/1/00	SMM	23281
CD-MS-S	6020	Cadmium, Cd	< 1.3	MG/KG	11/1/00	SMM	23281
CR-ICP-S	6010B	Chromium, Cr	5	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	< 4	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	7	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	< 0.02	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	4	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	83.3	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 1.9	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 2	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 0.6	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	20	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28102 **Your Sample ID:** SB-135
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlp/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/26/00 2:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
MS-S	6020	Antimony, Sb	< 0.8	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	< 1.7	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	< 1	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	< 8.6	MG/KG	11/1/00	SMM	23281
CD-MS-S	6020	Cadmium, Cd	< 1.7	MG/KG	11/1/00	SMM	23281
CR-ICP-S	6010B	Chromium, Cr	4	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	< 5	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	< 8	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	< 0.03	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	4	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	90.7	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 2.6	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 3	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 0.9	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	6	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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ATEL

Aqua Tech Environmental Laboratories, Inc.

Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28103 **Your Sample ID:** Surface
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/26/00 1:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
-MS-S	6020	Antimony, Sb	25.0	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	55	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	< 2	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	2100	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	< 3	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	375	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	195	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	377	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.26	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	3520	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	46.2	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 5.3	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 6	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 1.8	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	4790	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28104 **Your Sample ID:** SB-111A
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/24/00 2:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	35.0	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	74	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	8	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	3200	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	< 9	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	310	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	131	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	236	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.35	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	4320	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	33.9	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 6.8	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 9	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 2.3	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	4240	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28105 **Your Sample ID:** SB-109A
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/24/00 1:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	< 0.4	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	< 1.3	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	< 0	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	27	MG/KG	11/1/00	SMM	23281
CD-MS-S	6020	Cadmium, Cd	< 1.3	MG/KG	11/1/00	SMM	23281
CR-ICP-S	6010B	Chromium, Cr	3	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	< 3	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	7	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.03	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	25	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	77.7	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 1.9	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 2	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 0.6	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	40	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28106 **Your Sample ID:** SB-123
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 1:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	38.3	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	41	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	4	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	3800	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	< 6	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	228	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	173	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	212	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.33	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	2910	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	41.3	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 3.9	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 6	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 1.3	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	3820	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053.NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28107
Date Logged-In: 10/30/00
Matrix: Soil
Project #: Amert/Whrlpl/O

Your Sample ID: SB-131
Sample Source: Other/Undefined
Client Project #: 003-8562
PO#: Amert/Whrlp/OH
Date Submitted to Lab: 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 3:45 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	5.7	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	8.3	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	1	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	680	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	< 1	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	50	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	38	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	52	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.04	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	366	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	77.8	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 1.2	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	3	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 0.4	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	708	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28108 **Your Sample ID:** SB-115
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 9:30 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	48.5	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	82	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	8	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	3400	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	< 7	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	245	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	160	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	267	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.14	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	4090	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	31.5	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 7.1	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 14	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 2.4	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	4660	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28109 **Your Sample ID:** SB-102
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/24/00 10:00 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	37.1	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	54	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	3	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	2200	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	< 4	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	254	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	157	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	249	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.41	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	2910	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	35.9	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 5.5	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 8	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 1.8	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	3630	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The results for the Selenium, Silver, Nickel, and Zinc matrix spikes/matrix spike duplicates were biased low. The sample result should be qualified due to a matrix effect. The analytical run was not rejected since the method quality control checks were within limits. The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28110 **Your Sample ID:** SB-133
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Soil **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/26/00 11:30 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	3.5	MG/KG	11/1/00	SMM	23281
AS-MS-S	200.8/6020	Arsenic, As	37	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	< 1	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	190	MG/KG	11/1/00	SMM	23281
CD-MS-S	6020	Cadmium, Cd	< 1.1	MG/KG	11/1/00	SMM	23281
CR-ICP-S	6010B	Chromium, Cr	5	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	8	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	27	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.14	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	18	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	68.0	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 1.7	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	< 3	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 0.6	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	48	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28111
Date Logged-In: 10/30/00
Matrix: Soil
Project #: Amert/Whrlpl/O

Your Sample ID: SB-119
Sample Source: Other/Undefined
Client Project #: 003-8562
Date Submitted to Lab: 10/27/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 11:00 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS-S	6020	Antimony, Sb	15.8	MG/KG	11/1/00	SMM	23281
[illegible]-MS-S	200.8/6020	Arsenic, As	40	MG/KG	11/1/00	SMM	23281
BE-ICP-S	6010A	Beryllium, Be	1	MG/KG	10/31/00	SMM	23235
B-MS-S	6020	Boron, B	7100	MG/KG	11/1/00	SMM	23281
CD-ICP-S	6010B	Cadmium, Cd	10	MG/KG	10/31/00	SMM	23235
CR-ICP-S	6010B	Chromium, Cr	74	MG/KG	10/31/00	SMM	23235
CU-ICP-S	6010B	Copper, Cu	216	MG/KG	10/31/00	SMM	23235
PB-ICP-S	6010B	Lead, Pb	380	MG/KG	10/31/00	SMM	23235
HG-S	7471A	Mercury, Hg	0.06	MG/KG	11/1/00	BLD	23265
NI-ICP-S	6010B	Nickel, Ni	1550	MG/KG	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
TS-%	160.3	Residue, Total, TS	56.4	%	10/31/00	RCM	23228
SE-GFAA-S	7740	Selenium, Se	< 2.8	MG/KG	10/31/00	ROH	23238
AG-ICP-S	6010B	Silver, Ag	20	MG/KG	10/31/00	SMM	23235
TL-MS-S	200.8/6020	Thallium, Tl	< 0.9	MG/KG	11/1/00	SMM	23281
ZN-ICP-S	6010B	Zinc, Zn	2860	MG/KG	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury , Silver, Nickel, and Zinc was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28112
Date Logged-In: 10/30/00
Matrix: Groundwater
Project #: Amert/Whrlpl/O

Your Sample ID: SB-109
Sample Source: Other/Undefined
Client Project #: 003-8562
Date Submitted to Lab: 10/27/2000

PO#: Amert/Whrlp/OH

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 10:00 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	8.7	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	100	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	5.4	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	78000	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	1.6	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	130	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	270	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	76	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	0.6	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	140	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	1.4	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	270	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.The Practical Quantitation Limit for Selenium has been elevated due to matrix intereferences.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28113 **Your Sample ID:** SB-111
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/26/00 10:00 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	20	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	9700	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	< 0.5	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	19	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	12	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	91	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	99	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28115 **Your Sample ID:** SB-115
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 3:45 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	8.6	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	4000	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	< 0.5	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	4.9	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	76	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	50	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053.NY11071,A2LA102325

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Note: The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The results for the Mercury matrix spike/matrix spike duplicate were biased high, however, the %RPD was less than 20%. The sample result should be qualified due to a matrix effect. The analytical run was not rejected since the method quality control checks were within limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28114 **Your Sample ID:** SB-102
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/26/00 10:00 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	23	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	< 0.5	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	15000	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	< 0.5	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	< 20	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	< 10	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	5.4	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	54	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	46	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: 11107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28116 **Your Sample ID:** SB-123
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 1:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	3.7	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	27	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	1.8	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	32000	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	1.2	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	85	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	88	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	76	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	160	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	330	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *20-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28117 **Your Sample ID:** SB-131
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 10:30 AM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
[illegible]MS	200.8/6020	Antimony, Sb	< 3.0	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	56	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	0.9	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	23000	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	1.1	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	62	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	61	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	43	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	< 0.2	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	99	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	< 10	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	280	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L. Jackson

Lana L. Jackson

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I1107
Golder Associates Inc
16821 Wood Rd
Lansing, MI 48906

Attn: Andy Lewis

Report Date: *14-Nov-00*

Phone: (517) 482-2262 **Ext:**
FAX: (517) 482-2460

Our Lab #: MAR00-28118 **Your Sample ID:** SB-119
Date Logged-In: 10/30/00 **Sample Source:** Other/Undefined
Matrix: Groundwater **Client Project #:** 003-8562 **PO#:** Amert/Whrlp/OH
Project #: Amert/Whrlpl/O **Date Submitted to Lab:** 10/27/2000

- COLLECTION INFORMATION -

Date/Time/By: 10/25/00 2:00 PM Guy

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
SB-MS	200.8/6020	Antimony, Sb	15.7	UG/L	11/1/00	SMM	23281
AS-MS	200.8/6020	Arsenic, As	41	UG/L	11/1/00	SMM	23281
BE-MS	200.8/6020	Beryllium, Be	3.2	UG/L	11/1/00	SMM	23281
B-MS	6020	Boron, B	13000	UG/L	11/1/00	SMM	23281
CD-GFAA	3113B/7131	Cadmium, Cd	11	UG/L	11/7/00	BLD	23345
CR-ICP	200.7/6010B	Chromium, Cr	130	UG/L	10/31/00	SMM	23235
CU-ICP	200.7/6010B	Copper, Cu	300	UG/L	10/31/00	SMM	23235
PB-MS	200.8/6020	Lead, Pb	370	UG/L	11/1/00	SMM	23281
HG	245.1/7470A	Mercury, Hg	0.2	UG/L	11/1/00	BLD	23265
NI-ICP	200.7/6010B	Nickel, Ni	1500	UG/L	10/31/00	SMM	23235
PP-METALS		Priority Pollutant Metals					0
SE-GFAA	3113B/7740	Selenium, Se	< 15	UG/L	10/31/00	ROH	23238
AG-ICP	200.7/6010B	Silver, Ag	33	UG/L	10/31/00	SMM	23235
TL-MS	200.8/6020	Thallium, Tl	< 1.0	UG/L	11/1/00	SMM	23281
ZN-ICP	200.7/6010B	Zinc, Zn	3100	UG/L	10/31/00	SMM	23235

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Note: The Practical Quantitation Limit for Selenium has been elevated due to matrix interferences.The batch matrix spike/matrix spike duplicate data associated with this sample for Mercury was outside the recommended quality control limits.

