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CAPE ROMANZOF LRRS
ALASKA

ADMINISTRATIVE RECORD
COVER SHEET

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United States Air Force
611th Air Support Group
611th Civil Engineer Squadron

Elmendorf AFB, Alaska

FINAL

Site Investigation and Closure Monitoring
Landfill 2 (LF03)
Cape Romanzof LRRS, Alaska

August, 1999

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1.0 INTRODUCTION

1.1 Project Objectives

The objective of this investigation was to obtain soil and water samples at Landfill 2 (LF03) to monitor the potential leaching of contaminants from the site before the landfill closure, and to assess the extent of contaminant migration from the landfill. This portion of the project involved resampling at nine sites that are shown in Figure 3, south of the Main Access Road which runs between the airfield and the main camp.

In addition, significant effort was undertaken to perform a physical survey of the capped PCB area shown in Figure 3 as landfill. Elevations and coordinates were run and a final as-built map prepared. Contemporaneously, the physical condition of the cap was studied to locate visible rips, tears, or missing portions. Recommendations for linered cap maintenance are made herein, and 30 soil samples were taken to permit the development of a closely contoured PCB isopleth map, particularly on the west side of the landfill, where high concentrations of Arochlor have been previously found.

1.2 Project Scope

The SOW for this project consists of further acquisition of data for monitoring the extent of contamination remaining at the Landfill 2 (LF03) site as a part of a long term monitoring (LTM) project. This investigation herein evaluates the presence and extent of contamination in sediment, soil, surface water, and groundwater, as a result of environmental sample analysis whose collection took place in September and October 1998.

Documentation associated with this project included a Work Plan, and a Site Safety and Health Plan (SSHP). The Work Plan included a Field Sampling Plan (FSP) (sections 2 and 3), a Quality Assurance Project Plan (QAPP) (section 4), and a health and safety plan (section 5). The FSP described the general site and SOW, and discussed project organization, field operations, environmental sampling, field measurements, and documentation. The QAPP detailed the quality assurance/quality control (QA/QC) procedures to be used so that technical data generated during the investigation would be accurate, precise, complete, and representative of actual field conditions. The health and safety plan documented good working practices.

2.0 PROJECT DESCRIPTION

2.1 Background

Cape Romanzof is in the Yukon Delta Wildlife Refuge, approximately 540 miles west of Anchorage on a 4,900-acre peninsula that extends into the Bering Sea (Figure 1) Operations at Cape Romanzof began in 1953. It was one of the 10 original Aircraft Control and Warning sites in the Alaska Air Defense System Emerging technologies during the subsequent 30 years allowed for several facility renovations that resulted in the station becoming a Minimally Attended

Radar Site. Six station personnel presently operate and maintain the site (U.S. Air Force [USAF] 611 CES/CEOR, 1995).

Various methods of waste management have been used at Cape Romanzof Industrial wastes were applied to roads until 1978. Since then, these wastes have been accumulated and barged to off-base disposal locations. Other wastes have been disposed of in landfills, dumps, hardfills, and incinerators. Many of the potential contamination source areas at Cape Romanzof are from spills and leaks of diesel fuel and motor gasoline, either from drums in landfills or from petroleum, oil and lubricant tanks or pipelines (Woodward-Clyde Consultants [WCC], 1992)

2.2 Site History

The Landfill 2 (LF03) investigation site is south of the access road between Cape Romonzof's Lower (main)Camp and the runway (Figure 2). The landfill covers approximately 43,800 square feet (about 1 acre) and is on a slope that descends to a lower plateau. The landfill received garbage, rubbish, wood, metal, plastic, construction and demolition debris, shop wastes, and incinerator ash, and was operated until the mid-1970s (WCC, 1992). The location of this landfill and previous sample collection points are shown in Figure 3.

During site investigations conducted in 1989 and 1990 by WCC, a large amount of exposed metal, wood, and plastic debris was visible at the landfill. Areas of sheen-covered landfill effluent and stained soil were observed. An engineered drainage pathway with flowing surface water was observed along the north side of the access road and two drainage pathways containing active surface-water flow were observed adjacent to the east toe of the landfill. Several active seeps were observed on the landfill surface. Surface flow from these seeps extended for up to 100 feet across the surface of the landfill before reentering the landfill material The water table was encountered at 2 to 3 feet below the bottom of the landfill (WCC, 1992). During the 1989 WCC site investigation, four 4-inch groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed and sampled by WCC. Groundwater, surface water, sediment, and soil were sampled and analyzed for total petroleum hydrocarbons (TPH); metals, organochlorine pesticides and polychlorinated biphenyl's (PCBs); benzene, toluene, ethylbenzene, and xylenes (BTEX); and semivolatile organic compounds (SVOCs). Contamination consisted principally of TPH in soil and sediments, and PCBs and TPH in surface water at the perimeter of the landfill TPH in the sediment samples ranged from nondetect to 3,000 milligrams per kilogram (mg/kg) TPH was detected in one soil sample at 100,000 mg/kg. PCBs were detected in one surface-water sample collected west of the southwest corner of the landfill at a concentration of 2.7 micrograms per liter (µg/L) During the 1990 WCC site investigation, MW-1, MW-2, and MW-4 were resampled and TPH was detected in Wells MW-1 and MW-2.

Based on the results of the Landfill 2 (LF03) investigation, WCC concluded the following.

Surface water downgradient of Landfill 2 (LF03) was contaminated with petroleum products as measured by TPH (EPA 418 1) and also PCBs.

The volume of fill (soil and debris) was approximately 11,530 cubic yards

Contaminated soil contained within an area of approximately 49,900 square feet required remedial action

During June through September 1993, 11 Civil Engineering Operations Squadron (now known as 611 CES) collected the debris from 200 feet around the perimeter of the landfill and placed it in the landfill. Approximately 500 cubic yards of fill was placed on the south section of the landfill to cover the debris. The stream parallel to the eastern toe of the landfill was diverted 20 feet away from its original drainage (USAF 611 CES/CEOR, 1995).

Based on the WCC investigation recommendations, the landfill surface debris was compacted, and the landfill was capped in June through September 1994, with an impermeable hypalon liner overlain by geotextile fabric, sandwiched between layers of sand and pit-run material (USAF 611 CES/CEOR, 1995)

Also, additional analyses performed by Harding and Lawson in 1997 determined surface water concentrations of 0.1 – 0.2 PPB Arochlor 1260 offsite of the eastern edge of the landfill, as well as sediment Arochlor values of several hundreds of ppm offsite of the western edge of the capped landfill, with concomitant high surface water Arochlor 1260 values (55 ppb) here.

2.3 Environmental Setting

Cape Romanzof is in the physiographic region known as the Yukon-Kuskokwim Coastal Lowland, a marshy, lake-dotted deltaic plain that consists of coastal deposits of interlayered alluvial and marine sediments.

Ground-surface elevations at Cape Romanzof range from zero feet mean sea level (MSL) at the shoreline of the Bering Sea to approximately 2,300 feet MSL at the Upper Camp

The geology of the Cape Romanzof Upper Camp consists of sand, gravel, and boulders overlying granitic bedrock of the Towak Mountain. At the site of the Lower Camp, thin to moderately thick talus (coarse-grained materials) and alluvial sequences have been transported downslope into the steeply sloping stream valley of Fowler (Nilumat) Creek and its tributaries. The mixed talus and alluvial materials consist of large granitic boulders, rock fragments (probably cobble-sized), sand, and minor amounts of silt and clay. The talus layer is between 57 and 74 feet thick in local water wells, and is underlain by weathered bedrock. Granitic bedrock underlies the unconsolidated deposits (WCC, 1992).

Cape Romanzof is in a section of western coastal Alaska where thin to moderately thick (to 600 feet thick) permafrost zones may occur in predominately fine-grained sediments (Ferrians, 1965) Permafrost has not been observed in the Cape Romanzof area (USAF 611 CES/CEOR, 1995)

The major surface-water feature at Cape Romanzof is Fowler (Nilumat) Creek, which drains into Kokechik Bay. Nilumat Creek has a watershed area of approximately 8.5 square miles. Active springs exist northeast of Landfill 2 (LF03), indicating a shallow water table with a hydrostatic head (WCC, 1992).

Cape Romanzof lies in the maritime climatic zone Average summer temperatures range from 39 to 53 degrees Fahrenheit (°F), and winter temperatures range from 5 to 20°F The average annual precipitation is 25 inches (Arctic Environmental Information and Data Center [AEIDC], 1989)

Undisturbed vegetation consists of alpine/barren ground communities including mountain avens, lichens, low-growing herbs, and grasses

2.4 Scope of Work

Activities specific to the planned fieldwork are identified in the SOW They consist of the following tasks:

- Sampling monitoring wells
- PCB capped area monitoring
- Sampling surface water and sediment

Handling investigation-derived waste

Sample Monitoring Wells

The 611 CES/CEVO tested existing groundwater monitoring wells to provide data for site characterization and to aid in determining future sampling requirements. All anomalous, extraordinary, or unusual analytical data, including that taken from past studies, are presented in Tables 9 and 10 in the Appendix for the specific purpose of showing if any significant changes have occurred over time.

Included in the work plan is an evaluation and Long Term Monitoring (LTM) of the capped area over Landfill 2 (LF 03) specifically planned to:

Create a baseline (as-built) physical survey of the landfill cap to determine the stability of the structure in terms of erosion and aging, which will enable future monitoring to be meaningful The existing cap was scrutinized on site for stability and weathering, as well as to aid in determination as to requirements for additional cap placement Field screening of soils and sediments was directed toward this effort

Delineate the extent of PCB contamination in surface and subsurface (1-2' depth), soil, sediment, and surface water for mapping and sampling purposes and to determine the extent of contamination and/or required sediment or soil removal. Upgradient samples were collected to establish a background to also help delineate areal extent of contamination plumes This data will

be used for the execution of the FY 99 PCB soil/sediment IRA as a part of Operation Clean Sweep.

Determine if the off-site PCBs are either migrating due to weathering or are stable In Situ, and if there is any likelihood of continued PCB movement by erosion or leaching. Past and current data will be used to study PCB migration.

Physical survey requires the services of a transitman and a rodman, and was able to be completed in less than two days. In addition, a soil/sediment sampling grid was prepared by using the procedure developed for the EPA by Kelso and Cox (1986), and these sampling sites were surveyed in.

Delineation of limits of PCB contamination was undertaken by the collection and analysis of some 50 soil samples at grid – derived surveyed locations. Field methodology using a field chloride detector was undertaken to ensure that the soil sampling is sufficiently complete to locate any PCB plume that are to be found at or near the landfill; this data is included as a part of the LTM plan to determine stability or migration of PCBs found on the west side of this area

PCB mapping was further accomplished after field work was completed using physical survey and laboratory analytical data.

Sample Surface Water and Sediment

611 CES/CEVO collected three surface-water and three sediment samples from streams, seeps, and drainage pathways, where surface water drains offsite. Three duplicate samples were also collected as a means of determining sample precision. These duplicates are identified in Table 9 as consisting of one duplicate each of soil, sediment, and surface water. Surface-water and sediment sample locations are shown on Figure 3.

Specifically, the sample locations designated in Figure 3 were analyzed as follows

ANALYTE	METHOD
Diesel Range Organics	AK 102
Gasoline Range Organics	AK 101
ICP Metals Screen	EPA 3050/6010
Organochloride Pests & PCB	EPA 8081/8082
Volatile Organic Compounds	EPA 8260
Semivolatile Organic Compounds	EPA 8270

3.0 ENVIRONMENTAL SAMPLING

The Landfill 2 (LF03) investigation focused on existing and potential contamination of soil, groundwater, surface water, and sediment resulting from past practices of waste disposal Previous investigations indicated the presence of petroleum hydrocarbons in soil, groundwater, surface water, and sediments; and of PCBs in surface water and in soil/sediment

The sampling program conducted at the Landfill 2 (LF03) area is detailed in the following sections. Sampling rationale, chemical analyses, and quantities of investigation samples collected from subsurface soil, groundwater, sediment, and surface water are summarized on Table 1

The goals for soil sampling are to·

•Collect samples representative of field conditions.

•Properly identify, preserve, handle, store, and transport samples to maintain their integrity

3.1 Sampling Strategies

The media that was sampled included (shallow) subsurface soil, groundwater, surface water, and sediment During the time period that soil and sediment samples were being collected, field screening was completed on soil samples derived from the Kelso and Cox net, to ensure that the PCB plume was captured on the sampling map which was finalized after return from the field

The sampling strategy for the investigation at Landfill 2 (LF03) included:

- Collection of subsurface-soil samples in areas of known and suspected contamination;
- Evaluation of physical and chemical properties of subsurface soil;
- Collection of groundwater samples to assess areas of contaminant migration;
- Collection of sediment and surface-water samples from the streams, seeps, and drainage pathways adjacent to the landfill in areas of known and suspected contamination;

3.2 Chemical Analysis

Potential chemicals of concern at Landfill 2 (LF03) are diesel-range organics (DRO), gasoline-range organics (GRO), VOCs, SVOCs, PCBs, and target analyte list (TAL) metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, zinc). Table 2 presents a comparison of risk-based concentrations, maximum contaminant levels, and method reporting limits for soil and water

Six well samples were to be drawn, but one well (CMW2) was found to be dry, even after allowing the purged well to stand overnight. Three surface water samples, and two sediment samples were also collected from the locations shown on Figure 3. Additional soil samples were taken to ensure that adequate site control and plume delineation would be taken for PCB migration monitoring. These were surveyed in using the Kelso and Cox procedure for laying out

a sampling grid. A total of 50 soil samples were taken to ensure that the site had adequate analytical coverage (Figure 4)

All information gathered is herein compiled for a study of site aging phenomena over time, and to ascertain if any weathering trends are present, as well as to delineate affected soil that may have to be removed or otherwise treated.

In addition to investigation samples, sampling of treated IDW water (Investigation Derived Water) was necessary to comply with regulatory treatment and disposal requirements. IDW water was analyzed for the same parameters as investigation water samples (Table 3). Following the assumption that the drum of mixed IDW water was no more contaminated than the dirtiest well water analysis, and was indeed found to be within legal limits for discharge, the IDW was disposed in the camp sewage lagoon.

Required samples, chemical analyses, analytical methods, and collection requirements for soil, sediment, surface water, and groundwater are presented in Tables 3 through 6 Sampling and sample handling procedures are described in the following sections.

3.3 Sampling Procedures

3.3.1 Surface Water

Collected water samples may be classified as either surface water or ground (subsurface) water derived from monitor wells.

Surface-water samples are collected as grab samples, by fully immersing sample containers in the water, taking care to avoid or minimize aeration of the sample and to not dilute out any preserving materials within the bottles Surface-water samples were collected with the associated sediment samples.

Surface water samples were collected into bottles furnished by the laboratory by gently tipping or immersing the bottle in the water and slowly allowing to fill to a depth of ⅛ below the rim of the bottle in order to minimize likelihood of breakage. The lids were then tightly screwed on, the bottle labeled, and placed in a refrigerator as quickly as possible.
Ground water samples were taken by collection from a freshly purged monitor well. Well purging allows fresh formation water that is representative of the surrounding groundwater to be collected.
All wells capable of being sampled were sampled within two hours of purging. Downgradient wells were sampled first to minimize cross contamination between potentially contaminated wells Nothing entering the well was allowed to contact the ground or any potentially contaminated surface. If contact were to occur, the contaminated item was not placed in the well or used for sampling until it had been decontaminated.
All personnel wore disposable latex gloves while handling sampling equipment and containers.

Gloves were always changed at each well Sampling gloves were not allowed to touch any unclean surfaces prior to sampling.
Caution was taken to not allow sample waters to potentially lose volatile constituents by either warming up or become aerated during the bottle filling process, and water agitation was minimized. Containers designated for volatile analysis were filled last to prevent warming or having the bottles stand around.
Sample containers are always clearly and properly labeled.
Adequate steps were always immediately undertaken for sample preservation. These samples were immediately taken out of sunlight, placed in a cooler, and properly chilled as quickly as possible.

3.3.2 Water-Level Surveys

Water levels in each well were measured using a clean down – the – hole tape only after water sampling has been completed, and the well has been given sufficient time to become recharged

3.3.3 Sediment

Sediment samples were collected from stream bottoms at the Landfill 2 (LF03) site.

Sediment located above water (i.e , sandbar sediment) was collected as grab samples from about 3 to 6 inches below the sediment surface using a clean, noncontaminating hand trowel or similar implement.

Samples were placed in an appropriate sample containers in a manner that minimizes aeration and warming of all the samples. Pertinent observations made during sampling, such as odor or sheen, are recorded in the field logbook.

Sediment sample collection always began at the farthest downstream location and proceeded upstream to prevent potential adverse disturbances or cross-contamination at sample locations caused by upstream sampling activities Similarly, at each location, collocated surface-water samples were collected before collecting sediment samples to avoid potential cross-contamination of the water samples.

3.4 Sample Handling and Documentation

3.4.1 Sample Custody

The primary objective of sample custody is to create an accurate, verified written record that may be used to trace the possession and handling of the samples from the moment of collection until

receipt by the laboratory. Adequate sample custody was achieved by means of appropriate field and analytical documentation. A chain-of-custody form always accompanies samples

A sample is in someone's custody if:

- It is in one's actual physical possession;
- It is in one's view, after being in one's physical possession;
- It is in one's physical possession and then locked or otherwise sealed so that tampering will be evident; or
- It is kept in a secure area, restricted to authorized personnel only.

3.4 2 Chain-of-Custody

A chain-of-custody form is completed and accompanies every sample and shipment of samples to the laboratory, to establish the documentation necessary to trace sample possession from time of collection. The form contains the following information:

- Sample number
- Signature of collector, sampler, or recorder
- Date and time of collection
- Place of collection
- Sample type
- Analyses requested
- Signatures of persons involved in chain of possession
- Inclusive dates of possession

The field team sent the original chain-of-custody forms with the samples and retained copies for the project files. The last chain-of-custody form sent to each laboratory stated in 2 5 centimeter-high Helvetica letters "END OF PROJECT."

The laboratory portion of each form was completed by personnel at the analytical laboratory and contained the following information:

- Name of person receiving the sample
- Laboratory sample number
- Date of sample receipt
- Sample condition and temperature

Transfer of Custody and Shipment

When transferring the samples, the individuals relinquishing and receiving the samples signs, dates, and notes the time on the chain-of-custody form. Samples were properly packaged for shipment, as described in section 5.3.4. Samples were shipped by an airplane directly to Anchorage. The analytical laboratory coordinators were notified of when and how samples were sent. Notification included the following:

- Date of shipment

- Name of shipping company
- Airbill number
- Number of coolers
- Name, phone number, and facsimile number of point of contact
- Estimated date of shipment arrival
- Type of samples (water, sediment, or soil)

On receipt of each sample cooler and after verification of the chain-of-custody records, the project laboratories will fill out a Cooler Receipt Form documenting the condition of the samples.

3.4.3 Documentation

Field personnel will maintain documentation of both administrative and technical activities The following types of documentation are required:

- Field logs
- Boring logs
- Well completion forms
- Well development documentation
- Groundwater sampling data form
- Sample record logs
- Equipment calibration logs
- Photographs

Sample Labels

Sample labels are required for all samples. Site- and time-dependent information was added to the labels using indelible ink. The labels were protected from water and solvents with clear label protection tape. Each label will contain the following information:

- Project name
- Name of collector
- Date and time of collection
- Place of collection
- Sample number
- Preservation method
- Depth of sample (soil samples only)
- Method of analysis

The samples are numbered as follows: 480309898XXX, where 98 are the last two digits of the year and 48030 is the work order for Cape Romanzof; 8 indicates that the sample was collected by 611 CES/CEVO, where 8 is the code for the CEVO environmental section, and XXX is the sample number at the site. The first sample collected was numbered 48030988001. Field QA and QC samples were labeled and numbered in such a way that the laboratory could not identify the as duplicates unless they were so told.

Sample type designations are as follows:

Sample Designation	Sample Type
SL	Subsurface soil
SD	Sediment
SW	Surface water
WA	Groundwater
IW	IDW water

Field Logs

The project field supervisor maintained a field logbook of daily activities. Activities should always be recorded contemporaneously. Field logs were written to include the following information:

- Name of author, and date and time of entry
- Location of activity
- Names and affiliations of personnel onsite
- Field observations and comments
- Health and safety comments
- Conversations with USACE

Sample Record Log

The field supervisor maintained a sample record log spreadsheet that contained the following information:

- Sample number
- Sampling location
- Date and time of sample collection
- Sample depth
- Analyses requested
- Number of containers
- Type of sample if it is a QA/QC sample
- Date shipped
- Airbill number

Photographs

Photographs were taken in the field to document sampling locations and conditions. Photographs of all samples were taken with the sample number and depth clearly visible. A photographic log was kept in which the date, location, and direction faced (if appropriate) are noted Photographs and negatives were labeled and placed in the LTM Closure Monitoring Report as an appendix.

Documentation Control

The project manager maintains project files. Documents are kept in project files. Project personnel may keep their own files; however, all official and original documents are placed in the official project file.

Field logs of boring, sampling and well installation are maintained by the field supervisor and submitted to the project manager after the field effort.

3.4.4 Sample Handling, Packaging, and Shipping

The specific methods for sample container size and type sample preservation and holding times, and any special handling requirements for samples collected at the Landfill 2 (LF03) site are presented in Tables 3 through 6. All sample containers were obtained from the project laboratory. The containers were verified as precleaned and were obtained in sealed boxes.

Samples were packaged for shipment according to Department of Transportation IATA regulations. The method of shipment, courier name(s), and other pertinent information were entered on the chain-of-custody form

To minimize the potential for degradation and to maintain a temperature of 4 °C, samples were placed with an ice substitute in a cooler. The chain-of-custody form was filled out in ink, placed in a plastic bag, and taped to the inside lid of the shipping cooler. Each cooler was sealed with a custody seal to readily show evidence of tampering. Marking and labeling procedures were consistent with DOT regulations. Airbills were properly completed, and copies were retained and placed in the project file.

The following checklist details the procedures for sample packaging and shipment:

- For water samples other than those for VOC analyses, mark the sample volume with a grease pencil. Fill all water bottles to within ⅛ inch of the rim to give just a smidgen of ullage to prevent breakage, except for those containers specifically designed to be filled to the brim, such as purge (VOA) vials.
- Place a layer of ice substitute and cushioning material in the bottom of the cooler Then place a layer of cushioning material over the ice substitute.
- Wrap each bottle with a layer of bubble wrap With the exception of 40-ml and 2-ounce containers, enclose each bottle in a separate, clear plastic bag and seal each bag. Single samples consisting of two or three 40-ml or 2-ounce containers may be placed together in a single plastic bag after they are individually wrapped to prevent glass-to-glass contact Place the bottles upright in the cooler so that they will not touch during shipment.
- Place additional cushioning material to cover sample bottles and fill voids between bottles Then place the ice substitute into the cooler.
- Fill the cooler with cushioning material
- Tape the cooler drain shut.

- Place completed chain-of-custody form and a note indicating destination for return of cooler in a plastic bag, and tape the bag to the inside lid of the cooler.
- Secure the lid by wrapping the cooler with strapping tape at two locations Tape the cooler latch closed with strapping tape.
- Seal the cooler with custody seals in three places other than the areas with strapping tape and the hinged side. Sign and date custody seals. The signature on the custody seals should match the signature on the chain of custody.
- Attach the completed shipping label to the top of the cooler; affix "This side up" labels on all four sides, and "Fragile" and "Chill, Do Not Freeze" labels on at least two sides.

4.0 QUALITY ASSURANCE/QUALITY CONTROL

This Quality Assurance Project Plan (QAPP) has been prepared for site investigation activities at Cape Romanzof, Alaska. This QAPP addresses requirements set forth in the EPA's *Interim Guidelines for the Preparation of Quality Assurance Project Plans* (1980) The formal guidance will be used to produce valid data for the project.

QA is an integrated program designed to achieve reliable monitoring and measurement data. QC is the routine application of procedures for obtaining prescribed standards of performance in the monitoring and measurement processes The QA/QC requirements for the project are described in the following sections.

4.1 Terminology

QA/QC terms used throughout this QAPP are defined as follows.

- **Accuracy** - The degree of agreement of a measurement with an accepted reference of true value. Usually expressed in terms of percent recovery.
- **Comparability** - Expresses the confidence with which one data set can be compared to another.
- **Completeness** - The amount of valid data obtained from a measurement system compared to the amount of valid data that was expected.
- **Duplicate** - Two samples collected independently at a sampling location during a single act of sampling. Field duplicates will be numbered separately so that laboratory personnel performing the analyses may not ascertain which samples are duplicates.
- **Laboratory Sample Duplicate** - For every inorganic method, for every 20 samples, a duplicate aliquot is analyzed for the analytes of interest.
- **Method Blank** - Method blanks consist of analyte-free water or soil, processed in the exact manner as the samples within a batch, using identical reagents and solvents
- **Precision** - A measure of agreement among individual measurements under similar conditions Usually expressed in terms of the relative percent difference (RPD)

- **Representativeness** - The degree to which a sample or group of samples reflects the characteristics of the media at the sampling point. Includes how well the sampling point represents variations in the parameters under study.
- **Rinsate Blank** - After the equipment has been decontaminated, organic-free water is poured into the sampling device or pumped through it (in the case of sampling pumps), transferred to the sample bottle, and then transported to the laboratory for analysis.
- **Sample Matrix Spike** - For every 20 samples, a sample is selected that represents the matrix and is spiked with analytes specified for each method.
- **Sample Matrix Spike Duplicate** - For every organic method, for every 20 samples, a sample is selected that represents the matrix, and a duplicate spike is performed with the analytes specified for each method.
- **Standard Matrix Spike/QC Check Sample** - A QC check sample consists of either an EPA reference, a National Bureau of Standards (NBS) traceable reference, or a laboratory-prepared spike into a standard matrix (typically deionized water) using stocks made independently of the calibration standards (i.e., same as a standard matrix spike). The QC check sample or standard matrix spike serves one of two purposes, depending on the method:

  1. To verify the standard calibration using an independent standard Verification occurs when the method involves direct analysis of the sample.
  2. To differentiate between sample matrix interference and analytical procedural error Sample matrix spikes that fall outside of precision and/or accuracy acceptance criteria indicate either matrix interference or a problem with the standard analytical procedure. An acceptable QC check sample provides strong evidence that a matrix interference is present.

- **Surrogate Spikes** - Surrogate spikes are specific compounds that are added to every sample analyzed and that are not expected to occur in field samples. The spikes are added to standards, blanks, matrix spikes, and QC check samples, to assess the recovery of all organic methods.
- **Trip Blank** - A sample bottle that is filled with organic-free water in the laboratory, transported to the site, handled like a sample, and returned to the laboratory for analysis (trip blanks are not to be opened in the field). The sample is analyzed for VOCs.

4.2 Data Quality Assurance

The overall QA objectives for the project are to develop and implement procedures for obtaining and evaluating data in an accurate, precise, and complete manner so that measurement data, sampling procedures, and field measurements provide information that is comparable and representative of actual field conditions.

Analytical methods have been selected on the basis of documented reliability and acceptability, and because they meet the general project objectives.

Data quality assessments will evaluate whether laboratory data generated are accurate and consistent with analytical data quality objectives. The laboratories will be initially responsible for performing a review of laboratory data. The 611 CES/CEVO will be responsible for ensuring that

EPA quality assurance programs are complied with. The DQA will evaluate the usability of data based on a review of precision, accuracy, and compliance with analytical procedure control limits. A summary of the analytical data quality objectives is presented in Table 7.

4.3 Sampling Procedures

4.3.1 Field Sampling

The investigation activities completed at the Landfill 2 (LF03) site included a subsurface-soil-sampling program, a sediment-sampling program, monitoring well installation, and a water (groundwater and surface water) sampling program. A sample analysis was performed at USACE-validated and ADEC-approved laboratories. Required sampling techniques and sample locations are included in the Field Sampling Plan The goals for soil, sediment, surface-water, and groundwater sampling are 1) to collect samples that are representative of field conditions, and 2) to properly identify, preserve, and transport samples to retain their integrity.

4.3.2 QA/QC Samples

Three types of QA/QC samples were used for the project: trip blanks, rinsate blanks, and duplicates. Each type of sample is defined in section 6.1. QA/QC samples are summarized for each site on Tables 3 through 6. In general, QA and QC samples each represent approximately 10 percent of the total number of field samples. Sampling and handling procedures are discussed below.

Trip blanks are used for VOC analyses of water samples, and are prepared by filling sample bottles with organic-free water. Trip blanks are sent to a sampling location with sampling jars, and are returned unopened from the sampling location with the samples and analyzed One trip blank will be shipped with each cooler of water samples for VOC analysis. Trip blanks were numbered like water samples, so that they could not be distinguished from other water samples by the associated sample numbers alone.

Rinsate blanks are obtained immediately before the samples to which they are related, and are processed by rinsing decontaminated sampling equipment with organic-free water The rinse water is collected in sample bottles, preserved, and handled in the same manner as the water samples. Rinsate blank samples will be collected at a minimum frequency of 1 for every 20 investigation water samples (or 5 percent) for both QA and QC. Rinsate blanks will be numbered like other water samples so that the laboratories will not be able to distinguish them.

Sample duplicates are collected for soil and water to evaluate the precision of the sampling and analytical processes. Each duplicate will be a blind sample, meaning the sample will be labeled with a sample number different than the sample being duplicated Therefore, it is critical that the field teams leader records the sample number and site identification in the field notes Every effort should be made to collect QA and QC duplicates at the same time and location

Duplicates for soil and water VOC and GRO analyses are always collected before other sample fractions to minimize loss of volatiles. Duplicate fractions for soil and sediment, other than the VOC and GRO fractions, were not collected as splits, but instead were collected as true duplicates, being comprised of a side-by-side double set of samples placed into appropriate sample containers. Duplicate samples will be collected at a minimum frequency of 1 for every 10 investigation samples (or 10 percent) for both QA and QC.

4.3.3 Sample Analytical Procedures

Laboratory analyses were conducted at an USACE-validated laboratory using familiar USACE analytical protocols. Data deliverables and analytical methods selected for use during the program were tailored to meet program objectives and to support field activities while providing results of sufficient quality to meet the intended data use.

4.3.4 Analyses

The laboratory chosen was equipped to analyze soil and water samples for all required analytes listed below. Analyses were performed under the supervision of an experienced chemist

The media to be sampled included subsurface soil, groundwater, surface water, and sediment The analytical methods to be used are as follows:

- DRO were analyzed by gas chromatography (GC) using the ADEC Method AK102.
- GRO were analyzed by GC using the ADEC Method AK101.
- VOCs were analyzed by GC/mass spectrometry (GC/MS) using EPA Method SW-8260.
- SVOCs were analyzed by GC/MS using EPA Method SW-8270.
- PCBs/organochlorine pesticides were analyzed by GC using EPA Method SW-8081 and 8082.
- Metals were extracted (acid digestion) by EPA Method SW-3050 Analyses are as follows:
  - Arsenic - graphite furnace atomic absorption (GFAA) using EPA Method SW-7060.
  - Selenium - GFAA using EPA Method SW-7740
  - Thallium - GFAA using EPA Method SW7841.
  - Lead - GFAA using EPA Method SW-7421.
  - Antimony, barium, beryllium, cadmium, chromium, cobalt, copper, nickel, vanadium, zinc, and silver - inductively coupled plasma (ICP) using EPA Method SW-6010

4.4 Data Quality Assessment

The 611 CES personnel will validate data obtained from field measurements by checking procedures used in the field and comparing the data to previous measurements Data that cannot be validated will be so documented.

The following reporting requirements will be followed for field data:

- Water levels: Measurements will be repeated until at least two are within 0 01 foot
- Soil sample depths: Tape measurements will be made to the nearest 0.1 foot, measurements made by known lengths of drill string will be made to the nearest 0.5 foot.
- Locations of sampling sites: Sampling locations will be surveyed in and a map made for a final report. ••

4.5 Laboratory Analytical Data

The following minimum QA/QC information should be included in any reported data batch.

- Narrative cover letter explaining corrective actions taken on reported data and/or data falling outside the method or QA specifications;
- Sample data (matrix, date sampled, date received, date of extraction, and date of analysis);
- Parameters, results, and test method identification;
- Results that are uncorrected for any method blank contamination;
- Sample-specific detection limits for each parameter,
- Results of laboratory control data, method blanks, spikes, and replicates;
- Copies of chain-of-custody forms.

The contract laboratories will submit a data report in accordance with USACE requirements.

The 611 CES reviewed the analytical data and the QA sample data, and prepared a DQA The DQA summarized results of the QA laboratory's data review This information will be used in the DQA when preparing investigation reports. The DQA report may include the results of:

- The independent analytical data review
- Field operations audits
- Office operations audits

4.6 Data Quality Control

Data quality will be assessed by analyzing laboratory QC and QA samples. Laboratory QA samples and laboratory QC samples will be analyzed by different laboratories.

4.6.1 Field Quality Control

Procedures for the preparation, collection, frequency of use, and identification of QC samples are presented in section 6.3.2 and in Tables 3 through 6

4.6.2 Laboratory Quality Control

Laboratory QC procedures are those steps taken by the laboratories in day-to-day activities to achieve desired precision, accuracy, completeness, representativeness, and comparability Each analytical chemistry department manager and analyst will be responsible for performing the analysis in accordance with the defined QC practices outlined in ER 1110-1-263 (USACE, 1990)

Precision is a measure of agreement among analyses performed using the same test procedure, and is estimated by the RPD between duplicate samples. Precision will be assessed by analyzing field duplicates and/or matrix spike duplicates, calculating the RPD, and comparing the RPD to acceptance criteria. The analyses of field duplicates and laboratory duplicates will provide information on the precision of sample collection and analysis methodologies. Substandard precision in laboratory samples and subsequent corrective actions will be documented by the analytical laboratory and reviewed by the 611 CES project manager. The RPD of two duplicate samples will be calculated as follows:

$$RPD = \frac{D_1 - D_2}{(D_1 + D_2)/2} \times 100$$

Where: D_1 and D_2 = Concentration of duplicates 1 and 2, respectively.

Accuracy

Accuracy is the degree of agreement between a sample's target value (known concentration) and the actual measured value. Accuracy will be assessed by means of reference samples and percent recoveries. In addition to sample matrix spikes and surrogate spikes, a QC check sample consisting of commercial reference samples or spikes into a standard matrix (typically reagent water) will be analyzed, and "found values" will be compared to true or known values to assess accuracy. Results of the comparison will be expressed in terms of percent recovery

The QC check sample will also be used to assess the effects of any sample matrix interferences. If recoveries of matrix spikes are out of expected ranges and QC check samples show acceptable recoveries, then strong evidence exists that the sample matrix is affecting method accuracy. Accuracy for this project is measured by calculating the percent recovery of known levels of spike compounds into appropriate sample matrices. Percent recovery is calculated as follows:

$$\%\ R = (Q_d / Q_a) \times 100$$

Where: % R = Percent recovery

Q_d = Quantity detected by analysis minus unspiked sample quantity

Q_a = True or accepted reference quantity or value

Completeness

Completeness is defined as "a measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under correct normal conditions" (EPA, 1980). Following completion of the analytical testing, percent completeness will be calculated as follows:

$$\text{Completeness (percent) for parameter y} = \frac{\text{number of valid y values reported}}{\text{number of samples planned for analysis of y}} \times 100$$

Documentation

The review of analytical and QC data begins at the bench-chemist level. The chemists will be aware of the QC requirements for the project and will verify that calibration and other QC requirements are met before sample analysis continues. QC checks are part of the data programs. The following will be achieved before the final data report is published:

- Sufficient number of initial and continuing calibration standards,
- Sample responses bracketed by the calibration standards responses,
- Minimum calibration coefficient,
- Sufficient number and types of QC samples in the data batch,
- Accuracy and precision for each type of QC sample,
- Verification that holding times for extraction and analysis have been met

If any of these checks are not met, the data will be further reviewed and will be signed by the laboratory project manager.

Representativeness

Representativeness expresses the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition. Standardized, uniform field procedures will be implemented to achieve adequate representativeness of data.

Comparability

Comparability expresses the confidence with which one data set may be compared to another. Procedures to attain comparability will include

- Using the EPA SW-846 method of analysis, or
- Using ASTM methods, and
- Reporting data in conventional and standard units.

5.0 REPORT OF SURVEY

For the purposes of site work at Cape Romanzof, work in general can be divided into two aspects of data collection, physical and chemical. Chemical parameters consist of laboratory or mineralogical or compositional data. Physical information in contrast consists of all other types of information derived from the study, including, but not limited to, visual observation, measurements and palpation, so that physical data, such as surface slopes, material density and other phenomena can be measured.

Physical observations in contrast consist of physical or observational measurements, such as surface slopes, material density, etc.

As previously described, the Kelso and Cox site-sampling plan consists of a minimum of 37 sample locations surveyed in on a hexagonal grid system (Figure 4). Kelso and Cox have shown that statistically, this plan of 37 gridded samples ensures that there is a 98 per cent chance of intercepting a contaminant plume. Since 611 CES/CEVO collected fifty soil samples, more than adequate coverage of the site was accomplished, and adequate information was thus derived.

On site work for this project commenced on 21 Sep 98 with the layout of the sample grid system as derived from the Kelso and Cox procedure. Commencing at the northwest corner of the landfill at the toe of the angle created with the road to the airfield, test pits were staked out 116 feet apart along a line parallel to the road. A baseline for survey control was laid out from this initial point, heading at a perpendicular to this row of samples (i.e., to the south). The baseline was staked out with points 98' apart. These points then served in turn as beginning points for new rows of sample points parallel to both the road and the initial row described above.

The westernmost side of the landfill, in an area located between SW2 and the main access road (Figure 3) is exceptionally rocky, being covered with felsenmeer so that there was literally no surface outcrop of soil in this area. The Glossary of Geology defines felsenmeer as "A flat or gently sloping area covered with a continuous veneer of large angular and subangular blocks of rock derived from well-jointed underlying bedrock by intensive frost action and usually occurring is situ on high, flat-topped mountains or plateaus above timberline in middle and high latitudes" This felsenmeer area exempted the area from the Kelso and Cox grid, and samples were taken here where they could be found.

A total of eight rows of sample points was laid out and staked. Alternate rows were staked with sample points 49 feet apart, twice as near as calculated from Kelso and Cox to provide adequate sample points to permit generation of an isograd contour map of PCB concentrations

Soil samples were taken at a depth of 6", two feet if possible and even deeper if possible, at sampling points as close as possible to the Kelso and Cox staked point. Excavation proceeded with a small rubber – tired backhoe which had some difficulty digging through this rocky area, particularly the felsenmeer field located in the northwest angle created by the intersection of the cap and the roadway, where sampling tended to be either spotty or not on a gridline because of the difficulty of sampling through and around the boulders

A total of 50 soil samples were collected for PCB analysis, taken at the locations and in the order shown on Figure 4. Soil samples were taken with a clean sample spoon from the middle of the backhoe bucket.

As excavation for soil sampling proceeded, materials from the old landfill site were either uncovered or brought to the surface. These materials included old pipes, electrical cables, and fuel tanks that indicate there is an uncapped portion of the landfill that extends southward for some tens of feet from the capped portion of the landfill, along the southwestern edge.

