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SUPPORT ZONE INVESTIGATION
FIELD SAMPLING PLAN
ENVIROCHEM SITE
ZIONSVILLE, INDIANA

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SUPPORT ZONE INVESTIGATION
FIELD SAMPLING PLAN
ENVIROCHEM SITE
ZIONSVILLE, INDIANA

REVISION: 1

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1.0 INTRODUCTION

This Field Sampling Plan (FSP) presents the methods of soil sample collection to verify the western remedial boundary at the Environmental Conservation and Chemical Corporation (EnviroChem) site. The U.S. Environmental Protection Agency (USEPA) has requested that the current western remedial boundary location be verified as the result of the contamination detected during excavation activities for the construction of the EnviroChem Superfund Site - Site Preparation and Material Removal (SPMR) Project. Section 1.0 presents the results of SPMR soil sampling efforts. Section 2.0 presents the locations and objectives for the verification of the western remedial boundary and the evaluation of contamination in the area of the wastewater storage pad. Sections 3.0 and 4.0 present sampling procedures and sample handling and analysis, respectively.

1.1 Background

Construction of the SPMR commenced on September 1, 1993. The effort included the demolition of buildings and removal of debris both inside and outside the remedial boundary and construction of the support zone and support zone facilities. During excavation activities outside the remedial boundary, the two areas of potential contamination were located. Sections 1.1.1 and 1.1.2 describe the areas and the previous sampling efforts in each area.

1.1.1 Area Northwest of the Concrete Pad

On October 8, 1993, during SPMR construction, potentially contaminated soils were encountered. This finding was reported to the U.S. Environmental Protection Agency (USEPA) and detailed in SPMR Monthly Progress Reports #2 and #3 which covered the period between September 11, 1993 and November 11, 1993. The location of the potential contamination is represented by a bullet symbol on Figure 1-1 and occurs in a gravel layer approximately 1 foot below grade. This layer is approximately 1/2-foot-thick and was exposed during the excavation activities to a length of approximately 5 feet. After this layer was identified, the Support Zone North Diversion Channel excavation efforts in this location were stopped, the excavated channel was backfilled, the excavation equipment was decontaminated, and the area was marked with caution tape.

The EnviroChem Trustee Engineer (the Engineer) notified the USEPA and the Indiana Department of Environmental Management (IDEM) and prepared the "Sampling and Analysis Plan for Diversion Channel Northwest of Concrete Pad" (the Hand Auger Investigation Plan) which was submitted to IDEM and the USEPA on behalf of the EnviroChem Trustees on October 12, 1993. The USEPA verbally provided comments on the plan on October 13. The Hand Auger Investigation Plan included soil boring by hand auger in the area of potential contamination, field screening by headspace analysis with an organic vapor analyzer (OVA), and laboratory analysis for Volatile Organic Coumpounds (VOCs) of selected soil samples. The field sampling was initiated on October 13, 1993.

The results of the field screening activities were reported in SPMR Monthly Progress Report #3. The screening and sampling locations, HA-1 through HA-20, are shown on Figure 1-1. Table 1-1 presents a summary of the field screening results. Auger refusal occurred in a discontinuous, packed gravel layer at the 0.5- to 1.5-foot interval at fourteen of the twenty sample locations. Areal distribution of the potential contamination could not be reliably estimated by the field screening results. Without reliable field screening results to determine sample locations, one sample location in the potential contamination area and two sample locations west of the potential contamination area were selected for laboratory analysis of VOCs by using the USEPA's SW-846 Method 8240A. The sampling locations were selected to establish the soil concentrations at increasing distances west of the location of potential contamination and the remedial boundary.

Soil samples obtained from locations HA-3 and HA-16 taken from the 0.5- to 1.0-foot and 1.5- to 2.0-foot intervals, respectively, and from the "source" material were submitted to Heritage Laboratories, Inc. (Heritage) of Indianapolis, Indiana. The analytical results are summarized on Table 1-2. Certificates of Analysis are included in Appendix A. The analytical results indicate that the concentrations of VOCs decrease with increasing distance west of the remedial boundary. In fact, VOCs were not detected in the HA-3 and HA-16 samples above the site-specific acceptable soil concentrations (Table 3-1 Exhibit A of the Consent Decree entered September 1, 1991, Number 83-1419 C, U.S.D.C., Southern District of Indiana). This area will be further investigated as part of the western remedial boundary investigation.

1.1.2 Wastewater Storage Pad Collection Trench

A decontamination pad and a wastewater storage pad were constructed during the SPMR project. The Independent Quality Assurance Officer collected soil samples from the base of the excavations of each pad to establish the background soil concentrations.

Sample locations were determined by setting a grid on each pad excavation and randomly selecting four grid cells on each pad. The grids for the decontamination pad and wastewater storage pads are shown on Figure 1-2. The randomly selected sample locations for the wastewater storage pad and decontamination pad investigations are shown on Figure 1-1. In addition, soil samples were collected from the base of the wastewater storage pad's collection trench and the decontamination pad's manhole excavations. All samples were submitted to Heritage for analysis of VOCs, semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (pesticides/PCBs), barium, cadmium, chromium, lead, silver, arsenic, selenium, and mercury by USEPA's SW-846 Methods 8240A, 8270A, 8080, 6010A, 305A, and 7471 (modified). Sample analytical results are summarized on Tables 1-2 and 1-3. Certificates of Analysis are included in Appendix B.

As shown on Tables 1-2 and 1-3, the site-specific acceptable soil concentrations were only exceeded in the wastewater storage pad collection trench (sump) sample. In this sample 1,1-dichloroethane was detected at 15 parts per billion (ppb). The soil around the wastewater storage pad is proposed to be sampled during this investigation to determine the extent of soils above the site-specific acceptable concentrations.

1.2 Objectives of New Sampling

Soil samples will be collected and analyzed to verify the current location of the western remedial boundary and investigate the area around the wastewater storage pad. The data to be collected will be used to determine the final location of the Support Zone North Diversion Channel and the western remedial boundary.

2.0 SAMPLE LOCATIONS AND FREQUENCY

This section presents the sample locations and frequency for this investigation. Section 2.1 discusses verification sampling along the western remedial boundary. Section 2.2 discusses sampling in the wastewater storage pad collection trench area.

2.1 Verification of the Western Remedial Boundary

To verify the location of the western remedial boundary, a line of soil borings will be placed approximately 20 feet west of the current western remedial boundary. The distance between soil borings was determined by using the formula included in Instructions for the Preparation of Closure Plans for Interim Status Facilities by the Illinois Environmental Protection Agency (IEPA) - Division of Land Pollution Control, dated March 2, 1989. The formula is as follows:

$$GI = (A/\pi)^{0.5} / 2$$

Where:

GI = Grid interval in feet, and
A = Area in square feet.

For this calculation, the area of this investigation was estimated to be the forty foot width of the support zone immediately west of the western remedial boundary, or approximately 34,300 square feet. Using this as the total sampling area, a soil boring spacing interval of 52 feet is obtained, so the spacing interval will be 50 feet. Figure 2-1

shows the proposed locations of soil borings to verify the western remedial boundary. Where a diversion channel has been constructed along the western remedial boundary, soil borings will be placed immediately west of the diversion channel, but sufficiently distant from the channel as to not create stability problems in the channel. The On-Site Coordinator will be responsible for locating the soil borings.

The soil borings will be continuously sampled and advanced to a maximum depth of ten feet. If ground water is encountered at a depth less than ten feet, no soil samples will be collected below the water table. Samples will be collected at 2-foot intervals. The samples from the 2- to 4-foot and 6- to 8-foot depth intervals will be analyzed with a field Gas Chromatograph/Mass Spectrometer (GC/MS) for the VOCs on the site-specific acceptable soil concentrations list which is presented on Table 2-1. The remaining samples from each boring will be maintained at 4°C for a duration no greater than 14 days. The field GC/MS results will be reviewed by the On-Site Coordinator. At the direction of the On-Site Coordinator, one of the following activities will take place based on the field GC/MS results:

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in either the 2- to 4-foot depth interval or the 6- to 8-foot depth interval sample above its respective limit, the On-Site Coordinator will locate an additional soil boring for field screening approximately fifteen feet west of the soil boring from which that sample was taken.

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in the 6- to 8-foot depth interval sample above its respective limit, the sample taken from the 8- to 10-foot depth interval will be analyzed with the field GC/MS.

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is not present in either the 2- to 4-foot or 6- to 8- foot depth interval above its respective limit, no additional samples will be analyzed.

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in the 2- to 4-foot but not the 6- to 8- foot depth interval above its respective limit, no additional samples will be analyzed.

The investigation will continue west at 15-foot spacing intervals until all samples from the 2- to 4-foot and 6- to 8-foot depth intervals in each additional boring is below the acceptable concentrations. The investigation will not continue outside of the EnviroChem Trustees current access limits. If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in the 8- to 10-foot depth interval sample above its respective limit, then the On-Site Coordinator will immediately notify the EnviroChem

Trustees' designated Project Manager. The Project Manager will notify the EnviroChem Trustees, USEPA, and IDEM. At that time, the EnviroChem Trustees, USEPA, and IDEM will decide whether an additional soil boring in that location will be advanced to collect any additional deeper samples Soil samples will not be collected below the groundwater table.

The field GC/MS analytical method is a modified SW-846 8240 and will be described in the Quality Assurance Project Plan (QAPP). Ten percent of the samples analyzed by the field GC/MS will also be submitted to a laboratory for Target Compound List (TCL) VOCs analysis by using the Contract Laboratory Program Statement of Work (CLP SOW) method OLM01.1 or its most recent USEPA-approved version for confirmation. Samples for confirmation analysis will be selected daily by the On-Site Coordinator based on the field GC/MS analytical results to represent both the highest VOC concentrations and the lowest VOC concentrations (nondetect).

The On-Site Coordinator will select three soil samples from this investigation for laboratory analysis of the following parameters: TCL semivolatile organic compounds (SVOCs), Target Analyte List (TAL) inorganics, and TCL Pesticides/PCBs. The analytical methods to be used are, respectively, the most recent USEPA-approved version of CLP SOWs OLM01.1, ILM01.0, and OLM01.1. These samples will represent the high, low and nondetect field GC/MS results.

2.2 Wastewater Storage Pad Collection Trench Area

One compound, 1,1-dichloroethane, exceeded the acceptable concentration in the soil sample collected from the base of the wastewater storage pad collection trench

excavation. Analytical results for the other soil samples collected at the wastewater storage pad and west of the collection trench location did not exceed the site-specific acceptable soil concentrations. Therefore, further assessment will be conducted around the north and south ends of the wastewater storage pad by the installation of three soil borings (Figure 2-3).