End of Report

Report Approved By: Lana L Jackson

Lana L. Jackson

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Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1			- QC Calculations - QC2		Lower Limit	Upper Limit
23235	MAR00-28104	D	AG	3.97235023	MG/KG		17	%D	(<5 x MDL)				20
23235	MAR00-28104	D	BE	7.30414746	MG/KG		11	%D	(<5 x MDL)				20
23235	MAR00-28104	D	CD	0	MG/KG		0	%D	(<5 x MDL)				20
23235	MAR00-28104	D	CR	310.511520	MG/KG		0	%D					20
23235	MAR00-28104	D	CU	131.433179	MG/KG		1	%D					20
23265	MAR00-28104	D	HG	.347058823	MG/KG		0	%D					20
23235	MAR00-28104	D	NI	4326.92626	MG/KG		0	%D					20
23235	MAR00-28104	D	PB	236.972350	MG/KG		0	%D					20
23235	MAR00-28104	D	ZN	4250.12442	MG/KG		0	%D					20
23265	MAR00-28105	M	HG	.275423728	MG/KG	0.169	146	%R:	*	4	%RPD	75	125
23265	MAR00-28105	S	HG	.263883089	MG/KG	0.167	141	%R:	*			75	125
23235	MAR00-28108	D	AG	10.4792899	MG/KG		23	%D	* (<5 x MDL)				20
[illegible]81	MAR00-28108	D	AS	78.9197989	MG/KG		4	%D					20
23281	MAR00-28108	D	B	3397.05929	MG/KG		1	%D	(<5 x MDL)				20
23235	MAR00-28108	D	BE	6.64497041	MG/KG		24	%D	* (<5 x MDL)				20
23235	MAR00-28108	D	CD	0	MG/KG		0	%D	(<5 x MDL)				20
23235	MAR00-28108	D	CR	246.911242	MG/KG		1	%D					20
23235	MAR00-28108	D	CU	156.857988	MG/KG		2	%D					20
23235	MAR00-28108	D	NI	4019.90532	MG/KG		2	%D					20
23235	MAR00-28108	D	PB	266.733727	MG/KG		0	%D					20
23281	MAR00-28108	D	SB	40.2922485	MG/KG		18	%D					20
23238	MAR00-28108	D	SE	0	MG/KG		0	%D	(<5 x MDL)				20
23281	MAR00-28108	D	TL	.027286432	MG/KG		3	%D	(<5 x MDL)				20
23235	MAR00-28108	D	ZN	4585.49704	MG/KG		2	%D					20
23235	MAR00-28109	M	AG	54.3286713	MG/KG	36	134	%R:	*	0	%RPD	80	120
23235	MAR00-28109	S	AG	54.5791366	MG/KG	35	138	%R:	*			80	120
23281	MAR00-28109	M	AS	81.0871378	MG/KG	35.3	78	%R:		3	%RPD	75	125
23281	MAR00-28109	S	AS	78.4205841	MG/KG	34.4	72	%R:	*			75	125
23235	MAR00-28109	M	BE	152.835664	MG/KG	180	83	%R:		1	%RPD	80	120
23235	MAR00-28109	S	BE	154.582733	MG/KG	175	87	%R:				80	120
[illegible]	MAR00-28109	M	CD	143.947552	MG/KG	180	80	%R:		4	%RPD	80	120
23235	MAR00-28109	S	CD	149.255395	MG/KG	175	85	%R:				80	120

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PHONE 740-389-5991 • 1-800-873-2835 • FAX 740-389-1481

ATEL

Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1	- QC Calculations - QC2	Lower Limit	Upper Limit
23235	MAR00-28109	M	CR	1699.81118	MG/KG	1800	80 %R:	3 %RPD	80	120
23235	MAR00-28109	S	CR	1754.73741	MG/KG	1750	86 %R:		80	120
23235	MAR00-28109	M	CU	1600.34965	MG/KG	1800	80 %R:	3 %RPD	80	120
23235	MAR00-28109	S	CU	1645.76618	MG/KG	1750	85 %R:		80	120
23235	MAR00-28109	M	NI	4263.93356	MG/KG	1800	75 %R: *	0 %RPD	80	120
23235	MAR00-28109	S	NI	4248.21223	MG/KG	1750	76 %R: *		80	120
23235	MAR00-28109	M	PB	679.244755	MG/KG	540	80 %R:	1 %RPD	80	120
23235	MAR00-28109	S	PB	688.381294	MG/KG	525	84 %R:		80	120
23281	MAR00-28109	M	SB	360.974230	MG/KG	350	93 %R:	3 %RPD	75	125
23281	MAR00-28109	S	SB	371.013165	MG/KG	360	93 %R:		75	125
23238	MAR00-28109	M	SE	18.9399293	MG/KG	35.3	54 %R: *	14 %RPD	80	120
23238	MAR00-28109	S	SE	21.8213058	MG/KG	34.4	63 %R: *		80	120
[illegible]281	MAR00-28109	M	TL	13.4981625	MG/KG	17.7	76 %R:	3 %RPD	75	125
[illegible]281	MAR00-28109	S	TL	13.0826460	MG/KG	17.2	76 %R:		75	125
23235	MAR00-28109	M	ZN	4999.23426	MG/KG	1800	76 %R: *	0 %RPD	80	120
23235	MAR00-28109	S	ZN	4977.60791	MG/KG	1750	77 %R: *		80	120
23345	MAR00-28113	S	CD	3.306	UG/L	2.91	100 %R:		75	125
23265	MAR00-28113	D	HG	.096	UG/L		1 %D (<5 x MDL)			20
23235	MAR00-28114	D	AG	0	UG/L		0 %D (<5 x MDL)			20
23235	MAR00-28114	D	CR	10	UG/L		22 %D * (<5 x MDL)			20
23235	MAR00-28114	D	CU	5.49	UG/L		0 %D (<5 x MDL)			20
23235	MAR00-28114	D	NI	46.5	UG/L		16 %D (<5 x MDL)			20
23235	MAR00-28114	D	ZN	40.65	UG/L		13 %D (<5 x MDL)			20
23235	MAR00-28115	M	AG	96	UG/L	100	96 %R:	1 %RPD	80	120
23235	MAR00-28115	S	AG	97	UG/L	100	97 %R:		80	120
23345	MAR00-28115	D	CD	.187	UG/L		7 %D (<5 x MDL)			20
23235	MAR00-28115	M	CR	911.37	UG/L	1000	90 %R:	2 %RPD	80	120
23235	MAR00-28115	S	CR	930.4	UG/L	1000	92 %R:		80	120
23235	MAR00-28115	M	CU	893.99	UG/L	1000	88 %R:	2 %RPD	80	120
23235	MAR00-28115	S	CU	914.86	UG/L	1000	91 %R:		80	120
[illegible]5	MAR00-28115	M	HG	2.58	UG/L	2	124 %R:	2 %RPD	75	125
23265	MAR00-28115	S	HG	2.64	UG/L	2	127 %R: *		75	125

1776 MARION-WALDO RD. • P.O. BOX 436 • MARION, OH 43301-0436
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ATEL

Aqua Tech Environmental Laboratories, Inc.

--- QC Related To Samples ---

11/21/00

WS#	QC Lab#	QC Code	Test ID	Result	Units	Amount Of Spike	- QC Calculations - QC1	- QC Calculations - QC2	Lower Limit	Upper Limit
23235	MAR00-28115	M	NI	999.77	UG/L	1000	92 %R:	3 %RPD	80	120
23235	MAR00-28115	S	NI	1025.56	UG/L	1000	95 %R:		80	120
23235	MAR00-28115	M	ZN	952.17	UG/L	1000	90 %R:	1 %RPD	80	120
23235	MAR00-28115	S	ZN	966.5	UG/L	1000	92 %R:		80	120
23281	MAR00-28117	D	AS	57.4884	UG/L		2 %D			20
23281	MAR00-28117	D	BE	1.1073	UG/L		21 %D * (<5 x MDL)			20
23281	MAR00-28117	D	PB	44.0312	UG/L		2 %D			20
23281	MAR00-28117	D	TL	.2628	UG/L		25 %D * (<5 x MDL)			20
23235	MAR00-28118	D	AG	30	UG/L		10 %D (<5 x MDL)			20
23345	MAR00-28118	S	CD	41.35	UG/L	29.1	104 %R:		85	115
23235	MAR00-28118	D	CR	159.2	UG/L		19 %D (<5 x MDL)			20
23235	MAR00-28118	D	CU	311.7	UG/L		5 %D			20
23235	MAR00-28118	D	NI	1681.6	UG/L		11 %D			20
23235	MAR00-28118	D	ZN	3384.25	UG/L		9 %D			20

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CHAIN-OF-CUSTODY

ATEL

Aqua Tech Environmental Laboratories, Inc.

Client Name: Golder Associates Inc
Project Name: Amert/Whirlpool/Ohio
Project No: 003-8562
Sampler: Josh Guy

Sample ID	Date	Time	grab/ comp	Matrix	ATEL Lab Number	# of Cont.	Analysis Required
SB-136	10-26	1400		soil	28101	~~2~~ 3	metals and Boron
SB-135	10-26	1400		soil	28102	2	" "
Surface (SS-1)	10-26	1300		soil ~~sto~~	28103	2	" "
SB-111A	10-24	1400		soil	28104	2	" "
SB-109A	10-24	1300		"	28105	2	" "
SB-123	10-25	1300		"	28106	2	" "
SB-131	10-25	1545		"	28107	2	" "
SB-115	10-25	930		"	28108	2	" "
[illegible]B-102	10-24	1000		"	28109	2	" "
SB-133	10 26	11 30		"	28110	2	" "

SEND RESULTS TO:

Person: Mr Andy Harris
Company: Golder Associates Inc
Street: 16 821 Wood Rd
City: Lansing State: MI Zip: 48906
Phone: (517) 482 2262 Fax: (517) 482-2460
ATEL Quote #: _____ Company PO #: _____

Relinquished by:	Date/Time	Received by:	Date/Time
Josh Guy		[signature]	10/26
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received at Laboratory by:	Date/Time
		[signature] 10/27/00	1600

Comments:

Method of Shipment

Cooler Temperature °C

Canton: 5300 Fulton Drive NW, Canton, Ohio 44718, 800-635-3222 fax 330-494-2961
Marion: 1776 Marion-Waldo Rd., Marion, Ohio 43302, 800-873-2835 fax 740-389-1481
Sanford: 936 N Horner Boulevard, Sanford, North Carolina 27330, 800-522-2832 fax 919-774-7068
Tucson: 2700 E Bilby Rd. Bldg. A, Tucson, Arizona 85706, 800-879-2835 fax 520-573-6550
Melmore: 6878 S State Rt. 100, Melmore, Ohio 44845, 800-858-8869 fax 419-397-2229

CHAIN-OF-CUSTODY

ATEL

Aqua Tech Environmental Laboratories, Inc.