5.1 Physical Survey

The physical survey was undertaken by professional surveyors from 611 CES/CEVO to establish baseline survey points for potential future studies. At the same time, the Kelso – Cox soil sampling points were surveyed in. Physical layout, contour lines, and soil sample points are located on Figure 4.

The top of the capped liner is a gently sloping flat surface that is contiguous with the main access road running between lower camp and the airfield, and serves as a local parking apron. Because of ready access by wheeled vehicles, this surface has been continuously wheel rolled over time, and is well compacted.

In contrast, the edges of this flat surface feather downhill onto natural ground. These tapering edges are rather steep, with slopes of unconsolidated backfill of just under 30 per cent. These steep slopes were found to have a minimum of compaction, so that these low density surfaces readily accepted footprints and were also found to be undergoing erosion, particularly along the southwestern edge, where tongues of eroded gravel extended over natural ground. From recollection and photogrammetry, a narrow tongue of alluvial outwash from the area of the exposed liner shown on Figure 4 extends to the west or southwest of this area for a distance of about thirty feet. Since these side slopes are so steep, it may well be that little or no compaction was done during cap construction, or indeed that appropriate compaction equipment was not on site. At any rate, this is a situation that should be repaired to prevent further erosion Other methods of slope stabilization include regrading and planting appropriate grasses, and creating a weak backfill/cement dry mix for slope packing.

5.2 Chemical Survey

Chemical survey contrasts with the physical survey in that the chemical survey defines the chemical or mineralogical composition of materials found on site, or the partial analysis for certain harmful analytes. This may be performed by soil and water sampling for laboratory analysis, field instrumental testing, or visual observations in the field as to mineralogy, weathering phenomena, or any other compositional clues.

5.3 Current Data

The data show that except for one sediment sample of unusually high PCB content, the landfill area is quite clean of hazardous contaminants.

Fifty soil samples were collected specifically for PCB analysis by the laboratory. During this laboratory sample collection a duplicate sample bottle was also filled so that field screening for PCBs could be performed on site. The results of this field screening are shown in Table 8. With the minimum detection limit at 0.1 PPM chloride ion, this translates into considerable less than that amount of PCB, since each PCB molecule contains many more than one chloride ion. There were no field detectable amounts of PCB in these soil samples. This was borne out by subsequent laboratory chromatographic analysis, which determined 620 PPB Arochlor as a maximum, roughly half of the Dexsil Chloride Detector lower analytical range.

Three surface water samples along with a duplicate were collected from locations SW1, SW2, and SW3 on Figure 4. Soil and sediment samples were also collected here, except at SD2, where seemingly a portion of the felsenmeer had been removed to expose the subcolluvial running water and accompanying sediment. This one lone sediment sample proved to be exceptionally high in PCB (Arochlor 1260) at 180 ppm, approximately three orders of magnitude higher than surrounding soil samples. There is no adequate rationale developed for this. This one particular site has shown high values of PCB in the past.

In addition, seven monitor well samples were collected, along with a duplicate. An attempt was made to sample MW2, but this monitor well proved to be dry after allowing the purged well to stand overnight.

Results of laboratory analysis are posted in Table 9. All units are in PPB, except where otherwise noted (180 ppm Arochlor 1260 for sample 57). Nearly all of these soil, sediment, and water samples show traces of methylene chloride (MeCl), phthalates, and either acetone or toluene. Methylene chloride is a highly volatile and fugitive laboratory solvent, capable of being transmitted through the air from an extraction bench to samples either through plastics or by means of an unopened bottle cap. Because methylene chloride would not be expected to be found in a landfill, and is commonly found in laboratory atmospheres, it is felt that this is a case of cross contamination. As further evidence, MeCl is also found in only one sample out of a duplicate pair (in other words, the duplicate analysis did not match, and it is more likely that MeCl came in as a laboratory derived airborne contaminant).

Phthalates are a class of organic compounds that are used as plasticizers, modifying hardness, strength, and toughness of polyethylene based plastics. It is common for phthalates to exist in leaching dump waters, and it is quite likely that indeed the phthalate contribution to the samples came from buried materials in the dump, as opposed to being a laboratory artifact.

Aromatics (toluene and Xylene) are found in nearly all water samples at low ppb ranges. Unfortunately, they are also found in the trip blank, and may represent the water soluble aromatic portion of the previously reported low levels of diesel range organics. At any rate, the low values are negligible.

5.4 Comparison of Recent and Older Analytical Data

When comparing recent and old analytical data in Tables 9 and 10, it should be noted that at least three data points are needed to perform any sort of statistical analysis, and these three points must be derived in the same manner. That is, the samples must be collected by the same person in the same way at the same time of year, sent to the same lab, etc. However, there are some glimmers of possible trends, or at least concepts of indications that certain of the environmental chemicals might be behaving in a certain way, perhaps in part a result of the nature of the contaminant in itself. Items to be noted are:

1. There may be a trend developing for an increase of phthalate in monitor well samples. Since phthalate leaching is a normal part of landfill weathering of soil incorporated plastics, it may be that the seeming increase in phthalate leaching may be more a matter of a thermal lag, rather than a time lag. That is, the original samples were collected in mid June. There may have been dilution from melting snow waters in the ground, or even lack of solubility is early summer ground water.
2. Diesel Range Organic compounds may have suffered the same fate. It is somewhat suspicious that fuel constituents would increase over time, particularly when there is no evidence of addition or increase of soil fuel content. Changes in concentration may be a result of weather differences or flow rate differentials.
3. Toluene and xylene are petroleum fuel constituents, found in both gasoline and diesel fuels. It is interesting to note that they increased along with DRO values, as should be expected.
4. There is some slight indication of decrease in PCB content, particularly of water. This may be due to leaching out and removal of Arochlor, or other unknown factors.

6.0 CONCLUSIONS

6.1 A small portion of the landfill cap liner has been damaged. Probably no repair is necessary on the liner, since the damaged area is near the perimeter along the downhill side of the edge of the toe. However, the sloping sides of the landfill liner cap are loose, fluffy, and eroding. This does need repair before erosion proceeds much further.

6.2 Very little chemical contamination was found in the area of the capped landfill, and except for a lone sediment sample, trace chemicals found in the low part – per – billion ranges are of no great significance.

6.3 The one exceptionally high anomaly is at SD2, located in the middle of the felsenmeer. If considered of significant importance, this area should be resampled for sediment deposited by water heard running below the felsenmeer, although a piece of heavy equipment would have to be taken to the site to remove the felsenmeer blocks, which are about one foot wide and two feet long, running in weight over 300 pounds.

6.4 Now that baseline data has been established, to acquire statistical data water and sediment samples should be recollected annually during the same month.

TAB

Tables

Table 1. Summary of Investigation Samples for Cape Romanzof Landfill 2 (LF03)

Type of Sample	Number of Samples	Turnaround Time	Analyses	Rationale
Subsurface Soil	2	Normal	DRO, GRO, VOCs, SVOCs, PCBs, TAL Metals, PSA	Evaluate contaminant concentration levels in areas of known and suspected contamination Evaluate physical properties of subsurface soil.
Groundwater	7	Normal	DRO, GRO, VOCs, SVOCs, PCBs, TAL Metals	Evaluate contaminant concentration levels and assess contaminant migration downgradient of the landfill. Assess future sampling requirements.
Sediment	3	Normal	DRO, GRO, VOCs, SVOCs, PCBs, TAL Metals	Evaluate contaminant concentration levels in areas of known and suspected contamination Assess the potential migration of contaminants downgradient of the landfill.
Surface Water	3	Normal	DRO, GRO, VOCs, SVOCs, PCBs, TAL, Metals	Evaluate contaminant concentration levels in areas of known and suspected contamination Assess the potential migration of contaminants downgradient of the landfill

DRO Diesel-range organics
GRO Gasoline-range organics
PSA Particle-size analysis
PCBs Polychlorinated biphenyls
SVOCs Semivolatile organic compounds
TAL Target Analyte List
VOCs Volatile organic compounds

TABLE 2A METHOD TWO – SOIL CLEANUP LEVELS TABLE

CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
		Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwa-ter (mg/kg)
	ORGANICS									
83-32-9	Acenaphthene[15]	8200			6100		210	5000		190
67-64-1	Acetone (2-Propanone)	14000			10000		10	8300		9
309-00-2	**Aldrin**	0.7	35		0.5	24	1.6	0.40	18	1.5
120-12-7	Anthracene[15]	41000			30000		4300	24900		3900
71-43-2	**Benzene** [15]	390	13		290	9	0 02	230	6.4	0.02
56-55-3	**Benzo(a)anthracene** [15]	15			11		6	9		5 5
205-99-2	**Benzo(b)fluoranthene** [15]	15			11		20	9		17
207-08-9	**Benzo(k)fluoranthene** [15]	150			110		200	93		170
65-85-0	Benzoic acid	547500			410000		390	332000		350
50-32-8	**Benzo(a)pyrene** [15]	1 5			1		3	0.9		2 4
111-44-4	**Bis(2-chlorethyl)ether**	10	5		8	3	0.002	6	2.4	0 002
117-81-7	**Bis(2-ethylhexyl)phthalate**	800			590		1200	490		1100
75-27-4	**Bromodichloromethane**	180			130		0 35	110		0.3
75-25-2	**Bromoform (Tribromomethane)**	1400	590[12]		1050	500	0 38	860	370	0.34
71-36-3	Butanol	14000			10000		10	8300		9
85-68-7	Butyl benzyl phthalate	27000			20000		5600	16600		5000
86-74-8	**Carbazole**	560-			420		2	340		2
75-15-0	Carbon disulfide	14000	453[12]		10000	453[12]	17	8300	453[12]	16
56-23-5	**Carbon tetrachloride**	86	5		64	3.4	0.03	52	2 6	0 03
57-74-9	**Chlordane**	9	200		6	140	3	5	100	3

TABLE 2A METHOD TWO – SOIL CLEANUP LEVELS TABLE

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwa-ter (mg/kg)
106-47-8	p-Chloroaniline	550			410		0.5	330		0.46
108-90-7	Chlorobenzene	2700	160		2000	110	0.6	1700	81	0 5
124-48-1	**Chlorodibromomethane**	130			100		0.2	80		0.2
67-66-3	**Chloroform**	1400	5		1000	3.4	0.34	830	2.4	0.3
95-57-8	2-Chlorophenol	680			510		1.4	415		1.3
218-01-9	**Chrysene [15]**	1500			1100		620	930		550
72-54-8	**DDD**	47			35		47	28		42
72-55-9	**DDE**	33			24		150	20		130
50-29-3	**DDT**	33	7800		24	5300	88	20	3900	80
53-70-3	**Dibenzo(a,h)anthracene [15]**	1.5			1		6	0.9		5
84-74-2	Di-n-butyl phthalate	14000			10000		1700	8300		1500
117-84-0	Di-n-octyl phthalate	2700			2000		810000	1700		720000
95-50-1	1,2-Dichlorobenzene	12000	110[12]		9100	110[12]	7	7500	110[12]	6
106-46-7	**1,4-Dichlorobenzene**	470	12000		350	8000	0.8	280	6000	0.7
91-94-1	**3,3-Dichlorobenzidine**	25			18		0.02	15		0.02
75-34-3	1,1-Dichloroethane	14000	890[12]		10000	890[12]	12	8300	890[12]	11
107-06-2	**1,2-Dichloroethane**	120	7		91	5	0.015	75	3.5	0 01
75-35-4	**1,1-Dichloroethylene**	19	1.3		14	0.9	0.03	11	0.65	0 03
156-59-2	cis-1,2-Dichloroethylene	1400			1000		0.2	830		0.2
156-60-5	Trans-1,2-Dichloroethylene	2700			2000		0.4	1700		0.34
120-83-2	2,4-Dichlorophenol	410			300		0.45	250		0 45
78-87-5	**1,2-Dichloropropane**	160	25		120	17	0 017	100	12	0 015
542-75-6	**1,3-Dichloropropene**	41	2.3		30	1.5	0.02	25	1	0 02

TABLE 2A METHOD TWO – SOIL CLEANUP LEVELS TABLE

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwa-ter (mg/kg)
60-57-1	**Dieldrin**	0.7	12		0.5	8	0.015	0 4	6	0.014
131-11-3	Dimethyl phthalate	>1000000			>1000000		1400	830000		1200
84-66-2	Diethyl phthalate	110000			81000		190	66000		170
105-67-9	2,4-Dimethylphenol	2700			2000		4	1700		3.6
51-28-5	2,4-Dinitrophenol	270			200		0.2	170		0 17
131-11-3	Dimethyl phthalate	>1000000			>1000000		1400	830000		1200
121-14-2	**2,4-Dinitrotoluene**	17			12		0.005	10		0 0044
606-20-2	**2,6-Dinitrotoluene**	17			12		0.0044	10		0.004
174-60-16	**Dioxin [8]**									
115-29-7	Endosulfan	820			610		7	500		6
72-20-8	Endrin	41			30		0.3	25		0.3
100-41-4	Ethylbenzene [15]	13700	89[12]		10000	89[12]	5.5	8300	89[12]	5
206-44-0	Fluoranthene	5500			4100		2100	3300		1900
86-73-7	Fluorene[15]	5500			4100		270	3300		240
76-44-8	**Heptachlor**	2.5	1.2		2	0.8	8	1 5	0.6	7
1024-57-3	**Heptachlor epoxide**	1	50		0.9	33	0.2	0.75	25	0 2
118-74-1	**Hexachlorobenzene**	7	10		5	7	0 73	4	5	0 7
87-68-3	**Hexachloro-1,3-butadiene**	27	82		20	55	8	17	41	7
319-84-6	**alpha-Hexachlorocyclohexane**	2	8		1.3	5.5	0 0026	1	4	0 002
319-85-7	**beta-Hexachlorocyclohexane**	6	65		4 6	43	0.009	4	32	0 008
58-89-9	**gamma-Hexachlorocyclohex-ane (Lindane)**	9			6 4		0 003	5		0 003
77-47-4	Hexachlorocyclopentadiene	960	11		710	7	130	580	5	120
67-72-1	**Hexachloroethane**	139	580		101	390	1.6	83	290	1 4

TABLE 2A METHOD TWO – SOIL CLEANUP LEVELS TABLE

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwa-ter (mg/kg)
193-39-5	**Indeno(1,2,3-c,d)pyrene** [15]	15			11		54	9		50
78-59-1	**Isophorone**	11800			8700		3	7200		2.6
72-43-5	Methoxychlor	680			510		52	420		47
74-83-9	Methyl bromide	190	21		140	14	0.16	120	11	0.14
75-09-2	**Methylene chloride**	1500	270		1100	180	0.015	900	135	0.01
95-48-7	2-Methylphenol (o-cresol)	6800			5100		7	4200		6
91-20-3	Naphthalene[15]	5500			4100		43	3300		38
98-95-3	Nitrobenzene	68	130		51	90	0.06	42	67	0.06
86-30-6	**n-Nitrosodiphenylamine**	2300			1700		3.4	1400		3
621-64-7	**n-Nitrosodi-n-propylamine**	1.6			1.2		0 00036	1 0		0.0003
87-86-5	**Pentachlorophenol**	46.7[13]			35[13]		0 01	28[13]		0.009
108-95-2	Phenol	82000			60800		67	50000		60
133-63-63	**Polychlorinated Biphenyls (PCBs)** [9]	10	10		10	10	10	10	10	10
129-00-0	Pyrene[15]	4100			3000		1500	2500		1400
100-42-5	Styrene	27400	280[12]		20300	280[12]	1 3	17000	280[12]	1 2
79-34-5	**1,1,2,2-Tetrachloroethane**	56	8		42	5.4	0.017	34	4	0.01
127-18-4	**Tetrachloroethylene**	220	80[12]		160	80[12]	0.03	130	79	0 025
108-88-3	Toluene [15]	27400	180[12]		20300	180[12]	5.4	17000	180[12]	4.8
8001-35-2	**Toxaphene**	10	920		8	620	10	6	460	9
120-82-1	1,2,4-Trichlorobenzene	1400	570[12]		1000	570[12]	2	830	570[12]	1 7
71-55-6	1,1,1-Trichloroethane		460[12]			460[12]	1 0		460[12]	0 9
79-00-5	**1,1,2-Trichloroethane**	200	15		150	10	0 017	120	8	0 015

TABLE 2A METHOD TWO – SOIL CLEANUP LEVELS TABLE

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwa-ter (mg/kg)
79-01-6	**Trichloroethylene**	1000	64		750	43	0.027	620	32	0 02
95-95-4	2,4,5-Trichlorophenol	13700			10000		90	8300		78
88-06-2	**2,4,6-Trichlorophenol**	1000	2300		750	1500	0.6	620	1100	0 5
108-05-4	Vinyl acetate	137900	2200[12]		101000	1500	100	83000	1100	90
75-01-4	**Vinyl chloride** (Chloroethene)	6	0.7		4	0.5	0.009	4	0.3	0 008
1330-20-7	Xylenes (total)[15]	274000	81[12]		203000	81[12]	78	166000	81[12]	69
	INORGANICS									
7440-36-0	Antimony	55			41		3.6	33		3
7440-38-2	**Arsenic**	8			5.5		2	4.5		1 8
7440-39-3	Barium	9600			7100		1100	5800		982
7440-41-7	**Beryllium**	2.6			1.9		42	1.6		38
7440-43-9	Cadmium	140			100		5	83		4 5
7440-47-3	Chromium (Total)	680			510		26	420		23
16065-83-1	Chromium +3	137,000			100000		>1000000	83000		>1000000
18540-29-9	Chromium +6	680			510		26	420		23
57-12-5	Cyanide [10]	2700			2000		27	1700		24
7439-92-1	Lead [11]					18	1 4		13	1 24
7439-97-6	Mercury		26		2000		87	1700		78
7440-02-0	Nickel	2700			510		3.5	420		3
7782-49-2	Selenium	680			510		21	420		19
7440-22-4	Silver	680			710		3400	580		3050
7440-62-2	Vanadium	960								

TABLE 2A METHOD TWO – SOIL CLEANUP LEVELS TABLE

		Arctic Zone [1]			Under 40 inch Zone [2]			Over 40 inch Zone [3]		
CAS NUMBER [4]	CHEMICAL NAME (Carcinogenics in Bold Type)	Ingestion [5] (mg/kg)	Inhalation [6] (mg/kg)	Migration to Ground-water [7] (N/A)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwa-ter (mg/kg)
7440-66-6	Zinc	41000			30000		9100	25000		8100

NOTES TO TABLE B1 FOLLOW TABLE B2 IN (d) OF THIS SECTION

TABLE 2B. - PETROLEUM HYDROCARBON SOIL CLEANUP LEVELS

Petroleum Hydrocarbon Range	Arctic Zone			Under 40 Inch Zone			Over 40 Inch Zone			Maximum Allowable Concentrations[14] mg/kg
	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to groundwater (mg/kg)	Ingestion (mg/kg)	Inhalation (mg/kg)	Migration to Groundwater (mg/kg)	
For Laboratory Analysis using AK Methods 101, 102, and 103										
C_6-C_{10} GRO using AK 101	1400	1400	N/A	1400	1400	300	1400	1400	260	1400
C_{10}-C_{25} DRO using AK 102	12500	12500	N/A	10250	12500	250	8250	12500	230	12500
C_{25}-C_{36} RRO using AK 103	13700	22000	N/A	10000	22000	11000	8300	22000	9700	22000
For Laboratory Analysis using AK Aliphatic and Aromatic Fraction Methods 101AA, 102AA, and 103AA										
C_6-C_{10} Aliphatics	1000	1000	N/A	1000	1000	270	1000	1000	240	1000
C_6-C_{10} Aromatics	1000	1000	N/A	1000	1000	150	1000	1000	130	1000
C_{10}-C_{25} Aliphatics	10000	10000	N/A	10000	10000	7200	8300	10000	6400	10000
C_{10}-C_{25} Aromatics	5000	5000	N/A	4100	5000	100	3300	5000	90	5000
C_{25}-C_{36} Aliphatics	20000	20000	N/A	20000	20000	20000	20000	20000	20000	20000
C_{25}-C_{36} Aromatics	4100	10000	N/A	3000	10000	3300	2500	10000	2900	10000

See notes to table for further requirements. "N/A" means not applicable

Tables 2A and 2B

For PCB-free mineral oils, the department will approve alternate levels or exposure pathways, if the department determines that the alternative levels or exposure pathways are protective of human health, safety, and welfare, and of the environment. Although migration to groundwater is not applicable to the Arctic zone, site-specific levels must be protective of migration to surface water Concentrations of hazardous substances in soil must be calculated and presented on a per dry weight basis For volatile organic hazardous substances for which toxicity data is not currently available, the cleanup level that applies at a site is the calculated saturation concentration determined using the equations set out in *Guidance on Cleanup Standards Equations and Input Parameters*, adopted by reference in 18 AAC 75 325 The cleanup level from Table B1 or B2 that applies at a site is the most stringent of the applicable exposure pathway-specific cleanup levels based on ingestion, inhalation, or migration to groundwater. In Table B1, a blank space means not available or not applicable

1 "Arctic zone" is defined at 18 AAC 75.990.
2. "under 40 inch zone" means a site that receives mean annual precipitation of less than 40 inches each year.
3. "over 40 inch zone" means a site that receives mean annual precipitation of 40 or more inches each year
4 "CAS Number" means the Chemical Abstract Service (CAS) registry number uniquely assigned to chemicals by the American Chemical Society and recorded in the CAS Registry System
5. "ingestion" means a potential pathway of exposure to hazardous substances in soil through direct consumption of the soil.
6. "Inhalation" means a potential pathway of exposure to volatile organic hazardous substances in the soil through volatilization.
7. "Migration to groundwater" means a potential exposure to hazardous substances in soil through direct ingestion of groundwater contaminated with concentrations of hazardous substances at levels listed in Table C at 18 AAC 75.345(b)(1) as a result of movement of hazardous substances through soil to the groundwater; this exposure pathway is not applicable to the Arctic zone, where soil cleanup levels protective of migration to surface water must be determined on a site-specific basis.
8. Dioxin cleanup levels must be determined on a site-specific basis.
9. For residential land use, the cleanup level for PCBs in surface soil is 1 mg/kg; for commercial or industrial land use, the cleanup level for PCBs in surface soils is 10 mg/kg and for PCBs in subsurface soil is 25 mg/kg; a responsible person may also propose an alternative cleanup level through an approved site-specific risk assessment, conducted according to the *Risk Assessment Procedures Manual*,
d by reference at 18 AAC 75.340.
yanide expressed as free, or physiologically available cyanide.
11 Lead cleanup levels must be determined on a site-specific basis, based on land use; for residential land use, the soil cleanup level is 400 mg/kg, and for commercial or industrial land use, that level is 1,000 mg/kg; through an approved site-specific risk assessment, conducted according to the *Risk Assessment Procedures Manual*, adopted by reference at 18 AAC 75.340, approved exposure models may be used to evaluate exposure to a child resident or an adult worker; a responsible person may also propose an alternative cleanup level, through a site-specific risk assessment conducted according to the *Manual*, and based on a chemical speciation of the lead present at the site.
12 These levels are based on soil saturation level (Csat) using the equations set out in *Guidance on Cleanup Standards Equations and Input Parameters*, adopted by reference in 18 AAC 75.325.
13. Ingestion value is adjusted by a factor of 0.5 to account for dermal exposure.
14. This level is the concentration of C_6 - C_{10}, C_{10} - C_{25}, or C_{25} - C_{36} petroleum hydrocarbon range in surface and subsurface soil that, if exceeded, indicates an increased potential for hazardous substance migration or for risk to human health, safety, or welfare, or to the environment; the level of a petroleum hydrocarbon may not remain at a concentration above the maximum allowable concentration unless a responsible person demonstrates that the petroleum hydrocarbon will not migrate and will not pose a significant risk to human health, safety, or welfare, or to the environment. Free product must be recovered as required by 18 AAC 75.325(f)
15. If using method two or method three, the applicable petroleum hydrocarbon cleanup levels must be met in addition to the applicable chemical-specific cleanup levels for benzene, toluene, ethylbenzene, and total xylenes; the chemical-specific cleanup levels for the polynuclear aromatic hydrocarbons acenaphthene, anthracene, benzo (a) anthracene, benzo (b) fluoranthene, benzo (k) fluoranthene, benzo (a) pyrene, chrysene, dibenzo (a, h) anthracene, fluorene, indeno (1,2,3-c, d) pyrene, naphthalene, and pyrene must also be met unless the department determines that those cleanup levels need not be met to protect human health, safety, and welfare, and the environment. (Eff. 1/22/99, Register 149)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.710 AS 46.03.740 AS 46.03.745 AS 46.04.020 AS 46.04.070 AS 46.09 020

18 AAC 75.345. GROUNDWATER AND SURFACE WATER CLEANUP LEVELS.

(a) Except as otherwise provided in this section, cleanup of a discharge or release of a hazardous substance to groundwater or surface water must meet the requirements of this section

(b) Contaminated groundwater must meet

(1) the cleanup levels in Table C if the current use or the reasonably expected potential future use of the groundwater, determined under 18 AAC 75.350, is a drinking water source;

TABLE 2C. GROUNDWATER CLEANUP LEVELS

(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
Acenaphthene	83-32-9	2.2
Acetone	67-64-1	3.65
Aldrin	309-00-2	0.00005
Anthracene	120-12-7	11.0
Antimony	7440-36-0	0.006
Arsenic	7440-38-2	0 05
Barium	7440-39-3	2.0
Benzene	71-43-2	0 005
Benzo(a)anthracene	56-55-3	0.001
Benzo(b)fluoranthene	205-99-2	0.001
Benzo(k)fluoranthene	207-08-9	0 01
Benzoic acid	65-85-0	146.0
Benzo(a)pyrene	50-32-8	0 0002
Beryllium	7440-4-17	0.004
Bis(2-chloroethyl)ether	111-44-4	0 00077
P[illegible]-ethylhexyl)phthalate	117-81-7	0.006
[illegible]odichloromethane	75-27-4	0.1
[illegible]oform (Tribromomethane)	75-25-2	0.1
Butanol	71-36-3	3 65
Butyl benzyl phthalate	85-68-7	7.3
Cadmium	7440-04-39	0 005
Carbazole	86-74-8	0.04
Carbon disulfide	75-15-0	3.65
Carbon tetrachloride	56-23-5	0.005
Chlordane	57-74-9	0.002
p-Chloroaniline	106-47-8	0.15
Chlorobenzene	108-90-7	0.1
Chlorodibromomethane	124-48-1	0.06
Chloroform	67-66-3	0.1
2-Chlorophenol	95-57-8	0.2
Chromium (Total)	7440-47-3	0 1
Chromium +3	16065-83-1	36.5
Chromium +6	18540-29-9	0.1
Chrysene	218-01-9	0.1
Copper	7440-05-08	1.3
Cyanide	57-12-5	0.2
DDD	72-54-8	0.0036
DDE	72-55-9	0 0025

TABLE 2C. GROUNDWATER CLEANUP LEVELS

(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
DDT	50-29-3	0.0025
Dibenzo(a,h)anthracene	53-70-3	0 0001
Di-n-butyl phthalate	84-74-2	3.65
1,2-Dichlorobenzene	95-50-1	0.6
1,4-Dichlorobenzene	106-46-7	0 075
3,3-Dichlorobenzidine	91-94-1	0.002
1,1-Dichloroethane	75-34-3	3.65
1,2-Dichloroethane	107-06-2	0.005
1,1-Dichloroethylene	75-35-4	0.007
cis-1,2-Dichloroethylene	156-59-2	0 07
trans-1,2-Dichloroethylene	156-60-5	0.1
2,4-Dichlorophenol	120-83-2	0.1
1,2-Dichloropropane	78-87-5	0.005
1,3-Dichloropropene	542-75-6	0.005
Dieldrin	60-57-1	0 00005
Diethyl phthalate	84-66-2	29.0
2 4-Dimethylphenol	105-67-9	0.7
Dinitrophenol	51-28-5	0.07
2,4-Dinitrotoluene	121-14-2	0.00125
2,6-Dinitrotoluene	606-20-2	0.00125
Di-n-octyl phthalate	117-84-0	0 7
Dioxin	174-60-16	0.00000003
Endosulfan	115-29-7	0.2
Endrin	72-20-8	0.002
Ethylbenzene	100-41-4	0.7
Fluoranthene	206-44-0	1.46
Fluorene	86-73-7	1.46
Heptachlor	76-44-8	0.0004
Heptachlor epoxide	1024-57-3	0.0002
Hexachlorobenzene	118-74-1	0.001
Hexachloro-1,3-butadiene	87-68-3	0.01
Alpha-Hexachlorocyclohexane	319-84-6	0 0001
Beta-Hexachlorocyclohexane	319-85-7	0.00047
Gamma-Hexachlorocyclohexane (Lindane)	58-89-9	0.0002
Hexachlorocyclopentadiene	77-47-4	0.05
Hexachloroethane	67-72-1	0.06
Indeno(1,2,3-c,d)pyrene	193-39-5	0 001
Isophorone	78-59-1	0 9
Lead	7439-92-1	0 015

TABLE 2C. GROUNDWATER CLEANUP LEVELS

(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
Mercury	7439-97-6	0.002
Methoxychlor	72-43-5	0 04
Methyl bromide	74-83-9	0.05
Methylene chloride	75-09-2	0.005
2-Methylphenol (o-cresol)	95-48-7	1 8
Naphthalene	91-20-3	1 46
Nickel	7440-02-0	0.1
Nitrobenzene	98-95-3	0.018
n-Nitrosodiphenylamine	86-30-6	0.17
n-Nitrosodi-n-propylamine	621-64-7	0 0001
Pentachlorophenol	87-86-5	0 001
Phenol	108-95-2	22 0
Polychlorinated biphenyls (PCBs)	133-63-63	0.0005
Pyrene	129-00-0	1.1
Selenium	7782-49-2	0 05
Silver	7440-22-4	0.18
ene	100-42-5	0.1
:,2-Tetrachloroethane	79-34-5	0.004
Tetrachloroethylene	127-18-4	0.005
Thallium	7440280	0.002
Toluene	108-88-3	1 0
Toxaphene	8001-35-2	0.003
1,2,4-Trichlorobenzene	120-82-1	0.07
1,1,1-Trichloroethane	71-55-6	0.2
1,1,2-Trichloroethane	79-00-5	0.005
Trichloroethylene	79-01-6	0.005
2,4,5-Trichlorophenol	95-95-4	3.65
2,4,6-Trichlorophenol	88-06-2	0.077
Vanadium	7440-06-22	0.26
Vinyl acetate	108-05-4	36.5
Vinyl chloride (Chloroethene)	75-01-4	0.002
Xylenes (total)	1330-20-7	10 0
Zinc	7440-66-6	11.0
Petroleum Hydrocarbons		
GRO - C_6 - C_{10} (AK 101)		1.3*
DRO - C_{10} - C_{25} (AK 102)		1.5
RRO - C_{25} - C_{36}		1.1
C_6 - C_{10} - Aliphatics		1.3*

TABLE 2C. GROUNDWATER CLEANUP LEVELS
(Carcinogenics in Bold Type)

Hazardous Substance	CAS Registry Number	Groundwater Cleanup Level (mg/L)
C_6 - C_{10} - Aromatics		7.3
C_{10} - C_{25} - Aliphatics		0.1*
C_{10} - C_{25} - Aromatics		1.5
C_{25} - C_{36} – Aliphatics		N/A (insoluble)
C_{25} - C_{36} - Aromatics		1.1

*Standards based on estimated solubility

(2) a concentration equal to 10 times the cleanup levels in Table C, based on a determination of groundwater use made under 18 AAC 75.350 in consultation with each site landowner, the public, and appropriate government officials if

(A) the department determines that the groundwater is not a current source of drinking water or that the reasonably expected potential future use of the groundwater is not a drinking water source; and

(B) the cleanup levels in Table C are met at the property boundary in an area where the current use or reasonably expected potential future use of groundwater in the neighboring property is determined to be a source of drinking water; or

(3) an approved cleanup level based on an approved site-specific risk assessment conducted under the *Risk Assessment :dures Manual* adopted by reference in 18 AAC 75.340.

(c) The department will require a more stringent cleanup level than the applicable level under (b) of this section, if the department determines that a more stringent cleanup level is necessary to ensure protection of human health, safety, or welfare, or of the environment, and based on actual onsite and actual or likely offsite uses of the groundwater that are likely to be affected by the hazardous substance, and

(1) the groundwater use classifications other than for drinking water, as set out under 18 AAC 70.020(a)(1)(A) and 18 AAC 70.050(a)(2);

(2) groundwater hazardous substance concentrations complying with the secondary maximum contaminant levels in 18 AAC 80.070 for actual or likely drinking water supplies; and

(3) the standards in this section for groundwater contaminated with petroleum, the contamination may not exceed, for each petroleum hydrocarbon range applicable, including the gasoline range, the diesel range, and the residual range,

(A) a Threshold Odor Number (TON) of 1 for odor, as measured by Method 2150B, *Standard Methods for the Examination of Water and Wastewater*, 18th edition, American Public Health Association (1992), adopted by reference, or

(B) a Flavor Threshold Number (FTN) of 1 for flavor, as measured by Method 2160B, *Standard Methods for the Examination of Water and Wastewater*, adopted by reference in (A) of this paragraph.

(d) Toxic substances in sediment may not cause, and may not be reasonably be expected to cause, a toxic or other deleterious effect on aquatic life, except as authorized under 18 AAC 70. For purposes of this subsection, "toxic substances" has the meaning given in 18 AAC 70.990.

(e) The point of compliance where groundwater cleanup levels must be attained is throughout the site from each point extending vertically from the uppermost level of the saturated zone to the lowest possible depth that could potentially be affected by the discharge or release of a hazardous substance, unless the department approves an alternative point of compliance as part of the cleanup action under 18 AAC 75.360 To be approved under this subsection, an alternative point of compliance 1) must be within the existing groundwater contamination plume, and

(2) may not exceed the property boundary, unless a responsible person

(A) demonstrates that attainment of the applicable groundwater cleanup levels is not practicable, and

(B) provides an alternative source of water for affected persons.

(f) Groundwater that is closely connected hydrologically to nearby surface water may not cause a violation of the water quality standards in 18 AAC 70 for surface water or sediment. The department will, in consultation with local, state, and federal officials and the public, establish points of compliance with this subsection, taking into account the following factors:

(1) groundwater travel time and distance from sources of hazardous substances to surface water;

(2) the contribution of the groundwater to the chemical and physical quantity and quality of the surface water;

(3) organisms living in or dependent upon the groundwater to surface water ecosystems;

(4) climatic, tidal, or seasonal variations;

(5) feasibility of attaining applicable water quality standards to support the designated uses of the surface water,

(6) presence of sediment contamination;

(7) if conducted for the site, the conclusions of a site-specific risk assessment conducted under the *Risk Assessment Procedures Manual*, adopted by reference in 18 AAC 75.340.

(g) If the groundwater point of compliance is established at or near a property boundary or if groundwater is closely connected hydrologically to a surface waterbody, the department will, if the department determines that sentinel monitoring is necessary to ensure protection of human health, safety, or welfare, or the environment, require a responsible person to develop sentinel monitoring wells that monitor for any hazardous substances likely to migrate to the applicable point of compliance at concentrations that exceed the cleanup levels.

(h) The department will require long-term monitoring if the department determines that monitoring is necessary to ensure protection of human health, safety, or welfare, or of the environment and if groundwater, surface water, soil, or sediment contains residual concentrations of a hazardous substance that exceed the applicable cleanup levels. If long-term monitoring is required under this subsection, a responsible person shall submit a plan and schedule for monitoring as part of the requirements for cleanup operations under 18 AAC 75.360. Unless otherwise approved by the department, a responsible person shall conduct monitoring quarterly for at least one year to establish the concentration trend. The department will evaluate the monitoring program yearly. If the monitoring indicates that the concentration trend ,

(1) is increasing, the department will require additional followup monitoring and assess the need for additional cleanup; or

(2) is stable or decreasing, and that hazardous substance migration is not occurring, the department will decrease or discontinue the monitoring frequency and locations, if the responsible person demonstrates that continued monitoring is not necessary to ensure protection of human health, safety, and welfare, and of the environment.

(i) The department will require groundwater, surface water, soil, or sediment monitoring to estimate contaminant flux rates and to address potential bioaccumulation of each hazardous substance at the site, if the department determines that monitoring is necessary to ensure protection of human health, safety, or welfare, or of the environment. If monitoring is required under this subsection, a responsible person shall submit a plan and schedule for monitoring as part of the cleanup operation requirements under 18 AAC 75 360.

(j) Groundwater monitoring wells must be installed, developed, and decommissioned in accordance with the department's *Recommended Practices for Monitoring Well Design, Installation, and Decommissioning*, April 1992, adopted by reference, or another approved method that is protective of human health, safety, and welfare, and of the environment.

(k) For a cleanup conducted under (b)(1) of this section, a chemical that is detected at one-tenth or more of the Table C value must be included when calculating cumulative risk under 18 AAC 75.325(g). (Eff 1/22/99, Register 149)

Authority: AS 46.03.020
AS 46.03.050
AS 46.03.710
AS 46.03 740
AS 46.03.745
AS 46.03.755
AS 46.04.020
AS 46.04.070
AS 46.09.010
AS 46.09.020

Editor's note: Standard *Methods for the Examination of Water and Wastewater*, adopted by reference in this section, may be purchased from the American Water Works Association Bookstore, 6666 West Quincy Avenue, Denver, Colorado 80235, or may be viewed at the department's Anchorage, Fairbanks, Juneau, and Soldotna offices. *Recommended Practices for Monitoring Well Design, Installation, and Decommissioning*, adopted by reference in this section, may be viewed at, or requested from, the department's Anchorage, Fairbanks, Juneau, and Soldotna offices.