As with the western remedial boundary investigation, the soil borings will be continuously sampled and advanced to a maximum depth of ten feet. If ground water is encountered at a depth less than 10 feet, no soil samples will be collected below the water table. Samples will be collected at 2-foot intervals of the boring. The samples from the 2- to 4-foot and 6- to 8-foot depth intervals will be analyzed with a field GC/MS for the VOCs on the site-specific acceptable soil concentrations list. The field GC/MS results will be reviewed by the On-Site Coordinator. At the direction of the On-Site Coordinator, one of the following activities will take place based on the field GC/MS results:

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in the 6- to 8-foot depth interval sample above its respective limit, the sample taken from the 8- to 10-foot depth interval will be analyzed with the field GC/MS.

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is not present in either the

2- to 4-foot or 6- to 8- foot depth interval above its respective limit, no additional samples will be analyzed.

- If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in the 2- to 4-foot depth interval but not the 6- to 8-foot depth interval sample above its respective limit, no additional samples will be analyzed.

If the GC/MS analytical results indicate that the concentration of any of the compounds on the site-specific acceptable soil concentrations list is present in the 8- to 10-foot depth interval sample above its respective limit, then the On-Site Coordinator will immediately notify the EnviroChem Trustees' designated Project Manager. The Project Manager will notify the EnviroChem Trustees, USEPA, and IDEM. At that time the EnviroChem Trustees, USEPA, and IDEM will decided whether an additional soil boring in that location will be advanced to collect any additional samples. Soil samples will not be collected below the groundwater table.

The field GC/MS analytical method is a modified SW-846 8240 and will be described in the QAPP. Confirmation analysis will be the submittal of ten percent of the samples to the laboratory for TCL VOCs analysis by the most recent USEPA-approved version of CLP SOW method OLM01.1. Samples for confirmation analysis will be selected using the field GC/MS analytical results representing both the highest VOC concentrations and the lowest VOC concentrations (nondetect).

The On-Site Coordinator will select two soil samples from the three soil borings for laboratory analysis of the following: TCL SVOCs, TAL inorganics, and TAL Pesticides/PCBs. The same analytical methods listed in Section 2.2 will be used for the analysis of these two soil samples. The two samples selected for additional analyses will be the samples demonstrating high and low GC/MS VOC detection.

3.0 PROCEDURES

3.1 Sample Collection

All of the samples collected during this investigation will be obtained using a truck-mounted drill rig equipped with a hollow-stem auger. Prior to drilling, the aggregate and geotextile cover, if present, will be carefully removed. Samples will be continuously collected in 2-foot intervals to a depth of 8 feet by using 2-foot long 3-inch O.D. split spoons each fitted with four 6-inch stainless steel sampler sleeves. For each 2-foot interval one 6-inch sleeve will be submitted for field GC/MS and the adjacent sleeve will be stored for possible confirmation analysis. Both ends of each sleeve will be capped with clay or other cohesive material, covered with aluminum foil, and covered with the plastic sleeve cap. The samples will be labeled with the appropriate sample designation and placed in a cooler at 4°C. The chain of custody form will be completed for the sample designated for field analysis and the sample will be transported to the field GC/MS. The samples for possible confirmation will be kept in storage at 4°C until the On-Site Coordinator has reviewed that GC/MS analytical results and determined if subsequent submittal to the laboratory is required.

For the samples selected for additional analyses, the soil in the remaining two sleeves will be placed in the appropriate sample bottles, labeled with the appropriate sample designation, and placed inside a cooler.

Each soil boring will be logged by a qualified geologist by describing the length of sample collected, color, grain size, sorting, composition, structure, and moisture content of the sample based on visual observations. The density of the soil will be determined

by using the standard blow count method or a pocket penetrometer, and the color of the soil will be identified by comparison with a Munsell soil color chart. The geologic description for each sample interval will be recorded on a soil boring log.

Drill cuttings will be placed in clean Department of Transportation-approved 55-gallon metal drums and placed on the concrete pad in the drum storage area. All soil borings will be backfilled with bentonite chips which will be hydrated with clean potable water during installation. After backfilling of the borehole is complete, the geotextile and the aggregate, if any, will be replaced.

All of the drilling and sampling equipment will be decontaminated between borings in accordance with the procedures described in Section 3.3. Stainless steel sample sleeves will be cleaned by the laboratory prior to use for sample collection.

3.2 Preparation of Quality Assurance/Quality Control Samples

Quality Assurance/Quality Control (QA/QC) samples will be collected for the set of samples for field GC/MS analysis and the set of confirmation samples. For each of these two sets of samples, the frequency of QA/QC samples will be: (1) one sample will be designated for MS/MSD analysis for every 20 or fewer soil samples, and (2) one duplicate will be collected for every 10 or fewer soil samples.

3.2.1 Field Duplicate Samples

Duplicate samples will be collected in accordance with the procedure described below:

1. The investigative sample location from which a duplicate sample will be collected will be determined.

2. The duplicate sample will be the adjacent sleeve immediately above the investigative sample in the 2-foot sample interval. The duplicate sample sleeve will be preserved and handled by the sample procedure as the investigative samples. When a duplicate sample is taken for GC/MS analysis, the remaining sleeves will only be preserved for possible confirmation analysis if there is sufficient sample volume remaining.

3. The field notebook, labels, tags, and chain-of-custody sheets will be filled out with the duplicate sample properly designated and logged.

3.2.2 MS/MSD Samples

The investigative samples designated for MS/MSD analysis will be collected following the same procedure as other investigative samples. No extra sample volume is required. The investigative samples selected for MS/MSD analysis will be properly designated and logged on the chain-of-custody sheets, labels, tags, and in the field notebook. MS/MSD

samples will be preserved, handled, and shipped following the same procedures as investigative samples.

3.3 Decontamination

Drilling augers will be steam cleaned before each boring. All sampling equipment will be decontaminated prior to collection of each sample. Sampling gloves will be discarded after collecting each sample. Decontamination of field personnel will be conducted in accordance with the procedures specified in the SPMR Health and Safety Plan. Temporary exclusion zones and contamination reduction zones will be established by the On-Site Coordinator. Equipment will be decontaminated either near the sample location in heat-resistant plastic tubs or on the concrete decontamination pad.

A pump will be used to remove contaminated water from the decontamination pad into drums that will be relocated to the drum storage area on the concrete pad.

Decontamination of the split spoons and other sampling equipment will be conducted according to the following procedure:

Step 1	Steam clean or scrub equipment with a solution of Alconox or phosphate detergent mixed with potable water.
Step 2	Rinse with potable water.
Step 3	Rinse twice with distilled water.

Step 4 Air dry.

Step 5 Place in clean polyethylene bag or wrap in aluminum foil with shiny side out when not in use and during transport.

Stainless steel sampling sleeves will be decontaminated by the laboratory. Sleeves will not be reused without prior decontamination. The sleeves will be stored in a secure location in their shipping container and kept clean before use.

3.4 Documentation

All field measurements and observations will be recorded in both a field notebook and on the soil boring logs. Field measurements will include: distances, depths, and organic vapor concentrations. Field observations will consist of: weather conditions, physical appearance of samples, description of all field tasks undertaken, and a list of all personnel on site.

3.4.1 Field Notebooks

The field notebooks will be permanently labeled with the site name, site location, internal project number, and notebook number. Phone numbers of key project personnel and safety agencies, such as the fire department, hospital, and police, will be indicated in each field notebook.

Each page in the field notebook will be numbered and dated at the time of use, and initialed at the bottom by the user. Daily entries will begin with a synopsis of weather conditions, field conditions, personnel present, and projected work tasks for the day. All field tasks completed and the status of tasks in progress will be recorded in the field notebook. Entries will include all field measurements, calibration and preventive maintenance of field instruments, sampling locations, type of sample, sample number, physical appearance of sample, and the names of sampling personnel. No erasing will be allowed, and corrections will be made by drawing a single line through the incorrect entry. All corrections of recorded data will be initialed and dated.

3.4.2 Soil Boring Logs

Field measurements and detailed documentation of sampling will be recorded on soil boring field data forms that will identify the site, sampling personnel, the location of the sample, and the field measurements.

As with the field notebook, any corrections on the field data forms will be made by drawing a single line through the incorrect entry and initialing and dating the correction.

4.0 SAMPLE HANDLING AND ANALYSIS

Soil samples from each 2-foot boring interval will be submitted to the field GC/MS. Ten percent of the samples will be submitted to laboratory for analysis of TCL VOCs by using the most recent USEPA-approved version of CLP SOW OLM01.1. Five samples will be submitted for analysis of TCL SVOCs, TAL Inorganics, and TCL Pesticide/PCBs by the most recent USEPA-approved versions of CLP SOW OLM01.1, ILM01.0, and OLM01.1, respectively.

4.1 Sample Identification Label

Sample identification labels will include the following information:

- Sample designation,
- Name of collector,
- Affiliation of collector,
- Date and time of collection,
- Field GC/MS or laboratory,
- Requested analysis, and
- Analysis code.

Each sample taken during the execution of this Plan will be given a sample designation. The sample designation will be as follows:

- EC = EnviroChem,
- B## = Soil boring number,
- A,B,C,.. = Depth interval (A for 0 to 2 feet, B for 2 to 4 feet, C for 4 to 6 feet, etc.),
- S = Soil sample, and
- F or L = Field GC/MS or L for laboratory analysis.

A soil sample collected at the 4 to 6 foot depth interval from soil boring number 2 submitted to the field GC/MS analysis would be labelled as "ECB02CSF". A soil sample collected at the 0- to 2-foot depth interval from soil boring 11 submitted to the laboratory would be labeled "ECB11ASL". Information from the sample identification labels will be recorded in the field notebook to document all analytical samples.

4.2 Sample Seals

If the samples are to be transported by a carrier, the cooler containing the samples will be sealed to prevent disturbance of the samples during transportation. The seal will be affixed in such a manner that it would be broken if the cooler were to be opened. Upon receipt of the samples, the laboratory will check the integrity of the seal.

4.3 Chain-of-Custody Form

To provide documentation necessary to trace sample possession from the time of collection to the time of receipt by the analytical laboratory, a chain-of-custody record will be completed and accompany each shipment of sample(s) to the laboratory. Chain-of-custody procedures are discussed in Section 4.4. A copy of the sample chain-of-custody form is included in Appendix C. Copies will be stored in the project files.

4.4 Sample Shipment and Custody Procedures

Sample custody procedures will be consistent with the USEPA Region V Guidance "Content Requirements for Quality Assurance Project Plans."

A sample will be considered under the person's custody if it is: (1) in a person's physical possession, (2) in view of the person after taking possession, (3) secured by that person so that no one can tamper with the sample, or (4) secured by that person in an area that is restricted to authorized personnel. The sample packaging and shipment procedures summarized below will assure that the sample will arrive at the laboratory with the chain-of-custody intact.

Field procedures are as follows:

- The field sampler will be personally responsible for the care and custody of the samples until they are transferred or properly dispatched. As few people as possible will handle the samples.

- All samples will be tagged with sample numbers and locations.