Client Name: Golder Associates
Project Name: Amert/Whirlpool/Ohio
Project No: 003 - 8562
Sampler: Josh Guy

Sample ID	Date	Time	grab/ comp	Matrix	ATEL Lab Number	# of Cont.	Analysis Required
SB ~~123~~ 135	10-26	1100		soil		2	metals and Boron
SB - 119	10-25	11:00		"	28111	2	" "

SEND RESULTS TO:

Person: Andy Harris
Company: Golder Associates
Street: 16821 Wood Rd
City: Lansing State: MI Zip: 48906
Phone: (517) 482-2262 Fax: (517) 482-2460
ATEL Quote #: _____ Company PO #: _____

Relinquished by:	Date/Time	Received by:	Date/Time
Josh Guy	10/26	[illegible]	10/24

Comments:

Method of Shipment

Cooler Temperature °C

Canton: 5300 Fulton Drive NW, Canton, Ohio 44718, 800-635-3222 fax 330-494-2961

Marion: 1776 Marion-Waldo Rd., Marion, Ohio 43302, 800-873-2835 fax 740-389-1481

Sanford: 936 N Horner Boulevard, Sanford, North Carolina 27330, 800-522-2832 fax 919-774-7068

Tucson: 2700 E Bilby Rd. Bldg. A, Tucson, Arizona 85706, 800-879-2835 fax 520-573-6550

Melmore: 6878 S State Rt. 100, Melmore, Ohio 44845, 800-858-8869 fax 419-397-2229

CHAIN-OF-CUSTODY

ATEL

Aqua Tech Environmental Laboratories, Inc.

Ph ok

Client Name:	Golder Associates
Project Name:	Amert / Whirlpool / Ohio
Project No:	003-8562
Sampler:	Josh Guy

Sample ID	Date	Time	grab/ comp	Matrix	ATEL Lab Number	# of Cont.	Analysis Required
SB 109	10/26	1000	G	H_2O	28112		Metal + Boron
SB 111	10/26	1000	G	H_2O	28113		" "
SB 102	10/26	1000	G	H_2O	28114		" "
SB 115	10/25	1545	G	H_2O	28115		" "
SB 123	10/25	1300	G	H_2O	28116		" "
SB 131	10/25	10:30	G	H_2O	28117		" "
SB 119	10/25	1400	G	H_2O	28118		" "

SEND RESULTS TO:

Person: Andy Harris

Company: Golder Associates

Street: 16821 Wood Rd

City: Lansing State: MI Zip: 48906

Phone: (517) 482-2262 Fax: (517) 482-2460

ATEL Quote #: _____ Company PO #: _____

Relinquished by: Josh Guy	**Date/Time** 10/27	**Received by:** Lucy Schafer	**Date/Time** 10/26
Relinquished by:	**Date/Time**	**Received by:**	**Date/Time**
Relinquished by:	**Date/Time**	**Received at Laboratory by:**	**Date/Time** 10/27/00 1600

Comments:

Method of Shipment

Cooler Temperature °C

Canton: 5300 Fulton Drive NW, Canton, Ohio 44718, 800-635-3222 fax 330-494-2961

Marion: 1776 Marion-Waldo Rd., Marion, Ohio 43302, 800-873-2835 fax 740-389-1481

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Tucson: 2700 E Bilby Rd. Bldg. A, Tucson, Arizona 85706, 800-879-2835 fax 520-573-6550

Melmore: 6878 S State Rt. 100, Melmore, Ohio 44845, 800-858-8869 fax 419-397-2229

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23235	DUP AF 10.27	PB	C	3.58829	MG/L	4	90 %R:		80	120
23281	DUP LCSA 10.	AS	C	18.9204	UG/L	20	95 %R:		50	150
23281	DUP LCSA 10.	BA	C	203.1563	UG/L	200	102 %R:		50	150
23281	DUP LCSA 10.	BE	C	9.405	UG/L	10	94 %R:		50	150
23281	DUP LCSA 10.	CD	C	9.3878	UG/L	10	94 %R:		50	150
23281	DUP LCSA 10.	PB	C	10.2836	UG/L	10	103 %R:		50	150
23281	DUP LCSA 10.	SB	C	19.2782	UG/L	20	96 %R:		50	150
23281	DUP LCSA 10.	TH	C	455.6086	UG/L	500	91 %R:		50	150
23281	DUP LCSA 10.	TL	C	10.1262	UG/L	10	101 %R:		50	150
23281	DUP LCSA 10.	U	C	101.0641	UG/L	100	101 %R:		50	150
23387	LCS	AS	C	10.616	UG/L	10	106 %R:		50	150
23333	LCS	AS	C	20.3755	UG/L	20	102 %R:		50	150
23387	LCS	B	C	53.7059	UG/L	50	107 %R:		50	150
23333	LCS	B	C	97.2128	UG/L	100	97 %R:		50	150
23387	LCS	BE	C	5.3709	UG/L	5	107 %R:		50	150
23333	LCS	BE	C	8.9985	UG/L	10	90 %R:		50	150
23333	LCS	CD	C	10.1968	UG/L	10	102 %R:		50	150
23333	LCS	PB	C	10.2387	UG/L	10	102 %R:		50	150
23333	LCS	SB	C	21.5382	UG/L	20	108 %R:		50	150
23387	LCS	SI	C	.9147	MG/L	0.96	95 %R:		50	150
23333	LCS	TL	C	10.1911	UG/L	10	102 %R:		50	150
23333	LCS	U	C	100.7427	UG/L	100	101 %R:		50	150
23228	LCS 10.31	TS-%	C	100	%	100	100 %R:		95	105
23235	LCS AF 10.27	PB	C	3.49822	MG/L	4	87 %R:		80	120
23378	LCS-DW11.8	PB	C	123.075098	MG/KG	131	94 %R:		80	120
23378	LCS-DW11.8 R	PB	C	121.382575	MG/KG	131	93 %R:		80	120
23235	LCSA 10.25.2	AG	C	.09991	MG/L	0.1	100 %R:		80	120
23235	LCSA 10.25.2	BA	C	1.943	MG/L	2	97 %R:		80	120
23235	LCSA 10.25.2	BE	C	.09944	MG/L	0.1	99 %R:		80	120
23235	LCSA 10.25.2	CD	C	.09824	MG/L	0.1	98 %R:		80	120
23235	LCSA 10.25.2	CR	C	.97873	MG/L	1	98 %R:		80	120
23235	LCSA 10.25.2	CU	C	.96625	MG/L	1	97 %R:		80	120
23235	LCSA 10.25.2	FE	C	1.98007	MG/L	2	99 %R:		80	120
23235	LCSA 10.25.2	MG	C	2.44193	MG/L	2.5	98 %R:		80	120
23235	LCSA 10.25.2	MN	C	.95371	MG/L	1	95 %R:		80	120
23235	LCSA 10.25.2	NA	C	2.46294	MG/L	2.5	99 %R:		80	120
23235	LCSA 10.25.2	NI	C	.99855	MG/L	1	100 %R:		80	120
23235	LCSA 10.25.2	PB	C	1.0832	MG/L	1.1	98 %R:		80	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23235	LCSA 10.25.2	ZN	C	.96647	MG/L	1	97 %R:		80	120
23281	LCSA 10.25.3	AS	C	19.0909	UG/L	20	95 %R:		50	150
23281	LCSA 10.25.3	BA	C	202.4262	UG/L	200	101 %R:		50	150
23281	LCSA 10.25.3	BE	C	9.6302	UG/L	10	96 %R:		50	150
23281	LCSA 10.25.3	CD	C	9.4092	UG/L	10	94 %R:		50	150
23281	LCSA 10.25.3	PB	C	10.7703	UG/L	10	108 %R:		50	150
23281	LCSA 10.25.3	SB	C	19.2644	UG/L	20	96 %R:		50	150
23281	LCSA 10.25.3	TH	C	402.063	UG/L	500	80 %R:		50	150
23281	LCSA 10.25.3	TL	C	10.2129	UG/L	10	102 %R:		50	150
23281	LCSA 10.25.3	U	C	101.2728	UG/L	100	101 %R:		50	150
23235	LCSA 10.26.2	AG	C	.10221	MG/L	0.1	102 %R:		80	120
23235	LCSA 10.26.2	BA	C	1.90925	MG/L	2	95 %R:		80	120
23235	LCSA 10.26.2	BE	C	.09769	MG/L	0.1	98 %R:		80	120
23235	LCSA 10.26.2	CD	C	.0944	MG/L	0.1	94 %R:		80	120
23235	LCSA 10.26.2	CR	C	.96304	MG/L	1	96 %R:		80	120
23235	LCSA 10.26.2	CU	C	.96625	MG/L	1	97 %R:		80	120
23235	LCSA 10.26.2	FE	C	1.97368	MG/L	2	99 %R:		80	120
23235	LCSA 10.26.2	MG	C	2.42811	MG/L	2.5	97 %R:		80	120
23235	LCSA 10.26.2	MN	C	.94042	MG/L	1	94 %R:		80	120
23235	LCSA 10.26.2	NA	C	2.51972	MG/L	2.5	101 %R:		80	120
23235	LCSA 10.26.2	NI	C	.97154	MG/L	1	97 %R:		80	120
23235	LCSA 10.26.2	PB	C	1.07705	MG/L	1.1	98 %R:		80	120
23235	LCSA 10.26.2	ZN	C	.96502	MG/L	1	97 %R:		80	120
23235	LCSA 10.30.2	AG	C	.09832	MG/L	0.1	98 %R:		80	120
23235	LCSA 10.30.2	BA	C	1.86994	MG/L	2	93 %R:		80	120
23235	LCSA 10.30.2	BE	C	.09531	MG/L	0.1	95 %R:		80	120
23235	LCSA 10.30.2	CD	C	.09433	MG/L	0.1	94 %R:		80	120
23235	LCSA 10.30.2	CR	C	.94685	MG/L	1	95 %R:		80	120
23235	LCSA 10.30.2	CU	C	.94347	MG/L	1	94 %R:		80	120
23235	LCSA 10.30.2	FE	C	1.92254	MG/L	2	96 %R:		80	120
23235	LCSA 10.30.2	MG	C	2.37344	MG/L	2.5	95 %R:		80	120
23235	LCSA 10.30.2	MN	C	.92258	MG/L	1	92 %R:		80	120
23235	LCSA 10.30.2	NA	C	11.98591	MG/L	12.5	96 %R:		80	120
23235	LCSA 10.30.2	NI	C	.96446	MG/L	1	96 %R:		80	120
23235	LCSA 10.30.2	PB	C	1.05483	MG/L	1.1	96 %R:		80	120
23235	LCSA 10.30.2	ZN	C	.94015	MG/L	1	94 %R:		80	120
23238	LCSA 10.30.3	SE	C	19.59	UG/L	20	98 %R:		70	125
23387	LCSA 10.31.3	AS	C	219.0758	UG/L	200	110 %R:		50	150