Table 3. Cape Romanzof Landfill 2 (LF03) Sample Collection Summary - Groundwater

Parameter	Analytical Method[a]	Number of Samples[b]	Quality Assurance Samples*	Quality Control Samples*	Container[c]	Preservative	Maximum Holding Times
Gasoline-Range Organics	AK101[d]	7	1 duplicate		Three 40-ml glass septa-lidded	No headspace HCl to pH<2 4°C	14 days to analysis
Diesel-Range Organics	AK102[e]	7	1 duplicate		One 1-liter amber glass[f]	HCl to pH<2 4°C	7 days to extraction 40 days to analysis
Volatile Organic Compounds	8260	7	1 duplicate	1 trip	Three 40-ml glass septa-lidded	No headspace HCl to pH<2 4°C	14 days to analysis
Semivolatile Organic Compounds	8270	7	1 duplicate		One 1-liter amber glass[f]	4°C	14 days to analysis
TAL Metals[g]	6010/700	7	1 duplicate		One 1-liter HDPE	HNO3 to pH<2 4°C	6 months
Polychlorinated Biphenyls/ Organochlorine Pesticides	8080	7	1 duplicate		One 1-liter amber glass[f]	4°C	14 days to extraction 40 days to analysis

°C Degrees Celsius
HCl Hydrochloric acid
HDPE High-density polyethylene
HNO3 Nitric Acid
TAL Target Analyte List

* Rinsates are 5 percent of the total samples or at least one sample, whichever is greater. Duplicates are 10 percent of the total samples At least one trip blank must be provided for each cooler containing volatile organic compounds

a. Unless otherwise stated, analytical method is from the U.S. Environmental Protection Agency (EPA), 1986, *Test method for evaluation of solid waste, physical/chemical methods, SW-846*, 3rd edition, amended through update I, July 1992.

b. One sample of treated investigation-derived waste water will be collected and analyzed for all the parameters listed on this table.

c. Glass containers have polytetrafluoroethylene-lined lids

d. State of Alaska method for determining gasoline-range organics.

e State of Alaska method for determining diesel-range organics.

f For 10 percent of the water samples, include two extra 1-liter bottles per laboratory for matrix spike/matrix spike duplicate.

g. TAL metals include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc Samples will be analyzed for total metals. Samples will not be analyzed for dissolved or suspended metals

Table 4. Cape Romanzof Landfill 2 (LF03) Sample Collection Summary - Soil

Parameter	Analytical Method[a]	Number of Samples	Quality Assurance Samples*	Quality Control Samples*	Container	Preservative	Maximum Holding Times
Gasoline-Range Organics	AK101[b]	2		1	One 4-oz. amber glass	Methanol, <25°C	14 days to analysis
Diesel-Range Organics	AK102[c]	2		1	One 8-oz. amber glass or one 4-oz. amber glass	4°C	14 days to extraction 40 days to analysis
Volatile Organic Compounds	8260	2		1	One 4-oz. glass or one 2-oz. glass	No headspace 4°C	14 days to analysis
Semivolatile Organic Compounds	8270	2	1 trip	1	One 4-oz. glass	4°C	14 days to analysis
TAL Metals[d]	6010/7000	2		1	One 8-oz. glass	4°C	6 months
Polychlorinated Biphenyls/ Organochlorine Pesticides	8080	2		1	One 8-oz. glass	4°C	14 days to extraction 40 days to analysis
Grain-Size Analysis	ASTM C117 and C136	2		0	Plastic geobag	NA	NA

ASTM American Society for Testing and Materials
°C Degrees Celsius
NA Not applicable
TAL Target Analyte List

* Duplicate samples will be 10 percent of the total samples.

a. Unless otherwise stated, analytical method is from the U S. Environmental Protection Agency (EPA), 1986, *Test method for evaluation of solid waste, physical/chemical methods, SW-846*, 3rd edition, amended through update I, July 1992.

b State of Alaska method for determining gasoline-range organics

c. State of Alaska method for determining diesel-range organics

d. TAL metals include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc

Table 5. Cape Romanzof Landfill 2 (LF03) Sample Collection Summary - Sediment

Parameter	Analytical Method[a]	Maximum Number of Samples	Quality Assurance Samples*	Quality Control Samples*	Container	Preservative	Maximum Holding Times
Gasoline-Range Organics	AK101[b]	5	1	1	One 4-oz. amber glass	Methanol, 25°C	14 days to analysis
Diesel-Range Organics	AK102[c]	5	1	1	One 8-oz amber glass or one 4-oz. amber glass	4°C	14 days to extraction 40 days to analysis
Volatile Organic Compounds	8260	5	1	1	One 4-oz glass or one 2-oz. glass	No headspace 4°C	14 days to analysis
Polychlorinated Biphenyls/ Organochlorine Pesticides	8080	5	1	1	One 8-oz. glass	4°C	14 days to extraction 40 days to analysis
Semivolatile Organic Compounds	8270	5	1	1	One 4-oz. glass	4°C	7 days to extraction 40 days to analysis
TAL Metals[d]	6010/7000	5	1	1	One 8-oz. glass	4°C	6 months

°C Degrees Celsius

* Duplicates are 10 percent of the total samples.

a Unless otherwise stated, analytical method is from the U.S. Environmental Protection Agency (EPA), 1986, *Test method for evaluation of solid waste, physical/chemical methods, SW-846*, 3rd edition, amended through update I, July 1992

b State of Alaska method for determining gasoline-range organics.

c. State of Alaska method for determining diesel-range organics.

d. TAL metals include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc.

Table 6. Cape Romanzof Landfill 2 (LF03) Sample Collection Summary - Surface Water

Parameter	Analytical Method[a]	Number of Samples	Quality Assurance Samples*	Quality Control Samples*	Container[b]	Preservative	Maximum Holding Times
Gasoline-Range Organics	AK101[c]	3	1 duplicate	1 trip	Three 40-ml glass septa-lidded	No headspace HCl to pH<2 4°C	14 days to analysis
Diesel-Range Organics	AK102[d]	3	1 duplicate		One 1-liter amber glass[e]	HCl to pH<2 4°C	7 days to extraction 40 days to analysis
Volatile Organic Compounds	8260	3	1 duplicate		Three 40-ml glass septa-lidded	No headspace HCl to pH<2 4°C	14 days to analysis
Polychlorinated Biphenyls/ Organochlorine Pesticides	8080	3	1 duplicate		One 1-liter amber glass[e]	4°C	14 days to extraction 40 days to analysis
Semivolatile Organic Compounds	8270	3	1 duplicate		One 1-liter amber glass[e]	4°C	7 days to extraction 40 days to analysis
Metals[f]	6010/7000	3	1 duplicate		One 1-liter HDPE	HNO_3 to pH<2 4°C	28 days for mercury in glass, 6 months for all others

°C Degrees Celsius
HCl Hydrochloric acid
HDPE High-density polyethylene
HNO_3 Nitric acid

- Rinsates are 5 percent of the total samples or at least one sample, whichever is greater. Duplicates are 10 percent of the total samples At least one trip blank must be provided for each cooler containing volatile organic compounds

a. Unless otherwise stated, analytical method is from the U.S. Environmental Protection Agency (EPA), 1986, *Test method for evaluation of solid waste, physical/chemical methods, SW-846*, 3rd edition, amended through update I, July 1992.
b. All glass containers have polytetrafluoroethylene-lined lids.
c. State of Alaska method for determining gasoline-range organics.
d State of Alaska method for determining diesel-range organics.
e. For 10 percent of the water samples, include two extra 1-liter bottles per laboratory for matrix spike/matrix spike duplicate
f. TAL metals include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc. Samples will be analyzed for total metals. Samples will not be analyzed for dissolved or suspended metal

					90
			25	60-140	90
	Soil	8260	15	70-130	
Volatile Organic Compounds	Liquid	8260			90
			40	75-125	90
	Soil	6010	20	80-20	
Zinc	Liquid	6010			

a. Unless otherwise specified, method numbers refer to U.S. Environmental Protection Agency, 1986, *Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods*, *SW-846*, 3rd edition, with additions through November 1992.
b. State of Alaska method for determining diesel-range organics.
c. State of Alaska method for determining gasoline-range organics.

Table 7. Summary of Analytical Data Quality Objectives

Parameter	Matrix	Method[a]	Precision (percent)	Accuracy (percent)	Completeness (percent)
Antimony	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	60
Arsenic	Soil	7060	40	75-125	90
	Liquid	7060	20	80-120	90
Barium	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Beryllium	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Cadmium	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Chromium	Soil	7191	40	75-125	90
	Liquid	7191	20	80-120	90
Cobalt	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Copper	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Diesel-Range Organics	Soil	AK102[b]	40	50-150	90
	Liquid	AK102	20	60-140	90
Gasoline-Range Organics	Soil	AK101[c]	40	50-150	90
	Liquid	AK101	20	60-140	90
Lead	Soil	7421	40	75-125	90
	Liquid	7421	20	80-120	90
Nickel	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Polychlorinated Biphenyls/ Organochlorine Pesticides	Soil	8080	40	50-150	90
	Liquid	8080	30	60-140	90
Semivolatile Organic Compounds	Soil	8270	40	12-127	90
	Liquid	8270	30	12-127	90
Selenium	Soil	7740	40	75-125	90
	Liquid	7740	20	80-120	90
Silver	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90
Thallium	Soil	7841	20	85-115	90
	Liquid	7841	20	85-45	90
Vanadium	Soil	6010	40	75-125	90
	Liquid	6010	20	80-120	90

Table 8

Field PCB Monitor Data

Field PCB Determinations by Dexsil Chloride Detector
Y = 1 10 X + 2 9

Sample No	Field Chloride Value (Units are ppm)	EPA Method 8082 (Units are PPB)
1	3.6	92
2	1 8	68
3	9.3	120
4	BDL	76
5	0.2	170
6	23.6	
7	2.7	86
8	BDL	30
9	BDL	38
10	BDL	
11	BDL	
12	BDL	
13	BDL	
14	0.3	
15	0 2	
16	0.4	87
17	BDL	
18	1.2	
19	BDL	
20	BDL	87
21	0.6	120
22	4	110
23	7.6	620
24	12	
25	BDL	
26	3.1	
27	5 4	
28	0.8	
29	0.1	
30	0.8	140
31	1.2	
32	BDL	
33	2.8	55
34	0 7	
35	0.6	
36	0.5	
37	BDL	
38	2.9	
39	BDL	
40	BDL	430
41	11 4	
42	3.4	
43	BDL	
44	BDL	
45	BDL	26
46	0.2	72
47	BDL	
48	BDL	
49	0 3	
50	BDL	

BDL - Below Detection Limits This is represented by the low chloride standard, 0 1 ppm

Table 10. Comparison of Previous Data (1998 data is emboldened)

Site	Sample	DRO	RRO	8260	8270	8082 (PCB)
CMW-1	01WA		**0.179**			
CMW1	70 water					
CMW-2	Well Dry					
CMW-3	eviously sampled					
CMW-4	02WA		**2.13**			
CMW4	67 water	0 29	3.2			
CMW-5	06WA		**0.41**			
CWM5	68 water	0.22				
CMW-6	03WA					
CMW6	64 water					
CMW-7	04WA					
CMW7	66 water	0.23				
SW1	02SW					**0.000147**
SW1	54 water					
SW2	03SW		**0.205**			**0.0429**
SW2	58 water					
SW3	01SW					**0.000209**
SW3	51 water					
SD1	02SD		**34.7**		DDD 00115, DDT 000813	
SD1	55 sed	8 8	44			
SD2	03SD		**181**			**69.1ppm**
SD2	57 sed	180	1000			180 ppm
SD3	01SD		**13.1**			
SD3 (sed)	52 sed	18	94			

84 52

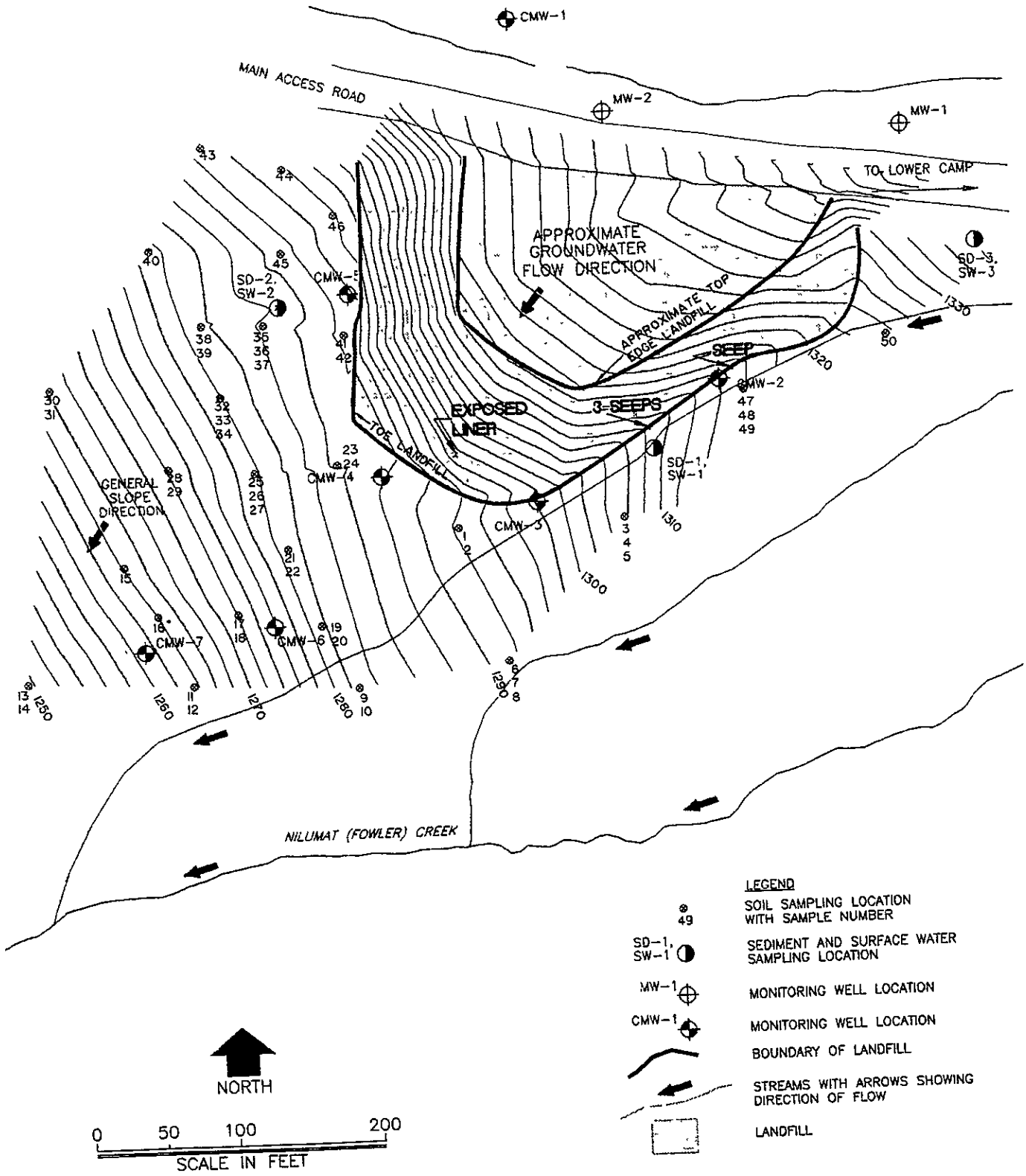
Table 9 Compendium of Cape Romanzov Data - Complete analysis of soil, water, and sediment

Sample	Site	DRO ppm	RRO ppm	8260 ppb	8270 ppb	8082 ppm
4803098853 soil	SW3					
4803098856 soil	SW1					
4803098860dupeof56	SW1					
4803098855 sediment	SD1					
4803098861dupeof55	SD1					
4803098852 sediment	SD3					
4803098857 sediment	SD2					180 (10)
4803098851 water	SW3					
4803098854 water	SW1					
4803098859dupeof54	SW1			MeCl 5 5 (5)		
4803098858 water	SW2					
4803098862 water	Not Collected					
4803098863 water	CMW3					
4803098864 water	CMW6					
4803098865 water	MW1				Bis(2-ethylhexxyl)phthalate 17 5 (6) B	
4803098866 water	CMW7					
4803098867 water	CMW4		3 2 (1 1)			
4803098868 water	CWM5					
4803098869 water	CMW5dupe					
4803098870 water	CMW1					
Trip Blank						

Only compounds which exceed regulatory limits are shown Regulatory limits are shown in parantheses
B qualifier for Bis(2-ethylhexyl)phthalate indicates this compound was found in the laboratory method blank
No GRO anomalies were found, since volatiles would have evaporated or weathered out from an old inactive site
8260 - Traces of toluene and xylene were found in the water samples below regulated levels Since these compounds were also found in the trip blank, they may be attributed to lab contamination, and certainly do not reflect on the samples themselves
Soil samples - Methylene chloride is ubiquitous along with acetone at levels below reporting requirements These are unlikely to actually exist on They are, however, common laboratory extraction and cleaning fluids
Sample 57 yielded 180 ppm arochlor 1260, confirmed by another laboratory Since all other site samples yielded PCB in the ppb range, this is by far the hottest sample on site This white sandy sediment samples appeared pristine during sampling

TAB

Figures



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SAMPLE LOCATIONS

CAPE ROMANZOF LRRS, AK

SCALE 1" = 100' | Sept 98

FIGURE 4

CAPE ROMANZOF LRRS, ALASKA

SOIL AND WATER MONITORING
LANDFILL 2 (LF 03) JULY 98

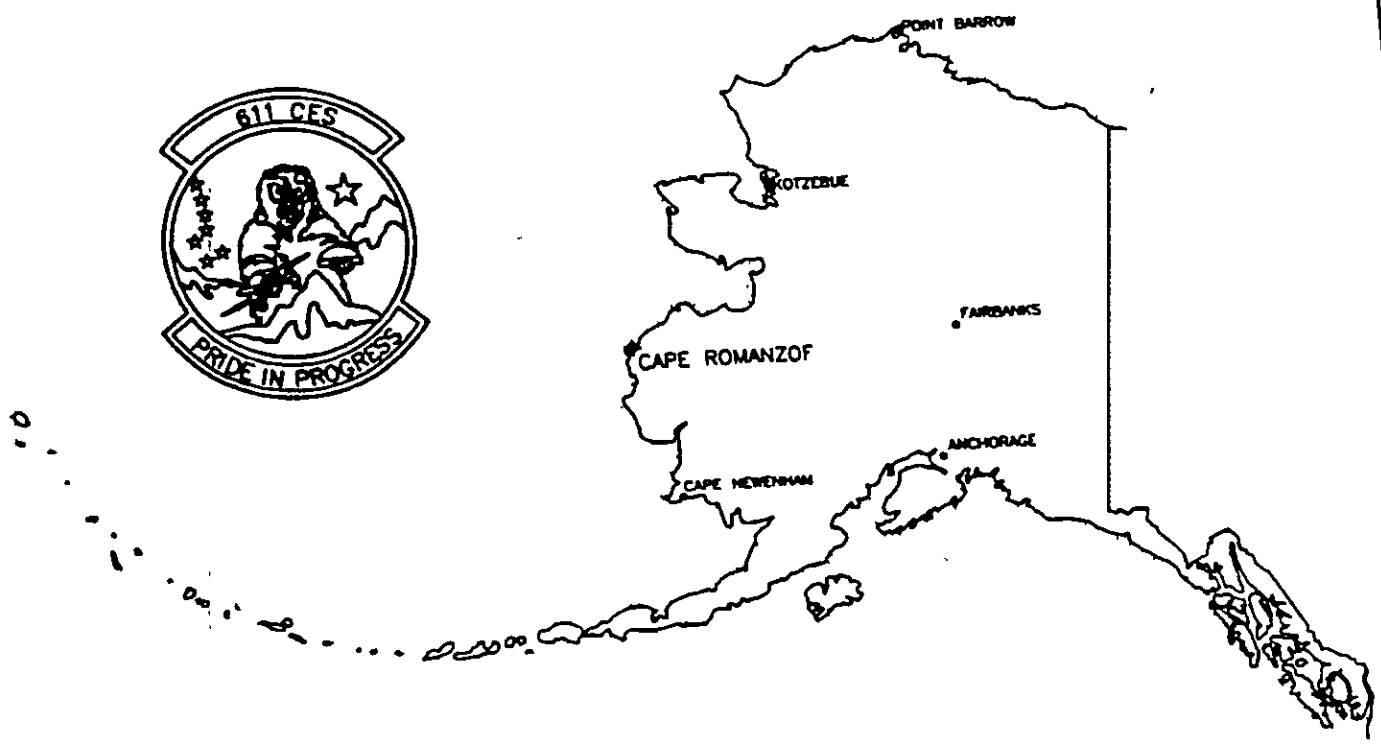

FIGURE 1

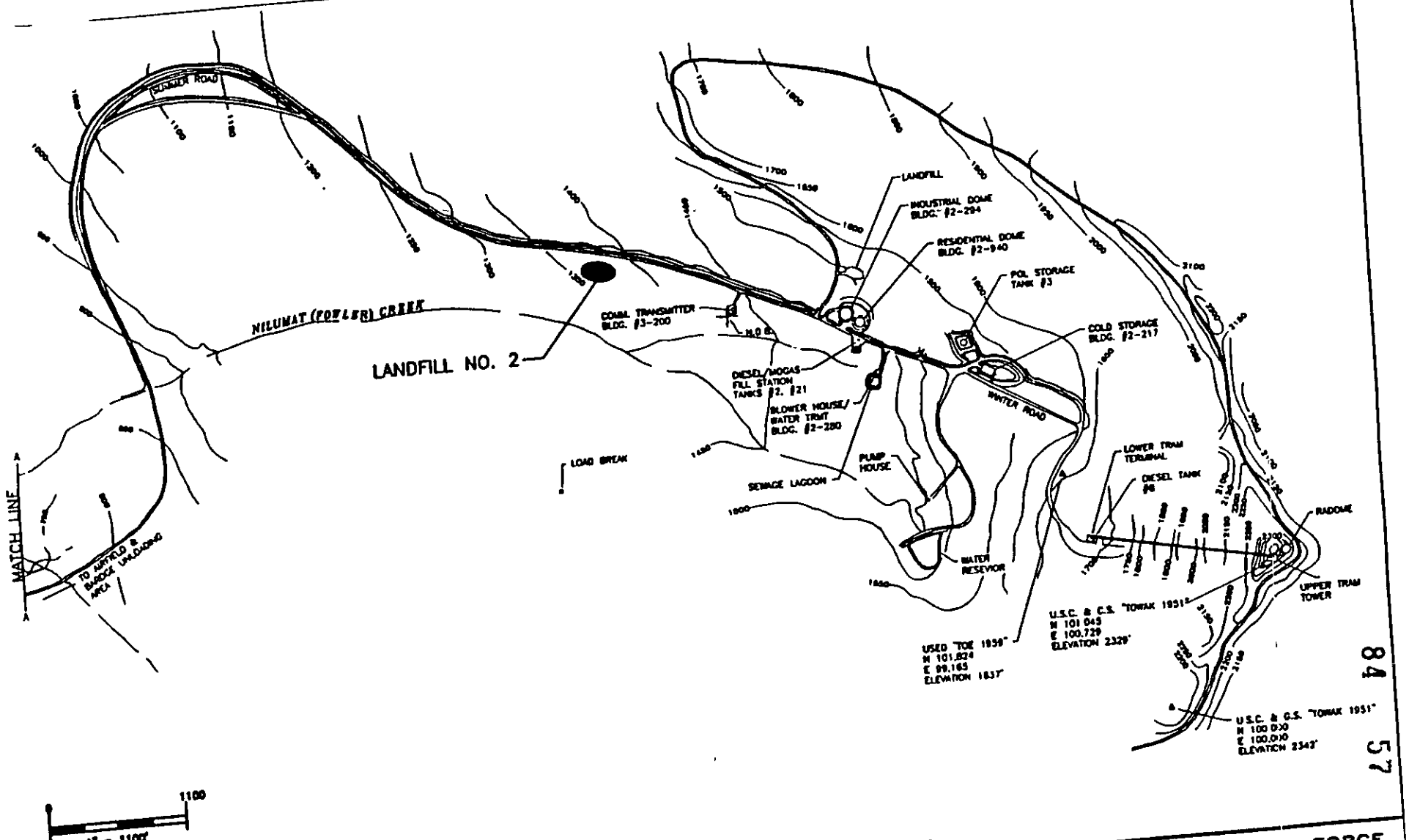

FIGURE 2

DEPARTMENT of the AIR FORCE
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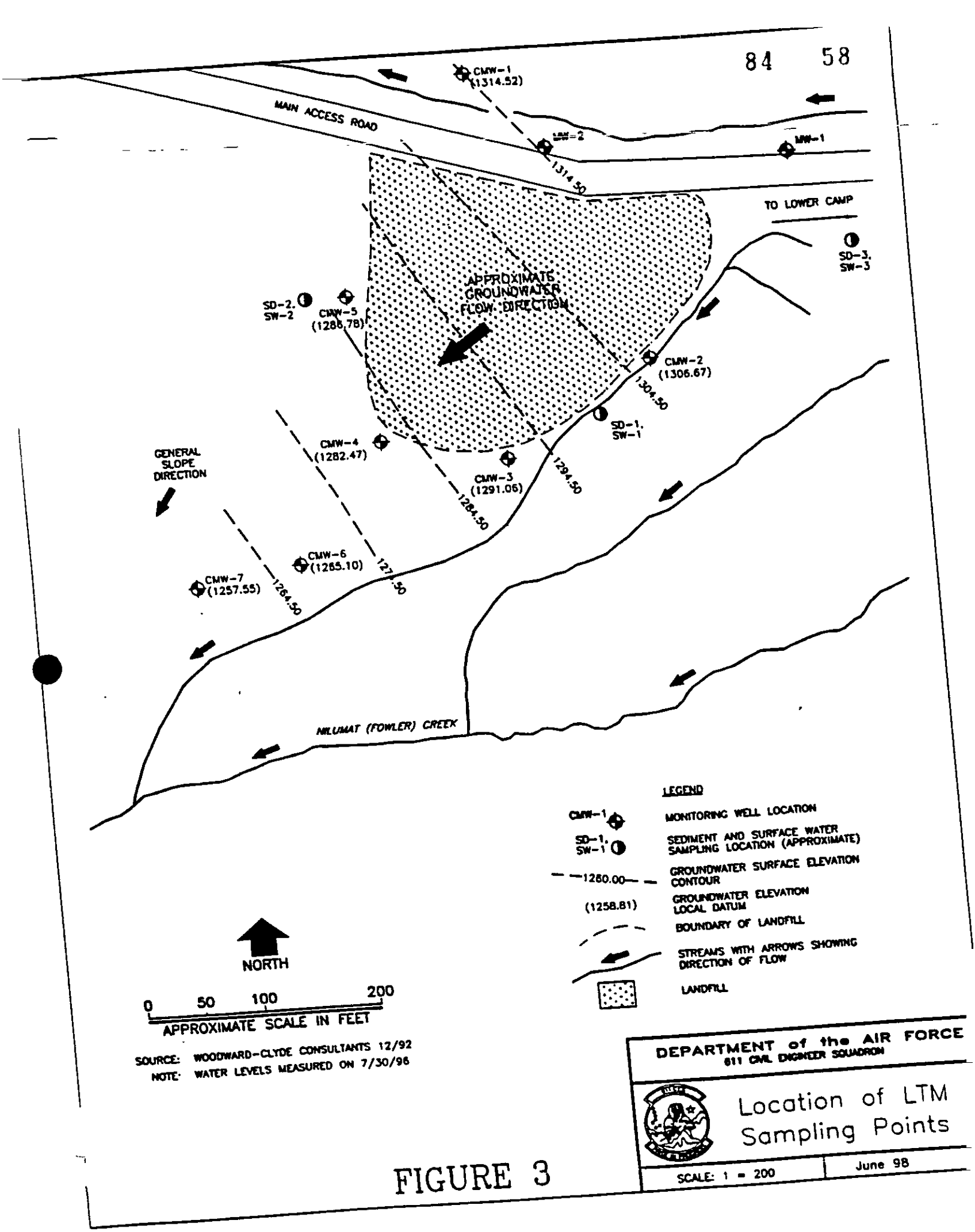
SITE PLAN

SOIL AND WATER MONITORING
LANDFILL 2 (LF 03)

CAPE ROMANZOF LRRS, ALASKA

SCALE: 1 = 1100 | July 98

84 57



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Location of LTM Sampling Points

SCALE: 1 = 200 | June 98

FIGURE 3

TAB

ARARs and TBCs

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Applicable or relevant and appropriate requirements (ARARs) can be in the form of regulations enforceable by law (federal, state and/or local) or regulatory "guidance" Many regulators issue guidance documents, advisories, and verbal ("understood") direction (e.g., 20x Dilution Rule) to assist the environmental community and potentially responsible parties in complying with environmental laws and regulations. These guidelines are commonly used to determine cleanup requirements at contaminated sites where specific laws or regulations are absent Ecological and human health risk assessments are also commonly employed to help determine appropriate remedial actions.

Exceedance of a potential ARAR or items "to be considered" (TBC) will force consideration of some type of remedial action on the part of the responsible party in a reasonable time frame, with consideration of the protection of human health and the environment as threshold criteria Cleanup alternatives shall be assessed to determine if they will be effective in protecting critical guidelines (protection of life and environment) with short and long term goals held in assessment. Assessments are to be made on hazardous substances, pollutants, or contaminants by eliminating, reducing, or minimizing exposure of these chemicals to goals established in accordance with ARAR forced study as listed in 18 AAC 75,

The ARARs and TBCs listed for this study are intended only as a guide since some, particularly the very conservative residential risk - based concentrations (RBCs) discussed below, are included for completeness only. Ultimately, long term monitoring or final cleanup requirements are determined by the appropriate regulating agency or agencies, such as United States Environmental Protection Agency (USEPA), Alaska Department of Environmental Conservation (ADEC), etc. TBC information is available for many chemicals that do not have federal or state promulgated standards. These may be from various information sources such as the EPA Integrated Risk Information System TBCs are integrated into the contents of Table 3.

Section 121 of SARA established four standards that govern selection of remedial action

1. Protection of human health and the environment
2. Cost effectiveness
3 Usage of permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum practicable extent
4. The achievement of federal ARARs and more stringent state ARARs promulgated under state environmental or facility siting laws for any material remaining onsite at the conclusion of the remedial action

A requirement may be either applicable or relevant and appropriate to eventual remedial activities at a site, but not necessarily both. Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a

hazardous substance, pollutant, contaminant, remedial action, location, or other circumstances at a site.

If a regulation is not applicable, it may still be relevant and appropriate. The basic considerations are whether the requirement (1) regulates or addresses problems or situations sufficiently similar to those encountered at the site (i e., relevance), and (2) is appropriate to the circumstances of the release or threatened release, such that its use is well suited to the particular site. Determining whether a requirement is relevant and appropriate is site-specific and must be based on best professional judgment. This judgment is based on a number of factors, including the characteristics of the site and of the release, as compared to the statutory or regulatory requirement. Compliance with all requirements found to be applicable or relevant and appropriate is mandatory under Comprehensive Environmental Response Compensation and Liability Act (CERCLA) program unless a waiver is obtained from the USEPA.

In some situations, a promulgated regulation does not address a particular issue or compound. In the case when there is no promulgated regulation, a state or federal advisory, proposed rules, criteria, or guidance documents may be TBC to establish remediation cleanup levels or procedures. TBCs are not enforceable and their use may not be economically feasible
Based on site evaluation data, the ARARs listed below were selected for review and are discussed or referenced in the sections that follow.

USEPA Toxic Substance Control Act (TSCA) - PCB Spill Cleanup Policy
(40 CFR 761.121)

USEPA Toxic Substance Control Act (TSCA) - PCB Spill Cleanup Policy (40
CFR 761.125)

ADEC Oil and Hazardous Substances Pollution Control (I 8 AAC 75), Parts 3 and 9.

ADEC Underground Storage Tanks (I 8 AAC 78)

ADEC Interim Guidance for Non-UST Contaminated Soil Cleanup Levels (July 17,1991)

USEPA Region III Risk-Based Concentration Table, Third quarter 1994

There are three types of ARARS: (1) chemical-specific ARARS, (2) location-specific ARARS, and (3) action-specific ARARS. Generally, potential chemical-specific ARARs and location specific ARARs are identified during the site characterization phase of a project, and the potential action-specific ARARs are identified during the development of remedial alternatives in a Feasibility Study (FS). Action-specific ARARs are not discussed in this report Should remedial actions be required at Cape Romanzof, action specific ARARs would be identified during the remedial design.

CHEMICAL -SPECIFIC ARARs

Chemical-specific requirements are based on health or risk-based concentration (RBC) limitations in environmental media (i.e., water, air, soil) for specific hazardous chemicals. These requirements may be used to set cleanup levels for the COCs in the designated media, or to set a safe level of discharge where discharge occurs as part of a remedial activity. Alternative cleanup levels may be adopted for a site if regulated levels are technically unfeasible and/or risk assessment is performed and approved by ADEC

The first step in identifying chemical-specific ARARs is identifying the chemicals of concern. These potential chemical-based ARARs are based upon the following sources

- Safe Drinking Water Act and the National Primary Drinking Water Regulations (40 CFR 141). These regulations establish enforceable MCLs for organic and inorganic compounds in public drinking water systems. In addition, nonenforceable MCL goals have been set at the level at which no known or anticipated adverse health effects are expected, assuming adequate margins of safety. There are no drinking water sources downgradient from Landfill 2 (LF03) at Cape Romanzof.
- Alaska Water Quality Standards (18 AAC 70). These regulations establish maximum contaminant concentrations (MCCs) for organic and inorganic contaminants in marine, estuarine, and fluvial environments. The MCL listed in Table 2 in the Appendix are compatible with the requirements of this act.
- Alaska Oil and Hazardous Substances Pollution Control Regulations (18 AAC 75, Articles 3 and 9).

Sources for potential target cleanup levels include selected standards, criteria, and guidelines that are typically considered as ARARs for remedial actions In addition, EPA Region III risk based concentrations (RBCs), developed as guidance for determining soil action levels are presented and should be regarded as TBCs.

Soil Cleanup Standards

Potential soil cleanup levels for contaminants found at the LRRS are discussed in the following sections.

PCBs

Soil The USEPA promulgated a PCB spill cleanup policy in the April 2, 1987, Federal Register. The policy is intended for spills occurring after the Federal Register notice, but may be applied to previous spill sites at the discretion of the USEPA regional office having jurisdiction USEPA Region X, which has jurisdiction in Alaska, adopted the policy for spills occurring before and after the Federal Register notice.

The PCB spill regulations in TSCA (40 CFR 761.125) require that for high-concentration PCB spills (above 500 mg/kg) in nonrestricted access areas, soil containing more than 10 mg/kg PCB must be removed and excavated to a depth of at least 10 inches. The regulations also state that

the excavation must be filled in with clean soil, containing less than 1 mg/kg PCB. However, these are the most stringent clean-up criteria. Cape Romanzof LRRS can be defined as a restricted access area as defined by TSCA. PCB clean-up requirements for restricted access areas are less stringent.

PCB concentrations in soil at Cape Romanzof Landfill 2 (LF03) exceed several hundred mg/kg along the western edge, as determined in only one sediment sample out of 50 soil and 3 sediment samples. The location of PCB contaminated soil is discussed in Sections 2.0 and 3.0.

Petroleum Hydrocarbons

The ADEC promulgated regulations (18 AAC 75, Articles 3 and 9, "Oil and Hazardous Substances Pollution Control Regulations, Discharge Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances and Other Hazardous Substances, and General Provisions" delineates cleanup and standards for releases of petroleum hydrocarbons, organic, and inorganic contaminants discharged on land or waters of the State of Alaska Soil contaminated by petroleum products must be cleaned up to levels identified by the ADEC Regional Supervisor or his designee.

The ADEC guidance documents include a method to determine cleanup levels using a matrix scoring system. The matrix accounts for variations in conditions, such as depth to groundwater, soil and geology types, precipitation, potential receptors, and volume of contaminated soil.

Risk-Based Concentrations for Soil

Under the provisions of 18 AAC 75, Articles 3 and 9, ADEC has developed risk-based concentrations (RBCs) for both arctic and non-arctic regions for soil borne contaminants, where arctic regions are based on the presence of nondiscontinuous permafrost. Table B1 of Method Two takes into consideration carcinogenicity, as well as possible ingestion or inhalation factors, as well as groundwater migration.

These levels were developed based on long-term residential exposure assumptions for soil ingestion that may not reflect actual site conditions. For instance, a factor which may be considered as a TBC is that Landfill 2 (LF03) is neither an area of permanent nor temporary residence, nor is it a continuous workplace. Rather, an assumption TBC may be made that no individual will work at Landfill 2 (LF03) for more than 2 weeks out of any given year.

RBCs are not cleanup standards but rather a means of assessing potential health or environmental risk under conservative exposure. assumptions. Cleanup goals are based on site-specific risk management decisions.

Chemical concentrations that exceed screening-level RBCs do not necessarily indicate an actual health threat because the RBCs are based on assumptions that overestimate current and probable future exposure conditions, and RBCs are based on very protective target risk levels that can be exceeded without necessarily posing unacceptable risk Therefore, the RBCs are used only for screening purposes to identify potential COCs. If the concentrations at the site do not exceed the screening-level RBCs, exposure to the chemicals at a site will not be of concern, and no

further action is recommended. Additionally, levels of target constituents above the RBCs do not necessarily indicate a potential health risk. For example, concentrations of metals in soils may be elevated above the RBCs but within area background levels, thus eliminating the chemical from the target COCs. Additionally, an item TBC is that the local watersources for Cape Romanzof LRRS is located considerably uphill from Landfill 2 (LF03), and that there are no water sources downhill.

A general RBC for lead has not been developed. In the absence of actual clean-up requirements or toxicity factors for lead, the EPA suggests an interim screening level for lead in residential soil of 400 mg/kg (USEPA 1994. Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities).

Location - Specific ARARs

Location – specific requirements are special requirements or standards that apply because of the location of the site. These ARARs may restrict or preclude certain remedial actions, or they may apply only to certain portions of the installation Location –specific factors that may add ARARs include sensitive habitats, floodplains, wetlands, endangered species habitat, and historic or archeological resources.

Performance, design, or other action – specific requirements

These ARARs constitute limitations or requirements that apply to specific technologies or activities, particularly with respect to hazardous waste or to the conduct of activities at specific locations. These ARARs do not in themselves determine any remedial alternatives; they indicate how a selected alternative must be achieved. These are included in the parameters of Tables 2 and 3.

Waiver of ARARs

Section 121 of CERCLA/SARA provides that under certain circumstances ARARs may be waived. These waivers apply only to meeting ARARs with respect to remedial actions at the contaminated area; Other statutes requiring remedies that protect human health and the environment cannot be waived. A waiver must be invoked for each ARAR that will not be attained or achieved. Waivers of ARARs may include the following.

- Interim Measures – the remedial action selected is only part of a total remedial action that will meet the ARAR when completed; it may apply to sites where a final remedy is divided into several smaller actions.
- Greater Risk – Compliance with the ARAR will result in greater risk to human health or environment. Magnitude, duration, and reversibility of adverse impacts are considered.
- Technically Impracticable – Compliance is technically impracticable from and engineering perspective. Engineering feasibility and reliability are considered.
- Equivalence to other Standards – The selected action would attain a standard of performance equivalent to the standard required by the ARAR. It may be used where the

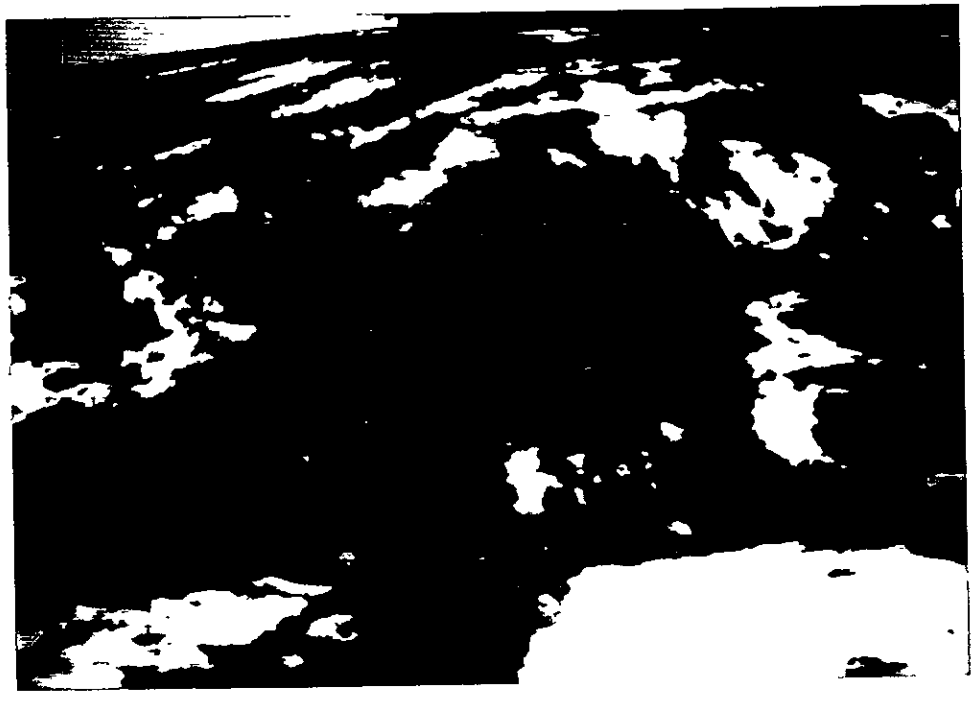
ARAR specifies design or where operating standards by equivalent or better results are available from an alternative design or method of operation.