- Sample tags will be completed for each sample using waterproof ink unless prohibited by weather conditions.

Transfer-of-custody and shipment procedures will be as follows:

- Samples will be accompanied by a properly completed chain-of-custody form. The sample numbers and locations will be listed on the chain-of-custody form. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the records. This record documents the transfer of custody of samples from the sampler to another person, to the chemist operating the field GC/MS analytical unit, to a permanent laboratory, or to/from a secure storage area.

- Samples will be properly packaged for shipment and dispatched via overnight courier or hand delivered to the GC/MS operator or laboratory for analysis, with a separate, signed custody record enclosed in a cooler. Shipping containers will be secured with packing tape and custody seals for shipment to the laboratory.

- The original chain-of-custody record and the yellow and pink copies will accompany the shipment. The gold copy will be retained by the samplers and returned to the field office.

The specifications for chain-of-custody and document control for the analytical laboratory will be discussed in the QAPP.

4.5 Analytical Procedures

Soil samples from each 2-foot boring interval will be submitted to the field GC/MS mobile analytical unit for analysis of the VOCs on the site-specific acceptable soil concentrations list by a modified SW-846 8240 method. This modified analytical method will be detailed in the QAPP. Ten percent of these samples will also be submitted to the laboratory for confirmatory analysis of TCL VOCs by using the most recent USEPA-approved version of CLP SOW OLM01.1. In addition, five samples will be submitted for analysis of TCL SVOCs, TAL Inorganics, and TCL Pesticide/PCBs by the most recent USEPA-approved version of CLP SOW OLM01.1, ILM01.0, and OLM01.1, respectively. The requirements for precision, accuracy, completeness, representativeness, and comparability will be described in the QAPP.

4.6 Field Quality Assurance/Quality Control Procedures

The QA/QC procedures will be followed to ensure the reliability and validity of the field and analytical data obtained during the investigation.

Field QA/QC procedures include calibration of field instruments and collection of field duplicate and MS/MSD samples. MS/MSD and field duplicate samples will be prepared as described in Section 3.2.

The On-Site Coordinator will monitor and audit the performance of field QA/QC procedures by reviewing the detailed description of sample collection and field measurement procedures recorded in the field notebook to ensure that this investigation is executed in accordance with this FSP. Field QC will be maintained during all field activities by an experienced geologist or engineer.

4.7 Corrective Action

If a problem occurs in the field that is immediately correctable by direct action, then the On-Site Coordinator will see that the action is taken. For example, if poor sampling techniques are observed when collecting a sample, the on-site supervisor will order the recollection of a new sample and indicate the steps to be taken to prevent a reoccurrence of the problem.

Some problems are not immediately correctable in the field. If such a problem is encountered, the on-site supervisor will contact the Engineer, who will then determine the appropriate corrective action in consultation with the USEPA and IDEM, if necessary.

4.8 Data Reduction and Validation

Two chemists will operate the field GC/MS. One chemist will carry out analytical data reduction by following procedures that will be detailed in the QAPP. Analytical data

validation will be carried out by the lead chemist in accordance with procedures to be described in the QAPP. The field GC/MS crew will critique its own analytical program by using spiked addition recoveries, established detection limits, and precision and accuracy control charts where applicable, and by keeping accurate records of the calibration of their instruments.

Analytical data reduction will be carried out by the laboratory following the procedures in the most recent USEPA-approved versions of the CLP SOWs. Analytical data validation will be performed in-house by the laboratory under the direction of their respective Quality Assurance (QA) officers. Additionally, the laboratory performing the analysis of the chemical parameters will critique its own analytical program by using spiked addition recoveries, established detection limits, and precision and accuracy control charts where applicable, and by keeping accurate records of the calibration of instruments as described in the most recent USEPA-approved version of the CLP SOWs. Data reduction and validation procedures will be described in the QAPP. The laboratory will provide documentation to meet the requirements of the QAPP.

The Engineer will independently validate the chemical analyses data by evaluating the attainment of the Quality Control (QC) criteria for calibration, blanks, spikes, and/or duplicate samples as outlined in the CLP SOWs.

4.9 Data Evaluation and Reporting

Field and analytical data will be evaluated, summarized and presented in a report to the USEPA seventy-five days after the completion of the field activities. Detected soil concentration will be compared with the site-specific soil acceptable concentrations. The report will also include a description of all field activities, analytical procedures, proposed modifications to the location of the remedial boundary, if any, or recommendations for handling any contaminated areas discovered.

TABLES

TABLE 1-1

SOIL SAMPLING HEAD SPACE RESULTS
HAND AUGER INVESTIGATION (1)
ENVIROCHEM SITE
ZIONSVILLE, INDIANA

DEPTH BGS (feet)	HA-1 OVA READINGS	HA-2 OVA READINGS	HA-3 OVA READINGS	HA-4 OVA READINGS	HA-5 OVA READINGS	HA-6 OVA READINGS	HA-7 OVA READINGS	HA-8 OVA READINGS	HA-9 OVA READINGS	HA-10 OVA READINGS
0.0 - 0.5	10	24	1	0	7	50	40	>1,000	62	1
0.5 - 1.0	220	NS AR	1.5 S	0	>1,000	220	79	>1,000	9	0
1.0 - 1.5	NS AR	NS	NS	0	NS AR	NS AR	NS AR	NS AR	0	20
1.5 - 2.0	NS	NS	3	0.5	NS	NS	NS	NS	0	10
2.0 - 2.5	NS	NS	NS	0.5	NS	NS	NS	NS	1	34
2.5 - 3.0	NS	NS	16	0	NS	NS	NS	NS	3	50
3.0 - 3.5	NS	NS	NS	1.5	NS	NS	NS	NS	6	200
3.5 - 4.0	NS	NS	0.5	4.5	NS	NS	NS	NS	NS AR	850
4.0 - 4.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS AR
4.5 - 5.0	NS	NS	1	NS	NS	NS	NS	NS	NS	NS

DEPTH BGS (feet)	HA-11 OVA READINGS	HA-12 OVA READINGS	HA-13 OVA READINGS	HA-14 OVA READINGS	HA-15 OVA READINGS	HA-16 OVA READINGS	HA-17 OVA READINGS	HA-18 OVA READINGS	HA-19 OVA READINGS	HA-20 OVA READINGS
0.0 - 0.5	2	4	NS AR	NS AR	23	15	55	58	600	34
0.5 - 1.0	NS AR	42	NS	NS	9	33	NS AR	14	>1000	97
1.0 - 1.5	NS	NS AR	NS	NS	NS AR	700	NS	NS AR	620	NS AR
1.5 - 2.0	NS	NS	NS	NS	NS	1000 S	NS	NS	400	NS
2.0 - 2.5	NS	NS	NS	NS	NS	300	NS	NS	NS AR	NS
2.5 - 3.0	NS	NS	NS	NS	NS	210	NS	NS	NS	NS
3.0 - 3.5	NS	NS	NS	NS	NS	280	NS	NS	NS	NS
3.5 - 4.0	NS	NS	NS	NS	NS	110	NS	NS	NS	NS
4.0 - 4.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4.5 - 5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Key:
OVA = Organic vapor analyzer.
NS = No sample.
BGS = Below ground surface.
S = Sample collected
AR = Auger refusal

Note:
(1) OVA headspace readings in Volumetric parts per million.

TABLE 1-2

SOIL SAMPLING ANALYTICAL RESULTS
HAND AUGER INVESTIGATION
ENVIROCHEM SITE
ZIONSVILLE, INDIANA

PARAMETERS	Acceptable Concentration (1)	Support Zone Sample	HA-3 0.5-1.0'	HA-16 1.5-2.0'
Volatile Organic Compounds (2)				
Methylene chloride	20	42	8	5
Toluene	238000	75	20	6
1,1,1-Trichloroethane	7200	710	74	11
Trichloroethene	240	73	21	7
Tetrachloroethene	130	320	ND	ND

Key:
HA = Hand auger sample.
ND = Not detected.

Notes:
(1) Reference: Table 3-1 Exhibit A Consent Decree.
(2) EPA Method (SW846-8240A) soil concentration in (ug/kg).

TABLE 1-3

SOIL SAMPLING ANALYTICAL RESULTS
DECONTAMINATION PAD AND WASTE WATER STORAGE PAD
ENVIROCHEM SITE
ZIONSVILLE, INDIANA

PARAMETERS	Mean (1)	Acceptable Concentration (2)	WWP-sump	WWP-3	WWP-18	WWP-19	WWP-22	DP-sump	ECC-DP-06	ECC-DP-009	ECC-DP-15	ECC-DP-15DUP	ECC-DP-22
Volatile Organic Compounds (3)													
Acetone	-	490	75	ND	ND	65	ND	ND	ND	ND	ND	ND	ND
Benzene	-	-	6	ND	ND	ND	ND	ND	ND	10	7	9	ND
Chloroethane	-	-	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	-	5.7	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl benzene	-	234000	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	-	20	7	11	7	8	ND	13	10	14	10	13	8
Toluene	-	238000	25	16	ND	10	6	ND	ND	ND	ND	ND	7
1,1,1-Trichloroethane	-	7200	34	73	27	28	28	ND	ND	35	32	60	10
Trichloroethene	-	240	6	32	7	10	8	ND	ND	79	93	130	49
Xylene	-	195000	100	ND	ND	ND	ND	ND	ND	16	9	ND	10
Tetrachloroethene	-	130	ND	ND	ND	ND	ND	ND	ND	10	10	11	ND
Trichloro-trifloroethane	-	-	-	-	-	-	-	15	-	-	-	-	-
Semivolatile Organic Compounds (4)													
SVOCs	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls/Pesticides (5)													
PCBs	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics (6)													
Arsenic	16.8	-	2.7	4.6	4.4	5.8	4.8	3.7	5.4	83	91	92	4
Barium	97.2	-	40	40	46	76	37	27	33	4.2	5.6	5.8	54
Cadmium	-	-	ND	ND	9.7	ND	ND	ND	1.6	79	37	35	2.2
Chromium	17.7	-	11	8.9	ND	16	7.8	7.5	7	2.8	1.9	1.9	12
Lead	16.8	-	9	8.8	12	12	8.2	6.5	5.8	14	8.2	7.7	12
Mercury	-	-	ND	ND	ND	ND	ND	ND	ND	12	5.7	6.9	ND
Selenium	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Key:
ND = Not detected.
NA = Not analyzed.
- = No value.
HA = Hand auger sample.
WWP = Wastewater storage pad sample.
DP = Decontamination Pad sample.