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23387	LCSA 10.31.3	SI	C	5.8548	MG/L	5	117 %R:		50	150
23387	LCSA 11.1.3	B	C	118.7816	UG/L	100	119 %R:		50	150
23387	LCSA 11.1.3	BE	C	10.4179	UG/L	10	104 %R:		50	150
23288	LCSA 11.1.3	SE	C	19.53	UG/L	20	98 %R:		70	125
23387	LCSA 11.2.3	B	C	113.9929	UG/L	100	114 %R:		50	150
23387	LCSA 11.2.3	BE	C	9.7618	UG/L	10	98 %R:		50	150
23288	LCSA 11.2.3	SE	C	16.1	UG/L	20	81 %R:		70	125
23320	LCSA 11.6	HG	C	2.34	UG/L	2.5	94 %R:		70	120
23295	LCSA-L11.2	AG	C	.98143	MG/L	1	98 %R:		80	120
23295	LCSA-L11.2	BA	C	19.23769	MG/L	20	96 %R:		80	120
23295	LCSA-L11.2	CD	C	.1966	MG/L	0.2	98 %R:		80	120
23295	LCSA-L11.2	CR	C	.96728	MG/L	1	97 %R:		80	120
23295	LCSA-L11.2	PB	C	1.00927	MG/L	1	101 %R:		80	120
23345	LCSA1.1.3	CD	C	8.79	UG/L	10	88 %R:		70	125
23345	LCSA10.30B.3	CD	C	8.71	UG/L	10	87 %R:		70	125
23333	LCSA10.31.3	PB	C	11.0566	UG/L	10	111 %R:		50	150
23265	LCSA11.1	HG	C	2.61	UG/L	2.5	104 %R:		70	120
23295	LCSA11.1.2	AG	C	.09125	MG/L	0.1	91 %R:		80	120
23295	LCSA11.1.2	CR	C	.87221	MG/L	1	87 %R:		80	120
23295	LCSA11.1.2	CU	C	.86483	MG/L	1	86 %R:		80	120
23295	LCSA11.1.2	NI	C	.89229	MG/L	1	89 %R:		80	120
23295	LCSA11.1.2	ZN	C	.86849	MG/L	1	87 %R:		80	120
23295	LCSA11.1.5	AG	C	.10381	MG/L	0.1	104 %R:		85	115
23295	LCSA11.1.5	AL	C	1.90113	MG/L	2	95 %R:		85	115
23295	LCSA11.1.5	CA	C	2.32511	MG/L	2.5	93 %R:		85	115
23295	LCSA11.1.5	CD	C	.0951	MG/L	0.1	95 %R:		85	115
23295	LCSA11.1.5	CR	C	.95286	MG/L	1	95 %R:		85	115
23295	LCSA11.1.5	CU	C	.9653	MG/L	1	97 %R:		85	115
23295	LCSA11.1.5	FE	C	1.93487	MG/L	2	97 %R:		85	115
23295	LCSA11.1.5	MG	C	2.37165	MG/L	2.5	95 %R:		85	115
23295	LCSA11.1.5	MN	C	.95247	MG/L	1	95 %R:		85	115
23295	LCSA11.1.5	NA	C	2.65206	MG/L	2.5	106 %R:		85	115
23295	LCSA11.1.5	NI	C	1.00355	MG/L	1	100 %R:		85	115
23295	LCSA11.1.5	PB	C	1.15358	MG/L	1.1	105 %R:		85	115
23295	LCSA11.1.5	ZN	C	.99264	MG/L	1	99 %R:		85	115
23333	LCSA11.11.3	AS	C	19.7594	UG/L	20	99 %R:		50	150
23333	LCSA11.11.3	CD	C	9.1721	UG/L	10	92 %R:		50	150
23333	LCSA11.11.3	PB	C	10.4652	UG/L	10	105 %R:		50	150