- Inconsistent Application – The standard may not be applied consistently in similar circumstances. Similarity of sites or response circumstances may be considered.
- Funding – This waiver is primarily applicable to sites undergoing action under CERCLA Section 104, and does not affect Landfill 2 (LF03) at Cape Romanzof.

TAB

Photos

View from CMW3 showing CMW4 and the Felsenmeer area in background, and the eroding corner of the Landfill Cap.



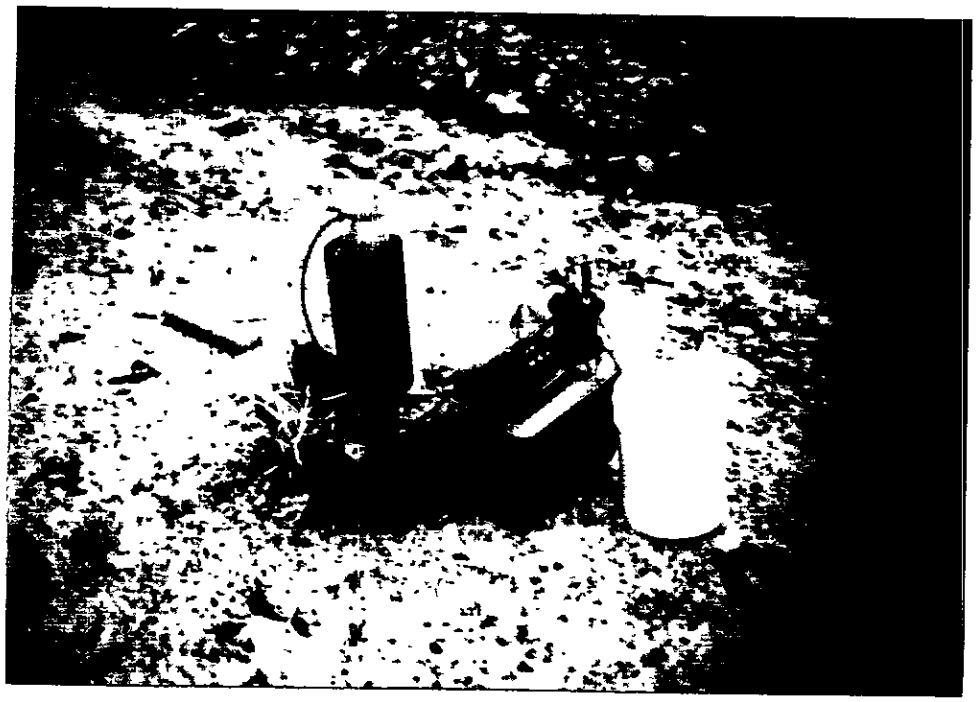
Seep area at SD1

View from the SW eroding corner of the Landfill Cap NNW into the Felsenmeer area and SD2

View from the SW corner of the Landfill Cap showing Erosion, and the Edge of the Cap Liner

View from Landfill Cap looking Southwest to CMW4 and beyond toward CMW7

Sediment collection area at SD1



Well Monitoring at MW1

Buried Off-Landfill Junk near the Southwest corner of the Landfill

TAB

Analytical Data

ANALYTICA
ENVIRONMENTAL
LABORATORIES
an Analytica Group company

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(303) 469-8868
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Department of the Air Force
611 Civil Eng./CEVO
21885 2nd St.
Elmendorf AFB, AK 99506-0875
Attn: Carl A. Hornig

Order #: 98-09-228
Date: 10/26/98 12:15
Work ID: CAPE ROMANZOF - CALL #B002
Date Received: 09/25/98
Date Completed: 10/25/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988 001 6"
02	48030988 002 2'
03	48030988 003 6"
04	48030988 004 2'
05	48030988 005 4'
06	48030988 006 6"
07	48030988 007 2'
08	48030988 008 4'
09	48030988 009 6"
10	48030988 010 2'
11	48030988 011 6"
12	48030988 012 2'
13	48030988 013 6"
14	48030988 014 2'
15	48030988 015 6"
16	48030988 016 6"
17	48030988 017 6"
18	48030988 018 2'
19	48030988 019 6"
20	48030988 020 2'
21	48030988 021 6"
22	48030988 022 2'
23	48030988 023 6"

Sample Number	Client Description
24	48030988 024 2'
25	48030988 025 6"
26	48030988 026 2'
27	48030988 027 3'
28	48030988 028 6"
29	48030988 029 2'
30	48030988 030 6"
31	48030988 031 2'
32	48030988 032 6"
33	48030988 033 2'
34	48030988 034 3.5'
35	48030988 035 6"
36	48030988 036 2'
37	48030988 037 3.5'
38	48030988 038 6"
39	48030988 039 2'
40	48030988 040 6"
41	48030988 041 6"
42	48030988 042 2'
43	48030988 043 6"
44	48030988 044 6"
45	48030988 045 6"
46	48030988 046 6"

Order # 98-09-228
ANALYTICA, INC.

Department of the Air Force

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire K. Toon

Claire K. Toon
Project Manager

Samples were prepared and analyzed according to methods outlined in the following references:

- Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, January 1996.

All analyses meet quality assurance objectives.

Sample: 01A 48030988 001 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	39.8		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		55	ug/Kg-DRY	10/20/98
PCB-1232		ND		28	ug/Kg-DRY	10/20/98
PCB-1242		ND		28	ug/Kg-DRY	10/20/98
PCB-1248		ND		28	ug/Kg-DRY	10/20/98
PCB-1254		92		28	ug/Kg-DRY	10/20/98
PCB-1260		ND		28	ug/Kg-DRY	10/20/98
PCB-1016		ND		28	ug/Kg-DRY	10/20/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		56.4		Min: 11	Max: 102	
Decachlorobiphenyl		53.6		Min: 35	Max: 141	

Sample: 02A 48030988 002 2' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	19.9		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		42	ug/Kg-DRY	10/20/98
PCB-1232		ND		21	ug/Kg-DRY	10/20/98
PCB-1242		ND		21	ug/Kg-DRY	10/20/98
PCB-1248		ND		21	ug/Kg-DRY	10/20/98
PCB-1254		68		21	ug/Kg-DRY	10/20/98
PCB-1260		ND		21	ug/Kg-DRY	10/20/98
PCB-1016		ND		21	ug/Kg-DRY	10/20/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		50.6		Min: 11	Max: 102	
Decachlorobiphenyl		49.4		Min: 35	Max: 141	

Sample: 03A 48030988 003 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	14.5		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		39	ug/Kg-DRY	10/20/98
PCB-1232		ND		19	ug/Kg-DRY	10/20/98
PCB-1242		ND		19	ug/Kg-DRY	10/20/98
PCB-1248		ND		19	ug/Kg-DRY	10/20/98
PCB-1254		120		19	ug/Kg-DRY	10/20/98
PCB-1260		ND		19	ug/Kg-DRY	10/20/98
PCB-1016		ND		19	ug/Kg-DRY	10/20/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		89.7		Min: 11	Max: 102	
Decachlorobiphenyl		74.4		Min: 35	Max: 141	

Order # 98-09-228
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04A 48030988 004 2' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	25.8		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		45	ug/Kg-DRY		10/20/98
PCB-1232		ND		22	ug/Kg-DRY		10/20/98
PCB-1242		ND		22	ug/Kg-DRY		10/20/98
PCB-1248		ND		22	ug/Kg-DRY		10/20/98
PCB-1254		76		22	ug/Kg-DRY		10/20/98
PCB-1260		ND		22	ug/Kg-DRY		10/20/98
PCB-1016		ND		22	ug/Kg-DRY		10/20/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		46.7		Min:	11	Max:	102
Decachlorobiphenyl		111		Min:	35	Max:	141

Sample: 05A 48030988 005 4' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	11.0		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		37	ug/Kg-DRY		10/20/98
PCB-1232		ND		19	ug/Kg-DRY		10/20/98
PCB-1242		ND		19	ug/Kg-DRY		10/20/98
PCB-1248		ND		19	ug/Kg-DRY		10/20/98
PCB-1254		170		19	ug/Kg-DRY		10/20/98
PCB-1260		ND		19	ug/Kg-DRY		10/20/98
PCB-1016		ND		19	ug/Kg-DRY		10/20/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		72.0		Min:	11	Max:	102
Decachlorobiphenyl		60.0		Min:	35	Max:	141

Sample: 06A 48030988 006 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	23.2		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		43	ug/Kg-DRY		10/16/98
PCB-1232		ND		22	ug/Kg-DRY		10/16/98
PCB-1242		ND		22	ug/Kg-DRY		10/16/98
PCB-1248		ND		22	ug/Kg-DRY		10/16/98
PCB-1254		ND		22	ug/Kg-DRY		10/16/98
PCB-1260		ND		22	ug/Kg-DRY		10/16/98
PCB-1016		ND		22	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		48.3		Min:	11	Max:	102
Decachlorobiphenyl		52.9		Min:	35	Max:	141

Order # 98-09-228
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 07A 48030988 007 2' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	12.3		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		38	ug/Kg-DRY			10/20/98
PCB-1232		ND		19	ug/Kg-DRY			10/20/98
PCB-1242		ND		19	ug/Kg-DRY			10/20/98
PCB-1248		ND		19	ug/Kg-DRY			10/20/98
PCB-1254		86		19	ug/Kg-DRY			10/20/98
PCB-1260		ND		19	ug/Kg-DRY			10/20/98
PCB-1016		ND		19	ug/Kg-DRY			10/20/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		94.7		Min:	11	Max:	102	
Decachlorobiphenyl		93.4		Min:	35	Max:	141	

Sample: 08A 48030988 008 4' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	10.6		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		37	ug/Kg-DRY			10/19/98
PCB-1232		ND		19	ug/Kg-DRY			10/19/98
PCB-1242		ND		19	ug/Kg-DRY			10/19/98
PCB-1248		ND		19	ug/Kg-DRY			10/19/98
PCB-1254		30		19	ug/Kg-DRY			10/19/98
PCB-1260		ND		19	ug/Kg-DRY			10/19/98
PCB-1016		ND		19	ug/Kg-DRY			10/19/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		93.3		Min:	11	Max:	102	
Decachlorobiphenyl		98.7		Min:	35	Max:	141	

Sample: 09A 48030988 009 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	21.5		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		42	ug/Kg-DRY			10/19/98
PCB-1232		ND		21	ug/Kg-DRY			10/19/98
PCB-1242		ND		21	ug/Kg-DRY			10/19/98
PCB-1248		ND		21	ug/Kg-DRY			10/19/98
PCB-1254		38		21	ug/Kg-DRY			10/19/98
PCB-1260		ND		21	ug/Kg-DRY			10/19/98
PCB-1016		ND		21	ug/Kg-DRY			10/19/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		78.8		Min:	11	Max:	102	
Decachlorobiphenyl		82.4		Min:	35	Max:	141	

Order # 98-09-228
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: **10A 48030988 010 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	31.3		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		48	ug/Kg-DRY		10/16/98
PCB-1232		ND		24	ug/Kg-DRY		10/16/98
PCB-1242		ND		24	ug/Kg-DRY		10/16/98
PCB-1248		ND		24	ug/Kg-DRY		10/16/98
PCB-1254		ND		24	ug/Kg-DRY		10/16/98
PCB-1260		ND		24	ug/Kg-DRY		10/16/98
PCB-1016		ND		24	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		42.3		Min:	11	Max:	102
Decachlorobiphenyl		42.3		Min:	35	Max:	141

Sample: **11A 48030988 011 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	34.5		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		51	ug/Kg-DRY		10/16/98
PCB-1232		ND		25	ug/Kg-DRY		10/16/98
PCB-1242		ND		25	ug/Kg-DRY		10/16/98
PCB-1248		ND		25	ug/Kg-DRY		10/16/98
PCB-1254		ND		25	ug/Kg-DRY		10/16/98
PCB-1260		ND		25	ug/Kg-DRY		10/16/98
PCB-1016		ND		25	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		63.0		Min:	11	Max:	102
Decachlorobiphenyl		49.0		Min:	35	Max:	141

Sample: **12A 48030988 012 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	36.0		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		52	ug/Kg-DRY		10/16/98
PCB-1232		ND		26	ug/Kg-DRY		10/16/98
PCB-1242		ND		26	ug/Kg-DRY		10/16/98
PCB-1248		ND		26	ug/Kg-DRY		10/16/98
PCB-1254		ND		26	ug/Kg-DRY		10/16/98
PCB-1260		ND		26	ug/Kg-DRY		10/16/98
PCB-1016		ND		26	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		55.0		Min:	11	Max:	102
Decachlorobiphenyl		48.0		Min:	35	Max:	141

Order # 98-09-228
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 13A 48030988 013 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	44.0		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		59	ug/Kg-DRY			10/16/98
PCB-1232		ND		30	ug/Kg-DRY			10/16/98
PCB-1242		ND		30	ug/Kg-DRY			10/16/98
PCB-1248		ND		30	ug/Kg-DRY			10/16/98
PCB-1254		ND		30	ug/Kg-DRY			10/16/98
PCB-1260		ND		30	ug/Kg-DRY			10/16/98
PCB-1016		ND		30	ug/Kg-DRY			10/16/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		50.0		Min:	11	Max:	102	
Decachlorobiphenyl		44.2		Min:	35	Max:	141	

Sample: 14A 48030988 014 2' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	18.7		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		41	ug/Kg-DRY			10/16/98
PCB-1232		ND		20	ug/Kg-DRY			10/16/98
PCB-1242		ND		20	ug/Kg-DRY			10/16/98
PCB-1248		ND		20	ug/Kg-DRY			10/16/98
PCB-1254		ND		20	ug/Kg-DRY			10/16/98
PCB-1260		ND		20	ug/Kg-DRY			10/16/98
PCB-1016		ND		20	ug/Kg-DRY			10/16/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		51.2		Min:	11	Max:	102	
Decachlorobiphenyl		56.1		Min:	35	Max:	141	

Sample: 15A 48030988 015 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	44.3		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		60	ug/Kg-DRY			10/16/98
PCB-1232		ND		30	ug/Kg-DRY			10/16/98
PCB-1242		ND		30	ug/Kg-DRY			10/16/98
PCB-1248		ND		30	ug/Kg-DRY			10/16/98
PCB-1254		ND		30	ug/Kg-DRY			10/16/98
PCB-1260		ND		30	ug/Kg-DRY			10/16/98
PCB-1016		ND		30	ug/Kg-DRY			10/16/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		56.7		Min:	11	Max:	102	
Decachlorobiphenyl		45.8		Min:	35	Max:	141	

Sample: **16A 48030988 016 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	50.2		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		67	ug/Kg-DRY		10/16/98
PCB-1232		ND		33	ug/Kg-DRY		10/16/98
PCB-1242		ND		33	ug/Kg-DRY		10/16/98
PCB-1248		ND		33	ug/Kg-DRY		10/16/98
PCB-1254		ND		33	ug/Kg-DRY		10/16/98
PCB-1260		ND		33	ug/Kg-DRY		10/16/98
PCB-1016		ND		33	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		53.8		Min:	11	Max:	102
Decachlorobiphenyl		49.2		Min:	35	Max:	141

Sample: **17A 48030988 017 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	36.9		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		53	ug/Kg-DRY		10/19/98
PCB-1232		ND		26	ug/Kg-DRY		10/19/98
PCB-1242		ND		26	ug/Kg-DRY		10/19/98
PCB-1248		ND		26	ug/Kg-DRY		10/19/98
PCB-1254		87		26	ug/Kg-DRY		10/19/98
PCB-1260		ND		26	ug/Kg-DRY		10/19/98
PCB-1016		ND		26	ug/Kg-DRY		10/19/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		60.9		Min:	11	Max:	102
Decachlorobiphenyl		69.1		Min:	35	Max:	141

Sample: **18A 48030988 018 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	9.80		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		37	ug/Kg-DRY		10/16/98
PCB-1232		ND		18	ug/Kg-DRY		10/16/98
PCB-1242		ND		18	ug/Kg-DRY		10/16/98
PCB-1248		ND		18	ug/Kg-DRY		10/16/98
PCB-1254		ND		18	ug/Kg-DRY		10/16/98
PCB-1260		ND		18	ug/Kg-DRY		10/16/98
PCB-1016		ND		18	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		58.1		Min:	11	Max:	102
Decachlorobiphenyl		54.1		Min:	35	Max:	141

Sample: **19A 48030988 019 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	40.1		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		56	ug/Kg-DRY		10/15/98
PCB-1232		ND		28	ug/Kg-DRY		10/15/98
PCB-1242		ND		28	ug/Kg-DRY		10/15/98
PCB-1248		ND		28	ug/Kg-DRY		10/15/98
PCB-1254		ND		28	ug/Kg-DRY		10/15/98
PCB-1260		ND		28	ug/Kg-DRY		10/15/98
PCB-1016		ND		28	ug/Kg-DRY		10/15/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		50.0		Min:	11	Max:	102
Decachlorobiphenyl		52.7		Min:	35	Max:	141

Sample: **20A 48030988 020 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	23.7		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		44	ug/Kg-DRY		10/15/98
PCB-1232		ND		22	ug/Kg-DRY		10/15/98
PCB-1242		ND		22	ug/Kg-DRY		10/15/98
PCB-1248		ND		22	ug/Kg-DRY		10/15/98
PCB-1254		ND		22	ug/Kg-DRY		10/15/98
PCB-1260		ND		22	ug/Kg-DRY		10/15/98
PCB-1016		ND		22	ug/Kg-DRY		10/15/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		64.4		Min:	11	Max:	102
Decachlorobiphenyl		51.7		Min:	35	Max:	141

Sample: **21A 48030988 021 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	24.6		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		44	ug/Kg-DRY		10/23/98
PCB-1232		ND		22	ug/Kg-DRY		10/23/98
PCB-1242		ND		22	ug/Kg-DRY		10/23/98
PCB-1248		ND		22	ug/Kg-DRY		10/23/98
PCB-1254		87		22	ug/Kg-DRY		10/23/98
PCB-1260		ND		22	ug/Kg-DRY		10/23/98
PCB-1016		ND		22	ug/Kg-DRY		10/23/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		58.0		Min:	11	Max:	102
Decachlorobiphenyl		79.5		Min:	35	Max:	141

Sample: **22A 48030988 022 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	37.4		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		53	ug/Kg-DRY			10/23/98
PCB-1232		ND		27	ug/Kg-DRY			10/23/98
PCB-1242		ND		27	ug/Kg-DRY			10/23/98
PCB-1248		ND		27	ug/Kg-DRY			10/23/98
PCB-1254		120		27	ug/Kg-DRY			10/23/98
PCB-1260		ND		27	ug/Kg-DRY			10/23/98
PCB-1016		ND		27	ug/Kg-DRY			10/23/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		60.0		Min:	11	Max:	102	
Decachlorobiphenyl		109		Min:	35	Max:	141	

Sample: **23A 48030988 023 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	22.4		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		43	ug/Kg-DRY			10/23/98
PCB-1232		ND		21	ug/Kg-DRY			10/23/98
PCB-1242		ND		21	ug/Kg-DRY			10/23/98
PCB-1248		ND		21	ug/Kg-DRY			10/23/98
PCB-1254		110		21	ug/Kg-DRY			10/23/98
PCB-1260		ND		21	ug/Kg-DRY			10/23/98
PCB-1016		ND		21	ug/Kg-DRY			10/23/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		53.5		Min:	11	Max:	102	
Decachlorobiphenyl		59.3		Min:	35	Max:	141	

Sample: **24A 48030988 024 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	22.5		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		130	ug/Kg-DRY			10/19/98
PCB-1232		ND		64	ug/Kg-DRY			10/19/98
PCB-1242		ND		64	ug/Kg-DRY			10/19/98
PCB-1248		ND		64	ug/Kg-DRY			10/19/98
PCB-1254		620	D	64	ug/Kg-DRY			10/19/98
PCB-1260		ND		64	ug/Kg-DRY			10/19/98
PCB-1016		ND		64	ug/Kg-DRY			10/19/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		77.9		Min:	11	Max:	102	
Decachlorobiphenyl		77.9		Min:	35	Max:	141	

Sample: 25A 48030988 025 6" Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	13.0		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/17/98
PCB-1232		ND		19	ug/Kg-DRY		10/17/98
PCB-1242		ND		19	ug/Kg-DRY		10/17/98
PCB-1248		ND		19	ug/Kg-DRY		10/17/98
PCB-1254		ND		19	ug/Kg-DRY		10/17/98
PCB-1260		ND		19	ug/Kg-DRY		10/17/98
PCB-1016		ND		19	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		49.4		Min:	11	Max:	102
Decachlorobiphenyl		57.1		Min:	35	Max:	141

Sample: 26A 48030988 026 2' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	9.60		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		37	ug/Kg-DRY		10/17/98
PCB-1232		ND		18	ug/Kg-DRY		10/17/98
PCB-1242		ND		18	ug/Kg-DRY		10/17/98
PCB-1248		ND		18	ug/Kg-DRY		10/17/98
PCB-1254		ND		18	ug/Kg-DRY		10/17/98
PCB-1260		ND		18	ug/Kg-DRY		10/17/98
PCB-1016		ND		18	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		48.6		Min:	11	Max:	102
Decachlorobiphenyl		45.9		Min:	35	Max:	141

Sample: 27A 48030988 027 3' Collected: 09/22/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	16.9		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		40	ug/Kg-DRY		10/17/98
PCB-1232		ND		20	ug/Kg-DRY		10/17/98
PCB-1242		ND		20	ug/Kg-DRY		10/17/98
PCB-1248		ND		20	ug/Kg-DRY		10/17/98
PCB-1254		ND		20	ug/Kg-DRY		10/17/98
PCB-1260		ND		20	ug/Kg-DRY		10/17/98
PCB-1016		ND		20	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		38.8		Min:	11	Max:	102
Decachlorobiphenyl		42.5		Min:	35	Max:	141

Sample: **28A 48030988 028 6"** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	9.70		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		37	ug/Kg-DRY		10/17/98
PCB-1232		ND		18	ug/Kg-DRY		10/17/98
PCB-1242		ND		18	ug/Kg-DRY		10/17/98
PCB-1248		ND		18	ug/Kg-DRY		10/17/98
PCB-1254		ND		18	ug/Kg-DRY		10/17/98
PCB-1260		ND		18	ug/Kg-DRY		10/17/98
PCB-1016		ND		18	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		51.4		Min:	11	Max:	102
Decachlorobiphenyl		52.7		Min:	35	Max:	141

Sample: **29A 48030988 029 2'** Collected: **09/22/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	17.6		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		40	ug/Kg-DRY		10/17/98
PCB-1232		ND		20	ug/Kg-DRY		10/17/98
PCB-1242		ND		20	ug/Kg-DRY		10/17/98
PCB-1248		ND		20	ug/Kg-DRY		10/17/98
PCB-1254		ND		20	ug/Kg-DRY		10/17/98
PCB-1260		ND		20	ug/Kg-DRY		10/17/98
PCB-1016		ND		20	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		53.1		Min:	11	Max:	102
Decachlorobiphenyl		50.6		Min:	35	Max:	141

Sample: **30A 48030988 030 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	26.6		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		45	ug/Kg-DRY		10/17/98
PCB-1232		ND		23	ug/Kg-DRY		10/17/98
PCB-1242		ND		23	ug/Kg-DRY		10/17/98
PCB-1248		ND		23	ug/Kg-DRY		10/17/98
PCB-1254		ND		23	ug/Kg-DRY		10/17/98
PCB-1260		ND		23	ug/Kg-DRY		10/17/98
PCB-1016		ND		23	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		44.0		Min:	11	Max:	102
Decachlorobiphenyl		40.7		Min:	35	Max:	141

Sample: **31A 48030988 031 2'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	11.7		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/17/98
PCB-1232		ND		19	ug/Kg-DRY		10/17/98
PCB-1242		ND		19	ug/Kg-DRY		10/17/98
PCB-1248		ND		19	ug/Kg-DRY		10/17/98
PCB-1254		ND		19	ug/Kg-DRY		10/17/98
PCB-1260		140		19	ug/Kg-DRY		10/17/98
PCB-1016		ND		19	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		54.7		Min:	11	Max:	102
Decachlorobiphenyl		56.0		Min:	35	Max:	141

Sample: **32A 48030988 032 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	11.3		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/17/98
PCB-1232		ND		19	ug/Kg-DRY		10/17/98
PCB-1242		ND		19	ug/Kg-DRY		10/17/98
PCB-1248		ND		19	ug/Kg-DRY		10/17/98
PCB-1254		ND		19	ug/Kg-DRY		10/17/98
PCB-1260		ND		19	ug/Kg-DRY		10/17/98
PCB-1016		ND		19	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		50.7		Min:	11	Max:	102
Decachlorobiphenyl		52.0		Min:	35	Max:	141

Sample: **33A 48030988 033 2'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	8.90		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		37	ug/Kg-DRY		10/17/98
PCB-1232		ND		18	ug/Kg-DRY		10/17/98
PCB-1242		ND		18	ug/Kg-DRY		10/17/98
PCB-1248		ND		18	ug/Kg-DRY		10/17/98
PCB-1254		ND		18	ug/Kg-DRY		10/17/98
PCB-1260		ND		18	ug/Kg-DRY		10/17/98
PCB-1016		ND		18	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		52.1		Min:	11	Max:	102
Decachlorobiphenyl		56.2		Min:	35	Max:	141

Sample: **34A 48030988 034 3.5'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	27.1		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		46	ug/Kg-DRY		10/23/98
PCB-1232		ND		23	ug/Kg-DRY		10/23/98
PCB-1242		ND		23	ug/Kg-DRY		10/23/98
PCB-1248		ND		23	ug/Kg-DRY		10/23/98
PCB-1254		55		23	ug/Kg-DRY		10/23/98
PCB-1260		ND		23	ug/Kg-DRY		10/23/98
PCB-1016		ND		23	ug/Kg-DRY		10/23/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		54.9		Min:	11	Max:	102
Decachlorobiphenyl		86.8		Min:	35	Max:	141

Sample: **35A 48030988 035 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	11.4		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/17/98
PCB-1232		ND		19	ug/Kg-DRY		10/17/98
PCB-1242		ND		19	ug/Kg-DRY		10/17/98
PCB-1248		ND		19	ug/Kg-DRY		10/17/98
PCB-1254		ND		19	ug/Kg-DRY		10/17/98
PCB-1260		ND		19	ug/Kg-DRY		10/17/98
PCB-1016		ND		19	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		57.3		Min:	11	Max:	102
Decachlorobiphenyl		69.3		Min:	35	Max:	141

Sample: **36A 48030988 036 2'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	13.0		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/17/98
PCB-1232		ND		19	ug/Kg-DRY		10/17/98
PCB-1242		ND		19	ug/Kg-DRY		10/17/98
PCB-1248		ND		19	ug/Kg-DRY		10/17/98
PCB-1254		ND		19	ug/Kg-DRY		10/17/98
PCB-1260		ND		19	ug/Kg-DRY		10/17/98
PCB-1016		ND		19	ug/Kg-DRY		10/17/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		48.1		Min:	11	Max:	102
Decachlorobiphenyl		55.8		Min:	35	Max:	141

Sample: **37A 48030988 037 3.5'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	22.8		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		43	ug/Kg-DRY	10/17/98
PCB-1232		ND		22	ug/Kg-DRY	10/17/98
PCB-1242		ND		22	ug/Kg-DRY	10/17/98
PCB-1248		ND		22	ug/Kg-DRY	10/17/98
PCB-1254		ND		22	ug/Kg-DRY	10/17/98
PCB-1260		ND		22	ug/Kg-DRY	10/17/98
PCB-1016		ND		22	ug/Kg-DRY	10/17/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		40.7		Min: 11	Max: 102	
Decachlorobiphenyl		53.5		Min: 35	Max: 141	

Sample: **38A 48030988 038 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	12.4		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		38	ug/Kg-DRY	10/16/98
PCB-1232		ND		19	ug/Kg-DRY	10/16/98
PCB-1242		ND		19	ug/Kg-DRY	10/16/98
PCB-1248		ND		19	ug/Kg-DRY	10/16/98
PCB-1254		ND		19	ug/Kg-DRY	10/16/98
PCB-1260		ND		19	ug/Kg-DRY	10/16/98
PCB-1016		ND		19	ug/Kg-DRY	10/16/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		56.6		Min: 11	Max: 102	
Decachlorobiphenyl		57.9		Min: 35	Max: 141	

Sample: **39A 48030988 039 2'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	16.1		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		40	ug/Kg-DRY	10/16/98
PCB-1232		ND		20	ug/Kg-DRY	10/16/98
PCB-1242		ND		20	ug/Kg-DRY	10/16/98
PCB-1248		ND		20	ug/Kg-DRY	10/16/98
PCB-1254		ND		20	ug/Kg-DRY	10/16/98
PCB-1260		ND		20	ug/Kg-DRY	10/16/98
PCB-1016		ND		20	ug/Kg-DRY	10/16/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		51.9		Min: 11	Max: 102	
Decachlorobiphenyl		63.3		Min: 35	Max: 141	

Sample: **40A 48030988 040 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	12.4		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/16/98
PCB-1232		ND		19	ug/Kg-DRY		10/16/98
PCB-1242		ND		19	ug/Kg-DRY		10/16/98
PCB-1248		ND		19	ug/Kg-DRY		10/16/98
PCB-1254		ND		19	ug/Kg-DRY		10/16/98
PCB-1260		ND		19	ug/Kg-DRY		10/16/98
PCB-1016		ND		19	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		60.5		Min:	11	Max:	102
Decachlorobiphenyl		36.8		Min:	35	Max:	141

Sample: **41A 48030988 041 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	28.4		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		47	ug/Kg-DRY		10/23/98
PCB-1232		ND		23	ug/Kg-DRY		10/23/98
PCB-1242		ND		23	ug/Kg-DRY		10/23/98
PCB-1248		ND		23	ug/Kg-DRY		10/23/98
PCB-1254		430		23	ug/Kg-DRY		10/23/98
PCB-1260		ND		23	ug/Kg-DRY		10/23/98
PCB-1016		ND		23	ug/Kg-DRY		10/23/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		52.7		Min:	11	Max:	102
Decachlorobiphenyl		89.2		Min:	35	Max:	141

Sample: **42A 48030988 042 2'** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	22.3		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		43	ug/Kg-DRY		10/16/98
PCB-1232		ND		21	ug/Kg-DRY		10/16/98
PCB-1242		ND		21	ug/Kg-DRY		10/16/98
PCB-1248		ND		21	ug/Kg-DRY		10/16/98
PCB-1254		ND		21	ug/Kg-DRY		10/16/98
PCB-1260		ND		21	ug/Kg-DRY		10/16/98
PCB-1016		ND		21	ug/Kg-DRY		10/16/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		36.0		Min:	11	Max:	102
Decachlorobiphenyl		66.3		Min:	35	Max:	141

Sample: **43A 48030988 043 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	36.7		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		53	ug/Kg-DRY			10/16/98
PCB-1232		ND		26	ug/Kg-DRY			10/16/98
PCB-1242		ND		26	ug/Kg-DRY			10/16/98
PCB-1248		ND		26	ug/Kg-DRY			10/16/98
PCB-1254		ND		26	ug/Kg-DRY			10/16/98
PCB-1260		ND		26	ug/Kg-DRY			10/16/98
PCB-1016		ND		26	ug/Kg-DRY			10/16/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		49.1		Min:	11	Max:	102	
Decachlorobiphenyl		62.7		Min:	35	Max:	141	

Sample: **44A 48030988 044 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	14.6		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		39	ug/Kg-DRY			10/16/98
PCB-1232		ND		20	ug/Kg-DRY			10/16/98
PCB-1242		ND		20	ug/Kg-DRY			10/16/98
PCB-1248		ND		20	ug/Kg-DRY			10/16/98
PCB-1254		ND		20	ug/Kg-DRY			10/16/98
PCB-1260		ND		20	ug/Kg-DRY			10/16/98
PCB-1016		ND		20	ug/Kg-DRY			10/16/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		55.1		Min:	11	Max:	102	
Decachlorobiphenyl		78.2		Min:	35	Max:	141	

Sample: **45A 48030988 045 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	10.0		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		37	ug/Kg-DRY			10/16/98
PCB-1232		ND		19	ug/Kg-DRY			10/16/98
PCB-1242		ND		19	ug/Kg-DRY			10/16/98
PCB-1248		ND		19	ug/Kg-DRY			10/16/98
PCB-1254		ND		19	ug/Kg-DRY			10/16/98
PCB-1260		ND		19	ug/Kg-DRY			10/16/98
PCB-1016		ND		19	ug/Kg-DRY			10/16/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		56.8		Min:	11	Max:	102	
Decachlorobiphenyl		56.8		Min:	35	Max:	141	

Sample: **46A 48030988 046 6"** Collected: **09/23/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Percent Moisture	ASTM D2216	28.8		0.1	WT%		09/29/98
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		47	ug/Kg-DRY		10/23/98
PCB-1232		ND		23	ug/Kg-DRY		10/23/98
PCB-1242		ND		23	ug/Kg-DRY		10/23/98
PCB-1248		ND		23	ug/Kg-DRY		10/23/98
PCB-1254		26		23	ug/Kg-DRY		10/23/98
PCB-1260		ND		23	ug/Kg-DRY		10/23/98
PCB-1016		ND		23	ug/Kg-DRY		10/23/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		49.5		Min:	11	Max:	102
Decachlorobiphenyl		90.3		Min:	35	Max:	141

THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field...
ND = not detected at the reported limit
NA = analyte not applicable (see case narrative/methods for discussion)

Q (qualifier) field...
GENERAL:
* = Recovery or %RPD outside method specifications
H = value is estimated due to analysis run outside EPA holding times
E = reported concentration is above the instrument calibration range
D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences

ORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected in the laboratory method blank
J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)

INORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)
W = post digestion spike did not meet criteria (85-115%)
S = reported value determined by the Method of Standard Additions

PCB_8S:	POLYCHLORINATED BIPHENYLS	METHOD: 8082
PCBPRS:	Ultrasonic Extraction - PCBs	METHOD: 3550A
PMOIST:	PERCENT MOISTURE	METHOD: ASTM D2216

Sample: 01A 48030988 001 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/20/98

Sample: 02A 48030988 002 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/20/98

Sample: 03A 48030988 003 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/20/98

Sample: 04A 48030988 004 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/20/98

Sample: 05A 48030988 005 4' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/20/98

Sample: 06A 48030988 006 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 07A 48030988 007 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/20/98

Sample: 08A 48030988 008 4' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/19/98

Order # 98-09-228
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 09A 48030988 009 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/19/98

Sample: 10A 48030988 010 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 11A 48030988 011 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 12A 48030988 012 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 13A 48030988 013 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 14A 48030988 014 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 15A 48030988 015 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 16A 48030988 016 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 17A 48030988 017 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/19/98

Sample: 18A 48030988 018 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/16/98

Sample: 19A 48030988 019 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/15/98

Sample: 20A 48030988 020 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/15/98

Sample: 21A 48030988 021 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/23/98

Sample: 22A 48030988 022 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/23/98

Sample: 23A 48030988 023 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/23/98

Sample: 24A 48030988 024 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/19/98

Sample: 25A 48030988 025 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/17/98

Sample: 26A 48030988 026 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/17/98

Sample: 27A 48030988 027 3' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/17/98

Sample: 28A 48030988 028 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/17/98

Sample: 29A 48030988 029 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/22/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/22/98	09/25/98	NA	09/29/98	10/17/98

Sample: 30A 48030988 030 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 31A 48030988 031 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 32A 48030988 032 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 33A 48030988 033 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 34A 48030988 034 3.5' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/23/98

Sample: 35A 48030988 035 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 36A 48030988 036 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 37A 48030988 037 3.5' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/17/98

Sample: 38A 48030988 038 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: 39A 48030988 039 2' Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: 40A 48030988 040 6" Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: **41A 48030988 041 6"** Matrix: **SOIL**

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/23/98

Sample: **42A 48030988 042 2'** Matrix: **SOIL**

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: **43A 48030988 043 6"** Matrix: **SOIL**

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: **44A 48030988 044 6"** Matrix: **SOIL**

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: **45A 48030988 045 6"** Matrix: **SOIL**

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/16/98

Sample: **46A 48030988 046 6"** Matrix: **SOIL**

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Percent Moisture	ASTM D2216	09/23/98	09/25/98	NA		09/29/98
Polychlorinated Biphenyls	SW 8082	09/23/98	09/25/98	NA	09/29/98	10/23/98

84 99

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Chain of Custody Record / Analysis Request

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Telephone: (907) 552-1617
FAX: 4601

Project Name: CAPE ROMANZOF LAND FILL
Report To: CARL HORNIG
Sampler: KIM D'ARCY
P.O. Number:

Sample ID	Date Collected	Time Collected	Matrix Soil/Water (Circle One)	8 oz Glass	4 oz Glass	40 ml. VOA/HCl	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	PCB	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
4803098 8001 6"	22 Sep	0915												↓				
002 2'		0920												↓				
003 6"		0940												↓				
004 2'		0945												↓				
005 4'		0950												↓				
006 6"		1010												↓				
007 2'		1015												↓				
008 4'		1020												↓				
009 6"		1040												↓				
010 2'		1045												↓				
011 6"		1100												↓				
012 2'		1105												↓				

COMMENTS

DELIVERABLES
- ☐ Level I
- ☐ ADEC Format
- ☐ ACOE
- ☐ Other___
- ☐ EDF - Format.____ specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [ ] 10-15 Business Days
- [ ] other. ____ #Business Days

RELINQUISHED BY SAMPLER:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature] 9/26/98	Signature:	Signature:
Printed Name: Kimberley A. D'Arcy	Printed Name: A D BYRNES	Printed Name:	Printed Name:
Firm: 611 CES/CEVO	Firm: ANALYTICA	Firm:	Firm:
Date/Time: 9/24/98 0830	Date/Time: 9/26/98 1:30 pm	Date/Time:	Date/Time:

ANALYTICA USE ONLY
Airbill / Freight #
Condition of Sample Containers.
Temp Received ___ °C 45°F
# of Coolers: 2
Seals. YES
SAMPLE 21 Cracked
__ OF __

NO TEMP BLANK no Cont...