Notes:
(1) On-Site Upper 95% Confidence Interval of the Mean; Reference: EnviroChem Remedial Investigation Report (1983).
(2) Reference: Table 3-1 Exhibit A Consent Decree.
(3) EPA Method (SW846-8240A) soil concentration in (ug/kg).
(4) EPA Method (SW846-8270A) soil concentration in (ug/kg).
(5) EPA Method (SW846-8080) soil concentration in (ug/kg).
(6) Inorganics soil concentration in (mg/kg)

TABLE 2-1

ACCEPTABLE SOIL CONCENTRATIONS
ENVIROCHEM SUPERFUND SITE
ZIONSVILLE, INDIANA

Compound	Acceptable Soil Concentration (ug/kg)
Acetone	490
Chloroform	2,300
1,1-Dichloroethane	5.7
1,1-Dichloroethene	120
Ethylbenzene	234,000
Methylene Chloride	20
Methyl Ethyl Ketone	75
Methyl Isobutyl Ketone	8,900
Tetrachloroethene	130
Toluene	238,000
1,1,1-Trichloroethane	7,200
1,1,2-Trichloroethane	22
Trichloroethene	240
Total Xylenes	195,000

FIGURES

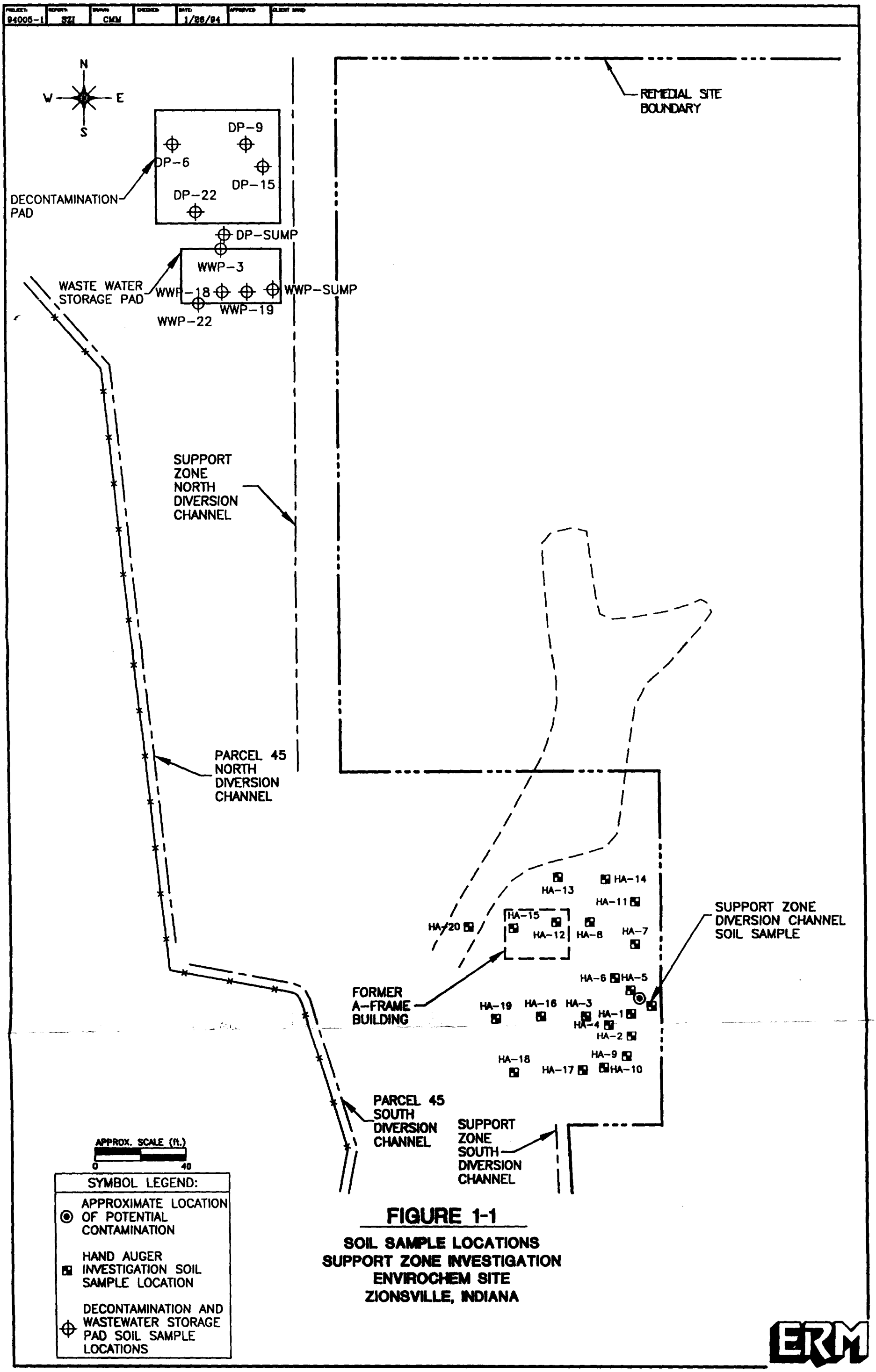
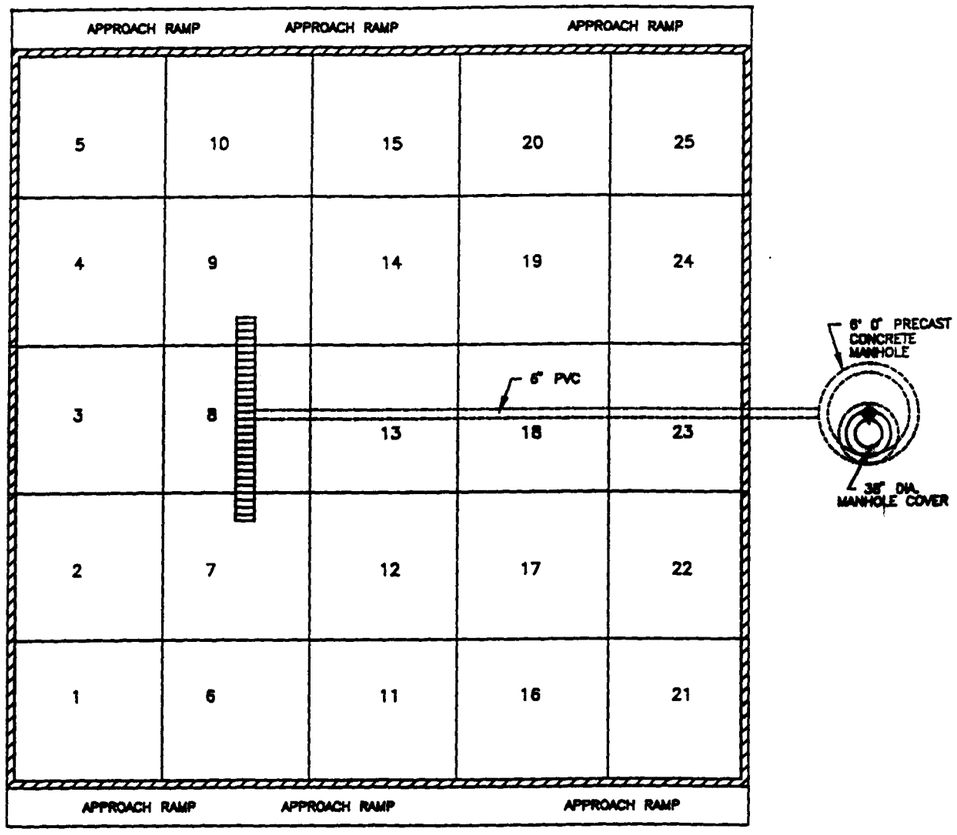
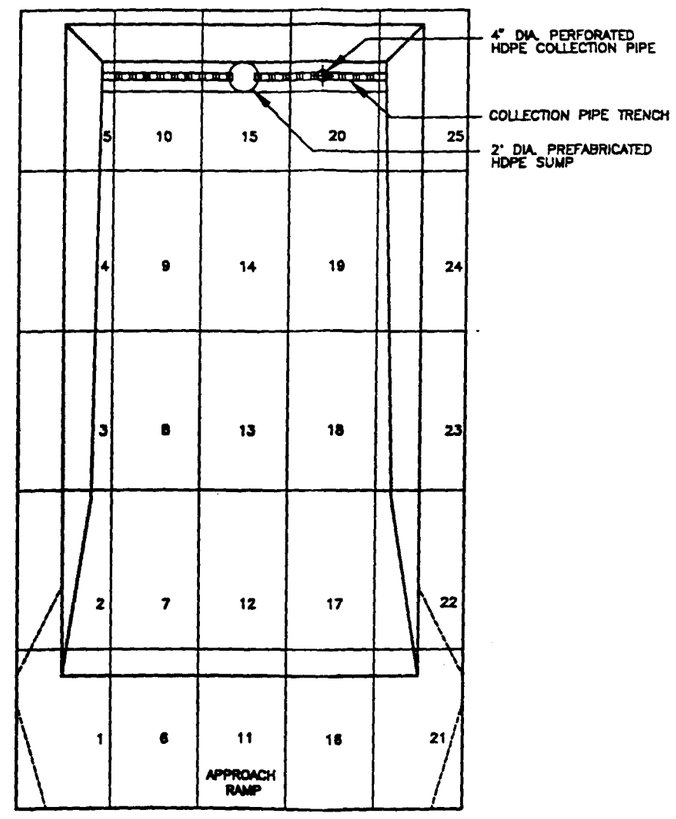


FIGURE 1-1

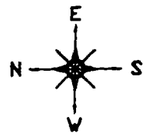
SOIL SAMPLE LOCATIONS
SUPPORT ZONE INVESTIGATION
ENVIROCHEM SITE
ZIONSVILLE, INDIANA

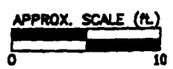


DECONTAMINATION PAD



WASTEWATER STORAGE PAD





SYMBOL LEGEND:	
⊕	SUMP SAMPLE LOCATION
5	GRID CELL

FIGURE 1-2

SAMPLING GRIDS ON PADS
DECONTAMINATION PAD AND WASTEWATER STORAGE PAD INVESTIGATION
ENVIRO-CHEM SITE
ZIONSVILLE, INDIANA

ERM

14006-0 | DRAWN | DESIGN | DRAWN FZKR | DESIGNED | DATE 01/28/94 | APPROVED | CLIENT NAME ENVIRO-CHEM SITE ZIONSVILLE, INDIANA