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
23333	LCSA11.11.3	SB	C	20.1511	UG/L	20	101 %R:		50	150
23333	LCSA11.11.3	TL	C	10.2783	UG/L	10	103 %R:		50	150
23378	LCSA11.16B.2	BA	C	1.6872	MG/L	2	84 %R:		80	120
23378	LCSA11.16B.2	CA	C	2.14578	MG/L	2.5	86 %R:		80	120
23378	LCSA11.16B.2	CO	C	.85207	MG/L	1	85 %R:		80	120
23378	LCSA11.16B.2	CR	C	.83423	MG/L	1	83 %R:		80	120
23378	LCSA11.16B.2	CU	C	.84028	MG/L	1	84 %R:		80	120
23378	LCSA11.16B.2	FE	C	1.79179	MG/L	2	90 %R:		80	120
23378	LCSA11.16B.2	K	C	8.31159	MG/L	10	83 %R:		80	120
23378	LCSA11.16B.2	MG	C	2.28584	MG/L	2.5	91 %R:		80	120
23378	LCSA11.16B.2	MN	C	.82171	MG/L	1	82 %R:		80	120
23378	LCSA11.16B.2	NA	C	2.10841	MG/L	2	105 %R:		80	120
23378	LCSA11.16B.2	NI	C	.84609	MG/L	1	85 %R:		80	120
23378	LCSA11.16B.2	PB	C	1.0198	MG/L	1.1	93 %R:		80	120
23378	LCSA11.16B.2	V	C	1.66964	MG/L	2	83 %R:		80	120
23378	LCSA11.16B.2	ZN	C	.83026	MG/L	1	83 %R:		80	120
23333	LCSA11.2.3	AS	C	17.4578	UG/L	20	87 %R:		50	150
23333	LCSA11.2.3	B	C	92.7144	UG/L	100	93 %R:		50	150
23333	LCSA11.2.3	CD	C	8.1883	UG/L	10	82 %R:		50	150
23333	LCSA11.2.3	PB	C	9.3476	UG/L	10	93 %R:		50	150
23333	LCSA11.2.3	SB	C	17.1341	UG/L	20	86 %R:		50	150
23333	LCSA11.2.3	TL	C	9.3488	UG/L	10	93 %R:		50	150
23288	LCSAL 11.2.3	SE	C	.1829	MG/L	0.2	91 %R:		80	120
23235	LCSL 10.27	AG	C	.9591	MG/L	1	96 %R:		80	120
23235	LCSL 10.27	BA	C	18.53996	MG/L	20	93 %R:		80	120
23235	LCSL 10.27	CD	C	.18967	MG/L	0.2	95 %R:		80	120
23235	LCSL 10.27	CR	C	.94168	MG/L	1	94 %R:		80	120
23235	LCSL 10.27	PB	C	.94004	MG/L	1	94 %R:		80	120
23238	LCSS 10.30	SE	C	79.5495495	MG/KG	86.4	92 %R:		70	125
23281	LCSS 10.30.4	AS	C	97.9425225	MG/KG	95	103 %R:		50	150
23281	LCSS 10.30.4	B	C	1315.05457	MG/KG	1064	124 %R:		50	150
23281	LCSS 10.30.4	CD	C	124.261801	MG/KG	123	101 %R:		50	150
23281	LCSS 10.30.4	SB	C	14.9184905	MG/KG	19	79 %R:		50	150
23281	LCSS 10.30.4	TL	C	77.2452252	MG/KG	82.1	94 %R:		50	150
23235	LCSS 10.30A	AG	C	30.1603773	MG/KG	34	89 %R:		70	120
23235	LCSS 10.30A	BE	C	108.400943	MG/KG	121	90 %R:		70	120
23235	LCSS 10.30A	CD	C	103.726415	MG/KG	123	84 %R:		70	120
23235	LCSS 10.30A	CR	C	184.306603	MG/KG	196	94 %R:		70	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23235	LCSS 10.30A	CU	C	132.75	MG/KG	150	89 %R:		70	120
23235	LCSS 10.30A	NI	C	153.650943	MG/KG	153	100 %R:		70	120
23235	LCSS 10.30A	PB	C	120.915094	MG/KG	131	92 %R:		70	120
23235	LCSS 10.30A	ZN	C	186.75	MG/KG	205	91 %R:		70	120
23265	LCSS11.1	HG	C	3.58918918	MG/KG	3.3	109 %R:		65	120
23378	LCSS11.8.4A	CD	C	41.2609126	PPM	49.6	83 %R:		80	120
23378	LCSS11.8.4A	CR	C	430.531746	PPM	496	87 %R:		80	120
23378	LCSS11.8.4A	PB	C	134.901785	PPM	148.8	91 %R:		80	120
23295	LFB	AL	C	9.96569	MG/L	10	100 %R:		85	115
23295	LFB	BA	C	9.66784	MG/L	10	97 %R:		85	115
23378	LFB	BA	C	9.76234	MG/L	10	98 %R:		80	120
23295	LFB	CA	C	24.59458	MG/L	25	98 %R:		85	115
23378	LFB	CA	C	24.94842	MG/L	25	100 %R:		80	120
23378	LFB	CD	C	1.28558	MG/L	1.25	103 %R:		80	120
23295	LFB	CD	C	1.29821	MG/L	1.25	104 %R:		85	115
23345	LFB	CD	C	2.842	UG/L	2.91	98 %R:		70	125
23378	LFB	CO	C	2.50298	MG/L	2.5	100 %R:		80	120
23295	LFB	CR	C	.97445	MG/L	1	97 %R:		85	115
23378	LFB	CR	C	.98628	MG/L	1	99 %R:		80	120
23295	LFB	CU	C	1.2274	MG/L	1.25	98 %R:		85	115
23378	LFB	CU	C	1.2325	MG/L	1.25	99 %R:		80	120
23235	LFB	FE	C	4.85	MG/L	5	97 %R:		80	120
23295	LFB	FE	C	4.86904	MG/L	5	97 %R:		85	115
23378	LFB	FE	C	4.95193	MG/L	5	99 %R:		80	120
23265	LFB	HG	C	1.81	UG/L	2	91 %R:		85	115
23378	LFB	K	C	24.12973	MG/L	25	97 %R:		80	120
23295	LFB	MG	C	24.95488	MG/L	25	100 %R:		85	115
23378	LFB	MG	C	25.13374	MG/L	25	101 %R:		80	120
23235	LFB	MN	C	2.37495	MG/L	2.5	95 %R:		80	120
23378	LFB	MN	C	2.43445	MG/L	2.5	97 %R:		80	120
23295	LFB	MN	C	2.44675	MG/L	2.5	98 %R:		85	115
23295	LFB	NA	C	24.75627	MG/L	25	99 %R:		85	115
23378	LFB	NA	C	24.84165	MG/L	25	99 %R:		80	120
23295	LFB	NI	C	2.46553	MG/L	2.5	99 %R:		85	115
23378	LFB	NI	C	2.47974	MG/L	2.5	99 %R:		80	120
23378	LFB	PB	C	2.481	MG/L	2.5	99 %R:		80	120
23295	LFB	PB	C	2.61051	MG/L	2.5	104 %R:		85	115
23378	LFB	V	C	2.48445	MG/L	2.5	99 %R:		80	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1			– QC Calculations – QC2	Lower Limit	Upper Limit
23295	LFB	ZN	C	2.54481	MG/L	2.5	102	%R:			85	115
23378	LFB	ZN	C	2.55155	MG/L	2.5	102	%R:			80	120
23320	LFB1 11.6	HG	C	1.97	UG/L	2	99	%R:			85	115
23265	LFB2	HG	C	1.87	UG/L	2	94	%R:			85	115
23320	LFB2 11.6	HG	C	1.99	UG/L	2	100	%R:			85	115
23235	MAR00-26570D	PB	D	3869.1	UG/L		1	%D				20
23235	MAR00-27709D	AG	D	.00755	MG/L		0	%D	(<5 x MDL)			20
23235	MAR00-27709D	BA	D	.84165	MG/L		13	%D	(<5 x MDL)			20
23235	MAR00-27709D	CD	D	0	MG/L		200	%D *	(<5 x MDL)			20
23235	MAR00-27709D	CR	D	9.4286	MG/L		2	%D				20
23235	MAR00-27709D	PB	D	.15115	MG/L		57	%D *	(<5 x MDL)			20
23235	MAR00-27709S	AG	S	4.7916	MG/L	5	96	%R:			50	150
23235	MAR00-27709S	BA	S	95.331	MG/L	100	95	%R:			50	150
23235	MAR00-27709S	CD	S	.9537	MG/L	1	96	%R:			50	150
23235	MAR00-27709S	CR	S	14.18355	MG/L	5	92	%R:			50	150
23235	MAR00-27709S	PB	S	4.7625	MG/L	5	94	%R:			50	150
23281	MAR00-27854D	AS	D	47.6417	UG/L		2	%D				20
23281	MAR00-27854D	BA	D	105.4457	UG/L		3	%D				20
23281	MAR00-27854D	BE	D	.2338	UG/L		9	%D	(<5 x MDL)			20
23281	MAR00-27854D	CD	D	.0261	UG/L		44	%D *	(<5 x MDL)			20
23281	MAR00-27854D	PB	D	1.843	UG/L		20	%D	(<5 x MDL)			20
23281	MAR00-27854D	SB	D	-2.688	UG/L		19	%D	(<5 x MDL)			20
23281	MAR00-27854D	TH	D	-9.8065	UG/L		8	%D	(<5 x MDL)			20
23281	MAR00-27854D	TL	D	-.0393	UG/L		10	%D	(<5 x MDL)			20
23281	MAR00-27854D	U	D	4140.9596	UG/L		4	%D				20
23228	MAR00-27870D	TS-%	D	2.28	%		0	%D				20
23228	MAR00-27870D	TVS	D	60.9	%		5	%D				20
23235	MAR00-27895S	AG	S	4.76075	MG/L	5	95	%R:			50	150
23235	MAR00-27895S	BA	S	94.08725	MG/L	100	93	%R:			50	150
23235	MAR00-27895S	CD	S	.9567	MG/L	1	96	%R:			50	150
23235	MAR00-27895S	CR	S	4.71865	MG/L	5	94	%R:			50	150
23235	MAR00-27895S	PB	S	4.72265	MG/L	5	94	%R:			50	150
23235	MAR00-27912D	FE	D	11495.52	UG/L		5	%D				20
23235	MAR00-27912D	MN	D	270.56	UG/L		1	%D				20
23235	MAR00-27913M	FE	M	5755.82	UG/L	2000	75	%R: *		2 %RPD	80	120
23235	MAR00-27913M	MN	M	1493.35	UG/L	1000	80	%R:		2 %RPD	80	120
23235	MAR00-27913S	FE	S	5868.12	UG/L	2000	80	%R:			80	120
23235	MAR00-27913S	MN	S	1523.45	UG/L	1000	83	%R:			80	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1			– QC Calculations – QC2	Lower Limit	Upper Limit
23265	MAR00-28033D	HG	D	.059	UG/L		20	%D	(<5 x MDL)			20
23265	MAR00-28034M	HG	M	2.8	UG/L	2	133	%R: *		4 %RPD	75	125
23265	MAR00-28034S	HG	S	2.7	UG/L	2	128	%R: *			75	125
23228	MAR00-28072D	TS-%	D	89.9	%		1	%D				20
23235	MAR00-28104D	AG	D	3.97235023	MG/KG		17	%D	(<5 x MDL)			20
23235	MAR00-28104D	BE	D	7.30414746	MG/KG		11	%D	(<5 x MDL)			20
23235	MAR00-28104D	CD	D	0	MG/KG		0	%D	(<5 x MDL)			20
23235	MAR00-28104D	CR	D	310.511520	MG/KG		0	%D				20
23235	MAR00-28104D	CU	D	131.433179	MG/KG		1	%D				20
23265	MAR00-28104D	HG	D	.347058823	MG/KG		0	%D				20
23235	MAR00-28104D	NI	D	4326.92626	MG/KG		0	%D				20
23235	MAR00-28104D	PB	D	236.972350	MG/KG		0	%D				20
23235	MAR00-28104D	ZN	D	4250.12442	MG/KG		0	%D				20
23265	MAR00-28105M	HG	M	.275423728	MG/KG	0.169	146	%R: *		4 %RPD	75	125
23265	MAR00-28105S	HG	S	.263883089	MG/KG	0.167	141	%R: *			75	125
23235	MAR00-28108D	AG	D	10.4792899	MG/KG		23	%D *	(<5 x MDL)			20
23281	MAR00-28108D	AS	D	78.9197989	MG/KG		4	%D				20
23281	MAR00-28108D	B	D	3397.05929	MG/KG		1	%D	(<5 x MDL)			20
23235	MAR00-28108D	BE	D	6.64497041	MG/KG		24	%D *	(<5 x MDL)			20
23235	MAR00-28108D	CD	D	0	MG/KG		0	%D	(<5 x MDL)			20
23235	MAR00-28108D	CR	D	246.911242	MG/KG		1	%D				20
23235	MAR00-28108D	CU	D	156.857988	MG/KG		2	%D				20
23235	MAR00-28108D	NI	D	4019.90532	MG/KG		2	%D				20
23235	MAR00-28108D	PB	D	266.733727	MG/KG		0	%D				20
23281	MAR00-28108D	SB	D	40.2922485	MG/KG		18	%D				20
23238	MAR00-28108D	SE	D	0	MG/KG		0	%D	(<5 x MDL)			20
23281	MAR00-28108D	TL	D	.027286432	MG/KG		3	%D	(<5 x MDL)			20
23235	MAR00-28108D	ZN	D	4585.49704	MG/KG		2	%D				20
23235	MAR00-28109M	AG	M	54.3286713	MG/KG	36	134	%R: *		0 %RPD	80	120
23281	MAR00-28109M	AS	M	81.0871378	MG/KG	35.3	78	%R:		3 %RPD	75	125
23235	MAR00-28109M	BE	M	152.835664	MG/KG	180	83	%R:		1 %RPD	80	120
23235	MAR00-28109M	CD	M	143.947552	MG/KG	180	80	%R:		4 %RPD	80	120
23235	MAR00-28109M	CR	M	1699.81118	MG/KG	1800	80	%R:		3 %RPD	80	120
23235	MAR00-28109M	CU	M	1600.34965	MG/KG	1800	80	%R:		3 %RPD	80	120
23235	MAR00-28109M	NI	M	4263.93356	MG/KG	1800	75	%R: *		0 %RPD	80	120
23235	MAR00-28109M	PB	M	679.244755	MG/KG	540	80	%R:		1 %RPD	80	120
23281	MAR00-28109M	SB	M	360.974230	MG/KG	350	93	%R:		3 %RPD	75	125
23238	MAR00-28109M	SE	M	18.9399293	MG/KG	35.3	54	%R: *		14 %RPD	80	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
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23281	MAR00-28109M	TL	M	13.4981625	MG/KG	17.7	76 %R:		3 %RPD	75	125
23235	MAR00-28109M	ZN	M	4999.23426	MG/KG	1800	76 %R: *		0 %RPD	80	120
23235	MAR00-28109S	AG	S	54.5791366	MG/KG	35	138 %R: *			80	120
23281	MAR00-28109S	AS	S	78.4205841	MG/KG	34.4	72 %R: *			75	125
23235	MAR00-28109S	BE	S	154.582733	MG/KG	175	87 %R:			80	120
23235	MAR00-28109S	CD	S	149.255395	MG/KG	175	85 %R:			80	120
23235	MAR00-28109S	CR	S	1754.73741	MG/KG	1750	86 %R:			80	120
23235	MAR00-28109S	CU	S	1645.76618	MG/KG	1750	85 %R:			80	120
23235	MAR00-28109S	NI	S	4248.21223	MG/KG	1750	76 %R: *			80	120
23235	MAR00-28109S	PB	S	688.381294	MG/KG	525	84 %R:			80	120
23281	MAR00-28109S	SB	S	371.013165	MG/KG	360	93 %R:			75	125
23238	MAR00-28109S	SE	S	21.8213058	MG/KG	34.4	63 %R: *			80	120
23281	MAR00-28109S	TL	S	13.0826460	MG/KG	17.2	76 %R:			75	125
23235	MAR00-28109S	ZN	S	4977.60791	MG/KG	1750	77 %R: *			80	120
23265	MAR00-28113D	HG	D	.096	UG/L		1 %D	(<5 x MDL)			20
23345	MAR00-28113S	CD	S	3.306	UG/L	2.91	100 %R:			75	125
23235	MAR00-28114D	AG	D	0	UG/L		0 %D	(<5 x MDL)			20
23235	MAR00-28114D	CR	D	10	UG/L		22 %D *	(<5 x MDL)			20
23235	MAR00-28114D	CU	D	5.49	UG/L		0 %D	(<5 x MDL)			20
23235	MAR00-28114D	NI	D	46.5	UG/L		16 %D	(<5 x MDL)			20
23235	MAR00-28114D	ZN	D	40.65	UG/L		13 %D	(<5 x MDL)			20
23345	MAR00-28115D	CD	D	.187	UG/L		7 %D	(<5 x MDL)			20
23235	MAR00-28115M	AG	M	96	UG/L	100	96 %R:		1 %RPD	80	120
23235	MAR00-28115M	CR	M	911.37	UG/L	1000	90 %R:		2 %RPD	80	120
23235	MAR00-28115M	CU	M	893.99	UG/L	1000	88 %R:		2 %RPD	80	120
23265	MAR00-28115M	HG	M	2.58	UG/L	2	124 %R:		2 %RPD	75	125
23235	MAR00-28115M	NI	M	999.77	UG/L	1000	92 %R:		3 %RPD	80	120
23235	MAR00-28115M	ZN	M	952.17	UG/L	1000	90 %R:		1 %RPD	80	120
23235	MAR00-28115S	AG	S	97	UG/L	100	97 %R:			80	120
23235	MAR00-28115S	CR	S	930.4	UG/L	1000	92 %R:			80	120
23235	MAR00-28115S	CU	S	914.86	UG/L	1000	91 %R:			80	120
23265	MAR00-28115S	HG	S	2.64	UG/L	2	127 %R: *			75	125
23235	MAR00-28115S	NI	S	1025.56	UG/L	1000	95 %R:			80	120
23235	MAR00-28115S	ZN	S	966.5	UG/L	1000	92 %R:			80	120
23281	MAR00-28117D	AS	D	57.4884	UG/L		2 %D				20
23281	MAR00-28117D	BE	D	1.1073	UG/L		21 %D *	(<5 x MDL)			20
23281	MAR00-28117D	PB	D	44.0312	UG/L		2 %D				20
23281	MAR00-28117D	TL	D	.2628	UG/L		25 %D *	(<5 x MDL)			20