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(303) 469-8868
FAX. (303) 469-5254

LGN:
CSN:

Chain of Custody Record / Analysis Request

84 100

Company Name: 611 CES/CEVO
Project Name: CAPE ROMANZOV LAND FILL
Company Address: 21885 2d ST ELMENDORF AFB AK 99506-4420
Report To: CARL HORNIG
Sampler: KIM D'ARCY
P O Number:
Telephone: (907) 552-1617
FAX: 4601

Sample ID		Date Collected	Time Collected	Matrix (Soil/Water) (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA Vial	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	PCB	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880 13	6"	9/24	1335												↓				
014	2'		1340																
015	6"		1355																
016	6"		1400																
017	6"		1420																
018	2'		1425																
019	6"		1530																
0201	2'		1535																
021	6"		1545																
022	2'		1550																
023	6"		1605																
024	2'		1610																

COMMENTS

DELIVERABLES
- [ ] Level I
- [ ] ADEC Formal
- [ ] ACOE
- [ ] Other
- [ ] EDF - Formal: ___ ___ specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [ ] 10-15 Business Days
- [ ] other _____ #Business Days

RELINQUISHED BY SAMPLER.	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Printed Name: Kimberley A. D'Arcy	Printed Name: M D BYRNES	Printed Name:	Printed Name
Firm: 611CES/CEVO	Firm: ANALYTICA	Firm:	Firm
Date/Time: 9/24 0830	Date/Time: 9/26/98 1:30	Date/Time	Date/Time.

ANALYTICA USE ONLY.
Airbill / Freight #
Condition of Sample Containers
Temp Received ____ °C
# of Coolers ____
Seals ____ ____

_____ OF ____

ANALYTICA
ALASKA INC.
Web www.analyticagroup.com

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Anchorage, AK 99501
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FAX: (907) 258-6634
E-Mail. analytic@eagle.ptialaska.net

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Juneau, AK 99801
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FAX: (907) 780-6670

325 Interlocken Parkway,
Suite 200
Broomfield, Colorado 80021
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FAX: (303) 469-5254

LGN:
CSN.

84 101

Chain of Custody Record / Analysis Request

Company Name: 611 CES/CEVO
Project Name: CAPE ROMANZOV LAND FILL
Company Address: 21885 2nd ST ELMENDORF AFB AK 99506-4420
Report To: CARL HORNIG
Sampler: KIM D'ARCY
P.O. Number:
Telephone: (907) 552-1617
FAX: 4601

Sample ID	Date Collected	Time Collected	Matrix (Soil/Water) (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA's	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	PCB	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880256"	22 Sep	1825																
026 2'		1830																
027 3'		1830																
028 6"		1840																
029 2'		1845																
030 6"	23 Sep	0930																
031 2'		0935																
032 6"		0945																
033 2'		0950																
034 3 1/2		0955																

COMMENTS

DELIVERABLES
- ☐ Level I
- ☐ ADEC Format
- ☐ ACOE
- ☐ Other _____
- ☐ EDF - Format _____ specify

TURNAROUND
- ☐ 2 Business Days
- ☐ 5 Business Days
- ☐ 10-15 Business Days
- ☐ other _____ #Business Days

RELINQUISHED BY SAMPLER:	RECEIVED BY.	RELINQUISHED BY	RECEIVED BY
Signature: Kimberly A. D'Arcy	Signature:	Signature:	Signature
Printed Name: Kimberley A. D'Arcy	Printed Name: A D Bivens	Printed Name	Printed Name
Firm: 611 CES/CEVO	Firm: ANALYTICA	Firm:	Firm
Date/Time: 9/26/ 0830	Date/Time: 9/26/18 1:30 pm	Date/Time:	Date/Time.

ANALYTICA USE ONLY
Airbill / Freight #.
Condition of Sample Containers
Temp Received _____ °C
# of Coolers _____
Seals _____

_____ OF _____

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ALASKA INC.
Web: www analyticagroup.com

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Suite 200
Broomfield, Colorado 80021
(303) 469-8868
FAX: (303) 469-5254

LGN.
CSN.

Chain of Custody Record / Analysis Request

84 102

Company Name: 611 CES/CEVO	Project Name: CAPE ROMANZOF LANDFILL
Company Address: 21885 2nd ST ELMENDORF AFB AK, 99506-1420	Report To: CARL HORNIG
	Sampler: KIM D'ARCY
	P.O. Number:
Telephone: (907)552-1617	
FAX: 4601	

Sample ID	Date Collected	Time Collected	Matrix (SW/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA/HCl	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	PCB	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880356"	2-3 Sep	1010																
036 2'		1015																
037 3'		1020																
038 6"		1100																
039 2'		1105																
040 6"		1120																
041 6"		1135																
042 2'		1140																
043 6"		1345	1315															
044 6		1325																
045 6"		1335																
046 6"		1345																

COMMENTS

DELIVERABLES
- ☐ Level I
- ☐ ADEC Format
- ☐ ACOE
- ☐ Other_____
- ☐ EDF - Format_____specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [ ] 10-15 Business Days
- [ ] other _____ #Business Days

RELINQUISHED BY SAMPLER:	RECEIVED BY:	RELINQUISHED BY.	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Printed Name: Kimberley A. D'Arcy	Printed Name: M D BYRNES	Printed Name	Printed Name.
Firm. 611CES/CEVO	Firm: ANALYTICA	Firm.	Firm:
Date/Time 9/26 0830	Date/Time: 9/26/98 1:30 pm	Date/Time.	Date/Time:

ANALYTICA USE ONLY.
Airbill / Freight #
Condition of Sample Containers.
Temp Received. _____ °C
# of Coolers _____
Seals: _____

OF____

COOLER RECEIPT FORM

CLIENT Elmendorf AFB CSN# ________ PROJECT Cape Romanzof ORD# T809228

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS/DISCREPANCIES

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 9-25-98 Chain of Custody # ________
by print A. BURNES sign ________

1. Did cooler come with a shipping slip air bill, etc. ? ________ (YES) NO
   If YES, enter carrier name & air bill number here: Fedex 3128864830
2. Were custody seals on outside of cooler? ________ (YES) NO
   How many & where: 2 - Sides seal date: 9-24-98 seal name: L. Andale
3. Were custody seals unbroken and intact on the date and time of arrival? ________ (YES) NO
4. Did you screen samples for radioactivity using the Geiger Counter? ________ YES (NO)
5. Were custody papers sealed in a plastic bag & taped inside to the lid? ________ (YES) NO
6. Were custody papers filled out properly ink, signed, etc ? ________ (YES) NO
7. Did you sign custody papers in the appropriate place? ________ (YES) NO
8. Was project identifiable from custody paper?, If yes, enter project name at the top of this form ________ (YES) NO
9. If required, was enough ice used? (YES) NO Type of ice: WET BLUE Temp 6 °C
10. Have designate person initial here to acknowledge receipt of cooler: ________ date: 9-28-98

B. LOG-IN PHASE: Date samples were logged-in: 9-24-98
by print JLSINEL sign ________

11. Describe type of packing in cooler: Bubble Wrap
12. Were all bottles sealed in separate plastic bags? ________ (YES) NO
13. Did all bottles arrive unbroken & were labels in good condition? C21 - Cracked YES (NO)
14. Were all bottle labels complete ID, date, time, signature, preservative, etc. ? ________ (YES) NO
15. Did all bottle labels agree with custody papers? ________ (YES) NO
16. Number of samples received 46 Number of bottles received 46
17. Were correct containers used for the tests indicated? ________ (YES) NO
18. Were correct preservatives added to samples? ________ (YES) NO
19. Was a sufficient amount of sample sent for tests indicated? ________ (YES) NO
20. Were bubbles absent in volatile samples? If NO, list by Sample # ID ________ ~~YES NO~~
21. Was the project manager called and status discussed? If yes, give details on the back of this form ________ YES (NO)
22. Who was called? ________ By whom? ________ date ________

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FAX. (303) 469-5254

Department of the Air Force
611 Civil Eng./CEVO
21885 2nd St.
Elmendorf AFB, AK 99506-0875
Attn: Carl A. Hornig

Order #: 98-09-243
Date: 10/26/98 12:26
Work ID: CAPE ROMANZOF - CALL #B002
Date Received: 09/25/98
Date Completed: 10/25/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988 047 6"
02	48030988 048 2'
03	48030988 049 4'
04	48030988 050 6"

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire K. Toon

Claire K. Toon
Project Manager

Samples were prepared and analyzed according to methods outlined in the following references:

- Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, January 1996.

All analyses meet quality assurance objectives.

Order # 98-09-243
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01A 48030988 047 6" Collected: 09/23/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	27.4		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		46	ug/Kg-DRY			10/23/98
PCB-1232		ND		23	ug/Kg-DRY			10/23/98
PCB-1242		ND		23	ug/Kg-DRY			10/23/98
PCB-1248		ND		23	ug/Kg-DRY			10/23/98
PCB-1254		72		23	ug/Kg-DRY			10/23/98
PCB-1260		ND		23	ug/Kg-DRY			10/23/98
PCB-1016		ND		23	ug/Kg-DRY			10/23/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		48.9		Min:	11	Max:	102	
Decachlorobiphenyl		69.6		Min:	35	Max:	141	

Sample: 02A 48030988 048 2' Collected: 09/23/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	24.9		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		44	ug/Kg-DRY			10/18/98
PCB-1232		ND		22	ug/Kg-DRY			10/18/98
PCB-1242		ND		22	ug/Kg-DRY			10/18/98
PCB-1248		ND		22	ug/Kg-DRY			10/18/98
PCB-1254		ND		22	ug/Kg-DRY			10/18/98
PCB-1260		ND		22	ug/Kg-DRY			10/18/98
PCB-1016		ND		22	ug/Kg-DRY			10/18/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		40.4		Min:	11	Max:	102	
Decachlorobiphenyl		51.7		Min:	35	Max:	141	

Sample: 03A 48030988 049 4' Collected: 09/23/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units			Analyzed
Percent Moisture	ASTM D2216	12.9		0.1	WT%			09/29/98
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		38	ug/Kg-DRY			10/18/98
PCB-1232		ND		19	ug/Kg-DRY			10/18/98
PCB-1242		ND		19	ug/Kg-DRY			10/18/98
PCB-1248		ND		19	ug/Kg-DRY			10/18/98
PCB-1254		ND		19	ug/Kg-DRY			10/18/98
PCB-1260		ND		19	ug/Kg-DRY			10/18/98
PCB-1016		ND		19	ug/Kg-DRY			10/18/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		44.2		Min:	11	Max:	102	
Decachlorobiphenyl		51.9		Min:	35	Max:	141	

Order # 98-09-243
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04A 48030988 050 6" Collected: 09/23/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Percent Moisture	ASTM D2216	22.0		0.1	WT%	09/29/98
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		43	ug/Kg-DRY	10/18/98
PCB-1232		ND		21	ug/Kg-DRY	10/18/98
PCB-1242		ND		21	ug/Kg-DRY	10/18/98
PCB-1248		ND		21	ug/Kg-DRY	10/18/98
PCB-1254		ND		21	ug/Kg-DRY	10/18/98
PCB-1260		ND		21	ug/Kg-DRY	10/18/98
PCB-1016		ND		21	ug/Kg-DRY	10/18/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		41.2		Min: 11	Max.	102
Decachlorobiphenyl		50.6		Min: 35	Max:	141

THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field...
ND = not detected at the reported limit
NA = analyte not applicable (see case narrative/methods for discussion)

Q (qualifier) field...
GENERAL:
* = Recovery or %RPD outside method specifications
H = value is estimated due to analysis run outside EPA holding times
E = reported concentration is above the instrument calibration range
D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences

ORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected in the laboratory method blank
J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)

INORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)
W = post digestion spike did not meet criteria (85-115%)
S = reported value determined by the Method of Standard Additions

PCB_8S:	POLYCHLORINATED BIPHENYLS	METHOD: 8082
PCBPRS:	Ultrasonic Extraction - PCBs	METHOD: 3550A
PMOIST:	PERCENT MOISTURE	METHOD: ASTM D2216

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FAX (303) 469-5254

Department of the Air Force
611 CES/CEVO
21-885 2nd St.
Elmendorf AFB, AK 99506-0875
Attn: Carl A. Hornig

Order #: 98-09-259
Date: 10/30/98 15:19
Work ID: CAPE ROMANZOF - CALL #B002
Date Received: 09/30/98
Date Completed: 10/30/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988051 SW3
02	48030988052 SD3
03	48030988053 SW3
04	48030988054 SW1
05	48030988055 SD1
06	48030988056 SW1
07	48030988057 SD2
08	48030988058 SW2
09	48030988059 SW1
10	48030988060 SW1
11	48030988061 SD1

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire K. Toon

Claire K. Toon
Project Manager

Samples were prepared and analyzed according to methods outlined in the following references:

- Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, January 1996.

Problems encountered with the analyses are discussed in the following narrative.

The 8260 analysis of sample 48030988057 SD2, resulted in the fourth internal standard being recovered low. This result was verified by re-analysis, and is attributed to sample matrix effect.

The pesticide results for samples 48030988052 SD3, 48030988053 SW3, 48030988055 SD1, and 48030988057 SD2 are reported with surrogate recoveries below quality control guidelines. These recoveries were verified by secondary analysis and are attributed to sample matrix effects. The method blank, which is analyzed in the absence of sample matrix, shows all surrogates within QC limits.

The PCB analysis for sample 48030988057 SD2 is reported with the surrogates diluted out. Analytical dilution was required in order to quantitate the detected aroclor within linear range.

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01A 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.34		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 01B 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.025	ug/L	10/21/98
alpha-BHC		ND		0.025	ug/L	10/21/98
beta-BHC		ND		0.025	ug/L	10/21/98
delta-BHC		ND		0.025	ug/L	10/21/98
gamma-BHC (Lindane)		ND		0.025	ug/L	10/21/98
alpha-Chlordane		ND		0.025	ug/L	10/21/98
gamma-Chlordane		ND		0.025	ug/L	10/21/98
4,4'-DDD		ND		0.050	ug/L	10/21/98
4,4'-DDE		ND		0.050	ug/L	10/21/98
4,4'-DDT		ND		0.050	ug/L	10/21/98
Dieldrin		ND		0.025	ug/L	10/21/98
Endosulfan I		ND		0.050	ug/L	10/21/98
Endosulfan II		ND		0.050	ug/L	10/21/98
Endosulfan Sulfate		ND		0.050	ug/L	10/21/98
Endrin		ND		0.050	ug/L	10/21/98
Endrin Aldehyde		ND		0.050	ug/L	10/21/98
Heptachlor		ND		0.025	ug/L	10/21/98
Heptachlor Epoxide		ND		0.025	ug/L	10/21/98
Methoxychlor		ND		0.25	ug/L	10/21/98
Toxaphene		ND		0.75	ug/L	10/21/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		75.0		Min: 45	Max: 124	
Decachlorobiphenyl		75.0		Min: 45	Max: 124	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01B 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		1.0	ug/L		10/21/98
PCB-1232		ND		0.50	ug/L		10/21/98
PCB-1242		ND		0.50	ug/L		10/21/98
PCB-1248		ND		0.50	ug/L		10/21/98
PCB-1254		ND		0.50	ug/L		10/21/98
PCB-1260		ND		0.50	ug/L		10/21/98
PCB-1016		ND		0.50	ug/L		10/21/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		75.0		Min:	29	Max:	133
Decachlorobiphenyl		75.0		Min:	26	Max:	137

Sample: 01C 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/08/98
Chloromethane		ND		5.0	ug/L	10/08/98
Vinyl Chloride		ND		2.0	ug/L	10/08/98
Bromomethane		ND		5.0	ug/L	10/08/98
Chloroethane		ND		5.0	ug/L	10/08/98
Trichlorofluoromethane		ND		2.0	ug/L	10/08/98
1,1-Dichloroethene		ND		2.0	ug/L	10/08/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/08/98
Methylene Chloride		ND		10	ug/L	10/08/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/08/98
1,1-Dichloroethane		ND		2.0	ug/L	10/08/98
2,2-Dichloropropane		ND		2.0	ug/L	10/08/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/08/98
Bromochloromethane		ND		2.0	ug/L	10/08/98
Chloroform		ND		2.0	ug/L	10/08/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/08/98
Carbon Tetrachloride		ND		2.0	ug/L	10/08/98
1,1-Dichloropropene		ND		2.0	ug/L	10/08/98
Benzene		ND		2.0	ug/L	10/08/98
1,2-Dichloroethane		ND		2.0	ug/L	10/08/98
Trichloroethene		ND		2.0	ug/L	10/08/98
1,2-Dichloropropane		ND		2.0	ug/L	10/08/98
Dibromomethane		ND		2.0	ug/L	10/08/98
Bromodichloromethane		ND		2.0	ug/L	10/08/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/08/98
Toluene		ND		2.0	ug/L	10/08/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/08/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/08/98
Tetrachloroethene		ND		2.0	ug/L	10/08/98
1,3-Dichloropropane		ND		2.0	ug/L	10/08/98
Dibromochloromethane		ND		2.0	ug/L	10/08/98
1,2-Dibromoethane		ND		2.0	ug/L	10/08/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01C 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
Chlorobenzene		ND		2.0	ug/L	10/08/98
Ethylbenzene		ND		2.0	ug/L	10/08/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/08/98
m,p-Xylenes		ND		2.0	ug/L	10/08/98
o-Xylene		ND		2.0	ug/L	10/08/98
Styrene		ND		2.0	ug/L	10/08/98
Bromoform		ND		2.0	ug/L	10/08/98
Isopropylbenzene		ND		2.0	ug/L	10/08/98
Bromobenzene		ND		2.0	ug/L	10/08/98
n-Propylbenzene		ND		2.0	ug/L	10/08/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/08/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/08/98
2-Chlorotoluene		ND		2.0	ug/L	10/08/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/08/98
4-Chlorotoluene		ND		2.0	ug/L	10/08/98
tert-Butylbenzene		ND		2.0	ug/L	10/08/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/08/98
sec-Butylbenzene		ND		2.0	ug/L	10/08/98
4-Isopropyltoluene		ND		2.0	ug/L	10/08/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/08/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/08/98
n-Butylbenzene		ND		2.0	ug/L	10/08/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/08/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/08/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/08/98
Hexachlorobutadiene		ND		2.0	ug/L	10/08/98
Napthalene		ND		2.0	ug/L	10/08/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/08/98
Acetone		ND		50	ug/L	10/08/98
Acrylonitrile		ND		10	ug/L	10/08/98
2-Butanone		ND		50	ug/L	10/08/98
Carbon Disulfide		ND		2.0	ug/L	10/08/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/08/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/08/98
2-Hexanone		ND		20	ug/L	10/08/98
Iodomethane		ND		2.0	ug/L	10/08/98
4-Methyl-2-pentanone		ND		20	ug/L	10/08/98
Vinyl Acetate		ND		5.0	ug/L	10/08/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/08/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		102		Min: 88	Max: 110	
p-Bromofluorobenzene		104		Min: 86	Max: 115	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01D 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.6	ug/L	10/07/98
bis(2-Chloroethyl) ether		ND		5.6	ug/L	10/07/98
2-Chlorophenol		ND		5.6	ug/L	10/07/98
1,3-Dichlorobenzene		ND		5.6	ug/L	10/07/98
1,4-Dichlorobenzene		ND		5.6	ug/L	10/07/98
Benzyl alcohol		1.6	J	11	ug/L	10/07/98
1,2-Dichlorobenzene		ND		5.6	ug/L	10/07/98
2-Methylphenol		ND		5.6	ug/L	10/07/98
bis(2-Chloroisopropyl) ether		ND		5.6	ug/L	10/07/98
4-Methylphenol		ND		5.6	ug/L	10/07/98
n-Nitroso-di-n-propylamine		ND		5.6	ug/L	10/07/98
Hexachloroethane		ND		5.6	ug/L	10/07/98
Nitrobenzene		ND		5.6	ug/L	10/07/98
Isophorone		ND		5.6	ug/L	10/07/98
2-Nitrophenol		ND		5.6	ug/L	10/07/98
2,4-Dimethylphenol		ND		5.6	ug/L	10/07/98
Benzoic acid		ND		56	ug/L	10/07/98
bis(2-Chloroethoxy)methane		ND		5.6	ug/L	10/07/98
2,4-Dichlorophenol		ND		5.6	ug/L	10/07/98
1,2,4-Trichlorobenzene		ND		5.6	ug/L	10/07/98
Naphthalene		ND		5.6	ug/L	10/07/98
4-Chloroaniline		ND		5.6	ug/L	10/07/98
Hexachlorobutadiene		ND		5.6	ug/L	10/07/98
4-Chloro-3-methylphenol		ND		5.6	ug/L	10/07/98
2-Methylnaphthalene		ND		5.6	ug/L	10/07/98
Hexachlorocyclopentadiene		ND		5.6	ug/L	10/07/98
2,4,6-Trichlorophenol		ND		5.6	ug/L	10/07/98
2,4,5-Trichlorophenol		ND		5.6	ug/L	10/07/98
2-Chloronaphthalene		ND		11	ug/L	10/07/98
2-Nitroaniline		ND		56	ug/L	10/07/98
Dimethylphthalate		ND		5.6	ug/L	10/07/98
Acenaphthylene		ND		5.6	ug/L	10/07/98
3-Nitroaniline		ND		56	ug/L	10/07/98
Acenaphthene		ND		5.6	ug/L	10/07/98
2,4-Dinitrophenol		ND		56	ug/L	10/07/98
4-Nitrophenol		ND		56	ug/L	10/07/98
Dibenzofuran		ND		5.6	ug/L	10/07/98
2,6-Dinitrotoluene		ND		5.6	ug/L	10/07/98
2,4-Dinitrotoluene		ND		5.6	ug/L	10/07/98
Diethylphthalate		ND		5.6	ug/L	10/07/98
4-Chlorophenyl-phenylether		ND		5.6	ug/L	10/07/98
Fluorene		ND		5.6	ug/L	10/07/98
4-Nitroaniline		ND		56	ug/L	10/07/98
4,6-Dinitro-2-methylphenol		ND		5.6	ug/L	10/07/98
n-Nitrosodiphenylamine		ND		5.6	ug/L	10/07/98
4-Bromophenyl-phenylether						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01D 48030988051 SW3 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Hexachlorobenzene		ND		5.6	ug/L	10/07/98
Pentachlorophenol		ND		5.6	ug/L	10/07/98
Phenanthrene		ND		5.6	ug/L	10/07/98
Anthracene		ND		5.6	ug/L	10/07/98
Di-n-butylphthalate		ND		5.6	ug/L	10/07/98
Fluoranthene		ND		5.6	ug/L	10/07/98
Pyrene		ND		5.6	ug/L	10/07/98
Butylbenzylphthalate		3.3	J	5.6	ug/L	10/07/98
3,3'-Dichlorobenzidine		ND		22	ug/L	10/07/98
Benzo(a)Anthracene		ND		5.6	ug/L	10/07/98
Chrysene		ND		5.6	ug/L	10/07/98
Bis(2-Ethylhexyl)phthalate		2.6	JB	5.6	ug/L	10/07/98
Di-n-octylphthalate		ND		5.6	ug/L	10/07/98
Benzo(b)fluoranthene		ND		5.6	ug/L	10/07/98
Benzo(k)fluoranthene		ND		5.6	ug/L	10/07/98
Benzo(a)pyrene		ND		5.6	ug/L	10/07/98
Indeno(1,2,3-cd)pyrene		ND		5.6	ug/L	10/07/98
Dibenz(a,h)anthracene		ND		5.6	ug/L	10/07/98
Benzo(g,h,i)perylene		ND		5.6	ug/L	10/07/98
SURROGATES, % Recovery						
2-Fluorophenol		70.6		Min: 21	Max: 100	
d5-Phenol		70.6		Min: 10	Max: 94	
d5-Nitrobenzene		89.1		Min: 35	Max: 114	
2-Fluorobiphenyl		88.2		Min: 43	Max: 116	
2,4,6-Tribromophenol		82.4		Min: 10	Max: 123	
d14-Terphenyl		100		Min: 33	Max: 141	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02A 48030988052 SD3 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		0.99		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		ND		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 02B 48030988052 SD3 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		1.5	ug/Kg-DRY	10/15/98
alpha-BHC		ND		1.5	ug/Kg-DRY	10/15/98
beta-BHC		ND		1.5	ug/Kg-DRY	10/15/98
delta-BHC		ND		1.5	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		1.5	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		1.5	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		1.5	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		2.9	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		2.9	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		2.9	ug/Kg-DRY	10/15/98
Dieldrin		ND		1.5	ug/Kg-DRY	10/15/98
Endosulfan I		ND		2.9	ug/Kg-DRY	10/15/98
Endosulfan II		ND		2.9	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		2.9	ug/Kg-DRY	10/15/98
Endrin		ND		2.9	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		2.9	ug/Kg-DRY	10/15/98
Heptachlor		ND		1.5	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		1.5	ug/Kg-DRY	10/15/98
Methoxychlor		ND		15	ug/Kg-DRY	10/15/98
Toxaphene		ND		44	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		40.8	*	Min: 45	Max: 124	
Decachlorobiphenyl		58.3		Min: 45	Max: 124	
Percent Moisture	ASTM D2216	43.0		0.1	WT%	10/05/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02B 48030988052 SD3 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		58	ug/Kg-DRY	10/15/98
PCB-1232		ND		29	ug/Kg-DRY	10/15/98
PCB-1242		ND		29	ug/Kg-DRY	10/15/98
PCB-1248		ND		29	ug/Kg-DRY	10/15/98
PCB-1254		ND		29	ug/Kg-DRY	10/15/98
PCB-1260		ND		29	ug/Kg-DRY	10/15/98
PCB-1016		ND		29	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		41.7		Min: 11	Max: 102	
Decachlorobiphenyl		58.3		Min: 35	Max: 141	
Semivolatile Organics	SW 8270C					
Phenol		ND		290	ug/Kg-DRY	10/21/98
bis(2-Chloroethyl) ether		ND		290	ug/Kg-DRY	10/21/98
2-Chlorophenol		ND		290	ug/Kg-DRY	10/21/98
1,3-Dichlorobenzene		ND		290	ug/Kg-DRY	10/21/98
1,4-Dichlorobenzene		ND		290	ug/Kg-DRY	10/21/98
Benzyl alcohol		ND		580	ug/Kg-DRY	10/21/98
1,2-Dichlorobenzene		ND		290	ug/Kg-DRY	10/21/98
2-Methylphenol		ND		290	ug/Kg-DRY	10/21/98
bis(2-Chloroisopropyl) eth		ND		290	ug/Kg-DRY	10/21/98
4-Methylphenol		ND		290	ug/Kg-DRY	10/21/98
n-Nitroso-di-n-propylamine		ND		290	ug/Kg-DRY	10/21/98
Hexachloroethane		ND		290	ug/Kg-DRY	10/21/98
Nitrobenzene		ND		290	ug/Kg-DRY	10/21/98
Isophorone		ND		290	ug/Kg-DRY	10/21/98
2-Nitrophenol		ND		290	ug/Kg-DRY	10/21/98
2,4-Dimethylphenol		ND		290	ug/Kg-DRY	10/21/98
Benzoic acid		ND		2900	ug/Kg-DRY	10/21/98
bis(2-Chloroethoxy)methane		ND		290	ug/Kg-DRY	10/21/98
2,4-Dichlorophenol		ND		290	ug/Kg-DRY	10/21/98
1,2,4-Trichlorobenzene		ND		290	ug/Kg-DRY	10/21/98
Naphthalene		ND		290	ug/Kg-DRY	10/21/98
4-Chloroaniline		ND		290	ug/Kg-DRY	10/21/98
Hexachlorobutadiene		ND		290	ug/Kg-DRY	10/21/98
4-Chloro-3-methylphenol		ND		290	ug/Kg-DRY	10/21/98
2-Methylnaphthalene		ND		290	ug/Kg-DRY	10/21/98
Hexachlorocyclopentadiene		ND		290	ug/Kg-DRY	10/21/98
2,4,6-Trichlorophenol		ND		2900	ug/Kg-DRY	10/21/98
2,4,5-Trichlorophenol		ND		290	ug/Kg-DRY	10/21/98
2-Chloronaphthalene		ND		2900	ug/Kg-DRY	10/21/98
2-Nitroaniline		ND		290	ug/Kg-DRY	10/21/98
Dimethylphthalate		ND		290	ug/Kg-DRY	10/21/98
Acenaphthylene		ND		2900	ug/Kg-DRY	10/21/98
3-Nitroaniline						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02B 48030988052 SD3 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Acenaphthene		ND		290	ug/Kg-DRY	10/21/98
2,4-Dinitrophenol		ND		2900	ug/Kg-DRY	10/21/98
4-Nitrophenol		ND		2900	ug/Kg-DRY	10/21/98
Dibenzofuran		ND		290	ug/Kg-DRY	10/21/98
2,6-Dinitrotoluene		ND		290	ug/Kg-DRY	10/21/98
2,4-Dinitrotoluene		ND		290	ug/Kg-DRY	10/21/98
Diethylphthalate		ND		290	ug/Kg-DRY	10/21/98
4-Chlorophenyl-phenylether		ND		290	ug/Kg-DRY	10/21/98
Fluorene		ND		290	ug/Kg-DRY	10/21/98
4-Nitroaniline		ND		2900	ug/Kg-DRY	10/21/98
4,6-Dinitro-2-methylphenol		ND		2900	ug/Kg-DRY	10/21/98
n-Nitrosodiphenylamine		ND		290	ug/Kg-DRY	10/21/98
4-Bromophenyl-phenylether		ND		290	ug/Kg-DRY	10/21/98
Hexachlorobenzene		ND		290	ug/Kg-DRY	10/21/98
Pentachlorophenol		ND		290	ug/Kg-DRY	10/21/98
Phenanthrene		ND		290	ug/Kg-DRY	10/21/98
Anthracene		ND		290	ug/Kg-DRY	10/21/98
Di-n-butylphthalate		ND		290	ug/Kg-DRY	10/21/98
Fluoranthene		ND		290	ug/Kg-DRY	10/21/98
Pyrene		ND		290	ug/Kg-DRY	10/21/98
Butylbenzylphthalate		ND		290	ug/Kg-DRY	10/21/98
3,3'-Dichlorobenzidine		ND		1200	ug/Kg-DRY	10/21/98
Benzo(a)Anthracene		ND		290	ug/Kg-DRY	10/21/98
Chrysene		ND		290	ug/Kg-DRY	10/21/98
Bis(2-Ethylhexyl)phthalate		ND		290	ug/Kg-DRY	10/21/98
Di-n-octylphthalate		ND		290	ug/Kg-DRY	10/21/98
Benzo(b)fluoranthene		ND		290	ug/Kg-DRY	10/21/98
Benzo(k)fluoranthene		ND		290	ug/Kg-DRY	10/21/98
Benzo(a)pyrene		ND		290	ug/Kg-DRY	10/21/98
Indeno(1,2,3-cd)pyrene		ND		290	ug/Kg-DRY	10/21/98
Dibenz(a,h)anthracene		ND		290	ug/Kg-DRY	10/21/98
Benzo(g,h,i)perylene		ND		290	ug/Kg-DRY	10/21/98
SURROGATES, % Recovery						
2-Fluorophenol		43.7		Min: 30	Max: 122	
d5-Phenol		51.7		Min: 30	Max: 117	
d5-Nitrobenzene		44.8		Min: 30	Max: 122	
2-Fluorobiphenyl		62.1		Min: 36	Max: 121	
2,4,6-Tribromophenol		58.6		Min: 30	Max: 113	
d14-Terphenyl		102		Min: 30	Max: 134	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02B 48030988052 SD3 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		8.8	ug/Kg-DRY	10/09/98
Chloromethane		ND		8.8	ug/Kg-DRY	10/09/98
Vinyl Chloride		ND		8.8	ug/Kg-DRY	10/09/98
Bromomethane		ND		8.8	ug/Kg-DRY	10/09/98
Chloroethane		ND		8.8	ug/Kg-DRY	10/09/98
Trichlorofluoromethane		ND		8.8	ug/Kg-DRY	10/09/98
1,1-Dichloroethene		ND		3.5	ug/Kg-DRY	10/09/98
Trichlorotrifluoroethane		ND		3.5	ug/Kg-DRY	10/09/98
Methylene Chloride		13	B	3.5	ug/Kg-DRY	10/09/98
trans-1,2-Dichloroethene		ND		3.5	ug/Kg-DRY	10/09/98
1,1-Dichloroethane		ND		3.5	ug/Kg-DRY	10/09/98
2,2-Dichloropropane		ND		3.5	ug/Kg-DRY	10/09/98
cis-1,2-Dichloroethene		ND		3.5	ug/Kg-DRY	10/09/98
Bromochloromethane		ND		3.5	ug/Kg-DRY	10/09/98
Chloroform		ND		3.5	ug/Kg-DRY	10/09/98
1,1,1-Trichloroethane		ND		3.5	ug/Kg-DRY	10/09/98
Carbon Tetrachloride		ND		3.5	ug/Kg-DRY	10/09/98
1,1-Dichloropropene		ND		3.5	ug/Kg-DRY	10/09/98
Benzene		ND		3.5	ug/Kg-DRY	10/09/98
1,2-Dichloroethane		ND		3.5	ug/Kg-DRY	10/09/98
Trichloroethene		ND		3.5	ug/Kg-DRY	10/09/98
1,2-Dichloropropane		ND		3.5	ug/Kg-DRY	10/09/98
Dibromomethane		ND		3.5	ug/Kg-DRY	10/09/98
Bromodichloromethane		ND		3.5	ug/Kg-DRY	10/09/98
cis-1,3-Dichloropropene		ND		3.5	ug/Kg-DRY	10/09/98
Toluene		ND		3.5	ug/Kg-DRY	10/09/98
trans-1,3-Dichloropropene		ND		3.5	ug/Kg-DRY	10/09/98
1,1,2-Trichloroethane		ND		3.5	ug/Kg-DRY	10/09/98
Tetrachloroethene		ND		3.5	ug/Kg-DRY	10/09/98
1,3-Dichloropropane		ND		3.5	ug/Kg-DRY	10/09/98
Dibromochloromethane		ND		3.5	ug/Kg-DRY	10/09/98
1,2-Dibromoethane		ND		3.5	ug/Kg-DRY	10/09/98
Chlorobenzene		ND		3.5	ug/Kg-DRY	10/09/98
Ethylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
1,1,1,2-Tetrachloroethane		ND		3.5	ug/Kg-DRY	10/09/98
m,p-Xylenes		ND		3.5	ug/Kg-DRY	10/09/98
o-Xylene		ND		3.5	ug/Kg-DRY	10/09/98
Styrene		ND		3.5	ug/Kg-DRY	10/09/98
Bromoform		ND		3.5	ug/Kg-DRY	10/09/98
Isopropylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
Bromobenzene		ND		3.5	ug/Kg-DRY	10/09/98
n-Propylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
1,1,2,2-Tetrachlorethane		ND		3.5	ug/Kg-DRY	10/09/98
1,2,3-Trichloropropane		ND		3.5	ug/Kg-DRY	10/09/98
2-Chlorotoluene		ND		3.5	ug/Kg-DRY	10/09/98
1,3,5-Trimethylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
4-Chlorotoluene						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02B 48030988052 SD3 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
1,2,4-Trimethylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
sec-Butylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
4-Isopropyltoluene		ND		3.5	ug/Kg-DRY	10/09/98
1,3-Dichlorobenzene		ND		3.5	ug/Kg-DRY	10/09/98
1,4-Dichlorobenzene		ND		3.5	ug/Kg-DRY	10/09/98
n-Butylbenzene		ND		3.5	ug/Kg-DRY	10/09/98
1,2-Dichlorobenzene		ND		3.5	ug/Kg-DRY	10/09/98
1,2-Dibromo-3-chloropropane		ND		18	ug/Kg-DRY	10/09/98
1,2,4-Trichlorobenzene		ND		3.5	ug/Kg-DRY	10/09/98
Hexachlorobutadiene		ND		3.5	ug/Kg-DRY	10/09/98
Napthalene		ND		3.5	ug/Kg-DRY	10/09/98
1,2,3-Trichlorobenzene		ND		3.5	ug/Kg-DRY	10/09/98
Acetone		41	J	88	ug/Kg-DRY	10/09/98
Acrylonitrile		ND		88	ug/Kg-DRY	10/09/98
2-Butanone		ND		88	ug/Kg-DRY	10/09/98
Carbon Disulfide		ND		3.5	ug/Kg-DRY	10/09/98
trans-1,4-Dichloro-2-butene		ND		88	ug/Kg-DRY	10/09/98
2-Chloroethyl Vinyl Ether		ND		88	ug/Kg-DRY	10/09/98
2-Hexanone		ND		18	ug/Kg-DRY	10/09/98
Iodomethane		ND		3.5	ug/Kg-DRY	10/09/98
4-Methyl-2-pentanone		ND		18	ug/Kg-DRY	10/09/98
Vinyl Acetate		ND		88	ug/Kg-DRY	10/09/98
tert-Butyl methyl ether		ND		3.5	ug/Kg-DRY	10/09/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		108		Min: 81	Max: 117	
p-Bromofluorobenzene		114		Min: 74	Max: 121	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: **03A** **48030988053 SW3** Collected: **09/26/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		0.95		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		ND		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: **03B** **48030988053 SW3** Collected: **09/26/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		1.1	ug/Kg-DRY	10/15/98
alpha-BHC		ND		1.1	ug/Kg-DRY	10/15/98
beta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
delta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		1.1	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		2.2	ug/Kg-DRY	10/15/98
Dieldrin		ND		1.1	ug/Kg-DRY	10/15/98
Endosulfan I		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan II		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		2.2	ug/Kg-DRY	10/15/98
Endrin		ND		2.2	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		1.1	ug/Kg-DRY	10/15/98
Heptachlor		ND		1.1	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		11	ug/Kg-DRY	10/15/98
Methoxychlor		ND		32	ug/Kg-DRY	10/15/98
Toxaphene						
SURROGATES, % Recovery						
Tetrachlorometaxylene		34.9	*	Min: 45	Max: 124	
Decachlorobiphenyl		52.3		Min: 45	Max: 124	
Percent Moisture	ASTM D2216	22.6		0.1	WT%	10/05/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03B 48030988053 SW3 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		43	ug/Kg-DRY	10/15/98
PCB-1232		ND		22	ug/Kg-DRY	10/15/98
PCB-1242		ND		22	ug/Kg-DRY	10/15/98
PCB-1248		ND		22	ug/Kg-DRY	10/15/98
PCB-1254		ND		22	ug/Kg-DRY	10/15/98
PCB-1260		ND		22	ug/Kg-DRY	10/15/98
PCB-1016		ND		22	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		34.9		Min: 11	Max: 102	
Decachlorobiphenyl		52.3		Min: 35	Max: 141	
Semivolatile Organics	SW 8270C					
Phenol		ND		220	ug/Kg-DRY	10/15/98
bis(2-Chloroethyl) ether		ND		220	ug/Kg-DRY	10/15/98
2-Chlorophenol		ND		220	ug/Kg-DRY	10/15/98
1,3-Dichlorobenzene		ND		220	ug/Kg-DRY	10/15/98
1,4-Dichlorobenzene		ND		220	ug/Kg-DRY	10/15/98
Benzyl alcohol		ND		430	ug/Kg-DRY	10/15/98
1,2-Dichlorobenzene		ND		220	ug/Kg-DRY	10/15/98
2-Methylphenol		ND		220	ug/Kg-DRY	10/15/98
bis(2-Chloroisopropyl) eth		ND		220	ug/Kg-DRY	10/15/98
4-Methylphenol		ND		220	ug/Kg-DRY	10/15/98
n-Nitroso-di-n-propylamine		ND		220	ug/Kg-DRY	10/15/98
Hexachloroethane		ND		220	ug/Kg-DRY	10/15/98
Nitrobenzene		ND		220	ug/Kg-DRY	10/15/98
Isophorone		ND		220	ug/Kg-DRY	10/15/98
2-Nitrophenol		ND		220	ug/Kg-DRY	10/15/98
2,4-Dimethylphenol		ND		220	ug/Kg-DRY	10/15/98
Benzoic acid		ND		2200	ug/Kg-DRY	10/15/98
bis(2-Chloroethoxy)methane		ND		220	ug/Kg-DRY	10/15/98
2,4-Dichlorophenol		ND		220	ug/Kg-DRY	10/15/98
1,2,4-Trichlorobenzene		ND		220	ug/Kg-DRY	10/15/98
Naphthalene		ND		220	ug/Kg-DRY	10/15/98
4-Chloroaniline		ND		220	ug/Kg-DRY	10/15/98
Hexachlorobutadiene		ND		220	ug/Kg-DRY	10/15/98
4-Chloro-3-methylphenol		ND		220	ug/Kg-DRY	10/15/98
2-Methylnaphthalene		ND		220	ug/Kg-DRY	10/15/98
Hexachlorocyclopentadiene		ND		220	ug/Kg-DRY	10/15/98
2,4,6-Trichlorophenol		ND		2200	ug/Kg-DRY	10/15/98
2,4,5-Trichlorophenol		ND		220	ug/Kg-DRY	10/15/98
2-Chloronaphthalene		ND		2200	ug/Kg-DRY	10/15/98
2-Nitroaniline		ND		220	ug/Kg-DRY	10/15/98
Dimethylphthalate		ND		220	ug/Kg-DRY	10/15/98
Acenaphthylene		ND		2200	ug/Kg-DRY	10/15/98
3-Nitroaniline						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03B 48030988053 SW3 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Acenaphthene		ND		220	ug/Kg-DRY	10/15/98
2,4-Dinitrophenol		ND		2200	ug/Kg-DRY	10/15/98
4-Nitrophenol		ND		2200	ug/Kg-DRY	10/15/98
Dibenzofuran		ND		220	ug/Kg-DRY	10/15/98
2,6-Dinitrotoluene		ND		220	ug/Kg-DRY	10/15/98
2,4-Dinitrotoluene		ND		220	ug/Kg-DRY	10/15/98
Diethylphthalate		ND		220	ug/Kg-DRY	10/15/98
4-Chlorophenyl-phenylether		ND		220	ug/Kg-DRY	10/15/98
Fluorene		ND		220	ug/Kg-DRY	10/15/98
4-Nitroaniline		ND		2200	ug/Kg-DRY	10/15/98
4,6-Dinitro-2-methylphenol		ND		2200	ug/Kg-DRY	10/15/98
n-Nitrosodiphenylamine		ND		220	ug/Kg-DRY	10/15/98
4-Bromophenyl-phenylether		ND		220	ug/Kg-DRY	10/15/98
Hexachlorobenzene		ND		220	ug/Kg-DRY	10/15/98
Pentachlorophenol		ND		220	ug/Kg-DRY	10/15/98
Phenanthrene		ND		220	ug/Kg-DRY	10/15/98
Anthracene		ND		220	ug/Kg-DRY	10/15/98
Di-n-butylphthalate		ND		220	ug/Kg-DRY	10/15/98
Fluoranthene		ND		220	ug/Kg-DRY	10/15/98
Pyrene		ND		220	ug/Kg-DRY	10/15/98
Butylbenzylphthalate		ND		860	ug/Kg-DRY	10/15/98
3,3'-Dichlorobenzidine		ND		220	ug/Kg-DRY	10/15/98
Benzo(a)Anthracene		ND		220	ug/Kg-DRY	10/15/98
Chrysene		ND		220	ug/Kg-DRY	10/15/98
Bis(2-Ethylhexyl)phthalate		ND		220	ug/Kg-DRY	10/15/98
Di-n-octylphthalate		ND		220	ug/Kg-DRY	10/15/98
Benzo(b)fluoranthene		ND		220	ug/Kg-DRY	10/15/98
Benzo(k)fluoranthene		ND		220	ug/Kg-DRY	10/15/98
Benzo(a)pyrene		ND		220	ug/Kg-DRY	10/15/98
Indeno(1,2,3-cd)pyrene		ND		220	ug/Kg-DRY	10/15/98
Dibenz(a,h)anthracene		ND		220	ug/Kg-DRY	10/15/98
Benzo(g,h,i)perylene		ND		220	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
2-Fluorophenol		55.4		Min: 30	Max: 122	
d5-Phenol		58.5		Min: 30	Max: 117	
d5-Nitrobenzene		55.8		Min: 30	Max: 122	
2-Fluorobiphenyl		65.1		Min: 36	Max: 121	
2,4,6-Tribromophenol		61.5		Min: 30	Max: 113	
d14-Terphenyl		88.4		Min: 30	Max: 134	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03B 48030988053 SW3 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		6.5	ug/Kg-DRY	10/09/98
Chloromethane		ND		6.5	ug/Kg-DRY	10/09/98
Vinyl Chloride		ND		6.5	ug/Kg-DRY	10/09/98
Bromomethane		ND		6.5	ug/Kg-DRY	10/09/98
Chloroethane		ND		6.5	ug/Kg-DRY	10/09/98
Trichlorofluoromethane		ND		6.5	ug/Kg-DRY	10/09/98
1,1-Dichloroethene		ND		2.6	ug/Kg-DRY	10/09/98
Trichlorotrifluoroethane		ND		2.6	ug/Kg-DRY	10/09/98
Methylene Chloride		12	B	2.6	ug/Kg-DRY	10/09/98
trans-1,2-Dichloroethene		ND		2.6	ug/Kg-DRY	10/09/98
1,1-Dichloroethane		ND		2.6	ug/Kg-DRY	10/09/98
2,2-Dichloropropane		ND		2.6	ug/Kg-DRY	10/09/98
cis-1,2-Dichloroethene		ND		2.6	ug/Kg-DRY	10/09/98
Bromochloromethane		ND		2.6	ug/Kg-DRY	10/09/98
Chloroform		ND		2.6	ug/Kg-DRY	10/09/98
1,1,1-Trichloroethane		ND		2.6	ug/Kg-DRY	10/09/98
Carbon Tetrachloride		ND		2.6	ug/Kg-DRY	10/09/98
1,1-Dichloropropene		ND		2.6	ug/Kg-DRY	10/09/98
Benzene		ND		2.6	ug/Kg-DRY	10/09/98
1,2-Dichloroethane		ND		2.6	ug/Kg-DRY	10/09/98
Trichloroethene		ND		2.6	ug/Kg-DRY	10/09/98
1,2-Dichloropropane		ND		2.6	ug/Kg-DRY	10/09/98
Dibromomethane		ND		2.6	ug/Kg-DRY	10/09/98
Bromodichloromethane		ND		2.6	ug/Kg-DRY	10/09/98
cis-1,3-Dichloropropene		ND		2.6	ug/Kg-DRY	10/09/98
Toluene		ND		2.6	ug/Kg-DRY	10/09/98
trans-1,3-Dichloropropene		ND		2.6	ug/Kg-DRY	10/09/98
1,1,2-Trichloroethane		ND		2.6	ug/Kg-DRY	10/09/98
Tetrachloroethene		ND		2.6	ug/Kg-DRY	10/09/98
1,3-Dichloropropane		ND		2.6	ug/Kg-DRY	10/09/98
Dibromochloromethane		ND		2.6	ug/Kg-DRY	10/09/98
1,2-Dibromoethane		ND		2.6	ug/Kg-DRY	10/09/98
Chlorobenzene		ND		2.6	ug/Kg-DRY	10/09/98
Ethylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
1,1,1,2-Tetrachloroethane		ND		2.6	ug/Kg-DRY	10/09/98
m,p-Xylenes		ND		2.6	ug/Kg-DRY	10/09/98
o-Xylene		ND		2.6	ug/Kg-DRY	10/09/98
Styrene		ND		2.6	ug/Kg-DRY	10/09/98
Bromoform		ND		2.6	ug/Kg-DRY	10/09/98
Isopropylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
Bromobenzene		ND		2.6	ug/Kg-DRY	10/09/98
n-Propylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
1,1,2,2-Tetrachlorethane		ND		2.6	ug/Kg-DRY	10/09/98
1,2,3-Trichloropropane		ND		2.6	ug/Kg-DRY	10/09/98
2-Chlorotoluene		ND		2.6	ug/Kg-DRY	10/09/98
1,3,5-Trimethylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
4-Chlorotoluene						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03B 48030988053 SW3 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
tert-Butylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
1,2,4-Trimethylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
sec-Butylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
4-Isopropyltoluene		ND		2.6	ug/Kg-DRY	10/09/98
1,3-Dichlorobenzene		ND		2.6	ug/Kg-DRY	10/09/98
1,4-Dichlorobenzene		ND		2.6	ug/Kg-DRY	10/09/98
n-Butylbenzene		ND		2.6	ug/Kg-DRY	10/09/98
1,2-Dichlorobenzene		ND		13	ug/Kg-DRY	10/09/98
1,2-Dibromo-3-chloropropane		ND		2.6	ug/Kg-DRY	10/09/98
1,2,4-Trichlorobenzene		ND		2.6	ug/Kg-DRY	10/09/98
Hexachlorobutadiene		ND		2.6	ug/Kg-DRY	10/09/98
Napthalene		ND		2.6	ug/Kg-DRY	10/09/98
1,2,3-Trichlorobenzene		48	J	65	ug/Kg-DRY	10/09/98
Acetone		ND		65	ug/Kg-DRY	10/09/98
Acrylonitrile		ND		65	ug/Kg-DRY	10/09/98
2-Butanone		ND		2.6	ug/Kg-DRY	10/09/98
Carbon Disulfide		ND		65	ug/Kg-DRY	10/09/98
trans-1,4-Dichloro-2-butene		ND		65	ug/Kg-DRY	10/09/98
2-Chloroethyl Vinyl Ether		ND		13	ug/Kg-DRY	10/09/98
2-Hexanone		ND		2.6	ug/Kg-DRY	10/09/98
Iodomethane		ND		13	ug/Kg-DRY	10/09/98
4-Methyl-2-pentanone		ND		65	ug/Kg-DRY	10/09/98
Vinyl Acetate		ND		2.6	ug/Kg-DRY	10/09/98
tert-Butyl methyl ether						
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		106		Min: 81	Max: 117	
p-Bromofluorobenzene		112		Min: 74	Max: 121	