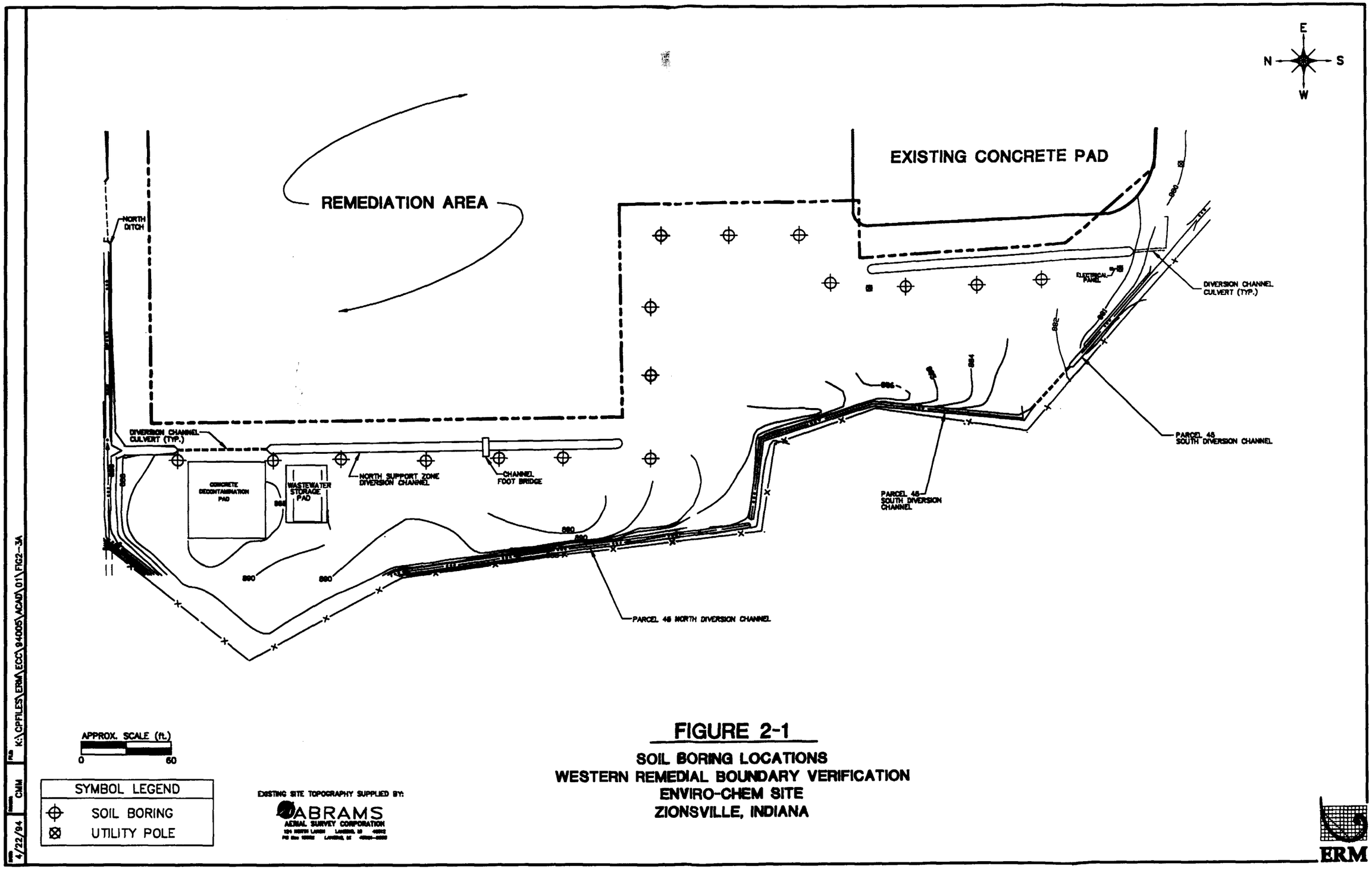
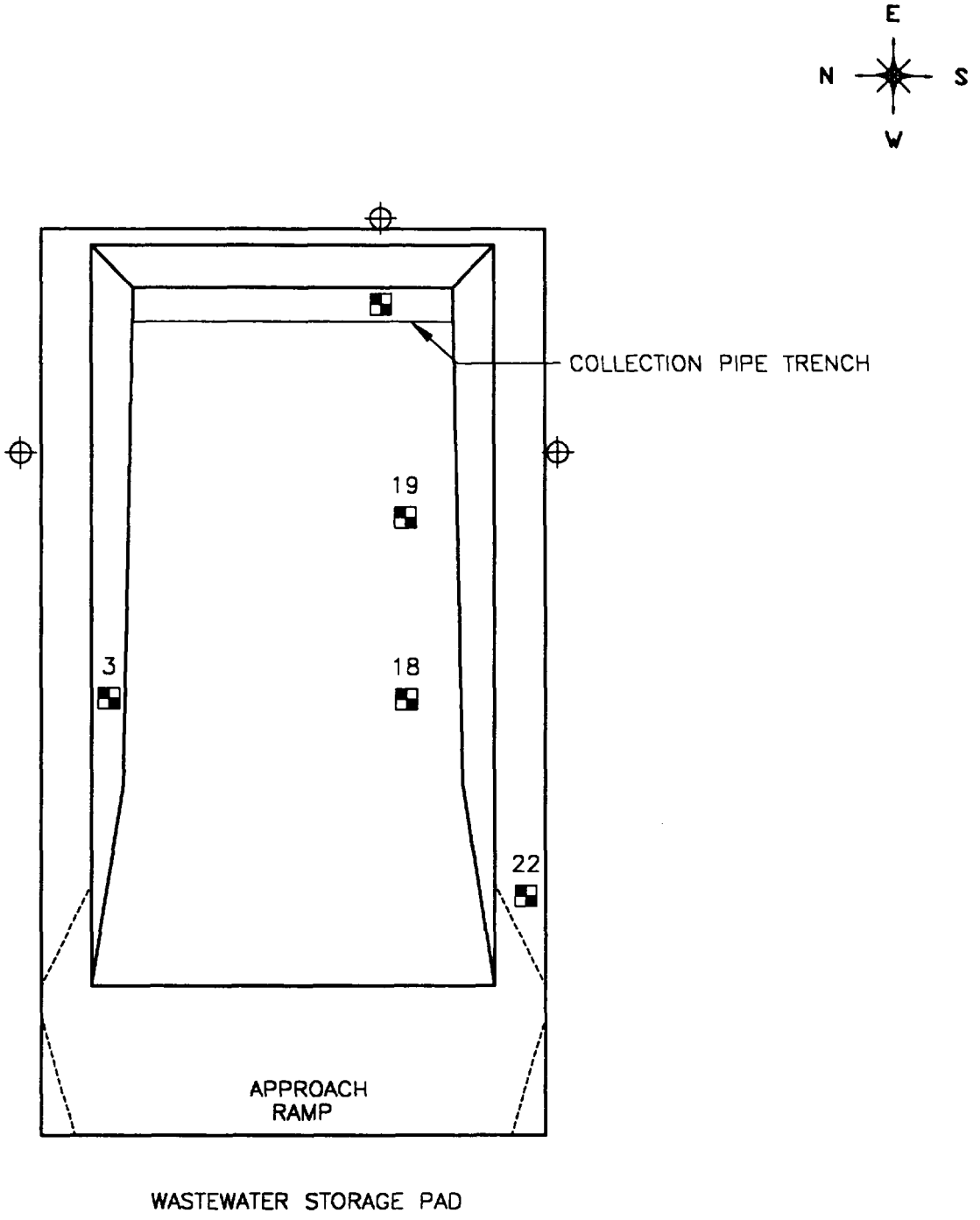


FIGURE 2-1

SOIL BORING LOCATIONS
WESTERN REMEDIAL BOUNDARY VERIFICATION
ENVIRO-CHEM SITE
ZIONSVILLE, INDIANA



APPROX. SCALE (ft.)
0 10

SYMBOL LEGEND
⊕ PROPOSED SOIL BORING/ SAMPLING LOCATION
■ PRE-CONSTRUCTION SAMPLE LOCATION

FIGURE 2-2

SOIL BORING/SAMPLING LOCATIONS
WASTEWATER STORAGE PAD
ENVIRO-CHEM SITE
ZIONSVILLE, INDIANA

ERM

PROJECT: 94005-1
REPORT:
DRAWN: CMM
CHECKED:
DATE: 4/22/94
APPROVED:
CLIENT NAME:
NAME: E:\CPFILES\ERM\ECC\94005\ACAD\01\FIG2-3.DWG DATE: MAR 28, 1994 TIME: 9:00 AM

APPENDIX A

CERTIFICATES OF ANALYSIS - HAND AUGER INVESTIGATION

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	14-OCT-93	2506	A293253
	Complete	PO Number	
	03-NOV-93	.....	
	Printed	Sampled	
	03-NOV-93	14-OCT-93 13:25	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

DESCRIPTION: SUPP. ZONE DIVERSION CHANNEL

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 26-OCT-93 12:13 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	100	ug/kg
ACROLEIN	BDL	250	ug/kg
ACRYLONITRILE	BDL	350	ug/kg
BENZENE	BDL	25	ug/kg
BROMODICHLOROMETHANE	BDL	25	ug/kg
BROMOFORM	BDL	25	ug/kg
BROMOMETHANE	BDL	50	ug/kg
CARBON DISULFIDE	BDL	25	ug/kg
CARBON TETRACHLORIDE	BDL	25	ug/kg
CHLOROBENZENE	BDL	25	ug/kg
CHLOROETHANE	BDL	50	ug/kg
CHLOROFORM	BDL	25	ug/kg
CHLOROMETHANE	BDL	50	ug/kg
DIBROMOCHLOROMETHANE	BDL	25	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	25	ug/kg
DICHLORODIFLUOROMETHANE	BDL	25	ug/kg
1,1-DICHLOROETHANE	BDL	25	ug/kg
1,2-DICHLOROETHANE	BDL	25	ug/kg
1,1-DICHLOROETHENE	BDL	25	ug/kg
1,2-DICHLOROPROPANE	BDL	25	ug/kg
ETHYLBENZENE	BDL	25	ug/kg
FLUOROTRICHLOROMETHANE	BDL	25	ug/kg
2-HEXANONE	BDL	50	ug/kg
METHYLENE CHLORIDE	42	25	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
STYRENE	BDL	25	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	25	ug/kg
TETRACHLOROETHENE	320	25	ug/kg
TETRAHYDROFURAN	BDL	120	ug/kg
TOLUENE	75	25	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	25	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	25	ug/kg
1,1,1-TRICHLOROETHANE	710	25	ug/kg
1,1,2-TRICHLOROETHANE	BDL	25	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A293253

Parameter	Result	Det. Limit	Units
TRICHLOROETHENE	73	25	ug/kg
VINYL ACETATE	BDL	50	ug/kg
VINYL CHLORIDE	BDL	50	ug/kg
XYLENE (TOTAL)	BDL	25	ug/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	95		% Rec
TOLUENE-D8	104		% Rec
BROMOFLUOROBENZENE	98		% Rec

1:5 DILUTION.

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 10936.

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CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

LIST OF COMPLETED TASKS

GC/MS CLP GC/MS CLP Completed 03-NOV-93

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	28-OCT-93	2506	A294793
	Complete	PO Number	
	08-NOV-93	.....	
	Printed	Sampled	
	09-NOV-93	19-OCT-93 16:30	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

DESCRIPTION: HA-3 (0.5-1.0')
LOCATION: ENVIROCHEM - SITE PREP & MATERIAL REMOVAL

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 01-NOV-93 11:05 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	8	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	20	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	74	5	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A294793

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	21	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	111		% Rec
TOLUENE-D8	98		% Rec
BROMOFLUOROBENZENE	103		% Rec

Sample reanalyzed with no improvement in internal standard areas.