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1		– QC Calculations – QC2	Lower Limit	Upper Limit
23235	MAR00-28118D	AG	D	30	UG/L		10	%D (<5 x MDL)			20
23235	MAR00-28118D	CR	D	159.2	UG/L		19	%D (<5 x MDL)			20
23235	MAR00-28118D	CU	D	311.7	UG/L		5	%D			20
23235	MAR00-28118D	NI	D	1681.6	UG/L		11	%D			20
23235	MAR00-28118D	ZN	D	3384.25	UG/L		9	%D			20
23345	MAR00-28118S	CD	S	41.35	UG/L	29.1	104	%R:		85	115
23333	MAR00-28120D	PB	D	2.4707	UG/L		0	%D (<5 x MDL)			20
23333	MAR00-28121M	PB	M	16.0899	UG/L	10	107	%R:	2 %RPD	75	125
23333	MAR00-28121S	PB	S	15.7634	UG/L	10	104	%R:		75	125
23235	MAR00-28156D	AG	D	75.5134	MG/L		6	%D			20
23387	MAR00-28172M	AS	M	115.2873	UG/L	100	110	%R:	2 %RPD	75	125
23387	MAR00-28172S	AS	S	112.9654	UG/L	100	108	%R:		75	125
23295	MAR00-28178D	FE	D	0	UG/L		0	%D (<5 x MDL)			20
23295	MAR00-28178D	MN	D	10.94	UG/L		0	%D (<5 x MDL)			20
23295	MAR00-28179S	FE	S	5246.18	UG/L	5000	97	%R:		85	115
23295	MAR00-28179S	MN	S	2628.67	UG/L	2500	97	%R:		85	115
23295	MAR00-28234M	FE	M	2.50446	MG/L	2	96	%R:	8 %RPD	70	130
23295	MAR00-28234S	FE	S	2.31736	MG/L	2	86	%R:		70	130
23295	MAR00-28239D	AL	D	206.77	UG/L		1	%D (<5 x MDL)			20
23295	MAR00-28239D	FE	D	756.09	UG/L		12	%D			20
23295	MAR00-28239D	MN	D	133.23	UG/L		13	%D			20
23295	MAR00-28239D	ZN	D	2.16	UG/L		13	%D (<5 x MDL)			20
23295	MAR00-28252D	CA	D	94.87054	MG/L		1	%D			20
23320	MAR00-28256M	HG	M	2.14	UG/L	2	106	%R:	3 %RPD	75	125
23320	MAR00-28256S	HG	S	2.08	UG/L	2	103	%R:		75	125
23320	MAR00-28257D	HG	D	0	UG/L		0	%D (<5 x MDL)			20
23295	MAR00-28270D	AG	D	0	UG/L		0	%D (<5 x MDL)			20
23333	MAR00-28270D	AS	D	4.3083	UG/L		29	%D * (<5 x MDL)			20
23387	MAR00-28270D	B	D	111985.4	UG/L		0	%D			20
23387	MAR00-28270D	BE	D	.0134	UG/L		200	%D * (<5 x MDL)			20
23333	MAR00-28270D	CD	D	0	UG/L		0	%D (<5 x MDL)			20
23295	MAR00-28270D	CR	D	0	UG/L		0	%D (<5 x MDL)			20
23295	MAR00-28270D	CU	D	1.93	UG/L		0	%D (<5 x MDL)			20
23295	MAR00-28270D	NI	D	.83	UG/L		134	%D * (<5 x MDL)			20
23333	MAR00-28270D	PB	D	.0776	UG/L		47	%D * (<5 x MDL)			20
23333	MAR00-28270D	SB	D	.1075	UG/L		60	%D * (<5 x MDL)			20
23288	MAR00-28270D	SE	D	0	UG/L		0	%D (<5 x MDL)			20
23333	MAR00-28270D	TL	D	0	UG/L		0	%D (<5 x MDL)			20

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1		– QC Calculations – QC2	Lower Limit	Upper Limit
23295	MAR00-28270D	ZN	D	0	UG/L		200 %D *	(<5 x MDL)			20
23295	MAR00-28271M	AG	M	107.94	UG/L	100	107 %R:		4 %RPD	80	120
23333	MAR00-28271M	AS	M	24.8809	UG/L	20	102 %R:		0 %RPD	75	125
23387	MAR00-28271M	BE	M	5.3625	UG/L	5	107 %R:		7 %RPD	75	125
23333	MAR00-28271M	CD	M	9.8328	UG/L	10	98 %R:		3 %RPD	75	125
23295	MAR00-28271M	CR	M	982.56	UG/L	1000	98 %R:		4 %RPD	80	120
23295	MAR00-28271M	CU	M	998.01	UG/L	1000	100 %R:		5 %RPD	80	120
23295	MAR00-28271M	NI	M	998.53	UG/L	1000	99 %R:		6 %RPD	80	120
23333	MAR00-28271M	PB	M	19.0231	UG/L	10	94 %R:		3 %RPD	75	125
23333	MAR00-28271M	SB	M	19.8653	UG/L	20	99 %R:		2 %RPD	75	125
23288	MAR00-28271M	SE	M	12.5	UG/L	20	63 %R: *		1 %RPD	80	120
23333	MAR00-28271M	TL	M	10.077	UG/L	10	100 %R:		1 %RPD	75	125
23295	MAR00-28271M	ZN	M	974.32	UG/L	1000	97 %R:		6 %RPD	80	120
23295	MAR00-28271S	AG	S	103.6	UG/L	100	103 %R:			80	120
23333	MAR00-28271S	AS	S	24.9934	UG/L	20	102 %R:			75	125
23387	MAR00-28271S	BE	S	5.0114	UG/L	5	100 %R:			75	125
23333	MAR00-28271S	CD	S	9.5592	UG/L	10	96 %R:			75	125
23295	MAR00-28271S	CR	S	939.86	UG/L	1000	94 %R:			80	120
23295	MAR00-28271S	CU	S	953.74	UG/L	1000	95 %R:			80	120
23295	MAR00-28271S	NI	S	938.23	UG/L	1000	93 %R:			80	120
23333	MAR00-28271S	PB	S	19.5157	UG/L	10	99 %R:			75	125
23333	MAR00-28271S	SB	S	19.4702	UG/L	20	98 %R:			75	125
23288	MAR00-28271S	SE	S	12.39	UG/L	20	62 %R: *			80	120
23333	MAR00-28271S	TL	S	10.2166	UG/L	10	101 %R:			75	125
23295	MAR00-28271S	ZN	S	922	UG/L	1000	92 %R:			80	120
23345	MAR00-28275S	CD	S	3.138	UG/L	2.91	104 %R:			75	125
23378	MAR00-28281D	FE	D	936.49	UG/L		1 %D				20
23320	MAR00-28282D	HG	D	0	MG/L		200 %D *	(<5 x MDL)			20
23320	MAR00-28282S	HG	S	.0201	MG/L	0.02	100 %R:			50	150
23320	MAR00-28283M	HG	M	1.95	UG/L	2	97 %R:		3 %RPD	75	125
23320	MAR00-28283S	HG	S	2.01	UG/L	2	100 %R:			75	125
23320	MAR00-28284D	HG	D	0	UG/L		0 %D	(<5 x MDL)			20
23387	MAR00-28291	AS		3.8573	UG/L						
23295	MAR00-28308S	ZN	S	3225.07	UG/L	2500	92 %R:			85	115
23235	OIL 10.30A	CD	C	41.9209809	MG/KG	46	91 %R:			70	120
23235	OIL 10.30A	CR	C	434.471389	MG/KG	455	95 %R:			70	120
23235	OIL 10.30A	PB	C	127.925522	MG/KG	137	93 %R:			70	120
23228	PB 10.31	TS-%	C	.02	%						