Sample: 03C 48030988053 SW3 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organic Carbon, Total	LECO/D513G	0.66		0.05	WT%	10/08/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: **04A 48030988054 SW1** Collected: **09/26/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.35		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: **04B 48030988054 SW1** Collected: **09/26/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.025	ug/L	10/21/98
alpha-BHC		ND		0.025	ug/L	10/21/98
beta-BHC		ND		0.025	ug/L	10/21/98
delta-BHC		ND		0.025	ug/L	10/21/98
gamma-BHC (Lindane)		ND		0.025	ug/L	10/21/98
alpha-Chlordane		ND		0.025	ug/L	10/21/98
gamma-Chlordane		ND		0.025	ug/L	10/21/98
4,4'-DDD		ND		0.050	ug/L	10/21/98
4,4'-DDE		ND		0.050	ug/L	10/21/98
4,4'-DDT		ND		0.050	ug/L	10/21/98
Dieldrin		ND		0.025	ug/L	10/21/98
Endosulfan I		ND		0.050	ug/L	10/21/98
Endosulfan II		ND		0.050	ug/L	10/21/98
Endosulfan Sulfate		ND		0.050	ug/L	10/21/98
Endrin		ND		0.050	ug/L	10/21/98
Endrin Aldehyde		ND		0.025	ug/L	10/21/98
Heptachlor		ND		0.025	ug/L	10/21/98
Heptachlor Epoxide		ND		0.25	ug/L	10/21/98
Methoxychlor		ND		0.75	ug/L	10/21/98
Toxaphene						
SURROGATES, % Recovery						
Tetrachlorometaxylene		70.0		Min: 45	Max: 124	
Decachlorobiphenyl		75.0		Min: 45	Max: 124	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04B 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		1.0	ug/L		10/21/98
PCB-1232		ND		0.50	ug/L		10/21/98
PCB-1242		ND		0.50	ug/L		10/21/98
PCB-1248		ND		0.50	ug/L		10/21/98
PCB-1254		ND		0.50	ug/L		10/21/98
PCB-1260		ND		0.50	ug/L		10/21/98
PCB-1016		ND		0.50	ug/L		10/21/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		70.0		Min:	29	Max:	133
Decachlorobiphenyl		75.0		Min:	26	Max:	137

Sample: 04C 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/08/98
Chloromethane		ND		5.0	ug/L	10/08/98
Vinyl Chloride		ND		2.0	ug/L	10/08/98
Bromomethane		ND		5.0	ug/L	10/08/98
Chloroethane		ND		5.0	ug/L	10/08/98
Trichlorofluoromethane		ND		2.0	ug/L	10/08/98
1,1-Dichloroethene		ND		2.0	ug/L	10/08/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/08/98
Methylene Chloride		ND		10	ug/L	10/08/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/08/98
1,1-Dichloroethane		ND		2.0	ug/L	10/08/98
2,2-Dichloropropane		ND		2.0	ug/L	10/08/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/08/98
Bromochloromethane		ND		2.0	ug/L	10/08/98
Chloroform		ND		2.0	ug/L	10/08/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/08/98
Carbon Tetrachloride		ND		2.0	ug/L	10/08/98
1,1-Dichloropropene		ND		2.0	ug/L	10/08/98
Benzene		ND		2.0	ug/L	10/08/98
1,2-Dichloroethane		ND		2.0	ug/L	10/08/98
Trichloroethene		ND		2.0	ug/L	10/08/98
1,2-Dichloropropane		ND		2.0	ug/L	10/08/98
Dibromomethane		ND		2.0	ug/L	10/08/98
Bromodichloromethane		ND		2.0	ug/L	10/08/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/08/98
Toluene		ND		2.0	ug/L	10/08/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/08/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/08/98
Tetrachloroethene		ND		2.0	ug/L	10/08/98
1,3-Dichloropropane		ND		2.0	ug/L	10/08/98
Dibromochloromethane		ND		2.0	ug/L	10/08/98
1,2-Dibromoethane		ND		2.0	ug/L	10/08/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04C 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
Chlorobenzene		ND		2.0	ug/L	10/08/98
Ethylbenzene		ND		2.0	ug/L	10/08/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/08/98
m,p-Xylenes		ND		2.0	ug/L	10/08/98
o-Xylene		ND		2.0	ug/L	10/08/98
Styrene		ND		2.0	ug/L	10/08/98
Bromoform		ND		2.0	ug/L	10/08/98
Isopropylbenzene		ND		2.0	ug/L	10/08/98
Bromobenzene		ND		2.0	ug/L	10/08/98
n-Propylbenzene		ND		2.0	ug/L	10/08/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/08/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/08/98
2-Chlorotoluene		ND		2.0	ug/L	10/08/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/08/98
4-Chlorotoluene		ND		2.0	ug/L	10/08/98
tert-Butylbenzene		ND		2.0	ug/L	10/08/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/08/98
sec-Butylbenzene		ND		2.0	ug/L	10/08/98
4-Isopropyltoluene		ND		2.0	ug/L	10/08/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/08/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/08/98
n-Butylbenzene		ND		2.0	ug/L	10/08/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/08/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/08/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/08/98
Hexachlorobutadiene		ND		2.0	ug/L	10/08/98
Napthalene		ND		2.0	ug/L	10/08/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/08/98
Acetone		ND		50	ug/L	10/08/98
Acrylonitrile		ND		10	ug/L	10/08/98
2-Butanone		ND		50	ug/L	10/08/98
Carbon Disulfide		ND		2.0	ug/L	10/08/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/08/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/08/98
2-Hexanone		ND		20	ug/L	10/08/98
Iodomethane		ND		2.0	ug/L	10/08/98
4-Methyl-2-pentanone		ND		20	ug/L	10/08/98
Vinyl Acetate		ND		5.0	ug/L	10/08/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/08/98
SURROGATES, % Recovery						
Dibromofluoromethane		98.0		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Sample: 04D 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	10/07/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	10/07/98
2-Chlorophenol		ND		5.0	ug/L	10/07/98
1,3-Dichlorobenzene		ND		5.0	ug/L	10/07/98
1,4-Dichlorobenzene		ND		5.0	ug/L	10/07/98
Benzyl alcohol		ND		10	ug/L	10/07/98
1,2-Dichlorobenzene		ND		5.0	ug/L	10/07/98
2-Methylphenol		ND		5.0	ug/L	10/07/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	10/07/98
4-Methylphenol		ND		5.0	ug/L	10/07/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	10/07/98
Hexachloroethane		ND		5.0	ug/L	10/07/98
Nitrobenzene		ND		5.0	ug/L	10/07/98
Isophorone		ND		5.0	ug/L	10/07/98
2-Nitrophenol		ND		5.0	ug/L	10/07/98
2,4-Dimethylphenol		ND		5.0	ug/L	10/07/98
Benzoic acid		ND		50	ug/L	10/07/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	10/07/98
2,4-Dichlorophenol		ND		5.0	ug/L	10/07/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	10/07/98
Naphthalene		ND		5.0	ug/L	10/07/98
4-Chloroaniline		ND		5.0	ug/L	10/07/98
Hexachlorobutadiene		ND		5.0	ug/L	10/07/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	10/07/98
2-Methylnaphthalene		ND		5.0	ug/L	10/07/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	10/07/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	10/07/98
2,4,5-Trichlorophenol		ND		5.0	ug/L	10/07/98
2-Chloronaphthalene		ND		10	ug/L	10/07/98
2-Nitroaniline		ND		50	ug/L	10/07/98
Dimethylphthalate		ND		5.0	ug/L	10/07/98
Acenaphthylene		ND		5.0	ug/L	10/07/98
3-Nitroaniline		ND		50	ug/L	10/07/98
Acenaphthene		ND		5.0	ug/L	10/07/98
2,4-Dinitrophenol		ND		50	ug/L	10/07/98
4-Nitrophenol		ND		50	ug/L	10/07/98
Dibenzofuran		ND		5.0	ug/L	10/07/98
2,6-Dinitrotoluene		ND		5.0	ug/L	10/07/98
2,4-Dinitrotoluene		ND		5.0	ug/L	10/07/98
Diethylphthalate		ND		5.0	ug/L	10/07/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	10/07/98
Fluorene		ND		5.0	ug/L	10/07/98
4-Nitroaniline		ND		50	ug/L	10/07/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	10/07/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	10/07/98
4-Bromophenyl-phenylether						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04D 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)					
Hexachlorobenzene		ND		5.0	ug/L		10/07/98
Pentachlorophenol		ND		5.0	ug/L		10/07/98
Phenanthrene		ND		5.0	ug/L		10/07/98
Anthracene		ND		5.0	ug/L		10/07/98
Di-n-butylphthalate		ND		5.0	ug/L		10/07/98
Fluoranthene		ND		5.0	ug/L		10/07/98
Pyrene		ND		5.0	ug/L		10/07/98
Butylbenzylphthalate		1.8	J	5.0	ug/L		10/07/98
3,3'-Dichlorobenzidine		ND		20	ug/L		10/07/98
Benzo(a)Anthracene		ND		5.0	ug/L		10/07/98
Chrysene		ND		5.0	ug/L		10/07/98
Bis(2-Ethylhexyl)phthalate		3.8	JB	5.0	ug/L		10/07/98
Di-n-octylphthalate		ND		5.0	ug/L		10/07/98
Benzo(b)fluoranthene		ND		5.0	ug/L		10/07/98
Benzo(k)fluoranthene		ND		5.0	ug/L		10/07/98
Benzo(a)pyrene		ND		5.0	ug/L		10/07/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L		10/07/98
Dibenz(a,h)anthracene		ND		5.0	ug/L		10/07/98
Benzo(g,h,i)perylene		ND		5.0	ug/L		10/07/98
SURROGATES, % Recovery							
2-Fluorophenol		44.0		Min:	21	Max:	100
d5-Phenol		45.3		Min:	10	Max:	94
d5-Nitrobenzene		48.0		Min:	35	Max:	114
2-Fluorobiphenyl		54.0		Min:	43	Max:	116
2,4,6-Tribromophenol		48.0		Min:	10	Max:	123
d14-Terphenyl		68.0		Min:	33	Max:	141

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05A 48030988055 SD1 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		1.2		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		ND		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 05B 48030988055 SD1 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		1.1	ug/Kg-DRY	10/15/98
alpha-BHC		ND		1.1	ug/Kg-DRY	10/15/98
beta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
delta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		1.1	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		2.2	ug/Kg-DRY	10/15/98
Dieldrin		ND		1.1	ug/Kg-DRY	10/15/98
Endosulfan I		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan II		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		2.2	ug/Kg-DRY	10/15/98
Endrin		ND		2.2	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		2.2	ug/Kg-DRY	10/15/98
Heptachlor		ND		1.1	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		1.1	ug/Kg-DRY	10/15/98
Methoxychlor		ND		11	ug/Kg-DRY	10/15/98
Toxaphene		ND		33	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		36.8	*	Min: 45	Max: 124	
Decachlorobiphenyl		44.8	*	Min: 45	Max: 124	
Percent Moisture	ASTM D2216	23.8		0.1	WT%	10/05/98

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ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05B 48030988055 SD1 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		44	ug/Kg-DRY		10/15/98
PCB-1232		ND		22	ug/Kg-DRY		10/15/98
PCB-1242		ND		22	ug/Kg-DRY		10/15/98
PCB-1248		ND		22	ug/Kg-DRY		10/15/98
PCB-1254		ND		22	ug/Kg-DRY		10/15/98
PCB-1260		ND		22	ug/Kg-DRY		10/15/98
PCB-1016		ND		22	ug/Kg-DRY		10/15/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		36.8		Min: 11		Max: 102	
Decachlorobiphenyl		44.8		Min: 35		Max: 141	
Semivolatile Organics	SW 8270C						
Phenol		ND		220	ug/Kg-DRY		10/21/98
bis(2-Chloroethyl) ether		ND		220	ug/Kg-DRY		10/21/98
2-Chlorophenol		ND		220	ug/Kg-DRY		10/21/98
1,3-Dichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
1,4-Dichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
Benzyl alcohol		ND		440	ug/Kg-DRY		10/21/98
1,2-Dichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
2-Methylphenol		ND		220	ug/Kg-DRY		10/21/98
bis(2-Chloroisopropyl) eth		ND		220	ug/Kg-DRY		10/21/98
4-Methylphenol		ND		220	ug/Kg-DRY		10/21/98
n-Nitroso-di-n-propylamine		ND		220	ug/Kg-DRY		10/21/98
Hexachloroethane		ND		220	ug/Kg-DRY		10/21/98
Nitrobenzene		ND		220	ug/Kg-DRY		10/21/98
Isophorone		ND		220	ug/Kg-DRY		10/21/98
2-Nitrophenol		ND		220	ug/Kg-DRY		10/21/98
2,4-Dimethylphenol		ND		220	ug/Kg-DRY		10/21/98
Benzoic acid		ND		2200	ug/Kg-DRY		10/21/98
bis(2-Chloroethoxy)methane		ND		220	ug/Kg-DRY		10/21/98
2,4-Dichlorophenol		ND		220	ug/Kg-DRY		10/21/98
1,2,4-Trichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
Naphthalene		ND		220	ug/Kg-DRY		10/21/98
4-Chloroaniline		ND		220	ug/Kg-DRY		10/21/98
Hexachlorobutadiene		ND		220	ug/Kg-DRY		10/21/98
4-Chloro-3-methylphenol		ND		220	ug/Kg-DRY		10/21/98
2-Methylnaphthalene		ND		220	ug/Kg-DRY		10/21/98
Hexachlorocyclopentadiene		ND		220	ug/Kg-DRY		10/21/98
2,4,6-Trichlorophenol		ND		2200	ug/Kg-DRY		10/21/98
2,4,5-Trichlorophenol		ND		220	ug/Kg-DRY		10/21/98
2-Chloronaphthalene		ND		2200	ug/Kg-DRY		10/21/98
2-Nitroaniline		ND		220	ug/Kg-DRY		10/21/98
Dimethylphthalate		ND		220	ug/Kg-DRY		10/21/98
Acenaphthylene		ND		2200	ug/Kg-DRY		10/21/98
3-Nitroaniline		ND		220	ug/Kg-DRY		10/21/98
Acenaphthene							

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ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05B 48030988055 SD1 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2,4-Dinitrophenol		ND		2200	ug/Kg-DRY	10/21/98
4-Nitrophenol		ND		2200	ug/Kg-DRY	10/21/98
Dibenzofuran		ND		220	ug/Kg-DRY	10/21/98
2,6-Dinitrotoluene		ND		220	ug/Kg-DRY	10/21/98
2,4-Dinitrotoluene		ND		220	ug/Kg-DRY	10/21/98
Diethylphthalate		ND		220	ug/Kg-DRY	10/21/98
4-Chlorophenyl-phenylether		ND		220	ug/Kg-DRY	10/21/98
Fluorene		ND		220	ug/Kg-DRY	10/21/98
4-Nitroaniline		ND		2200	ug/Kg-DRY	10/21/98
4,6-Dinitro-2-methylphenol		ND		2200	ug/Kg-DRY	10/21/98
n-Nitrosodiphenylamine		ND		220	ug/Kg-DRY	10/21/98
4-Bromophenyl-phenylether		ND		220	ug/Kg-DRY	10/21/98
Hexachlorobenzene		ND		220	ug/Kg-DRY	10/21/98
Pentachlorophenol		ND		220	ug/Kg-DRY	10/21/98
Phenanthrene		ND		220	ug/Kg-DRY	10/21/98
Anthracene		ND		220	ug/Kg-DRY	10/21/98
Di-n-butylphthalate		ND		220	ug/Kg-DRY	10/21/98
Fluoranthene		ND		220	ug/Kg-DRY	10/21/98
Pyrene		ND		220	ug/Kg-DRY	10/21/98
Butylbenzylphthalate		ND		870	ug/Kg-DRY	10/21/98
3,3'-Dichlorobenzidine		ND		220	ug/Kg-DRY	10/21/98
Benzo(a)Anthracene		ND		220	ug/Kg-DRY	10/21/98
Chrysene		49	J	220	ug/Kg-DRY	10/21/98
Bis(2-Ethylhexyl)phthalate		ND		220	ug/Kg-DRY	10/21/98
Di-n-octylphthalate		ND		220	ug/Kg-DRY	10/21/98
Benzo(b)fluoranthene		ND		220	ug/Kg-DRY	10/21/98
Benzo(k)fluoranthene		ND		220	ug/Kg-DRY	10/21/98
Benzo(a)pyrene		ND		220	ug/Kg-DRY	10/21/98
Indeno(1,2,3-cd)pyrene		ND		220	ug/Kg-DRY	10/21/98
Dibenz(a,h)anthracene		ND		220	ug/Kg-DRY	10/21/98
Benzo(g,h,i)perylene		ND		220	ug/Kg-DRY	10/21/98
SURROGATES, % Recovery						
2-Fluorophenol		37.9		Min: 30	Max: 122	
d5-Phenol		43.9		Min: 30	Max: 117	
d5-Nitrobenzene		40.9		Min: 30	Max: 122	
2-Fluorobiphenyl		56.8		Min: 36	Max: 121	
2,4,6-Tribromophenol		47.0		Min: 30	Max: 113	
d14-Terphenyl		86.4		Min: 30	Max: 134	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05B 48030988055 SD1 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		6.6	ug/Kg-DRY	10/08/98
Chloromethane		ND		6.6	ug/Kg-DRY	10/08/98
Vinyl Chloride		ND		6.6	ug/Kg-DRY	10/08/98
Bromomethane		ND		6.6	ug/Kg-DRY	10/08/98
Chloroethane		ND		6.6	ug/Kg-DRY	10/08/98
Trichlorofluoromethane		ND		6.6	ug/Kg-DRY	10/08/98
1,1-Dichloroethene		ND		2.6	ug/Kg-DRY	10/08/98
Trichlorotrifluoroethane		ND		2.6	ug/Kg-DRY	10/08/98
Methylene Chloride		44	B	2.6	ug/Kg-DRY	10/08/98
trans-1,2-Dichloroethene		ND		2.6	ug/Kg-DRY	10/08/98
1,1-Dichloroethane		ND		2.6	ug/Kg-DRY	10/08/98
2,2-Dichloropropane		ND		2.6	ug/Kg-DRY	10/08/98
cis-1,2-Dichloroethene		ND		2.6	ug/Kg-DRY	10/08/98
Bromochloromethane		ND		2.6	ug/Kg-DRY	10/08/98
Chloroform		ND		2.6	ug/Kg-DRY	10/08/98
1,1,1-Trichloroethane		ND		2.6	ug/Kg-DRY	10/08/98
Carbon Tetrachloride		ND		2.6	ug/Kg-DRY	10/08/98
1,1-Dichloropropene		ND		2.6	ug/Kg-DRY	10/08/98
Benzene		ND		2.6	ug/Kg-DRY	10/08/98
1,2-Dichloroethane		ND		2.6	ug/Kg-DRY	10/08/98
Trichloroethene		ND		2.6	ug/Kg-DRY	10/08/98
1,2-Dichloropropane		ND		2.6	ug/Kg-DRY	10/08/98
Dibromomethane		ND		2.6	ug/Kg-DRY	10/08/98
Bromodichloromethane		ND		2.6	ug/Kg-DRY	10/08/98
cis-1,3-Dichloropropene		ND		2.6	ug/Kg-DRY	10/08/98
Toluene		ND		2.6	ug/Kg-DRY	10/08/98
trans-1,3-Dichloropropene		ND		2.6	ug/Kg-DRY	10/08/98
1,1,2-Trichloroethane		ND		2.6	ug/Kg-DRY	10/08/98
Tetrachloroethene		ND		2.6	ug/Kg-DRY	10/08/98
1,3-Dichloropropane		ND		2.6	ug/Kg-DRY	10/08/98
Dibromochloromethane		ND		2.6	ug/Kg-DRY	10/08/98
1,2-Dibromoethane		ND		2.6	ug/Kg-DRY	10/08/98
Chlorobenzene		ND		2.6	ug/Kg-DRY	10/08/98
Ethylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
1,1,1,2-Tetrachloroethane		ND		2.6	ug/Kg-DRY	10/08/98
m,p-Xylenes		ND		2.6	ug/Kg-DRY	10/08/98
o-Xylene		ND		2.6	ug/Kg-DRY	10/08/98
Styrene		ND		2.6	ug/Kg-DRY	10/08/98
Bromoform		ND		2.6	ug/Kg-DRY	10/08/98
Isopropylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
Bromobenzene		ND		2.6	ug/Kg-DRY	10/08/98
n-Propylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
1,1,2,2-Tetrachlorethane		ND		2.6	ug/Kg-DRY	10/08/98
1,2,3-Trichloropropane		ND		2.6	ug/Kg-DRY	10/08/98
2-Chlorotoluene		ND		2.6	ug/Kg-DRY	10/08/98
1,3,5-Trimethylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
4-Chlorotoluene						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05B 48030988055 SD1 Collected: 09/26/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
1,2,4-Trimethylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
sec-Butylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
4-Isopropyltoluene		ND		2.6	ug/Kg-DRY	10/08/98
1,3-Dichlorobenzene		ND		2.6	ug/Kg-DRY	10/08/98
1,4-Dichlorobenzene		ND		2.6	ug/Kg-DRY	10/08/98
n-Butylbenzene		ND		2.6	ug/Kg-DRY	10/08/98
1,2-Dichlorobenzene		ND		13	ug/Kg-DRY	10/08/98
1,2-Dibromo-3-chloropropane		ND		2.6	ug/Kg-DRY	10/08/98
1,2,4-Trichlorobenzene		ND		2.6	ug/Kg-DRY	10/08/98
Hexachlorobutadiene		ND		2.6	ug/Kg-DRY	10/08/98
Napthalene		ND		2.6	ug/Kg-DRY	10/08/98
1,2,3-Trichlorobenzene		96		66	ug/Kg-DRY	10/08/98
Acetone		ND		66	ug/Kg-DRY	10/08/98
Acrylonitrile		ND		66	ug/Kg-DRY	10/08/98
2-Butanone		ND		2.6	ug/Kg-DRY	10/08/98
Carbon Disulfide		ND		66	ug/Kg-DRY	10/08/98
trans-1,4-Dichloro-2-butene		ND		66	ug/Kg-DRY	10/08/98
2-Chloroethyl Vinyl Ether		ND		13	ug/Kg-DRY	10/08/98
2-Hexanone		ND		2.6	ug/Kg-DRY	10/08/98
Iodomethane		ND		13	ug/Kg-DRY	10/08/98
4-Methyl-2-pentanone		ND		66	ug/Kg-DRY	10/08/98
Vinyl Acetate		ND		2.6	ug/Kg-DRY	10/08/98
tert-Butyl methyl ether						
SURROGATES, % Recovery						
Dibromofluoromethane		103		Min: 80	Max: 120	
Toluene d-8		105		Min: 81	Max: 117	
p-Bromofluorobenzene		114		Min: 74	Max: 121	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06A 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		1.0		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		0.20		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 06B 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.95	ug/Kg-DRY	10/15/98
alpha-BHC		ND		0.95	ug/Kg-DRY	10/15/98
beta-BHC		ND		0.95	ug/Kg-DRY	10/15/98
delta-BHC		ND		0.95	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		0.95	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		0.95	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		1.9	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		1.9	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		1.9	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		0.95	ug/Kg-DRY	10/15/98
Dieldrin		ND		1.9	ug/Kg-DRY	10/15/98
Endosulfan I		ND		1.9	ug/Kg-DRY	10/15/98
Endosulfan II		ND		1.9	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		1.9	ug/Kg-DRY	10/15/98
Endrin		ND		1.9	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		0.95	ug/Kg-DRY	10/15/98
Heptachlor		ND		0.95	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		9.5	ug/Kg-DRY	10/15/98
Methoxychlor		ND		29	ug/Kg-DRY	10/15/98
Toxaphene						
SURROGATES, % Recovery						
Tetrachlorometaxylene		50.0		Min: 45	Max: 124	
Decachlorobiphenyl		59.2		Min: 45	Max: 124	
Percent Moisture	ASTM D2216	13.0		0.1	WT%	10/05/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06B 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		38	ug/Kg-DRY		10/15/98
PCB-1232		ND		19	ug/Kg-DRY		10/15/98
PCB-1242		ND		19	ug/Kg-DRY		10/15/98
PCB-1248		ND		19	ug/Kg-DRY		10/15/98
PCB-1254		ND		19	ug/Kg-DRY		10/15/98
PCB-1260		ND		19	ug/Kg-DRY		10/15/98
PCB-1016							
SURROGATES, % Recovery							
Tetrachlorometaxylene		50.0		Min: 11		Max: 102	
Decachlorobiphenyl		59.2		Min: 35		Max: 141	
Semivolatile Organics	SW 8270C						
Phenol		ND		190	ug/Kg-DRY		10/21/98
bis(2-Chloroethyl) ether		ND		190	ug/Kg-DRY		10/21/98
2-Chlorophenol		ND		190	ug/Kg-DRY		10/21/98
1,3-Dichlorobenzene		ND		190	ug/Kg-DRY		10/21/98
1,4-Dichlorobenzene		ND		190	ug/Kg-DRY		10/21/98
Benzyl alcohol		ND		380	ug/Kg-DRY		10/21/98
1,2-Dichlorobenzene		ND		190	ug/Kg-DRY		10/21/98
2-Methylphenol		ND		190	ug/Kg-DRY		10/21/98
bis(2-Chloroisopropyl) eth		ND		190	ug/Kg-DRY		10/21/98
4-Methylphenol		ND		190	ug/Kg-DRY		10/21/98
n-Nitroso-di-n-propylamine		ND		190	ug/Kg-DRY		10/21/98
Hexachloroethane		ND		190	ug/Kg-DRY		10/21/98
Nitrobenzene		ND		190	ug/Kg-DRY		10/21/98
Isophorone		ND		190	ug/Kg-DRY		10/21/98
2-Nitrophenol		ND		190	ug/Kg-DRY		10/21/98
2,4-Dimethylphenol		ND		1900	ug/Kg-DRY		10/21/98
Benzoic acid		ND		190	ug/Kg-DRY		10/21/98
bis(2-Chloroethoxy)methane		ND		190	ug/Kg-DRY		10/21/98
2,4-Dichlorophenol		ND		190	ug/Kg-DRY		10/21/98
1,2,4-Trichlorobenzene		ND		190	ug/Kg-DRY		10/21/98
Naphthalene		ND		190	ug/Kg-DRY		10/21/98
4-Chloroaniline		ND		190	ug/Kg-DRY		10/21/98
Hexachlorobutadiene		ND		190	ug/Kg-DRY		10/21/98
4-Chloro-3-methylphenol		ND		190	ug/Kg-DRY		10/21/98
2-Methylnaphthalene		ND		190	ug/Kg-DRY		10/21/98
Hexachlorocyclopentadiene		ND		190	ug/Kg-DRY		10/21/98
2,4,6-Trichlorophenol		ND		1900	ug/Kg-DRY		10/21/98
2,4,5-Trichlorophenol		ND		190	ug/Kg-DRY		10/21/98
2-Chloronaphthalene		ND		1900	ug/Kg-DRY		10/21/98
2-Nitroaniline		ND		190	ug/Kg-DRY		10/21/98
Dimethylphthalate		ND		190	ug/Kg-DRY		10/21/98
Acenaphthylene		ND		1900	ug/Kg-DRY		10/21/98
3-Nitroaniline		ND		190	ug/Kg-DRY		10/21/98
Acenaphthene							