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 13243.

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CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: GABusch

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	29-OCT-93	2506	A295096
	Complete	PO Number	
	11-NOV-93	9311001-RJA	
	Printed	Sampled	
	11-NOV-93	29-OCT-93 14:25	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

DESCRIPTION: HA-16 (1.5-2.0')

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 04-NOV-93 06:10 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	5	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	6	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	11	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A295096

Parameter	Result	Det. Limit	Units
TRICHLOROETHENE	7	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	94		% Rec
TOLUENE-D8	103		% Rec
BROMOFLUOROBENZENE	92		% Rec

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 14434.

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CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

LIST OF COMPLETED TASKS

GC/MS CLP	GC/MS CLP	Completed 11-NOV-93

APPENDIX B

CERTIFICATES OF ANALYSIS - DECONTAMINATION PAD AND WASTEWATER STORAGE PAD INVESTIGATIONS

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	21-OCT-93	2506	A293855
	Complete	PO Number	
	12-NOV-93	9311001-RJA	
	Printed	Sampled	
	12-NOV-93	18-OCT-93 12:50	

Report To

ROBERT J. AUTIO
QUALITY ENVIRONMENTAL MANAGEMENT
1640 STRICKLAND
MARTINSVILLE, IN 46151

Bill To

CHARLES JACKSON
QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555
ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: WWP-SUMP
DESCRIPTION: WASTEWATER STORAGE PAD

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 22-OCT-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	81	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 25-OCT-93 14:25 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	75	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	6	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	32	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	15	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	EST 290	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	7	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A293855

Parameter	Result	Det. Limit	Units
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	25	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	34	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	6	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	100	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	113		% Rec
TOLUENE-D8	108		% Rec
BROMOFLUOROBENZENE	95		% Rec

Dilution necessary due to high concentration of target compounds.

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 27-OCT-93 06:19 Instrument: GC/MS VOA Test: 0510.9.1

Parameter	Result	Det. Limit	Units
ACETONE	BDL	100	ug/kg
ACROLEIN	BDL	250	ug/kg
ACRYLONITRILE	BDL	350	ug/kg
BENZENE	BDL	25	ug/kg
BROMODICHLOROMETHANE	BDL	25	ug/kg
BROMOFORM	BDL	25	ug/kg
BROMOMETHANE	BDL	50	ug/kg
CARBON DISULFIDE	BDL	25	ug/kg
CARBON TETRACHLORIDE	BDL	25	ug/kg
CHLOROBENZENE	BDL	25	ug/kg
CHLOROETHANE	BDL	50	ug/kg
CHLOROFORM	BDL	25	ug/kg
CHLOROMETHANE	BDL	50	ug/kg
DIBROMOCHLOROMETHANE	BDL	25	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	25	ug/kg
DICHLORODIFLUOROMETHANE	BDL	25	ug/kg
1,1-DICHLOROETHANE	BDL	25	ug/kg
1,2-DICHLOROETHANE	BDL	25	ug/kg
1,1-DICHLOROETHENE	BDL	25	ug/kg
1,2-DICHLOROPROPANE	BDL	25	ug/kg
ETHYL BENZENE	330	25	ug/kg
TRICHLOROFLUOROMETHANE	BDL	25	ug/kg
2-HEXANONE	BDL	50	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	25	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
STYRENE	BDL	25	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	25	ug/kg
TETRACHLOROETHENE	BDL	25	ug/kg
TETRAHYDROFURAN	BDL	120	ug/kg
TOLUENE	BDL	25	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	25	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	25	ug/kg
1,1,1-TRICHLOROETHANE	BDL	25	ug/kg
1,1,2-TRICHLOROETHANE	BDL	25	ug/kg

Parameter	Result	Det. Limit	Units
TRICHLOROETHENE	BDL	25	ug/kg
VINYL ACETATE	BDL	50	ug/kg
VINYL CHLORIDE	BDL	50	ug/kg
XYLENES (O/M/P-XYLENE)	360	25	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	99		% Rec
TOLUENE-D8	97		% Rec
4-BROMOFLUOROBENZENE	101		% Rec

1:5 DILUTION.

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 25-OCT-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 26-OCT-93 23:34 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	EST 180	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	56		% Rec
PHENOL-D5	59		% Rec
NITROBENZENE-D5	67		% Rec
2-FLUOROBIPHENYL	71		% Rec
2,4,6-TRIBROMOPHENOL	57		% Rec
TERPHENYL-D14	71		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 29-OCT-93 Instrument: GC/ECD Test: 0305.t.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg

Parameter	Result	Det. Limit	Units
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	92.6		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 25-OCT-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	40.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	11.	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	9.0	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. CARDWELL Analysis Date: 25-OCT-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 05-NOV-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 08-NOV-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
ARSENIC	2.7	1.0	mg/kg

1:2 DILUTION

SELENIUM GFAA SW846-7740

Analyst: W. WATNESS Analysis Date: 05-NOV-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: J. WALLACE Analysis Date: 01-NOV-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 03-NOV-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value

Sample chain of custody number 14431.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Additional copies of this report sent to:
CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Sample Comments

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	21-OCT-93	2506	A293856
	Complete	PO Number	
	12-NOV-93	9311001-RJA	
	Printed	Sampled	
	12-NOV-93	21-OCT-93 13:40	

Report To

ROBERT J. AUTIO
QUALITY ENVIRONMENTAL MANAGEMENT
1640 STRICKLAND
MARTINSVILLE, IN 46151

Bill To

CHARLES JACKSON
QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555
ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: WWP-3
DESCRIPTION: WASTEWATER STORAGE PAD

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 22-OCT-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	89	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 03-NOV-93 07:09 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	11	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	16	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	73	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	32	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
SURROGATE RECOVERY			

DICHLOROETHANE-D4	102		% Rec
TOLUENE-D8	104		% Rec
BROMOFLUOROBENZENE	100		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 25-OCT-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 27-OCT-93 00:26 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	55		% Rec
PHENOL-D5	58		% Rec
NITROBENZENE-D5	74		% Rec
2-FLUOROBIPHENYL	72		% Rec
2,4,6-TRIBROMOPHENOL	49		% Rec
TERPHENYL-D14	84		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 29-OCT-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	79.2		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 25-OCT-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	40.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	8.9	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	8.8	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. CARDWELL Analysis Date: 25-OCT-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 05-NOV-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 08-NOV-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
ARSENIC	4.6	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: W. WATNESS Analysis Date: 05-NOV-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: J. WALLACE Analysis Date: 01-NOV-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 03-NOV-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 14431.

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RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	21-OCT-93	2506	A293858
	Complete	PO Number	
	12-NOV-93	9311001-RJA	
	Printed	Sampled	
	12-NOV-93	21-OCT-93 14:10	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: WWP-18
DESCRIPTION: WASTEWATER STORAGE PAD

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 22-OCT-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	86	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 03-NOV-93 04:40 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	7	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	BDL	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	27	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	7	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	98		% Rec
TOLUENE-D8	106		% Rec
BROMOFLUOROBENZENE	101		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 25-OCT-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 27-OCT-93 01:19 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			

2-FLUOROPHENOL	49		% Rec
PHENOL-D5	50		% Rec
NITROBENZENE-D5	67		% Rec
2-FLUOROBIPHENYL	62		% Rec
2,4,6-TRIBROMOPHENOL	38		% Rec
TERPHENYL-D14	68		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 29-OCT-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	81.6		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 25-OCT-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	46.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	9.7	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	12.	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. CARDWELL Analysis Date: 25-OCT-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 05-NOV-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 08-NOV-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
ARSENIC	4.4	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: W. WATNESS Analysis Date: 05-NOV-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: J. WALLACE Analysis Date: 01-NOV-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 03-NOV-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 14431.

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RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	21-OCT-93	2506	A293859
	Complete	PO Number	
	12-NOV-93	9311001-RJA	
	Printed	Sampled	
	12-NOV-93	21-OCT-93 14:35	

Report To

ROBERT J. AUTIO
QUALITY ENVIRONMENTAL MANAGEMENT
1640 STRICKLAND
MARTINSVILLE, IN 46151

Bill To

CHARLES JACKSON
QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555
ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: WWP-19
DESCRIPTION: WASTEWATER STORAGE PAD

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 22-OCT-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	81	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 03-NOV-93 05:29 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	65	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	8	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	10	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	28	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	10	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	103		% Rec
TOLUENE-D8	105		% Rec
BROMOFLUOROBENZENE	104		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 25-OCT-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 28-OCT-93 12:12 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	80		% Rec
PHENOL-D5	72		% Rec
NITROBENZENE-D5	66		% Rec
2-FLUOROBIPHENYL	69		% Rec
2,4,6-TRIBROMOPHENOL	64		% Rec
TERPHENYL-D14	74		% Rec

HERITAGE LABORATORIES, INC. Lab Sample ID: A293859

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 29-OCT-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	91		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 25-OCT-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	76.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	16.	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	12.	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. CARDWELL Analysis Date: 25-OCT-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 05-NOV-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 08-NOV-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
ARSENIC	5.8	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: W. WATNESS Analysis Date: 05-NOV-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: J. WALLACE Analysis Date: 01-NOV-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 03-NOV-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 14431.

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Additional copies of this report sent to:
CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	21-OCT-93	2506	A293860
	Complete	PO Number	
	18-NOV-93	9311001-RJA	
	Printed	Sampled	
	18-NOV-93	21-OCT-93 14:55	

Report To

ROBERT J. AUTIO
QUALITY ENVIRONMENTAL MANAGEMENT
1640 STRICKLAND
MARTINSVILLE, IN 46151

Bill To

CHARLES JACKSON
QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555
ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: WWP-22
DESCRIPTION: WASTEWATER STORAGE PAD

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 22-OCT-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	88	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 04-NOV-93 05:22 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	BDL	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg

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Parameter	Result	Det. Limit	Units
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	6	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	28	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	9	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
.			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	93		% Rec
TOLUENE-D8	106		% Rec
BROMOFLUOROBENZENE	103		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 25-OCT-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 27-OCT-93 03:04 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg

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Parameter	Result	Det. Limit	Units
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	56		% Rec
PHENOL-D5	57		% Rec
NITROBENZENE-D5	74		% Rec
2-FLUOROBIPHENYL	66		% Rec
2,4,6-TRIBROMOPHENOL	41		% Rec
TERPHENYL-D14	76		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 29-OCT-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	82.6		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 25-OCT-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	37.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M106.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	7.8	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	8.2	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 27-OCT-93 11:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. CARDWELL Analysis Date: 25-OCT-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 05-NOV-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 08-NOV-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
ARSENIC	4.8	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: W. WATNESS Analysis Date: 05-NOV-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: J. WALLACE Analysis Date: 01-NOV-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 03-NOV-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 14431.