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23235	PB AF 10.27	PB	C	.02077	MG/L					
23235	PBL 10.27	AG	C	.00383	MG/L					
23235	PBL 10.27	BA	C	.07921	MG/L					
23235	PBL 10.27	CD	C	-.00171	MG/L		0			
23235	PBL 10.27	CR	C	.00355	MG/L					
23235	PBL 10.27	NI	C	.00409	MG/L					
23235	PBL 10.27	PB	C	.02214	MG/L					
23288	PBL 11.2.3	SE	C	-.00072	MG/L		0			
23238	PBS 10.30	SE	C	-1.3	UG/L		0			
23281	PBS 10.30.4A	SB	C	1.1775	UG/L					
23281	PBS 10.30.4B	AS	C	-.5076	UG/L					
23281	PBS 10.30.4B	CD	C	-.7976	UG/L					
23281	PBS 10.30.4B	TL	C	-.0429	UG/L					
23235	PBS 10.30A	AG	C	-.00156	MG/L					
23235	PBS 10.30A	BE	C	-.00066	MG/L					
23235	PBS 10.30A	CD	C	-.00275	MG/L		0			
23235	PBS 10.30A	CR	C	.00406	MG/L					
23235	PBS 10.30A	CU	C	-.00189	MG/L					
23235	PBS 10.30A	NI	C	-.00603	MG/L					
23235	PBS 10.30A	PB	C	.04727	MG/L					
23235	PBS 10.30A	ZN	C	.00266	MG/L					
23265	PBS11.1	HG	C	.000006	MG/KG					
23235	PBW 10.25.2	AG	C	.00074	MG/L		0			
23235	PBW 10.25.2	BA	C	.00026	MG/L					
23235	PBW 10.25.2	BE	C	.00053	MG/L					
23235	PBW 10.25.2	CD	C	-.00287	MG/L					
23235	PBW 10.25.2	CR	C	.00123	MG/L					
23235	PBW 10.25.2	CU	C	-.00189	MG/L					
23235	PBW 10.25.2	FE	C	.00905	MG/L		0			
23235	PBW 10.25.2	MG	C	-.00715	MG/L					
23235	PBW 10.25.2	MN	C	-.00072	MG/L					
23235	PBW 10.25.2	NA	C	.00227	MG/L					
23235	PBW 10.25.2	NI	C	.00071	MG/L					
23235	PBW 10.25.2	PB	C	.03699	MG/L					
23235	PBW 10.25.2	ZN	C	.00017	MG/L		0			
23281	PBW 10.25.3	AS	C	-.0476	UG/L					
23281	PBW 10.25.3	BA	C	-.0583	UG/L					
23281	PBW 10.25.3	BE	C	.0184	UG/L					

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23281	PBW 10.25.3	CD	C	-.0111	UG/L					
23281	PBW 10.25.3	PB	C	.0715	UG/L					
23281	PBW 10.25.3	SB	C	-.414	UG/L					
23281	PBW 10.25.3	TH	C	1.1101	UG/L					
23281	PBW 10.25.3	TL	C	-.016	UG/L					
23281	PBW 10.25.3	U	C	.0779	UG/L					
23235	PBW 10.26.2	AG	C	-.00311	MG/L					
23235	PBW 10.26.2	BA	C	.00124	MG/L					
23235	PBW 10.26.2	BE	C	.00053	MG/L					
23235	PBW 10.26.2	CD	C	-.00098	MG/L					
23235	PBW 10.26.2	CR	C	.00175	MG/L					
23235	PBW 10.26.2	CU	C	-.00379	MG/L		0			
23235	PBW 10.26.2	FE	C	.03782	MG/L					
23235	PBW 10.26.2	MG	C	.02682	MG/L					
23235	PBW 10.26.2	MN	C	-.00073	MG/L					
23235	PBW 10.26.2	NA	C	.11724	MG/L					
23235	PBW 10.26.2	NI	C	-.00449	MG/L					
23235	PBW 10.26.2	PB	C	.0177	MG/L		0			
23235	PBW 10.26.2	ZN	C	.00235	MG/L					
23235	PBW 10.30.2	AG	C	.00074	MG/L					
23235	PBW 10.30.2	BA	C	.00386	MG/L					
23235	PBW 10.30.2	BE	C	.00236	MG/L					
23235	PBW 10.30.2	CD	C	-.00386	MG/L					
23235	PBW 10.30.2	CR	C	.00123	MG/L		0			
23235	PBW 10.30.2	CU	C	-.00379	MG/L					
23235	PBW 10.30.2	FE	C	.00944	MG/L					
23235	PBW 10.30.2	MG	C	.00646	MG/L					
23235	PBW 10.30.2	MN	C	.00181	MG/L					
23235	PBW 10.30.2	NA	C	.02821	MG/L					
23235	PBW 10.30.2	NI	C	-.00173	MG/L		0			
23235	PBW 10.30.2	PB	C	.01626	MG/L					
23235	PBW 10.30.2	ZN	C	.00234	MG/L					
23238	PBW 10.30.3B	SE	C	-.62	UG/L		0			
23387	PBW 10.31.3	AS	C	0	UG/L					
23387	PBW 10.31.3	SI	C	0	MG/L					
23387	PBW 11.1.3	B	C	5.4377	UG/L					
23387	PBW 11.1.3	BE	C	0	UG/L					
23288	PBW 11.1.3	SE	C	-.83	UG/L		0			

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23387	PBW 11.2.3	B	C	5.5007	UG/L					
23387	PBW 11.2.3	BE	C	0	UG/L					
23288	PBW 11.2.3	SE	C	-.54	UG/L		0			
23295	PBW-L11.2	AG	C	.00228	MG/L					
23295	PBW-L11.2	B[illegible]	C	.02357	MG/L					
23295	PBW-L11.2	CD	C	0	MG/L		0			
23295	PBW-L11.2	CR	C	0	MG/L		0			
23295	PBW-L11.2	PB	C	.02102	MG/L		0			
23320	PBW1 11.6	HG	C	0	UG/L		0			
23345	PBW10.30B.3	CD	C	.022	UG/L		0			
23333	PBW10.31.3	PB	C	.0296	UG/L					
23265	PBW11.1	HG	C	.045	UG/L					
23295	PBW11.1.2	AG	C	.00072	MG/L		0			
23295	PBW11.1.2	CR	C	.00048	MG/L		0			
23295	PBW11.1.2	CU	C	0	MG/L		0			
23295	PBW11.1.2	NI	C	.01627	MG/L		0			
23295	PBW11.1.2	ZN	C	.00207	MG/L		0			
23333	PBW11.1.3	AS	C	.4491	UG/L					
23345	PBW11.1.3	CD	C	.041	UG/L					
23333	PBW11.1.3	CD	C	.0139	UG/L		0			
23333	PBW11.1.3	PB	C	.0616	UG/L					
23333	PBW11.1.3	SB	C	.0963	UG/L					
23333	PBW11.1.3	TL	C	0	UG/L		0			
23295	PBW11.1.5	AG	C	.00072	MG/L		0			
23295	PBW11.1.5	AL	C	0	MG/L		0			
23295	PBW11.1.5	CA	C	.00182	MG/L		0			
23295	PBW11.1.5	CD	C	0	MG/L		0			
23295	PBW11.1.5	CR	C	.00153	MG/L		0			
23295	PBW11.1.5	CU	C	0	MG/L		0			
23295	PBW11.1.5	FE	C	.01452	MG/L		0			
23295	PBW11.1.5	MG	C	0	MG/L		0			
23295	PBW11.1.5	MN	C	.00308	MG/L		0			
23295	PBW11.1.5	NA	C	.05655	MG/L		0			
23295	PBW11.1.5	NI	C	.00419	MG/L		0			
23295	PBW11.1.5	PB	C	.01473	MG/L		0			
23295	PBW11.1.5	ZN	C	.0018	MG/L		0			
23378	PBW11.16B.2	BA	C	.00019	MG/L					
23378	PBW11.16B.2	CA	C	.0077	MG/L					

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23378	PBW11.16B.2	CO	C	.00221	MG/L					
23378	PBW11.16B.2	CR	C	.00416	MG/L					
23378	PBW11.16B.2	CU	C	0	MG/L		0			
23378	PBW11.16B.2	FE	C	.03585	MG/L					
23378	PBW11.16B.2	K	C	1.06339	MG/L					
23378	PBW11.16B.2	MG	C	.07975	MG/L		0			
23378	PBW11.16B.2	MN	C	.00087	MG/L					
23378	PBW11.16B.2	NA	C	.03945	MG/L					
23378	PBW11.16B.2	NI	C	.00184	MG/L					
23378	PBW11.16B.2	PB	C	.00353	MG/L					
23378	PBW11.16B.2	V	C	.00266	MG/L					
23378	PBW11.16B.2	ZN	C	.00154	MG/L					
23333	PBW11.2.3	AS	C	.1267	UG/L		0			
23333	PBW11.2.3	B	C	.5237	UG/L		0			
23333	PBW11.2.3	CD	C	.0001	UG/L		0			
23333	PBW11.2.3	PB	C	.0191	UG/L		0			
23333	PBW11.2.3	SB	C	.1462	UG/L		0			
23333	PBW11.2.3	TL	C	0	UG/L		0			
23265	PBW2	HG	C	.058	UG/L					
23320	PBW2 11.6	HG	C	0	UG/L		0			