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06B 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2,4-Dinitrophenol		ND		1900	ug/Kg-DRY	10/21/98
4-Nitrophenol		ND		1900	ug/Kg-DRY	10/21/98
Dibenzofuran		ND		190	ug/Kg-DRY	10/21/98
2,6-Dinitrotoluene		ND		190	ug/Kg-DRY	10/21/98
2,4-Dinitrotoluene		ND		190	ug/Kg-DRY	10/21/98
Diethylphthalate		ND		190	ug/Kg-DRY	10/21/98
4-Chlorophenyl-phenylether		ND		190	ug/Kg-DRY	10/21/98
Fluorene		ND		190	ug/Kg-DRY	10/21/98
4-Nitroaniline		ND		1900	ug/Kg-DRY	10/21/98
4,6-Dinitro-2-methylphenol		ND		1900	ug/Kg-DRY	10/21/98
n-Nitrosodiphenylamine		ND		190	ug/Kg-DRY	10/21/98
4-Bromophenyl-phenylether		ND		190	ug/Kg-DRY	10/21/98
Hexachlorobenzene		ND		190	ug/Kg-DRY	10/21/98
Pentachlorophenol		ND		190	ug/Kg-DRY	10/21/98
Phenanthrene		ND		190	ug/Kg-DRY	10/21/98
Anthracene		41	J	190	ug/Kg-DRY	10/21/98
Di-n-butylphthalate		ND		190	ug/Kg-DRY	10/21/98
Fluoranthene		ND		190	ug/Kg-DRY	10/21/98
Pyrene		ND		190	ug/Kg-DRY	10/21/98
Butylbenzylphthalate		ND		760	ug/Kg-DRY	10/21/98
3,3'-Dichlorobenzidine		ND		190	ug/Kg-DRY	10/21/98
Benzo(a)Anthracene		ND		190	ug/Kg-DRY	10/21/98
Chrysene		130	J	190	ug/Kg-DRY	10/21/98
Bis(2-Ethylhexyl)phthalate		ND		190	ug/Kg-DRY	10/21/98
Di-n-octylphthalate		ND		190	ug/Kg-DRY	10/21/98
Benzo(b)fluoranthene		ND		190	ug/Kg-DRY	10/21/98
Benzo(k)fluoranthene		ND		190	ug/Kg-DRY	10/21/98
Benzo(a)pyrene		ND		190	ug/Kg-DRY	10/21/98
Indeno(1,2,3-cd)pyrene		ND		190	ug/Kg-DRY	10/21/98
Dibenz(a,h)anthracene		ND		190	ug/Kg-DRY	10/21/98
Benzo(g,h,i)perylene		ND		190	ug/Kg-DRY	10/21/98
SURROGATES, % Recovery						
2-Fluorophenol		52.6		Min: 30	Max: 122	
d5-Phenol		56.1		Min: 30	Max: 117	
d5-Nitrobenzene		57.9		Min: 30	Max: 122	
2-Fluorobiphenyl		81.6		Min: 36	Max: 121	
2,4,6-Tribromophenol		49.1		Min: 30	Max: 113	
d14-Terphenyl		94.7		Min: 30	Max: 134	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06B 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.7	ug/Kg-DRY	10/08/98
Chloromethane		ND		5.7	ug/Kg-DRY	10/08/98
Vinyl Chloride		ND		5.7	ug/Kg-DRY	10/08/98
Bromomethane		ND		5.7	ug/Kg-DRY	10/08/98
Chloroethane		ND		5.7	ug/Kg-DRY	10/08/98
Trichlorofluoromethane		ND		5.7	ug/Kg-DRY	10/08/98
1,1-Dichloroethene		ND		2.3	ug/Kg-DRY	10/08/98
Trichlorotrifluoroethane		ND		2.3	ug/Kg-DRY	10/08/98
Methylene Chloride		41	B	2.3	ug/Kg-DRY	10/08/98
trans-1,2-Dichloroethene		ND		2.3	ug/Kg-DRY	10/08/98
1,1-Dichloroethane		ND		2.3	ug/Kg-DRY	10/08/98
2,2-Dichloropropane		ND		2.3	ug/Kg-DRY	10/08/98
cis-1,2-Dichloroethene		ND		2.3	ug/Kg-DRY	10/08/98
Bromochloromethane		ND		2.3	ug/Kg-DRY	10/08/98
Chloroform		ND		2.3	ug/Kg-DRY	10/08/98
1,1,1-Trichloroethane		ND		2.3	ug/Kg-DRY	10/08/98
Carbon Tetrachloride		ND		2.3	ug/Kg-DRY	10/08/98
1,1-Dichloropropene		ND		2.3	ug/Kg-DRY	10/08/98
Benzene		ND		2.3	ug/Kg-DRY	10/08/98
1,2-Dichloroethane		ND		2.3	ug/Kg-DRY	10/08/98
Trichloroethene		ND		2.3	ug/Kg-DRY	10/08/98
1,2-Dichloropropane		ND		2.3	ug/Kg-DRY	10/08/98
Dibromomethane		ND		2.3	ug/Kg-DRY	10/08/98
Bromodichloromethane		ND		2.3	ug/Kg-DRY	10/08/98
cis-1,3-Dichloropropene		ND		2.3	ug/Kg-DRY	10/08/98
Toluene		ND		2.3	ug/Kg-DRY	10/08/98
trans-1,3-Dichloropropene		ND		2.3	ug/Kg-DRY	10/08/98
1,1,2-Trichloroethane		ND		2.3	ug/Kg-DRY	10/08/98
Tetrachloroethene		ND		2.3	ug/Kg-DRY	10/08/98
1,3-Dichloropropane		ND		2.3	ug/Kg-DRY	10/08/98
Dibromochloromethane		ND		2.3	ug/Kg-DRY	10/08/98
1,2-Dibromoethane		ND		2.3	ug/Kg-DRY	10/08/98
Chlorobenzene		ND		2.3	ug/Kg-DRY	10/08/98
Ethylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
1,1,1,2-Tetrachloroethane		ND		2.3	ug/Kg-DRY	10/08/98
m,p-Xylenes		ND		2.3	ug/Kg-DRY	10/08/98
o-Xylene		ND		2.3	ug/Kg-DRY	10/08/98
Styrene		ND		2.3	ug/Kg-DRY	10/08/98
Bromoform		ND		2.3	ug/Kg-DRY	10/08/98
Isopropylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
Bromobenzene		ND		2.3	ug/Kg-DRY	10/08/98
n-Propylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
1,1,2,2-Tetrachlorethane		ND		2.3	ug/Kg-DRY	10/08/98
1,2,3-Trichloropropane		ND		2.3	ug/Kg-DRY	10/08/98
2-Chlorotoluene		ND		2.3	ug/Kg-DRY	10/08/98
1,3,5-Trimethylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
4-Chlorotoluene						

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06B 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
1,2,4-Trimethylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
sec-Butylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
4-Isopropyltoluene		ND		2.3	ug/Kg-DRY	10/08/98
1,3-Dichlorobenzene		ND		2.3	ug/Kg-DRY	10/08/98
1,4-Dichlorobenzene		ND		2.3	ug/Kg-DRY	10/08/98
n-Butylbenzene		ND		2.3	ug/Kg-DRY	10/08/98
1,2-Dichlorobenzene		ND		11	ug/Kg-DRY	10/08/98
1,2-Dibromo-3-chloropropane		ND		2.3	ug/Kg-DRY	10/08/98
1,2,4-Trichlorobenzene		ND		2.3	ug/Kg-DRY	10/08/98
Hexachlorobutadiene		ND		2.3	ug/Kg-DRY	10/08/98
Napthalene		ND		2.3	ug/Kg-DRY	10/08/98
1,2,3-Trichlorobenzene		120		57	ug/Kg-DRY	10/08/98
Acetone		ND		57	ug/Kg-DRY	10/08/98
Acrylonitrile		ND		57	ug/Kg-DRY	10/08/98
2-Butanone		ND		2.3	ug/Kg-DRY	10/08/98
Carbon Disulfide		ND		57	ug/Kg-DRY	10/08/98
trans-1,4-Dichloro-2-butene		ND		57	ug/Kg-DRY	10/08/98
2-Chloroethyl Vinyl Ether		ND		11	ug/Kg-DRY	10/08/98
2-Hexanone		ND		2.3	ug/Kg-DRY	10/08/98
Iodomethane		ND		11	ug/Kg-DRY	10/08/98
4-Methyl-2-pentanone		ND		57	ug/Kg-DRY	10/08/98
Vinyl Acetate		ND		2.3	ug/Kg-DRY	10/08/98
tert-Butyl methyl ether						
SURROGATES, % Recovery						
Dibromofluoromethane		109		Min: 80	Max: 120	
Toluene d-8		100		Min: 81	Max: 117	
p-Bromofluorobenzene		116		Min: 74	Max: 121	

Sample: 06C 48030988056 SW1 Collected: 09/26/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organic Carbon, Total	LECO/D513G	0.23		0.05	WT%	10/08/98

Sample: 07A 48030988057 SD2 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		1.0		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		ND		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 07B 48030988057 SD2 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		1.1	ug/Kg-DRY	10/15/98
alpha-BHC		ND		1.1	ug/Kg-DRY	10/15/98
beta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
delta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		1.1	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		2.2	ug/Kg-DRY	10/15/98
Dieldrin		ND		1.1	ug/Kg-DRY	10/15/98
Endosulfan I		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan II		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		2.2	ug/Kg-DRY	10/15/98
Endrin		ND		2.2	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		2.2	ug/Kg-DRY	10/15/98
Heptachlor		ND		1.1	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		1.1	ug/Kg-DRY	10/15/98
Methoxychlor		ND		11	ug/Kg-DRY	10/15/98
Toxaphene		ND		33	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		33.7	*	Min: 45	Max: 124	
Decachlorobiphenyl		66.3		Min: 45	Max: 124	
Percent Moisture	ASTM D2216	25.0		0.1	WT%	10/05/98

Sample: 07B 48030988057 SD2 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		22000	ug/Kg-DRY	10/16/98
PCB-1232		ND		11000	ug/Kg-DRY	10/16/98
PCB-1242		ND		11000	ug/Kg-DRY	10/16/98
PCB-1248		ND		11000	ug/Kg-DRY	10/16/98
PCB-1254		ND		11000	ug/Kg-DRY	10/16/98
PCB-1260		180000	D	11000	ug/Kg-DRY	10/16/98
PCB-1016		ND		11000	ug/Kg-DRY	10/16/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		0	*	Min: 11	Max: 102	
Decachlorobiphenyl		0	*	Min: 35	Max: 141	
Semivolatile Organics	SW 8270C					
Phenol		ND		440	ug/Kg-DRY	10/21/98
bis(2-Chloroethyl) ether		ND		440	ug/Kg-DRY	10/21/98
2-Chlorophenol		ND		440	ug/Kg-DRY	10/21/98
1,3-Dichlorobenzene		ND		440	ug/Kg-DRY	10/21/98
1,4-Dichlorobenzene		ND		440	ug/Kg-DRY	10/21/98
Benzyl alcohol		ND		890	ug/Kg-DRY	10/21/98
1,2-Dichlorobenzene		ND		440	ug/Kg-DRY	10/21/98
2-Methylphenol		ND		440	ug/Kg-DRY	10/21/98
bis(2-Chloroisopropyl) eth		ND		440	ug/Kg-DRY	10/21/98
4-Methylphenol		ND		440	ug/Kg-DRY	10/21/98
n-Nitroso-di-n-propylamine		ND		440	ug/Kg-DRY	10/21/98
Hexachloroethane		ND		440	ug/Kg-DRY	10/21/98
Nitrobenzene		ND		440	ug/Kg-DRY	10/21/98
Isophorone		ND		440	ug/Kg-DRY	10/21/98
2-Nitrophenol		ND		440	ug/Kg-DRY	10/21/98
2,4-Dimethylphenol		ND		440	ug/Kg-DRY	10/21/98
Benzoic acid		ND		4400	ug/Kg-DRY	10/21/98
bis(2-Chloroethoxy)methane		ND		440	ug/Kg-DRY	10/21/98
2,4-Dichlorophenol		ND		440	ug/Kg-DRY	10/21/98
1,2,4-Trichlorobenzene		ND		440	ug/Kg-DRY	10/21/98
Naphthalene		ND		440	ug/Kg-DRY	10/21/98
4-Chloroaniline		ND		440	ug/Kg-DRY	10/21/98
Hexachlorobutadiene		ND		440	ug/Kg-DRY	10/21/98
4-Chloro-3-methylphenol		ND		440	ug/Kg-DRY	10/21/98
2-Methylnaphthalene		ND		440	ug/Kg-DRY	10/21/98
Hexachlorocyclopentadiene		ND		440	ug/Kg-DRY	10/21/98
2,4,6-Trichlorophenol		ND		440	ug/Kg-DRY	10/21/98
2,4,5-Trichlorophenol		ND		4400	ug/Kg-DRY	10/21/98
2-Chloronaphthalene		ND		440	ug/Kg-DRY	10/21/98
2-Nitroaniline		ND		4400	ug/Kg-DRY	10/21/98
Dimethylphthalate		ND		440	ug/Kg-DRY	10/21/98
Acenaphthylene		ND		440	ug/Kg-DRY	10/21/98
3-Nitroaniline		ND		4400	ug/Kg-DRY	10/21/98
Acenaphthene		ND		440	ug/Kg-DRY	10/21/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 07B 48030988057 SD2 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2,4-Dinitrophenol		ND		4400	ug/Kg-DRY	10/21/98
4-Nitrophenol		ND		4400	ug/Kg-DRY	10/21/98
Dibenzofuran		ND		440	ug/Kg-DRY	10/21/98
2,6-Dinitrotoluene		ND		440	ug/Kg-DRY	10/21/98
2,4-Dinitrotoluene		ND		440	ug/Kg-DRY	10/21/98
Diethylphthalate		ND		440	ug/Kg-DRY	10/21/98
4-Chlorophenyl-phenylether		ND		440	ug/Kg-DRY	10/21/98
Fluorene		ND		440	ug/Kg-DRY	10/21/98
4-Nitroaniline		ND		4400	ug/Kg-DRY	10/21/98
4,6-Dinitro-2-methylphenol		ND		4400	ug/Kg-DRY	10/21/98
n-Nitrosodiphenylamine		ND		440	ug/Kg-DRY	10/21/98
4-Bromophenyl-phenylether		ND		440	ug/Kg-DRY	10/21/98
Hexachlorobenzene		220	DJ	440	ug/Kg-DRY	10/21/98
Pentachlorophenol		ND		440	ug/Kg-DRY	10/21/98
Phenanthrene		ND		440	ug/Kg-DRY	10/21/98
Anthracene		ND		440	ug/Kg-DRY	10/21/98
Di-n-butylphthalate		ND		440	ug/Kg-DRY	10/21/98
Fluoranthene		ND		440	ug/Kg-DRY	10/21/98
Pyrene		ND		440	ug/Kg-DRY	10/21/98
Butylbenzylphthalate		ND		440	ug/Kg-DRY	10/21/98
3,3'-Dichlorobenzidine		ND		1800	ug/Kg-DRY	10/21/98
Benzo(a)Anthracene		ND		440	ug/Kg-DRY	10/21/98
Chrysene		ND		440	ug/Kg-DRY	10/21/98
Bis(2-Ethylhexyl)phthalate		ND		440	ug/Kg-DRY	10/21/98
Di-n-octylphthalate		ND		440	ug/Kg-DRY	10/21/98
Benzo(b)fluoranthene		ND		440	ug/Kg-DRY	10/21/98
Benzo(k)fluoranthene		ND		440	ug/Kg-DRY	10/21/98
Benzo(a)pyrene		ND		440	ug/Kg-DRY	10/21/98
Indeno(1,2,3-cd)pyrene		ND		440	ug/Kg-DRY	10/21/98
Dibenz(a,h)anthracene		ND		440	ug/Kg-DRY	10/21/98
Benzo(g,h,i)perylene		ND		440	ug/Kg-DRY	10/21/98
SURROGATES, % Recovery						
2-Fluorophenol		44.6		Min: 30	Max: 122	
d5-Phenol		50.8		Min: 30	Max: 117	
d5-Nitrobenzene		48.9		Min: 30	Max: 122	
2-Fluorobiphenyl		73.3		Min: 36	Max: 121	
2,4,6-Tribromophenol		49.2		Min: 30	Max: 113	
d14-Terphenyl		84.4		Min: 30	Max: 134	

Sample: 07B 48030988057 SD2 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		6.7	ug/Kg-DRY	10/09/98
Chloromethane		ND		6.7	ug/Kg-DRY	10/09/98
Vinyl Chloride		ND		6.7	ug/Kg-DRY	10/09/98
Bromomethane		ND		6.7	ug/Kg-DRY	10/09/98
Chloroethane		ND		6.7	ug/Kg-DRY	10/09/98
Trichlorofluoromethane		ND		6.7	ug/Kg-DRY	10/09/98
1,1-Dichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
Trichlorotrifluoroethane		ND		2.7	ug/Kg-DRY	10/09/98
Methylene Chloride		11	B	2.7	ug/Kg-DRY	10/09/98
trans-1,2-Dichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
1,1-Dichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
2,2-Dichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
cis-1,2-Dichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
Bromochloromethane		ND		2.7	ug/Kg-DRY	10/09/98
Chloroform		ND		2.7	ug/Kg-DRY	10/09/98
1,1,1-Trichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
Carbon Tetrachloride		ND		2.7	ug/Kg-DRY	10/09/98
1,1-Dichloropropene		ND		2.7	ug/Kg-DRY	10/09/98
Benzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
Trichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
Dibromomethane		ND		2.7	ug/Kg-DRY	10/09/98
Bromodichloromethane		ND		2.7	ug/Kg-DRY	10/09/98
cis-1,3-Dichloropropene		ND		2.7	ug/Kg-DRY	10/09/98
Toluene		ND		2.7	ug/Kg-DRY	10/09/98
trans-1,3-Dichloropropene		ND		2.7	ug/Kg-DRY	10/09/98
1,1,2-Trichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
Tetrachloroethene		ND		2.7	ug/Kg-DRY	10/09/98
1,3-Dichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
Dibromochloromethane		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dibromoethane		ND		2.7	ug/Kg-DRY	10/09/98
Chlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
Ethylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,1,1,2-Tetrachloroethane		ND		2.7	ug/Kg-DRY	10/09/98
m,p-Xylenes		ND		2.7	ug/Kg-DRY	10/09/98
o-Xylene		ND		2.7	ug/Kg-DRY	10/09/98
Styrene		ND		2.7	ug/Kg-DRY	10/09/98
Bromoform		ND		2.7	ug/Kg-DRY	10/09/98
Isopropylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
Bromobenzene		ND		2.7	ug/Kg-DRY	10/09/98
n-Propylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,1,2,2-Tetrachlorethane		ND		2.7	ug/Kg-DRY	10/09/98
1,2,3-Trichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
2-Chlorotoluene		ND		2.7	ug/Kg-DRY	10/09/98
1,3,5-Trimethylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
4-Chlorotoluene		ND		2.7	ug/Kg-DRY	10/09/98

Sample: 07B 48030988057 SD2 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2,4-Trimethylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
sec-Butylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
4-Isopropyltoluene		ND		2.7	ug/Kg-DRY	10/09/98
1,3-Dichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,4-Dichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
n-Butylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dibromo-3-chloropropane		ND		13	ug/Kg-DRY	10/09/98
1,2,4-Trichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
Hexachlorobutadiene		ND		2.7	ug/Kg-DRY	10/09/98
Napthalene		ND		2.7	ug/Kg-DRY	10/09/98
1,2,3-Trichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
Acetone		30	J	67	ug/Kg-DRY	10/09/98
Acrylonitrile		ND		67	ug/Kg-DRY	10/09/98
2-Butanone		ND		67	ug/Kg-DRY	10/09/98
Carbon Disulfide		ND		2.7	ug/Kg-DRY	10/09/98
trans-1,4-Dichloro-2-butene		ND		67	ug/Kg-DRY	10/09/98
2-Chloroethyl Vinyl Ether		ND		67	ug/Kg-DRY	10/09/98
2-Hexanone		ND		13	ug/Kg-DRY	10/09/98
Iodomethane		ND		2.7	ug/Kg-DRY	10/09/98
4-Methyl-2-pentanone		ND		13	ug/Kg-DRY	10/09/98
Vinyl Acetate		ND		67	ug/Kg-DRY	10/09/98
tert-Butyl methyl ether		ND		2.7	ug/Kg-DRY	10/09/98
SURROGATES, % Recovery						
Dibromofluoromethane		104		Min: 80	Max: 120	
Toluene d-8		109		Min: 81	Max: 117	
p-Bromofluorobenzene		121		Min: 74	Max: 121	

Sample: **08A** **48030988058 SW2** Collected: **09/27/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.40		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: **08B** **48030988058 SW2** Collected: **09/27/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.025	ug/L	10/21/98
alpha-BHC		ND		0.025	ug/L	10/21/98
beta-BHC		ND		0.025	ug/L	10/21/98
delta-BHC		ND		0.025	ug/L	10/21/98
gamma-BHC (Lindane)		ND		0.025	ug/L	10/21/98
alpha-Chlordane		ND		0.025	ug/L	10/21/98
gamma-Chlordane		ND		0.025	ug/L	10/21/98
4,4'-DDD		ND		0.050	ug/L	10/21/98
4,4'-DDE		ND		0.050	ug/L	10/21/98
4,4'-DDT		ND		0.050	ug/L	10/21/98
Dieldrin		ND		0.025	ug/L	10/21/98
Endosulfan I		ND		0.050	ug/L	10/21/98
Endosulfan II		ND		0.050	ug/L	10/21/98
Endosulfan Sulfate		ND		0.050	ug/L	10/21/98
Endrin		ND		0.050	ug/L	10/21/98
Endrin Aldehyde		ND		0.050	ug/L	10/21/98
Heptachlor		ND		0.025	ug/L	10/21/98
Heptachlor Epoxide		ND		0.025	ug/L	10/21/98
Methoxychlor		ND		0.25	ug/L	10/21/98
Toxaphene		ND		0.75	ug/L	10/21/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		75.0		Min: 45	Max: 124	
Decachlorobiphenyl		65.0		Min: 45	Max: 124	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 08B 48030988058 SW2 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		1.0	ug/L		10/21/98
PCB-1232		ND		0.50	ug/L		10/21/98
PCB-1242		ND		0.50	ug/L		10/21/98
PCB-1248		ND		0.50	ug/L		10/21/98
PCB-1254		ND		0.50	ug/L		10/21/98
PCB-1260		ND		0.50	ug/L		10/21/98
PCB-1016		ND		0.50	ug/L		10/21/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		75.0		Min:	29	Max:	133
Decachlorobiphenyl		65.0		Min:	26	Max:	137

Sample: 08C 48030988058 SW2 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/09/98
Chloromethane		ND		5.0	ug/L	10/09/98
Vinyl Chloride		ND		2.0	ug/L	10/09/98
Bromomethane		ND		5.0	ug/L	10/09/98
Chloroethane		ND		5.0	ug/L	10/09/98
Trichlorofluoromethane		ND		2.0	ug/L	10/09/98
1,1-Dichloroethene		ND		2.0	ug/L	10/09/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/09/98
Methylene Chloride		4.8	JB	10	ug/L	10/09/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/09/98
1,1-Dichloroethane		ND		2.0	ug/L	10/09/98
2,2-Dichloropropane		ND		2.0	ug/L	10/09/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/09/98
Bromochloromethane		ND		2.0	ug/L	10/09/98
Chloroform		ND		2.0	ug/L	10/09/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/09/98
Carbon Tetrachloride		ND		2.0	ug/L	10/09/98
1,1-Dichloropropene		ND		2.0	ug/L	10/09/98
Benzene		ND		2.0	ug/L	10/09/98
1,2-Dichloroethane		ND		2.0	ug/L	10/09/98
Trichloroethene		ND		2.0	ug/L	10/09/98
1,2-Dichloropropane		ND		2.0	ug/L	10/09/98
Dibromomethane		ND		2.0	ug/L	10/09/98
Bromodichloromethane		ND		2.0	ug/L	10/09/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/09/98
Toluene		ND		2.0	ug/L	10/09/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/09/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/09/98
Tetrachloroethene		ND		2.0	ug/L	10/09/98
1,3-Dichloropropane		ND		2.0	ug/L	10/09/98
Dibromochloromethane		ND		2.0	ug/L	10/09/98
1,2-Dibromoethane						

Sample: 08C 48030988058 SW2 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
Chlorobenzene		ND		2.0	ug/L	10/09/98
Ethylbenzene		ND		2.0	ug/L	10/09/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/09/98
m,p-Xylenes		ND		2.0	ug/L	10/09/98
o-Xylene		ND		2.0	ug/L	10/09/98
Styrene		ND		2.0	ug/L	10/09/98
Bromoform		ND		2.0	ug/L	10/09/98
Isopropylbenzene		ND		2.0	ug/L	10/09/98
Bromobenzene		ND		2.0	ug/L	10/09/98
n-Propylbenzene		ND		2.0	ug/L	10/09/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/09/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/09/98
2-Chlorotoluene		ND		2.0	ug/L	10/09/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/09/98
4-Chlorotoluene		ND		2.0	ug/L	10/09/98
tert-Butylbenzene		ND		2.0	ug/L	10/09/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/09/98
sec-Butylbenzene		ND		2.0	ug/L	10/09/98
4-Isopropyltoluene		ND		2.0	ug/L	10/09/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/09/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/09/98
n-Butylbenzene		ND		2.0	ug/L	10/09/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/09/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/09/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/09/98
Hexachlorobutadiene		ND		2.0	ug/L	10/09/98
Napthalene		ND		2.0	ug/L	10/09/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/09/98
Acetone		ND		50	ug/L	10/09/98
Acrylonitrile		ND		10	ug/L	10/09/98
2-Butanone		ND		50	ug/L	10/09/98
Carbon Disulfide		ND		2.0	ug/L	10/09/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/09/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/09/98
2-Hexanone		ND		20	ug/L	10/09/98
Iodomethane		ND		2.0	ug/L	10/09/98
4-Methyl-2-pentanone		ND		20	ug/L	10/09/98
Vinyl Acetate		ND		5.0	ug/L	10/09/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/09/98
SURROGATES, % Recovery						
Dibromofluoromethane		98.0		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		108		Min: 86	Max: 115	

Sample: 08D 48030988058 SW2 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.6	ug/L	10/07/98
bis(2-Chloroethyl) ether		ND		5.6	ug/L	10/07/98
2-Chlorophenol		ND		5.6	ug/L	10/07/98
1,3-Dichlorobenzene		ND		5.6	ug/L	10/07/98
1,4-Dichlorobenzene		ND		5.6	ug/L	10/07/98
Benzyl alcohol		ND		11	ug/L	10/07/98
1,2-Dichlorobenzene		ND		5.6	ug/L	10/07/98
2-Methylphenol		ND		5.6	ug/L	10/07/98
bis(2-Chloroisopropyl) ether		ND		5.6	ug/L	10/07/98
4-Methylphenol		ND		5.6	ug/L	10/07/98
n-Nitroso-di-n-propylamine		ND		5.6	ug/L	10/07/98
Hexachloroethane		ND		5.6	ug/L	10/07/98
Nitrobenzene		ND		5.6	ug/L	10/07/98
Isophorone		ND		5.6	ug/L	10/07/98
2-Nitrophenol		ND		5.6	ug/L	10/07/98
2,4-Dimethylphenol		ND		5.6	ug/L	10/07/98
Benzoic acid		ND		56	ug/L	10/07/98
bis(2-Chloroethoxy)methane		ND		5.6	ug/L	10/07/98
2,4-Dichlorophenol		ND		5.6	ug/L	10/07/98
1,2,4-Trichlorobenzene		ND		5.6	ug/L	10/07/98
Naphthalene		ND		5.6	ug/L	10/07/98
4-Chloroaniline		ND		5.6	ug/L	10/07/98
Hexachlorobutadiene		ND		5.6	ug/L	10/07/98
4-Chloro-3-methylphenol		ND		5.6	ug/L	10/07/98
2-Methylnaphthalene		ND		5.6	ug/L	10/07/98
Hexachlorocyclopentadiene		ND		5.6	ug/L	10/07/98
2,4,6-Trichlorophenol		ND		5.6	ug/L	10/07/98
2,4,5-Trichlorophenol		ND		5.6	ug/L	10/07/98
2-Chloronaphthalene		ND		11	ug/L	10/07/98
2-Nitroaniline		ND		56	ug/L	10/07/98
Dimethylphthalate		ND		5.6	ug/L	10/07/98
Acenaphthylene		ND		5.6	ug/L	10/07/98
3-Nitroaniline		ND		56	ug/L	10/07/98
Acenaphthene		ND		5.6	ug/L	10/07/98
2,4-Dinitrophenol		ND		56	ug/L	10/07/98
4-Nitrophenol		ND		56	ug/L	10/07/98
Dibenzofuran		ND		5.6	ug/L	10/07/98
2,6-Dinitrotoluene		ND		5.6	ug/L	10/07/98
2,4-Dinitrotoluene		ND		5.6	ug/L	10/07/98
Diethylphthalate		ND		5.6	ug/L	10/07/98
4-Chlorophenyl-phenylether		ND		5.6	ug/L	10/07/98
Fluorene		ND		5.6	ug/L	10/07/98
4-Nitroaniline		ND		5.6	ug/L	10/07/98
4,6-Dinitro-2-methylphenol		ND		56	ug/L	10/07/98
n-Nitrosodiphenylamine		ND		5.6	ug/L	10/07/98
4-Bromophenyl-phenylether		ND		5.6	ug/L	10/07/98

Sample: **08D 48030988058 SW2** Collected: **09/27/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)					
Hexachlorobenzene		ND		5.6	ug/L		10/07/98
Pentachlorophenol		ND		5.6	ug/L		10/07/98
Phenanthrene		ND		5.6	ug/L		10/07/98
Anthracene		ND		5.6	ug/L		10/07/98
Di-n-butylphthalate		ND		5.6	ug/L		10/07/98
Fluoranthene		ND		5.6	ug/L		10/07/98
Pyrene		ND		5.6	ug/L		10/07/98
Butylbenzylphthalate		ND		5.6	ug/L		10/07/98
3,3'-Dichlorobenzidine		ND		22	ug/L		10/07/98
Benzo(a)Anthracene		ND		5.6	ug/L		10/07/98
Chrysene		ND		5.6	ug/L		10/07/98
Bis(2-Ethylhexyl)phthalate		3.3	JB	5.6	ug/L		10/07/98
Di-n-octylphthalate		ND		5.6	ug/L		10/07/98
Benzo(b)fluoranthene		ND		5.6	ug/L		10/07/98
Benzo(k)fluoranthene		ND		5.6	ug/L		10/07/98
Benzo(a)pyrene		ND		5.6	ug/L		10/07/98
Indeno(1,2,3-cd)pyrene		ND		5.6	ug/L		10/07/98
Dibenz(a,h)anthracene		ND		5.6	ug/L		10/07/98
Benzo(g,h,i)perylene		ND		5.6	ug/L		10/07/98
SURROGATES, % Recovery							
2-Fluorophenol		64.7		Min:	21	Max:	100
d5-Phenol		64.7		Min:	10	Max:	94
d5-Nitrobenzene		86.4		Min:	35	Max:	114
2-Fluorobiphenyl		100		Min:	43	Max:	116
2,4,6-Tribromophenol		70.6		Min:	10	Max:	123
d14-Terphenyl		90.9		Min:	33	Max:	141

Sample: **09A 48030988059 SW1** Collected: **09/27/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.15		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: **09B 48030988059 SW1** Collected: **09/27/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.050	ug/L	10/29/98
alpha-BHC		ND		0.050	ug/L	10/29/98
beta-BHC		ND		0.050	ug/L	10/29/98
delta-BHC		ND		0.050	ug/L	10/29/98
gamma-BHC (Lindane)		ND		0.050	ug/L	10/29/98
alpha-Chlordane		ND		0.050	ug/L	10/29/98
gamma-Chlordane		ND		0.050	ug/L	10/29/98
4,4'-DDD		ND		0.10	ug/L	10/29/98
4,4'-DDE		ND		0.10	ug/L	10/29/98
4,4'-DDT		ND		0.10	ug/L	10/29/98
Dieldrin		ND		0.050	ug/L	10/29/98
Endosulfan I		ND		0.10	ug/L	10/29/98
Endosulfan II		ND		0.10	ug/L	10/29/98
Endosulfan Sulfate		ND		0.10	ug/L	10/29/98
Endrin		ND		0.10	ug/L	10/29/98
Endrin Aldehyde		ND		0.10	ug/L	10/29/98
Heptachlor		ND		0.050	ug/L	10/29/98
Heptachlor Epoxide		ND		0.050	ug/L	10/29/98
Methoxychlor		ND		0.50	ug/L	10/29/98
Toxaphene		18	D	1.5	ug/L	10/29/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		95.0		Min: 45	Max: 124	
Decachlorobiphenyl		80.0		Min: 45	Max: 124	

Sample: 09B 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		1.0	ug/L		10/21/98
PCB-1232		ND		0.50	ug/L		10/21/98
PCB-1242		ND		0.50	ug/L		10/21/98
PCB-1248		ND		0.50	ug/L		10/21/98
PCB-1254		ND		0.50	ug/L		10/21/98
PCB-1260		ND		0.50	ug/L		10/21/98
PCB-1016		ND		0.50	ug/L		10/21/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		60.0		Min:	29	Max:	133
Decachlorobiphenyl		80.0		Min:	26	Max:	137

Sample: 09C 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/09/98
Chloromethane		ND		5.0	ug/L	10/09/98
Vinyl Chloride		ND		2.0	ug/L	10/09/98
Bromomethane		ND		5.0	ug/L	10/09/98
Chloroethane		ND		5.0	ug/L	10/09/98
Trichlorofluoromethane		ND		2.0	ug/L	10/09/98
1,1-Dichloroethene		ND		2.0	ug/L	10/09/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/09/98
Methylene Chloride		5.5	JB	10	ug/L	10/09/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/09/98
1,1-Dichloroethane		ND		2.0	ug/L	10/09/98
2,2-Dichloropropane		ND		2.0	ug/L	10/09/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/09/98
Bromochloromethane		ND		2.0	ug/L	10/09/98
Chloroform		ND		2.0	ug/L	10/09/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/09/98
Carbon Tetrachloride		ND		2.0	ug/L	10/09/98
1,1-Dichloropropene		ND		2.0	ug/L	10/09/98
Benzene		ND		2.0	ug/L	10/09/98
1,2-Dichloroethane		ND		2.0	ug/L	10/09/98
Trichloroethene		ND		2.0	ug/L	10/09/98
1,2-Dichloropropane		ND		2.0	ug/L	10/09/98
Dibromomethane		ND		2.0	ug/L	10/09/98
Bromodichloromethane		ND		2.0	ug/L	10/09/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/09/98
Toluene		0.42	J	2.0	ug/L	10/09/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/09/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/09/98
Tetrachloroethene		ND		2.0	ug/L	10/09/98
1,3-Dichloropropane		ND		2.0	ug/L	10/09/98
Dibromochloromethane		ND		2.0	ug/L	10/09/98
1,2-Dibromoethane		ND		2.0	ug/L	10/09/98

Sample: 09C 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
Chlorobenzene		ND		2.0	ug/L	10/09/98
Ethylbenzene		ND		2.0	ug/L	10/09/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/09/98
m,p-Xylenes		ND		2.0	ug/L	10/09/98
o-Xylene		ND		2.0	ug/L	10/09/98
Styrene		ND		2.0	ug/L	10/09/98
Bromoform		ND		2.0	ug/L	10/09/98
Isopropylbenzene		ND		2.0	ug/L	10/09/98
Bromobenzene		ND		2.0	ug/L	10/09/98
n-Propylbenzene		ND		2.0	ug/L	10/09/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/09/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/09/98
2-Chlorotoluene		ND		2.0	ug/L	10/09/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/09/98
4-Chlorotoluene		ND		2.0	ug/L	10/09/98
tert-Butylbenzene		ND		2.0	ug/L	10/09/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/09/98
sec-Butylbenzene		ND		2.0	ug/L	10/09/98
4-Isopropyltoluene		ND		2.0	ug/L	10/09/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/09/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/09/98
n-Butylbenzene		ND		2.0	ug/L	10/09/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/09/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/09/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/09/98
Hexachlorobutadiene		ND		2.0	ug/L	10/09/98
Napthalene		ND		2.0	ug/L	10/09/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/09/98
Acetone		ND		50	ug/L	10/09/98
Acrylonitrile		ND		10	ug/L	10/09/98
2-Butanone		ND		50	ug/L	10/09/98
Carbon Disulfide		ND		2.0	ug/L	10/09/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/09/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/09/98
2-Hexanone		ND		20	ug/L	10/09/98
Iodomethane		ND		2.0	ug/L	10/09/98
4-Methyl-2-pentanone		ND		20	ug/L	10/09/98
Vinyl Acetate		ND		5.0	ug/L	10/09/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/09/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Sample: 09D 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	10/07/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	10/07/98
2-Chlorophenol		ND		5.0	ug/L	10/07/98
1,3-Dichlorobenzene		ND		5.0	ug/L	10/07/98
1,4-Dichlorobenzene		ND		5.0	ug/L	10/07/98
Benzyl alcohol		ND		10	ug/L	10/07/98
1,2-Dichlorobenzene		ND		5.0	ug/L	10/07/98
2-Methylphenol		ND		5.0	ug/L	10/07/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	10/07/98
4-Methylphenol		ND		5.0	ug/L	10/07/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	10/07/98
Hexachloroethane		ND		5.0	ug/L	10/07/98
Nitrobenzene		ND		5.0	ug/L	10/07/98
Isophorone		ND		5.0	ug/L	10/07/98
2-Nitrophenol		ND		5.0	ug/L	10/07/98
2,4-Dimethylphenol		ND		5.0	ug/L	10/07/98
Benzoic acid		ND		50	ug/L	10/07/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	10/07/98
2,4-Dichlorophenol		ND		5.0	ug/L	10/07/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	10/07/98
Naphthalene		ND		5.0	ug/L	10/07/98
4-Chloroaniline		ND		5.0	ug/L	10/07/98
Hexachlorobutadiene		ND		5.0	ug/L	10/07/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	10/07/98
2-Methylnaphthalene		ND		5.0	ug/L	10/07/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	10/07/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	10/07/98
2,4,5-Trichlorophenol		ND		5.0	ug/L	10/07/98
2-Chloronaphthalene		ND		10	ug/L	10/07/98
2-Nitroaniline		ND		50	ug/L	10/07/98
Dimethylphthalate		ND		5.0	ug/L	10/07/98
Acenaphthylene		ND		5.0	ug/L	10/07/98
3-Nitroaniline		ND		50	ug/L	10/07/98
Acenaphthene		ND		5.0	ug/L	10/07/98
2,4-Dinitrophenol		ND		50	ug/L	10/07/98
4-Nitrophenol		ND		50	ug/L	10/07/98
Dibenzofuran		ND		5.0	ug/L	10/07/98
2,6-Dinitrotoluene		ND		5.0	ug/L	10/07/98
2,4-Dinitrotoluene		ND		5.0	ug/L	10/07/98
Diethylphthalate		ND		5.0	ug/L	10/07/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	10/07/98
Fluorene		ND		5.0	ug/L	10/07/98
4-Nitroaniline		ND		5.0	ug/L	10/07/98
4,6-Dinitro-2-methylphenol		ND		50	ug/L	10/07/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	10/07/98
4-Bromophenyl-phenylether		ND		5.0	ug/L	10/07/98