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RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

LIST OF COMPLETED TASKS

GC/MS CLP	GC/MS CLP	Completed 12-NOV-93
GC CLP	GC CLP	Completed 04-NOV-93
MTO CLP	METALS CLP REPORT PACKAGE	Completed 10-NOV-93

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	21-OCT-93	2506	A293865
	Complete	PO Number	
	12-NOV-93	9311001-RJA	
	Printed	Sampled	
	18-NOV-93	21-OCT-93 15:25	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: EQUIP BLANK
DESCRIPTION: DI WATER

VOLATILE ORGANICS SW846-8240A

Analyst: R. SHAMP Analysis Date: 27-OCT-93 16:53 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5	ug/L
BROMODICHLOROMETHANE	BDL	5	ug/L
BROMOFORM	BDL	5	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5	ug/L
CARBON TETRACHLORIDE	BDL	5	ug/L
CHLOROBENZENE	BDL	5	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/L
DICHLORODIFLUOROMETHANE	BDL	5	ug/L
1,1-DICHLOROETHANE	BDL	5	ug/L
1,2-DICHLOROETHANE	BDL	5	ug/L
1,1-DICHLOROETHENE	BDL	5	ug/L
1,2-DICHLOROPROPANE	BDL	5	ug/L
ETHYL BENZENE	BDL	5	ug/L
TRICHLOROFLUOROMETHANE	BDL	5	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/L
TETRACHLOROETHENE	BDL	5	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5	ug/L
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/L
1,1,1-TRICHLOROETHANE	BDL	5	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	5	ug/L
TRICHLOROETHENE	BDL	5	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENES (O/M/P-XYLENE)	BDL	5	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	97		% Rec
TOLUENE-D8	100		% Rec
4-BROMOFLUOROBENZENE	98		% Rec

On this instrument, packed column has been replaced by capillary column with 8240 criteria.

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. FRANK Analysis Date: 26-OCT-93 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 27-OCT-93 15:15 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
TETRACHLOROBENZENES	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	56		% Rec
PHENOL-D5	30		% Rec
NITROBENZENE-D5	89		% Rec
2-FLUOROBIPHENYL	83		% Rec
2,4,6-TRIBROMOPHENOL	81		% Rec
TERPHENYL-D14	64		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. KEEZER Analysis Date: 22-OCT-93 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 23-OCT-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	103.2		Percent

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: E. MERRILL Analysis Date: 27-OCT-93 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 28-OCT-93 08:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.010	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 28-OCT-93 08:00 Instrument: ICP Test: M106.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 28-OCT-93 08:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

LEAD ICP SW846-6010A

Analyst: M. JAO Analysis Date: 28-OCT-93 08:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 28-OCT-93 08:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

GFAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-3020A

Analyst: C. LADD Analysis Date: 06-NOV-93 Test: P130.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 08-NOV-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-3020A P130.6.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

SELENIUM GFAA SW846-7740

Analyst: M. BAUER Analysis Date: 09-NOV-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-3020A P130.6.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: G. MAPP Analysis Date: 02-NOV-93 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 03-NOV-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 14431.

IDEM Drinking Water Certification Number C-49-01
This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Sample Comments

Additional copies of this report sent to:
CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	27-SEP-93	2506	A291170
	Complete	PO Number	
	20-OCT-93	10011993-001RJA	
	Printed	Sampled	
	20-OCT-93	27-SEP-93 14:55	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

DESCRIPTION: DP SUMP SOIL SAMPLE
LOCATION: ENVIROCHEM

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 28-SEP-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	90	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 01-OCT-93 13:53 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	13	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	BDL	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
TRICHLORO-TRIFLUOROETHANE	15	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	97		% Rec
TOLUENE-D8	106		% Rec
BROMOFLUOROBENZENE	98		% Rec

Sample reanalyzed with no improvement in internal standard areas.

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 04-OCT-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. BARRETT Analysis Date: 05-OCT-93 17:29 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	49		% Rec
PHENOL-D5	56		% Rec
NITROBENZENE-D5	53		% Rec
2-FLUOROBIPHENYL	57		% Rec
2,4,6-TRIBROMOPHENOL	38		% Rec
TERPHENYL-D14	62		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 14-OCT-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	73.6		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 05-OCT-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-OCT-93 17:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	27.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-OCT-93 17:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg

HERITAGE LABORATORIES, INC. Lab Sample ID: A291170

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-OCT-93 17:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	7.5	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-OCT-93 17:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	6.5	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-OCT-93 17:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. CARDWELL Analysis Date: 11-OCT-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: B. HAHN Analysis Date: 14-OCT-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: W. WATNESS Analysis Date: 18-OCT-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
ARSENIC	3.7	1.5	mg/kg

1:3 DILUTION

SELENIUM GFAA SW846-7740

Analyst: M. BAUER Analysis Date: 14-OCT-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.050	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 11-OCT-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 12-OCT-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg

 (continued on next page)

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 10935.

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Additional copies of this report sent to:
CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

LIST OF COMPLETED TASKS

GC/MS CLP	GC/MS CLP	Completed 14-OCT-93
GC CLP	GC CLP	Completed 19-OCT-93
MTO CLP	METALS CLP REPORT PACKAGE	Completed 19-OCT-93
GEN CLP	GENERAL CHEMISTRY CLP	Completed 04-OCT-93

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	08-SEP-93	2506	A289443
	Complete	PO Number	
	07-OCT-93	10011993-001RJA	
	Printed	Sampled	
	08-OCT-93	08-SEP-93 14:25	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: ECC-DP-06
DESCRIPTION: DECON PAD SOIL
LOCATION: ENVIROCHEM

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 10-SEP-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	91	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 21-SEP-93 22:39 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	10	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg

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HERITAGE LABORATORIES, INC. Lab Sample ID: A289443

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	BDL	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	30	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	28	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	99		% Rec
TOLUENE-D8	105		% Rec
BROMOFLUOROBENZENE	99		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: W. WATNESS Analysis Date: 16-SEP-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	20		mL

NOTE: SEMI-VOLATILES PREP MEASURED WITH INITIAL WEIGHT AT 30.0 GRAMS AND FINAL VOLUME AT 1.0 MILLILITER.

GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: J. KOCH Analysis Date: 21-SEP-93 Test: P236.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 20-SEP-93 09:45 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg

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HERITAGE LABORATORIES, INC. Lab Sample ID: A289443

Parameter	Result	Det. Limit	Units
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	26		% Rec
PHENOL-D5	36		% Rec

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A289443

Parameter	Result	Det. Limit	Units
NITROBENZENE-D5	43		% Rec
2-FLUOROBIPHENYL	37		% Rec
2,4,6-TRIBROMOPHENOL	9		% Rec
TERPHENYL-D14	44		% Rec
.			
ALSO DETECTED			

UNKNOWN	EST 130 RT=4.81		ug/kg

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 22-SEP-93 17:27 Instrument: GC/MS SVOA Test: 0505.3.1

Prep: GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg

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Parameter	Result	Det. Limit	Units
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.	BDL		
SURROGATE RECOVERY	BDL		
----------	BDL		
2-FLUOROPHENOL	46		% Rec
PHENOL-D5	48		% Rec
NITROBENZENE-D5	47		% Rec
2-FLUOROBIPHENYL	48		% Rec
2,4,6-TRIBROMOPHENOL	18		% Rec
TERPHENYL-D14	45		% Rec
.			
ALSO DETECTED			

UNKNOWN	EST 210 RT=4.78		ug/kg

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 17-SEP-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	76		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	33.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	1.6	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	7.0	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	5.8	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A289443

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 30-SEP-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: A. ROBERTSON Analysis Date: 23-SEP-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.4	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: A. ROBERTSON Analysis Date: 01-OCT-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	1.0	mg/kg

1:2 dilution

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 20-SEP-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 21-SEP-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

Sample Comments

BDL Below Detection Limit
EST Estimated Value
RT Retention Time

Sample chain of custody number 10934.

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CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	08-SEP-93	2506	A289445
	Complete	PO Number	
	07-OCT-93	10011993-001RJA	
	Printed	Sampled	
	08-OCT-93	08-SEP-93 15:05	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: ECC-DP-09
DESCRIPTION: DECON PAD SOIL
LOCATION: ENVIROCHEM

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 10-SEP-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	83	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 21-SEP-93 23:27 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	10	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	5	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	14	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A289445

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	10	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	13	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	35	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	79	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	16	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	106		% Rec
TOLUENE-D8	107		% Rec
BROMOFLUOROBENZENE	95		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: W. WATNESS Analysis Date: 16-SEP-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	20		mL

NOTE: SEMI-VOLATILES PREP MEASURED WITH INITIAL WEIGHT OF 30.0 GRAMS AND FINAL VOLUME OF 1.0 MILLILITER.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 20-SEP-93 10:43 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A289445

Parameter	Result	Det. Limit	Units
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	72		% Rec
PHENOL-D5	75		% Rec
NITROBENZENE-D5	76		% Rec
2-FLUOROBIPHENYL	64		% Rec
2,4,6-TRIBROMOPHENOL	55		% Rec
TERPHENYL-D14	78		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 17-SEP-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	88.8		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	79.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	2.8	0.50	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	14.	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	12.	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 30-SEP-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: A. ROBERTSON Analysis Date: 23-SEP-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	4.2	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: A. ROBERTSON Analysis Date: 01-OCT-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 20-SEP-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 21-SEP-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 10934.