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23333	LCSA11.11.3	CD	C	9.1721	UG/L	10	92 %R:		50	150
23333	LCSA11.11.3	PB	C	10.4652	UG/L	10	105 %R:		50	150
23333	LCSA11.11.3	SB	C	20.1511	UG/L	20	101 %R:		50	150
23333	LCSA11.11.3	TL	C	10.2783	UG/L	10	103 %R:		50	150
23333	LCSA11.2.3	AS	C	17.4578	UG/L	20	87 %R:		50	150
23333	LCSA11.2.3	B	C	92.7144	UG/L	100	93 %R:		50	150
23333	LCSA11.2.3	CD	C	8.1883	UG/L	10	82 %R:		50	150
23333	LCSA11.2.3	PB	C	9.3476	UG/L	10	93 %R:		50	150
23333	LCSA11.2.3	SB	C	17.1341	UG/L	20	86 %R:		50	150
23333	LCSA11.2.3	TL	C	9.3488	UG/L	10	93 %R:		50	150
23288	LCSAL 11.2.3	SE	C	.1829	MG/L	0.2	91 %R:		80	120
23309	LCSAL 11.6.2	AG	C	.91384	MG/L	1	91 %R:		80	120
23309	LCSAL 11.6.2	BA	C	18.45369	MG/L	20	92 %R:		80	120
23309	LCSAL 11.6.2	CD	C	.18685	MG/L	0.2	93 %R:		80	120
23309	LCSAL 11.6.2	CR	C	.9568	MG/L	1	96 %R:		80	120
23309	LCSAL 11.6.2	PB	C	.94117	MG/L	1	94 %R:		80	120
23309	LFB	FE	C	4.83133	MG/L	5	97 %R:		80	120
23309	LFB	MN	C	2.36489	MG/L	2.5	95 %R:		80	120
23320	LFB1 11.6	HG	C	1.97	UG/L	2	99 %R:		85	115
23320	LFB2 11.6	HG	C	1.99	UG/L	2	100 %R:		85	115
23387	MAR00-28291	AS		3.8573	UG/L					
23309	MAR00-28440D	AG	D	0	UG/L		200 %D * (<5 x MDL)			20
23333	MAR00-28440D	AS	D	.4973	UG/L		0 %D (<5 x MDL)			20
23387	MAR00-28440D	B	D	816.8109	UG/L		5 %D			20
23309	MAR00-28440D	BE	D	0	UG/L		200 %D * (<5 x MDL)			20
23333	MAR00-28440D	CD	D	.018	UG/L		144 %D * (<5 x MDL)			20
23309	MAR00-28440D	CR	D	0	UG/L		200 %D * (<5 x MDL)			20
23309	MAR00-28440D	CU	D	0	UG/L		200 %D * (<5 x MDL)			20
23309	MAR00-28440D	NI	D	1.63	UG/L		200 %D * (<5 x MDL)			20
23333	MAR00-28440D	PB	D	7.4921	UG/L		6 %D (<5 x MDL)			20
23333	MAR00-28440D	SB	D	.217	UG/L		17 %D (<5 x MDL)			20
23288	MAR00-28440D	SE	D	0	UG/L		0 %D (<5 x MDL)			20
23333	MAR00-28440D	TL	D	0	UG/L		0 %D (<5 x MDL)			20
23309	MAR00-28440D	ZN	D	13.49	UG/L		5 %D (<5 x MDL)			20
23309	MAR00-28441M	AG	M	94.34	UG/L	100	94 %R:	1 %RPD	80	120
23333	MAR00-28441M	AS	M	20.9571	UG/L	20	104 %R:	6 %RPD	75	125
23387	MAR00-28441M	B	M	127.5362	UG/L	100	97 %R:	8 %RPD	75	125
23309	MAR00-28441M	BE	M	85.8	UG/L	100	86 %R:	4 %RPD	80	120

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
23333	MAR00-28441M	CD	M	9.8132	UG/L	10	98 %R:	2 %RPD	75	125
23309	MAR00-28441M	CR	M	879.8	UG/L	1000	88 %R:	2 %RPD	80	120
23309	MAR00-28441M	CU	M	890.65	UG/L	1000	89 %R:	1 %RPD	80	120
23309	MAR00-28441M	NI	M	877.9	UG/L	1000	87 %R:	2 %RPD	80	120
23333	MAR00-28441M	PB	M	10.0382	UG/L	10	98 %R:	3 %RPD	75	125
23333	MAR00-28441M	SB	M	19.1031	UG/L	20	96 %R:	7 %RPD	75	125
23288	MAR00-28441M	SE	M	16.39	UG/L	20	82 %R:	3 %RPD	80	120
23333	MAR00-28441M	TL	M	10.0186	UG/L	10	100 %R:	4 %RPD	75	125
23309	MAR00-28441M	ZN	M	871.01	UG/L	1000	87 %R:	2 %RPD	80	120
23309	MAR00-28441S	AG	S	95.12	UG/L	100	95 %R:		80	120
23333	MAR00-28441S	AS	S	19.6619	UG/L	20	98 %R:		75	125
23387	MAR00-28441S	B	S	117.6627	UG/L	100	87 %R:		75	125
23309	MAR00-28441S	BE	S	88.9	UG/L	100	89 %R:		80	120
23333	MAR00-28441S	CD	S	9.6038	UG/L	10	96 %R:		75	125
23309	MAR00-28441S	CR	S	897.79	UG/L	1000	90 %R:		80	120
23309	MAR00-28441S	CU	S	900.37	UG/L	1000	90 %R:		80	120
23309	MAR00-28441S	NI	S	893.83	UG/L	1000	89 %R:		80	120
23333	MAR00-28441S	PB	S	9.7495	UG/L	10	95 %R:		75	125
23333	MAR00-28441S	SB	S	17.845	UG/L	20	90 %R:		75	125
23288	MAR00-28441S	SE	S	16.94	UG/L	20	85 %R:		80	120
23333	MAR00-28441S	TL	S	9.6424	UG/L	10	97 %R:		75	125
23309	MAR00-28441S	ZN	S	884.6	UG/L	1000	88 %R:		80	120
23320	MAR00-28472S	HG	S	.0197	MG/L	0.02	97 %R:		50	150
23288	MAR00-28472S	SE	S	.937	MG/L	1	94 %R:		50	150
23309	MAR00-28475S	AG	S	4.47275	MG/L	5	89 %R:		50	150
23309	MAR00-28475S	BA	S	90.6645	MG/L	100	90 %R:		50	150
23309	MAR00-28475S	CD	S	.895	MG/L	1	88 %R:		50	150
23309	MAR00-28475S	CR	S	4.5946	MG/L	5	92 %R:		50	150
23320	MAR00-28475S	HG	S	.0189	MG/L	0.02	94 %R:		50	150
23309	MAR00-28475S	PB	S	4.7139	MG/L	5	94 %R:		50	150
23309	MAR00-28476D	FE	D	1334.68	UG/L		1 %D			20
23309	MAR00-28476D	MN	D	527.81	UG/L		0 %D			20
23309	MAR00-28477M	FE	M	2268.75	UG/L	2000	86 %R:	1 %RPD	80	120
23309	MAR00-28477M	MN	M	1159.57	UG/L	1000	86 %R:	0 %RPD	80	120
23309	MAR00-28477S	FE	S	2287.06	UG/L	2000	86 %R:		80	120
23309	MAR00-28477S	MN	S	1154.32	UG/L	1000	85 %R:		80	120
23309	MAR00-28505S	AG	S	4.235	MG/L	5	85 %R:		50	150
23309	MAR00-28505S	BA	S	92.71055	MG/L	100	90 %R:		50	150

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

- QUALITY CONTROL REPORT -

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WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	– QC Calculations – QC1	– QC Calculations – QC2	Lower Limit	Upper Limit
23309	MAR00-28505S	CD	S	.96135	MG/L	1	94 %R:		50	150
23309	MAR00-28505S	CR	S	4.6174	MG/L	5	92 %R:		50	150
23320	MAR00-28505S	HG	S	.0193	MG/L	0.02	95 %R:		50	150
23309	MAR00-28505S	PB	S	4.93055	MG/L	5	92 %R:		50	150
23288	PBL 11.2.3	SE	C	-.00072	MG/L		0			
23309	PBL 11.6.2	AG	C	-.0038	MG/L					
23309	PBL 11.6.2	BA	C	-.00016	MG/L					
23309	PBL 11.6.2	CD	C	.00374	MG/L					
23309	PBL 11.6.2	CR	C	-.00272	MG/L					
23309	PBL 11.6.2	PB	C	.01005	MG/L					
23387	PBW 10.31.3	AS	C	0	UG/L					
23387	PBW 10.31.3	SI	C	0	MG/L					
23309	PBW 11.1.2	FE	C	.085	MG/L					
23309	PBW 11.1.2	K	C	-.09081	MG/L					
23387	PBW 11.1.3	B	C	5.4377	UG/L					
23387	PBW 11.1.3	BE	C	0	UG/L					
23288	PBW 11.1.3	SE	C	-.83	UG/L		0			
23309	PBW 11.2.2	AG	C	-.00225	MG/L					
23309	PBW 11.2.2	BE	C	-.00263	MG/L					
23309	PBW 11.2.2	CR	C	-.00379	MG/L					
23309	PBW 11.2.2	CU	C	.00581	MG/L					
23309	PBW 11.2.2	NI	C	.0001	MG/L					
23309	PBW 11.2.2	ZN	C	.0014	MG/L					
23387	PBW 11.2.3	B	C	5.5007	UG/L					
23387	PBW 11.2.3	BE	C	0	UG/L					
23288	PBW 11.2.3	SE	C	-.54	UG/L		0			
23309	PBW 11.6.2	CR	C	-.00245	MG/L					
23309	PBW 11.6.2	FE	C	.00732	MG/L					
23309	PBW 11.6.2	MN	C	-.001	MG/L					
23309	PBW 11.6.2	NI	C	-.00755	MG/L					
23309	PBW 11.6.2	PB	C	-.01123	MG/L					
23309	PBW 11.6.2	ZN	C	-.00014	MG/L					
23309	PBW-D 11.1	FE	C	.00981	MG/L					
23309	PBW-D 11.1	MN	C	-.00077	MG/L					
23320	PBW1 11.6	HG	C	0	UG/L		0			
23333	PBW10.31.3	PB	C	.0296	UG/L					
23333	PBW11.1.3	AS	C	.4491	UG/L					
23333	PBW11.1.3	CD	C	.0139	UG/L		0			

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	

- QUALITY CONTROL REPORT -

Printed: 2/26/2001

WS#	Lab#	Test ID	QC Code	Result	Units	Amount Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
23333	PBW11.1.3	PB	C	.0616	UG/L					
23333	PBW11.1.3	SB	C	.0963	UG/L					
23333	PBW11.1.3	TL	C	0	UG/L		0			
23333	PBW11.2.3	AS	C	.1267	UG/L		0			
23333	PBW11.2.3	B	C	.5237	UG/L		0			
23333	PBW11.2.3	CD	C	.0001	UG/L		0			
23333	PBW11.2.3	PB	C	.0191	UG/L		0			
23333	PBW11.2.3	SB	C	.1462	UG/L		0			
23333	PBW11.2.3	TL	C	0	UG/L		0			
23320	PBW2 11.6	HG	C	0	UG/L		0			

QC Code Legend

B Blanks	K Calibration Checks	S Spikes
C Control Samples	M Matrix Spike Duplicates	
D Duplicates	R Surrogates	