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RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	08-SEP-93	2506	A289446
	Complete	PO Number	
	07-OCT-93	10011993-001RJA	
	Printed	Sampled	
	08-OCT-93	08-SEP-93 15:35	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: ECC-DP-15
DESCRIPTION: DECON PAD SOIL
LOCATION: ENVIROCHEM

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 10-SEP-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	91	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 22-SEP-93 07:07 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	7	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	10	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg

 (continued on next page)

HERITAGE LABORATORIES, INC. Lab Sample ID: A289446

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	10	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	12	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	32	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	93	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	9	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	95		% Rec
TOLUENE-D8	106		% Rec
BROMOFLUOROBENZENE	98		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: W. WATNESS Analysis Date: 16-SEP-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	20		mL

NOTE: SEMI-VOLATILES PREP MEASURED WITH AN INITIAL WEIGHT OF 30.0 GRAMS AND FINAL VOLUME OF 1.0 MILLILITER.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-SEP-93 17:29 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg

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Parameter	Result	Det. Limit	Units
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	56		% Rec
PHENOL-D5	62		% Rec
NITROBENZENE-D5	70		% Rec
2-FLUOROBIPHENYL	61		% Rec
2,4,6-TRIBROMOPHENOL	19		% Rec
TERPHENYL-D14	65		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 17-SEP-93 Instrument: GC/ECD Test: Q305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	80.4		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	37.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	1.9	0.50	mg/kg

HERITAGE LABORATORIES, INC. Lab Sample ID: A289446

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	8.2	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	5.7	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 30-SEP-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: A. ROBERTSON Analysis Date: 23-SEP-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.6	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: A. ROBERTSON Analysis Date: 01-OCT-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 20-SEP-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 21-SEP-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 10934.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Additional copies of this report sent to:
CHARLES JACKSON, QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	08-SEP-93	2506	A289448
	Complete	PO Number	
	07-OCT-93	10011993-001RJA	
	Printed	Sampled	
	08-OCT-93	08-SEP-93 15:45	

Report To

ROBERT J. AUTIO
QUALITY ENVIRONMENTAL MANAGEMENT
1640 STRICKLAND
MARTINSVILLE, IN 46151

Bill To

CHARLES JACKSON
QUALITY ENVIRONMENTAL MANAGEMENT
RR 1, BOX 555
ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: ECC-DP-15 (DUP)
DESCRIPTION: DECON PAD SOIL
LOCATION: ENVIROCHEM

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 10-SEP-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	92	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 22-SEP-93 00:15 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	9	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	13	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg

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HERITAGE LABORATORIES, INC. Lab Sample ID: A289448

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	11	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	11	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	60	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	130	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	BDL	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	106		% Rec
TOLUENE-D8	106		% Rec
BROMOFLUOROBENZENE	100		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: W. WATNESS Analysis Date: 16-SEP-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	20		mL

NOTE: SEMI-VOLATILES PREP MEASURED WITH AN INITIAL WEIGHT OF 30.0 GRAMS AND FINAL VOLUME OF 1.0 MILLILITER.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 20-SEP-93 11:38 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg

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HERITAGE LABORATORIES, INC. Lab Sample ID: A289448

Parameter	Result	Det. Limit	Units
DIETHYLPHTHALATE	BDL	330	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
FLUORENE	BDL	330	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
ISOPHORONE	BDL	330	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
NAPHTHALENE	BDL	330	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
NITROBENZENE	BDL	330	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
PHENANTHRENE	BDL	330	ug/kg
2-PICOLINE	BDL	1600	ug/kg
PYRENE	BDL	330	ug/kg
PYRIDINE	BDL	1600	ug/kg
TETRACHLOROBENZENES	BDL	330	ug/kg
TOLUENEDIAMINE	BDL	1600	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
BENZOIC ACID	BDL	1600	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
PHENOL	BDL	330	ug/kg
TETRACHLOROPHENOL	BDL	330	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	47		% Rec
PHENOL-D5	52		% Rec
NITROBENZENE-D5	54		% Rec
2-FLUOROBIPHENYL	47		% Rec
2,4,6-TRIBROMOPHENOL	25		% Rec
TERPHENYL-D14	59		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 17-SEP-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	70.2		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	35.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	1.9	0.50	mg/kg

HERITAGE LABORATORIES, INC. Lab Sample ID: A289448

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	7.7	1.0	mg/kg

LEAD ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M116.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	6.9	5.0	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P130.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 30-SEP-93 Test: P130.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ARSENIC GFAA SW846-7060

Analyst: A. ROBERTSON Analysis Date: 23-SEP-93 Instrument: GFAA Test: M103.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.8	2.0	mg/kg

1:4 DILUTION

SELENIUM GFAA SW846-7740

Analyst: A. ROBERTSON Analysis Date: 01-OCT-93 Instrument: GFAA Test: M128.2.0

Prep: GFAA ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P130.7.1

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 20-SEP-93 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 21-SEP-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 10934.

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RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE LABORATORIES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	08-SEP-93	2506	A289459
	Complete	PO Number	
	07-OCT-93	10011993-001RJA	
	Printed	Sampled	
	08-OCT-93	08-SEP-93 10:10	

Report To	Bill To
ROBERT J. AUTIO QUALITY ENVIRONMENTAL MANAGEMENT 1640 STRICKLAND MARTINSVILLE, IN 46151	CHARLES JACKSON QUALITY ENVIRONMENTAL MANAGEMENT RR 1, BOX 555 ROCKVILLE, IN 47872

Sample Description

SAMPLE ID: ECC-DP-22
DESCRIPTION: DECON PAD SOIL
LOCATION: ENVIROCHEM

TOTAL SOLIDS EPA 160.3

Analyst: B. PRIDEMORE Analysis Date: 10-SEP-93 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	88	0.001	Percent

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: G. WILSON Analysis Date: 22-SEP-93 09:32 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
ACROLEIN	BDL	50	ug/kg
ACRYLONITRILE	BDL	70	ug/kg
BENZENE	BDL	5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
BROMOFORM	BDL	5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
CHLOROFORM	BDL	5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DICHLORODIFLUOROMETHANE	BDL	5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
ETHYLBENZENE	BDL	5	ug/kg
FLUOROTRICHLOROMETHANE	BDL	5	ug/kg
2-HEXANONE	BDL	10	ug/kg
METHYLENE CHLORIDE	8	5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
STYRENE	BDL	5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5	ug/kg
TETRAHYDROFURAN	BDL	25	ug/kg
TOLUENE	7	5	ug/kg
1,2-DICHLOROETHENE (TOTAL)	BDL	5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
1,1,1-TRICHLOROETHANE	10	5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
TRICHLOROETHENE	49	5	ug/kg
VINYL ACETATE	BDL	10	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
XYLENE (TOTAL)	10	5	ug/kg
SURROGATE RECOVERY			
DICHLOROETHANE-D4	96		% Rec
TOLUENE-D8	105		% Rec
BROMOFLUOROBENZENE	94		% Rec

GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: W. WATNESS Analysis Date: 16-SEP-93 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	20		mL

NOTE: SEMI-VOLATILES PREP MEASURED WITH INITIAL WEIGHT OF 30.0 GRAMS AND FINAL VOLUME OF 1.0 MILLILITER.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 20-SEP-93 12:55 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
ANTHRACENE	BDL	330	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
BENZYL ALCOHOL	BDL	330	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
CARBAZOLE	BDL	330	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
CHRYSENE	BDL	330	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg

ERITAGE LABORATORIES, INC. Lab Sample ID: A289459

Parameter	Result	Det. Limit	Units
DIETHYLPHTHALATE	BDL	330	ug/kg
IMETHYLPHTHALATE	BDL	330	ug/kg
I-N-BUTYLPHTHALATE	BDL	330	ug/kg
DINITROBENZENES	BDL	1600	ug/kg
,4-DINITROTOLUENE	BDL	330	ug/kg
,6-DINITROTOLUENE	BDL	330	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
FLUORANTHENE	BDL	330	ug/kg
LUORENE	BDL	330	ug/kg
EXACHLOROBENZENE	BDL	330	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
EXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
EXACHLOROETHANE	BDL	330	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
SOPHORONE	BDL	330	ug/kg
METHYLNAPHTHALENE	BDL	330	ug/kg
APHTHALENE	BDL	330	ug/kg
-NITROANILINE	BDL	1600	ug/kg
NITROANILINE	BDL	1600	ug/kg
NITROANILINE	BDL	1600	ug/kg
ITROBENZENE	BDL	330	ug/kg
NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
ENANTHRENE	BDL	330	ug/kg
-PICOLINE	BDL	1600	ug/kg
RENE	BDL	330	ug/kg
RIDINE	BDL	1600	ug/kg
ETRACHLOROBENZENES	BDL	330	ug/kg
UENEDIAMINE	BDL	1600	ug/kg
,4-TRICHLOROBENZENE	BDL	330	ug/kg
ENZOIC ACID	BDL	1600	ug/kg
-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
HLOROPHENOL	BDL	330	ug/kg
-DICHLOROPHENOL	BDL	330	ug/kg
,4-DIMETHYLPHENOL	BDL	330	ug/kg
-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
-DINITROPHENOL	BDL	1600	ug/kg
METHYLPHENOL	BDL	330	ug/kg
ETHYLPHENOL	BDL	330	ug/kg
ITROPHENOL	BDL	330	ug/kg
ITROPHENOL	BDL	1600	ug/kg
NTACHLOROPHENOL	BDL	1600	ug/kg
OL	BDL	330	ug/kg
ACHLOROPHENOL	BDL	330	ug/kg
4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
6-TRICHLOROPHENOL	BDL	330	ug/kg
RROGATE RECOVERY			
UOROPHENOL	69		% Rec
OL-D5	75		% Rec
TROBENZENE-D5	77		% Rec
JOROBIPHENYL	64		% Rec
5-TRIBROMOPHENOL	55		% Rec
PHENYL-D14	66		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 17-SEP-93 Instrument: GC/ECD Test: 0305.1.0

Prep: GC & GC/MS SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.008	mg/kg
BETA-BHC	BDL	0.008	mg/kg
DELTA-BHC	BDL	0.008	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.008	mg/kg
HEPTACHLOR	BDL	0.008	mg/kg
ALDRIN	BDL	0.008	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.008	mg/kg
ENDOSULFAN I	BDL	0.008	mg/kg
DIELDRIN	BDL	0.016	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
ENDRIN	BDL	0.016	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
METHOXYCHLOR	BDL	0.08	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
ALPHA-CHLORDANE	BDL	0.08	mg/kg
GAMMA-CHLORDANE	BDL	0.08	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
PCB AROCHLOR 1016	BDL	0.08	mg/kg
PCB AROCHLOR 1221	BDL	0.08	mg/kg
PCB AROCHLOR 1232	BDL	0.08	mg/kg
PCB AROCHLOR 1242	BDL	0.08	mg/kg
PCB AROCHLOR 1248	BDL	0.08	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DECACHLOROBIPHENYL (DCB)	89.8		Percent

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. SNYDER Analysis Date: 14-SEP-93 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

BARIUM ICP SW846-6010A

Analyst: A. WILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	54.	1.0	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. WILSCHER Analysis Date: 14-SEP-93 17:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	2.2	0.50	mg/kg

HERITAGE LABORATORIES, INC. Lab Sample ID: A289459

MERCURY CVAA SW846-7471(MOD)

Analyst: G. MAPP Analysis Date: 21-SEP-93 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.13	mg/kg

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 10934.

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RR 1, BOX 555, ROCKVILLE, IN 47872

Quality Assurance Officer: _____

APPENDIX C

SAMPLE CHAIN OF CUSTODY FORM

ERM

ERM Environmental Resources Management

SAMPLE CHAIN OF CUSTODY

W.O.No.:	Project Name:
Sampler:	

ERM Sample Number	Date	Time	COMP	GRAB	Station Location	Number of Containers						Remarks

Sample Relinquished by:	Date	Time	Sample Received by:	Date	Time	Reason for Transfer

COPIES: White & Yellow copies accompany sample shipment to laboratory. Yellow copy retained by laboratory. White copy to be returned to ERM for files. Pink copy retained by sampler. Gold copy extra copy as needed.