Sample: 09D 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)					
Hexachlorobenzene		ND		5.0	ug/L		10/07/98
Pentachlorophenol		ND		5.0	ug/L		10/07/98
Phenanthrene		ND		5.0	ug/L		10/07/98
Anthracene		ND		5.0	ug/L		10/07/98
Di-n-butylphthalate		ND		5.0	ug/L		10/07/98
Fluoranthene		ND		5.0	ug/L		10/07/98
Pyrene		ND		5.0	ug/L		10/07/98
Butylbenzylphthalate		9.6		5.0	ug/L		10/07/98
3,3'-Dichlorobenzidine		ND		20	ug/L		10/07/98
Benzo(a)Anthracene		ND		5.0	ug/L		10/07/98
Chrysene		ND		5.0	ug/L		10/07/98
Bis(2-Ethylhexyl)phthalate		1.7	JB	5.0	ug/L		10/07/98
Di-n-octylphthalate		ND		5.0	ug/L		10/07/98
Benzo(b)fluoranthene		ND		5.0	ug/L		10/07/98
Benzo(k)fluoranthene		ND		5.0	ug/L		10/07/98
Benzo(a)pyrene		ND		5.0	ug/L		10/07/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L		10/07/98
Dibenz(a,h)anthracene		ND		5.0	ug/L		10/07/98
Benzo(g,h,i)perylene		ND		5.0	ug/L		10/07/98
SURROGATES, % Recovery							
2-Fluorophenol		52.7		Min:	21	Max:	100
d5-Phenol		46.7		Min:	10	Max:	94
d5-Nitrobenzene		78.0		Min:	35	Max:	114
2-Fluorobiphenyl		90.0		Min:	43	Max:	116
2,4,6-Tribromophenol		60.0		Min:	10	Max:	123
d14-Terphenyl		91.0		Min:	33	Max:	141

Sample: **10A 48030988060 SW1** Collected: **09/27/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		1.0		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		0.095		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: **10B 48030988060 SW1** Collected: **09/27/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.96	ug/Kg-DRY	10/15/98
alpha-BHC		ND		0.96	ug/Kg-DRY	10/15/98
beta-BHC		ND		0.96	ug/Kg-DRY	10/15/98
delta-BHC		ND		0.96	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		0.96	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		0.96	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		0.96	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		1.9	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		1.9	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		1.9	ug/Kg-DRY	10/15/98
Dieldrin		ND		0.96	ug/Kg-DRY	10/15/98
Endosulfan I		ND		1.9	ug/Kg-DRY	10/15/98
Endosulfan II		ND		1.9	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		1.9	ug/Kg-DRY	10/15/98
Endrin		ND		1.9	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		1.9	ug/Kg-DRY	10/15/98
Heptachlor		ND		0.96	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		0.96	ug/Kg-DRY	10/15/98
Methoxychlor		ND		9.6	ug/Kg-DRY	10/15/98
Toxaphene		ND		29	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		48.1		Min: 45	Max: 124	
Decachlorobiphenyl		57.1		Min: 45	Max: 124	
Percent Moisture	ASTM D2216	13.6		0.1	WT%	10/05/98

Sample: 10B 48030988060 SW1 Collected: 09/27/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		39	ug/Kg-DRY	10/18/98
PCB-1232		ND		19	ug/Kg-DRY	10/18/98
PCB-1242		ND		19	ug/Kg-DRY	10/18/98
PCB-1248		ND		19	ug/Kg-DRY	10/18/98
PCB-1254		ND		19	ug/Kg-DRY	10/18/98
PCB-1260		ND		19	ug/Kg-DRY	10/18/98
PCB-1016		ND		19	ug/Kg-DRY	10/18/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		40.3		Min: 11	Max: 102	
Decachlorobiphenyl		53.2		Min: 35	Max: 141	
Semivolatile Organics	SW 8270C					
Phenol		ND		190	ug/Kg-DRY	10/21/98
bis(2-Chloroethyl) ether		ND		190	ug/Kg-DRY	10/21/98
2-Chlorophenol		ND		190	ug/Kg-DRY	10/21/98
1,3-Dichlorobenzene		ND		190	ug/Kg-DRY	10/21/98
1,4-Dichlorobenzene		ND		190	ug/Kg-DRY	10/21/98
Benzyl alcohol		ND		390	ug/Kg-DRY	10/21/98
1,2-Dichlorobenzene		ND		190	ug/Kg-DRY	10/21/98
2-Methylphenol		ND		190	ug/Kg-DRY	10/21/98
bis(2-Chloroisopropyl) eth		ND		190	ug/Kg-DRY	10/21/98
4-Methylphenol		ND		190	ug/Kg-DRY	10/21/98
n-Nitroso-di-n-propylamine		ND		190	ug/Kg-DRY	10/21/98
Hexachloroethane		ND		190	ug/Kg-DRY	10/21/98
Nitrobenzene		ND		190	ug/Kg-DRY	10/21/98
Isophorone		ND		190	ug/Kg-DRY	10/21/98
2-Nitrophenol		ND		190	ug/Kg-DRY	10/21/98
2,4-Dimethylphenol		ND		190	ug/Kg-DRY	10/21/98
Benzoic acid		ND		1900	ug/Kg-DRY	10/21/98
bis(2-Chloroethoxy)methane		ND		190	ug/Kg-DRY	10/21/98
2,4-Dichlorophenol		ND		190	ug/Kg-DRY	10/21/98
1,2,4-Trichlorobenzene		ND		190	ug/Kg-DRY	10/21/98
Naphthalene		ND		190	ug/Kg-DRY	10/21/98
4-Chloroaniline		ND		190	ug/Kg-DRY	10/21/98
Hexachlorobutadiene		ND		190	ug/Kg-DRY	10/21/98
4-Chloro-3-methylphenol		ND		190	ug/Kg-DRY	10/21/98
2-Methylnaphthalene		ND		190	ug/Kg-DRY	10/21/98
Hexachlorocyclopentadiene		ND		190	ug/Kg-DRY	10/21/98
2,4,6-Trichlorophenol		ND		190	ug/Kg-DRY	10/21/98
2,4,5-Trichlorophenol		ND		1900	ug/Kg-DRY	10/21/98
2-Chloronaphthalene		ND		190	ug/Kg-DRY	10/21/98
2-Nitroaniline		ND		1900	ug/Kg-DRY	10/21/98
Dimethylphthalate		ND		190	ug/Kg-DRY	10/21/98
Acenaphthylene		ND		190	ug/Kg-DRY	10/21/98
3-Nitroaniline		ND		1900	ug/Kg-DRY	10/21/98
Acenaphthene		ND		190	ug/Kg-DRY	10/21/98

Sample: **10B 48030988060 SW1** Collected: **09/27/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2,4-Dinitrophenol		ND		1900	ug/Kg-DRY	10/21/98
4-Nitrophenol		ND		1900	ug/Kg-DRY	10/21/98
Dibenzofuran		ND		190	ug/Kg-DRY	10/21/98
2,6-Dinitrotoluene		ND		190	ug/Kg-DRY	10/21/98
2,4-Dinitrotoluene		ND		190	ug/Kg-DRY	10/21/98
Diethylphthalate		ND		190	ug/Kg-DRY	10/21/98
4-Chlorophenyl-phenylether		ND		190	ug/Kg-DRY	10/21/98
Fluorene		ND		190	ug/Kg-DRY	10/21/98
4-Nitroaniline		ND		1900	ug/Kg-DRY	10/21/98
4,6-Dinitro-2-methylphenol		ND		1900	ug/Kg-DRY	10/21/98
n-Nitrosodiphenylamine		ND		190	ug/Kg-DRY	10/21/98
4-Bromophenyl-phenylether		ND		190	ug/Kg-DRY	10/21/98
Hexachlorobenzene		ND		190	ug/Kg-DRY	10/21/98
Pentachlorophenol		ND		190	ug/Kg-DRY	10/21/98
Phenanthrene		ND		190	ug/Kg-DRY	10/21/98
Anthracene		ND		190	ug/Kg-DRY	10/21/98
Di-n-butylphthalate		ND		190	ug/Kg-DRY	10/21/98
Fluoranthene		ND		190	ug/Kg-DRY	10/21/98
Pyrene		ND		190	ug/Kg-DRY	10/21/98
Butylbenzylphthalate		ND		190	ug/Kg-DRY	10/21/98
3,3'-Dichlorobenzidine		ND		770	ug/Kg-DRY	10/21/98
Benzo(a)Anthracene		ND		190	ug/Kg-DRY	10/21/98
Chrysene		ND		190	ug/Kg-DRY	10/21/98
Bis(2-Ethylhexyl)phthalate		ND		190	ug/Kg-DRY	10/21/98
Di-n-octylphthalate		ND		190	ug/Kg-DRY	10/21/98
Benzo(b)fluoranthene		ND		190	ug/Kg-DRY	10/21/98
Benzo(k)fluoranthene		ND		190	ug/Kg-DRY	10/21/98
Benzo(a)pyrene		ND		190	ug/Kg-DRY	10/21/98
Indeno(1,2,3-cd)pyrene		ND		190	ug/Kg-DRY	10/21/98
Dibenz(a,h)anthracene		ND		190	ug/Kg-DRY	10/21/98
Benzo(g,h,i)perylene		ND		190	ug/Kg-DRY	10/21/98
SURROGATES, % Recovery						
2-Fluorophenol		43.1		Min: 30	Max: 122	
d5-Phenol		46.6		Min: 30	Max: 117	
d5-Nitrobenzene		48.7		Min: 30	Max: 122	
2-Fluorobiphenyl		61.5		Min: 36	Max: 121	
2,4,6-Tribromophenol		41.4		Min: 30	Max: 113	
d14-Terphenyl		76.9		Min: 30	Max: 134	

Sample: 10B 48030988060 SW1 Collected: 09/27/98 Matrix: SOIL

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.8	ug/Kg-DRY	10/09/98
Chloromethane		ND		5.8	ug/Kg-DRY	10/09/98
Vinyl Chloride		ND		5.8	ug/Kg-DRY	10/09/98
Bromomethane		ND		5.8	ug/Kg-DRY	10/09/98
Chloroethane		ND		5.8	ug/Kg-DRY	10/09/98
Trichlorofluoromethane		ND		5.8	ug/Kg-DRY	10/09/98
1,1-Dichloroethene		ND		2.3	ug/Kg-DRY	10/09/98
Trichlorotrifluoroethane		ND		2.3	ug/Kg-DRY	10/09/98
Methylene Chloride		11	B	2.3	ug/Kg-DRY	10/09/98
trans-1,2-Dichloroethene		ND		2.3	ug/Kg-DRY	10/09/98
1,1-Dichloroethane		ND		2.3	ug/Kg-DRY	10/09/98
2,2-Dichloropropane		ND		2.3	ug/Kg-DRY	10/09/98
cis-1,2-Dichloroethene		ND		2.3	ug/Kg-DRY	10/09/98
Bromochloromethane		ND		2.3	ug/Kg-DRY	10/09/98
Chloroform		ND		2.3	ug/Kg-DRY	10/09/98
1,1,1-Trichloroethane		ND		2.3	ug/Kg-DRY	10/09/98
Carbon Tetrachloride		ND		2.3	ug/Kg-DRY	10/09/98
1,1-Dichloropropene		ND		2.3	ug/Kg-DRY	10/09/98
Benzene		ND		2.3	ug/Kg-DRY	10/09/98
1,2-Dichloroethane		ND		2.3	ug/Kg-DRY	10/09/98
Trichloroethene		ND		2.3	ug/Kg-DRY	10/09/98
1,2-Dichloropropane		ND		2.3	ug/Kg-DRY	10/09/98
Dibromomethane		ND		2.3	ug/Kg-DRY	10/09/98
Bromodichloromethane		ND		2.3	ug/Kg-DRY	10/09/98
cis-1,3-Dichloropropene		ND		2.3	ug/Kg-DRY	10/09/98
Toluene		ND		2.3	ug/Kg-DRY	10/09/98
trans-1,3-Dichloropropene		ND		2.3	ug/Kg-DRY	10/09/98
1,1,2-Trichloroethane		ND		2.3	ug/Kg-DRY	10/09/98
Tetrachloroethene		ND		2.3	ug/Kg-DRY	10/09/98
1,3-Dichloropropane		ND		2.3	ug/Kg-DRY	10/09/98
Dibromochloromethane		ND		2.3	ug/Kg-DRY	10/09/98
1,2-Dibromoethane		ND		2.3	ug/Kg-DRY	10/09/98
Chlorobenzene		ND		2.3	ug/Kg-DRY	10/09/98
Ethylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
1,1,1,2-Tetrachloroethane		ND		2.3	ug/Kg-DRY	10/09/98
m,p-Xylenes		ND		2.3	ug/Kg-DRY	10/09/98
o-Xylene		ND		2.3	ug/Kg-DRY	10/09/98
Styrene		ND		2.3	ug/Kg-DRY	10/09/98
Bromoform		ND		2.3	ug/Kg-DRY	10/09/98
Isopropylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
Bromobenzene		ND		2.3	ug/Kg-DRY	10/09/98
n-Propylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
1,1,2,2-Tetrachlorethane		ND		2.3	ug/Kg-DRY	10/09/98
1,2,3-Trichloropropane		ND		2.3	ug/Kg-DRY	10/09/98
2-Chlorotoluene		ND		2.3	ug/Kg-DRY	10/09/98
1,3,5-Trimethylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
4-Chlorotoluene		ND		2.3	ug/Kg-DRY	10/09/98

Sample: **10B 48030988060 SW1** Collected: **09/27/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
1,2,4-Trimethylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
sec-Butylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
4-Isopropyltoluene		ND		2.3	ug/Kg-DRY	10/09/98
1,3-Dichlorobenzene		ND		2.3	ug/Kg-DRY	10/09/98
1,4-Dichlorobenzene		ND		2.3	ug/Kg-DRY	10/09/98
n-Butylbenzene		ND		2.3	ug/Kg-DRY	10/09/98
1,2-Dichlorobenzene		ND		2.3	ug/Kg-DRY	10/09/98
1,2-Dibromo-3-chloropropane		ND		12	ug/Kg-DRY	10/09/98
1,2,4-Trichlorobenzene		ND		2.3	ug/Kg-DRY	10/09/98
Hexachlorobutadiene		ND		2.3	ug/Kg-DRY	10/09/98
Napthalene		ND		2.3	ug/Kg-DRY	10/09/98
1,2,3-Trichlorobenzene		ND		2.3	ug/Kg-DRY	10/09/98
Acetone		24	J	58	ug/Kg-DRY	10/09/98
Acrylonitrile		ND		58	ug/Kg-DRY	10/09/98
2-Butanone		ND		58	ug/Kg-DRY	10/09/98
Carbon Disulfide		ND		2.3	ug/Kg-DRY	10/09/98
trans-1,4-Dichloro-2-butene		ND		58	ug/Kg-DRY	10/09/98
2-Chloroethyl Vinyl Ether		ND		58	ug/Kg-DRY	10/09/98
2-Hexanone		ND		12	ug/Kg-DRY	10/09/98
Iodomethane		ND		2.3	ug/Kg-DRY	10/09/98
4-Methyl-2-pentanone		ND		12	ug/Kg-DRY	10/09/98
Vinyl Acetate		ND		58	ug/Kg-DRY	10/09/98
tert-Butyl methyl ether		ND		2.3	ug/Kg-DRY	10/09/98
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		105		Min: 81	Max: 117	
p-Bromofluorobenzene		112		Min: 74	Max: 121	

Sample: **10C 48030988060 SW1** Collected: **09/27/98** Matrix: **SOIL**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organic Carbon, Total	LECO/D513G	0.14		0.05	WT%	10/08/98

Sample: **11A 48030988061 SD1** Collected: **09/27/98** Matrix: **SEDIMENT**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/09/98
Barium		1.0		0.020	mg/L	10/09/98
Cadmium		ND		0.0050	mg/L	10/09/98
Chromium		ND		0.010	mg/L	10/09/98
Lead		1.2		0.050	mg/L	10/09/98
Selenium		ND		0.10	mg/L	10/09/98
Silver		ND		0.010	mg/L	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: **11B 48030988061 SD1** Collected: **09/27/98** Matrix: **SEDIMENT**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		1.1	ug/Kg-DRY	10/15/98
alpha-BHC		ND		1.1	ug/Kg-DRY	10/15/98
beta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
delta-BHC		ND		1.1	ug/Kg-DRY	10/15/98
gamma-BHC (Lindane)		ND		1.1	ug/Kg-DRY	10/15/98
alpha-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
gamma-Chlordane		ND		1.1	ug/Kg-DRY	10/15/98
4,4'-DDD		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDE		ND		2.2	ug/Kg-DRY	10/15/98
4,4'-DDT		ND		2.2	ug/Kg-DRY	10/15/98
Dieldrin		ND		1.1	ug/Kg-DRY	10/15/98
Endosulfan I		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan II		ND		2.2	ug/Kg-DRY	10/15/98
Endosulfan Sulfate		ND		2.2	ug/Kg-DRY	10/15/98
Endrin		ND		2.2	ug/Kg-DRY	10/15/98
Endrin Aldehyde		ND		2.2	ug/Kg-DRY	10/15/98
Heptachlor		ND		1.1	ug/Kg-DRY	10/15/98
Heptachlor Epoxide		ND		1.1	ug/Kg-DRY	10/15/98
Methoxychlor		ND		11	ug/Kg-DRY	10/15/98
Toxaphene		ND		33	ug/Kg-DRY	10/15/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		45.2		Min: 45	Max: 124	
Decachlorobiphenyl		78.8		Min: 45	Max: 124	
Percent Moisture	ASTM D2216	25.2		0.1	WT%	10/05/98

Sample: **11B 48030988061 SD1** Collected: **09/27/98** Matrix: **SEDIMENT**

Test Description	Method	Result	Q	Limit	Units		Analyzed
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		45	ug/Kg-DRY		10/18/98
PCB-1232		ND		22	ug/Kg-DRY		10/18/98
PCB-1242		ND		22	ug/Kg-DRY		10/18/98
PCB-1248		ND		22	ug/Kg-DRY		10/18/98
PCB-1254		ND		22	ug/Kg-DRY		10/18/98
PCB-1260		ND		22	ug/Kg-DRY		10/18/98
PCB-1016		ND		22	ug/Kg-DRY		10/18/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		41.6		Min:	11	Max:	102
Decachlorobiphenyl		62.9		Min:	35	Max:	141
Semivolatile Organics	SW 8270C						
Phenol		ND		220	ug/Kg-DRY		10/21/98
bis(2-Chloroethyl) ether		ND		220	ug/Kg-DRY		10/21/98
2-Chlorophenol		ND		220	ug/Kg-DRY		10/21/98
1,3-Dichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
1,4-Dichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
Benzyl alcohol		ND		440	ug/Kg-DRY		10/21/98
1,2-Dichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
2-Methylphenol		ND		220	ug/Kg-DRY		10/21/98
bis(2-Chloroisopropyl) eth		ND		220	ug/Kg-DRY		10/21/98
4-Methylphenol		ND		220	ug/Kg-DRY		10/21/98
n-Nitroso-di-n-propylamine		ND		220	ug/Kg-DRY		10/21/98
Hexachloroethane		ND		220	ug/Kg-DRY		10/21/98
Nitrobenzene		ND		220	ug/Kg-DRY		10/21/98
Isophorone		ND		220	ug/Kg-DRY		10/21/98
2-Nitrophenol		ND		220	ug/Kg-DRY		10/21/98
2,4-Dimethylphenol		ND		220	ug/Kg-DRY		10/21/98
Benzoic acid		ND		2200	ug/Kg-DRY		10/21/98
bis(2-Chloroethoxy)methane		ND		220	ug/Kg-DRY		10/21/98
2,4-Dichlorophenol		ND		220	ug/Kg-DRY		10/21/98
1,2,4-Trichlorobenzene		ND		220	ug/Kg-DRY		10/21/98
Naphthalene		ND		220	ug/Kg-DRY		10/21/98
4-Chloroaniline		ND		220	ug/Kg-DRY		10/21/98
Hexachlorobutadiene		ND		220	ug/Kg-DRY		10/21/98
4-Chloro-3-methylphenol		ND		220	ug/Kg-DRY		10/21/98
2-Methylnaphthalene		ND		220	ug/Kg-DRY		10/21/98
Hexachlorocyclopentadiene		ND		220	ug/Kg-DRY		10/21/98
2,4,6-Trichlorophenol		ND		220	ug/Kg-DRY		10/21/98
2,4,5-Trichlorophenol		ND		2200	ug/Kg-DRY		10/21/98
2-Chloronaphthalene		ND		220	ug/Kg-DRY		10/21/98
2-Nitroaniline		ND		2200	ug/Kg-DRY		10/21/98
Dimethylphthalate		ND		220	ug/Kg-DRY		10/21/98
Acenaphthylene		ND		220	ug/Kg-DRY		10/21/98
3-Nitroaniline		ND		2200	ug/Kg-DRY		10/21/98
Acenaphthene		ND		220	ug/Kg-DRY		10/21/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: **11B 48030988061 SD1** Collected: **09/27/98** Matrix: **SEDIMENT**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
2,4-Dinitrophenol		ND		2200	ug/Kg-DRY	10/21/98
4-Nitrophenol		ND		2200	ug/Kg-DRY	10/21/98
Dibenzofuran		ND		220	ug/Kg-DRY	10/21/98
2,6-Dinitrotoluene		ND		220	ug/Kg-DRY	10/21/98
2,4-Dinitrotoluene		ND		220	ug/Kg-DRY	10/21/98
Diethylphthalate		ND		220	ug/Kg-DRY	10/21/98
4-Chlorophenyl-phenylether		ND		220	ug/Kg-DRY	10/21/98
Fluorene		ND		220	ug/Kg-DRY	10/21/98
4-Nitroaniline		ND		2200	ug/Kg-DRY	10/21/98
4,6-Dinitro-2-methylphenol		ND		2200	ug/Kg-DRY	10/21/98
n-Nitrosodiphenylamine		ND		220	ug/Kg-DRY	10/21/98
4-Bromophenyl-phenylether		ND		220	ug/Kg-DRY	10/21/98
Hexachlorobenzene		ND		220	ug/Kg-DRY	10/21/98
Pentachlorophenol		ND		220	ug/Kg-DRY	10/21/98
Phenanthrene		ND		220	ug/Kg-DRY	10/21/98
Anthracene		ND		220	ug/Kg-DRY	10/21/98
Di-n-butylphthalate		ND		220	ug/Kg-DRY	10/21/98
Fluoranthene		ND		220	ug/Kg-DRY	10/21/98
Pyrene		ND		220	ug/Kg-DRY	10/21/98
Butylbenzylphthalate		ND		220	ug/Kg-DRY	10/21/98
3,3'-Dichlorobenzidine		ND		890	ug/Kg-DRY	10/21/98
Benzo(a)Anthracene		ND		220	ug/Kg-DRY	10/21/98
Chrysene		ND		220	ug/Kg-DRY	10/21/98
Bis(2-Ethylhexyl)phthalate		ND		220	ug/Kg-DRY	10/21/98
Di-n-octylphthalate		ND		220	ug/Kg-DRY	10/21/98
Benzo(b)fluoranthene		ND		220	ug/Kg-DRY	10/21/98
Benzo(k)fluoranthene		ND		220	ug/Kg-DRY	10/21/98
Benzo(a)pyrene		ND		220	ug/Kg-DRY	10/21/98
Indeno(1,2,3-cd)pyrene		ND		220	ug/Kg-DRY	10/21/98
Dibenz(a,h)anthracene		ND		220	ug/Kg-DRY	10/21/98
Benzo(g,h,i)perylene		ND		220	ug/Kg-DRY	10/21/98
SURROGATES, % Recovery						
2-Fluorophenol		40.3		Min: 30	Max: 122	
d5-Phenol		43.3		Min: 30	Max: 117	
d5-Nitrobenzene		45.5		Min: 30	Max: 122	
2-Fluorobiphenyl		56.8		Min: 36	Max: 121	
2,4,6-Tribromophenol		41.8		Min: 30	Max: 113	
d14-Terphenyl		65.9		Min: 30	Max: 134	

Sample: **11B 48030988061 SD1** Collected: **09/27/98** Matrix: **SEDIMENT**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		6.7	ug/Kg-DRY	10/09/98
Chloromethane		ND		6.7	ug/Kg-DRY	10/09/98
Vinyl Chloride		ND		6.7	ug/Kg-DRY	10/09/98
Bromomethane		ND		6.7	ug/Kg-DRY	10/09/98
Chloroethane		ND		6.7	ug/Kg-DRY	10/09/98
Trichlorofluoromethane		ND		6.7	ug/Kg-DRY	10/09/98
1,1-Dichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
Trichlorotrifluoroethane		ND		2.7	ug/Kg-DRY	10/09/98
Methylene Chloride		15	B	2.7	ug/Kg-DRY	10/09/98
trans-1,2-Dichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
1,1-Dichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
2,2-Dichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
cis-1,2-Dichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
Bromochloromethane		ND		2.7	ug/Kg-DRY	10/09/98
Chloroform		ND		2.7	ug/Kg-DRY	10/09/98
1,1,1-Trichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
Carbon Tetrachloride		ND		2.7	ug/Kg-DRY	10/09/98
1,1-Dichloropropene		ND		2.7	ug/Kg-DRY	10/09/98
Benzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
Trichloroethene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
Dibromomethane		ND		2.7	ug/Kg-DRY	10/09/98
Bromodichloromethane		ND		2.7	ug/Kg-DRY	10/09/98
cis-1,3-Dichloropropene		ND		2.7	ug/Kg-DRY	10/09/98
Toluene		ND		2.7	ug/Kg-DRY	10/09/98
trans-1,3-Dichloropropene		ND		2.7	ug/Kg-DRY	10/09/98
1,1,2-Trichloroethane		ND		2.7	ug/Kg-DRY	10/09/98
Tetrachloroethene		ND		2.7	ug/Kg-DRY	10/09/98
1,3-Dichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
Dibromochloromethane		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dibromoethane		ND		2.7	ug/Kg-DRY	10/09/98
Chlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
Ethylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,1,1,2-Tetrachloroethane		ND		2.7	ug/Kg-DRY	10/09/98
m,p-Xylenes		ND		2.7	ug/Kg-DRY	10/09/98
o-Xylene		ND		2.7	ug/Kg-DRY	10/09/98
Styrene		ND		2.7	ug/Kg-DRY	10/09/98
Bromoform		ND		2.7	ug/Kg-DRY	10/09/98
Isopropylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
Bromobenzene		ND		2.7	ug/Kg-DRY	10/09/98
n-Propylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,1,2,2-Tetrachlorethane		ND		2.7	ug/Kg-DRY	10/09/98
1,2,3-Trichloropropane		ND		2.7	ug/Kg-DRY	10/09/98
2-Chlorotoluene		ND		2.7	ug/Kg-DRY	10/09/98
1,3,5-Trimethylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
4-Chlorotoluene		ND		2.7	ug/Kg-DRY	10/09/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 11B 48030988061 SD1 Collected: 09/27/98 Matrix: SEDIMENT

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
tert-Butylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2,4-Trimethylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
sec-Butylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
4-Isopropyltoluene		ND		2.7	ug/Kg-DRY	10/09/98
1,3-Dichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,4-Dichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
n-Butylbenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
1,2-Dibromo-3-chloropropane		ND		13	ug/Kg-DRY	10/09/98
1,2,4-Trichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
Hexachlorobutadiene		ND		2.7	ug/Kg-DRY	10/09/98
Napthalene		ND		2.7	ug/Kg-DRY	10/09/98
1,2,3-Trichlorobenzene		ND		2.7	ug/Kg-DRY	10/09/98
Acetone		37	J	67	ug/Kg-DRY	10/09/98
Acrylonitrile		ND		67	ug/Kg-DRY	10/09/98
2-Butanone		ND		67	ug/Kg-DRY	10/09/98
Carbon Disulfide		ND		2.7	ug/Kg-DRY	10/09/98
trans-1,4-Dichloro-2-butene		ND		67	ug/Kg-DRY	10/09/98
2-Chloroethyl Vinyl Ether		ND		67	ug/Kg-DRY	10/09/98
2-Hexanone		ND		13	ug/Kg-DRY	10/09/98
Iodomethane		ND		2.7	ug/Kg-DRY	10/09/98
4-Methyl-2-pentanone		ND		13	ug/Kg-DRY	10/09/98
Vinyl Acetate		ND		67	ug/Kg-DRY	10/09/98
tert-Butyl methyl ether		ND		2.7	ug/Kg-DRY	10/09/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		101		Min: 81	Max: 117	
p-Bromofluorobenzene		112		Min: 74	Max: 121	

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field...
ND = not detected at the reported limit
NA = analyte not applicable (see case narrative/methods for discussion)

Q (qualifier) field...
GENERAL:
* = Recovery or %RPD outside method specifications
H = value is estimated due to analysis run outside EPA holding times
E = reported concentration is above the instrument calibration range
D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences

ORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected in the laboratory method blank
J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)

INORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)
W = post digestion spike did not meet criteria (85-115%)
S = reported value determined by the Method of Standard Additions

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

PCB_8S:	POLYCHLORINATED BIPHENYLS	METHOD: 8082
PCB_8W:	POLYCHLORINATED BIPHENYLS	METHOD: 8082
3520_P:	Continuous Liquid-Liquid Extraction (Pesticides)	METHOD: 3520B
3550_P:	Ultrasonic Extraction - Pesticides	METHOD: 3550B
3520_P:	Continuous Liquid-Liquid Extraction (PCBs)	METHOD: 3520B
PCBPRS:	Ultrasonic Extraction - PCBs	METHOD: 3550A
PST_8S:	ORGANOCHLORINE PESTICIDES	METHOD: 8081A
PST_8W:	ORGANOCHLORINE PESTICIDES	METHOD: 8081A
1311EM:	TCLP EXTRACTION Toxicity Characteristic Leachate Procedure (Metals)	METHOD: 1311
1311HG:	MERCURY, TCLP Extracted Maximum Contaminant Level (mg/L)	METHOD: 1311/7470 0.2
ICPTWE:	Acid Digestion of TCLP Extracts for Total Metals Analysis by Inductively Coupled Plasma (ICP) Spectroscopy according to SW-846.	METHOD: 3010A
1311_M:	METALS (ICP), TCLP Extracted Maximum Contaminant Level (mg/L)	METHOD: 1311/6010
	Arsenic	5.0
	Barium	100
	Cadmium	1.0
	Chromium	5.0
	Lead	5.0
	Selenium	1.0
	Silver	5.0
8260_S:	VOLATILE ORGANIC COMPOUNDS (GC/MS)	METHOD: 8260B
8260_W:	VOLATILE ORGANIC COMPOUNDS (GC/MS)	METHOD: 8260B

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ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

3520_B: Continuous Liquid-Liquid Extraction - BNAs — METHOD: 3520B
The continuous liquid-liquid extraction used with this method (3520) is modified to conform with the EPA-CLP methodology (OLM01.0) in which dual pH extraction has been replaced with one 18 hour extraction at a pH of <2.0.

3550_B: Ultrasonic Extraction - BNAs — METHOD: 3550B

8270_S: SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) — METHOD: 8270

8270_W: SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) — METHOD: 8270

TOC_S: ORGANIC CARBON, Total — METHOD: LECO/D513G
This analysis was subcontracted to:
HUFFMAN Laboratories, Inc.
4630 Indiana Street
Golden, CO 80403
TEL: (303) 278-4455

PMOIST: PERCENT MOISTURE — METHOD: ASTM D2216

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 01A 48030988051 SW3

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/26/98	09/30/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/26/98	09/30/98	10/12/98	10/20/98	10/20/98

Sample: 01B 48030988051 SW3

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/26/98	09/30/98	NA	10/01/98	10/21/98
Polychlorinated Biphenyls	SW 8082	09/26/98	09/30/98	NA	10/01/98	10/21/98

Sample: 01C 48030988051 SW3

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/26/98	09/30/98	NA		10/08/98

Sample: 01D 48030988051 SW3

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/26/98	09/30/98	NA	10/01/98	10/07/98

Sample: 02A 48030988052 SD3

Matrix: SEDIMENT

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/26/98	09/30/98	10/06/98	10/07/98	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	09/26/98	09/30/98	10/06/98	10/20/98	10/20/98

Sample: 02B 48030988052 SD3

Matrix: SEDIMENT

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/26/98	09/30/98	NA	10/05/98	10/15/98
Percent Moisture	ASTM D2216	09/26/98	09/30/98	NA		10/05/98
Polychlorinated Biphenyls	SW 8082	09/26/98	09/30/98	NA	10/05/98	10/15/98
Semivolatile Organics	SW 8270C	09/26/98	09/30/98	NA	10/05/98	10/21/98
Volatiles by GC/MS	SW 8260B	09/26/98	09/30/98	NA		10/09/98

Sample: 03A 48030988053 SW3

Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/26/98	09/30/98	10/06/98	10/07/98	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	09/26/98	09/30/98	10/06/98	10/20/98	10/20/98

Sample: 03B 48030988053 SW3

Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyze
Organochlorine Pesticides	SW 8081A	09/26/98	09/30/98	NA	10/05/98	10/15/9
Percent Moisture	ASTM D2216	09/26/98	09/30/98	NA		10/05/9
Polychlorinated Biphenyls	SW 8082	09/26/98	09/30/98	NA	10/05/98	10/15/9
Semivolatile Organics	SW 8270C	09/26/98	09/30/98	NA	10/05/98	10/15/
Volatiles by GC/MS	SW 8260B	09/26/98	09/30/98	NA		10/09/

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 03C 48030988053 SW3

Analysis	Method
Organic Carbon, Total	LECO/D513G

Matrix: SOIL

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA		10/08/98

Sample: 04A 48030988054 SW1

Analysis	Method
ICP Metals, TCLP Extracted	SW 1311/6010
Mercury, TCLP Extracted	SW 1311/7470

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	10/12/98	10/14/98	10/15/98
09/26/98	09/30/98	10/12/98	10/20/98	10/20/98

Sample: 04B 48030988054 SW1

Analysis	Method
Organochlorine Pesticides	SW 8081A
Polychlorinated Biphenyls	SW 8082

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA	10/01/98	10/21/98
09/26/98	09/30/98	NA	10/01/98	10/21/98

Sample: 04C 48030988054 SW1

Analysis	Method
Volatiles by GC/MS	SW 8260B

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA		10/08/98

Sample: 04D 48030988054 SW1

Analysis	Method
Semivolatile Organics	SW 8270C

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA	10/01/98	10/07/98

Sample: 05A 48030988055 SD1

Analysis	Method
ICP Metals, TCLP Extracted	SW 1311/6010
Mercury, TCLP Extracted	SW 1311/7470

Matrix: SEDIMENT

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	10/06/98	10/07/98	10/09/98
09/26/98	09/30/98	10/06/98	10/20/98	10/20/98

Sample: 05B 48030988055 SD1

Analysis	Method
Organochlorine Pesticides	SW 8081A
Percent Moisture	ASTM D2216
Polychlorinated Biphenyls	SW 8082
Semivolatile Organics	SW 8270C
Volatiles by GC/MS	SW 8260B

Matrix: SEDIMENT

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA	10/05/98	10/15/98
09/26/98	09/30/98	NA		10/05/98
09/26/98	09/30/98	NA	10/05/98	10/15/98
09/26/98	09/30/98	NA	10/05/98	10/21/98
09/26/98	09/30/98	NA		10/08/98

Sample: 06A 48030988056 SW1

Analysis	Method
ICP Metals, TCLP Extracted	SW 1311/6010
Mercury, TCLP Extracted	SW 1311/7470

Matrix: SOIL

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	10/06/98	10/07/98	10/09/98
09/26/98	09/30/98	10/06/98	10/20/98	10/20/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 06B 48030988056 SW1

Analysis	Method
Organochlorine Pesticides	SW 8081A
Percent Moisture	ASTM D2216
Polychlorinated Biphenyls	SW 8082
Semivolatile Organics	SW 8270C
Volatiles by GC/MS	SW 8260B

Matrix: SOIL

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA	10/05/98	10/15/98
09/26/98	09/30/98	NA		10/05/98
09/26/98	09/30/98	NA	10/05/98	10/15/98
09/26/98	09/30/98	NA	10/05/98	10/21/98
09/26/98	09/30/98	NA		10/08/98

Sample: 06C 48030988056 SW1

Analysis	Method
Organic Carbon, Total	LECO/D513G

Matrix: SOIL

Collected	Received	TCLP date	Extracted	Analyzed
09/26/98	09/30/98	NA		10/08/98

Sample: 07A 48030988057 SD2

Analysis	Method
ICP Metals, TCLP Extracted	SW 1311/6010
Mercury, TCLP Extracted	SW 1311/7470

Matrix: SEDIMENT

Collected	Received	TCLP date	Extracted	Analyzed
09/27/98	09/30/98	10/06/98	10/07/98	10/09/98
09/27/98	09/30/98	10/06/98	10/20/98	10/20/98

Sample: 07B 48030988057 SD2

Analysis	Method
Organochlorine Pesticides	SW 8081A
Percent Moisture	ASTM D2216
Polychlorinated Biphenyls	SW 8082
Semivolatile Organics	SW 8270C
Volatiles by GC/MS	SW 8260B

Matrix: SEDIMENT

Collected	Received	TCLP date	Extracted	Analyzed
09/27/98	09/30/98	NA	10/05/98	10/15/98
09/27/98	09/30/98	NA		10/05/98
09/27/98	09/30/98	NA	10/05/98	10/16/98
09/27/98	09/30/98	NA	10/05/98	10/21/98
09/27/98	09/30/98	NA		10/09/98

Sample: 08A 48030988058 SW2

Analysis	Method
ICP Metals, TCLP Extracted	SW 1311/6010
Mercury, TCLP Extracted	SW 1311/7470

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyzed
09/27/98	09/30/98	10/12/98	10/14/98	10/15/98
09/27/98	09/30/98	10/12/98	10/20/98	10/20/98

Sample: 08B 48030988058 SW2

Analysis	Method
Organochlorine Pesticides	SW 8081A
Polychlorinated Biphenyls	SW 8082

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyze
09/27/98	09/30/98	NA	10/01/98	10/21/9
09/27/98	09/30/98	NA	10/01/98	10/21/9

Sample: 08C 48030988058 SW2

Analysis	Method
Volatiles by GC/MS	SW 8260B

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyze
09/27/98	09/30/98	NA		10/09/-

Sample: 08D 48030988058 SW2

Analysis	Method
Semivolatile Organics	SW 8270C

Matrix: WATER

Collected	Received	TCLP date	Extracted	Analyz
09/27/98	09/30/98	NA	10/01/98	10/07/

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
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Sample: 09A 48030988059 SW1

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/27/98	09/30/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/27/98	09/30/98	10/12/98	10/20/98	10/20/98

Sample: 09B 48030988059 SW1

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/27/98	09/30/98	NA	10/01/98	10/29/98
Polychlorinated Biphenyls	SW 8082	09/27/98	09/30/98	NA	10/01/98	10/21/98

Sample: 09C 48030988059 SW1

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/27/98	09/30/98	NA		10/09/98

Sample: 09D 48030988059 SW1

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/27/98	09/30/98	NA	10/01/98	10/07/98

Sample: 10A 48030988060 SW1

Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/27/98	09/30/98	10/06/98	10/07/98	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	09/27/98	09/30/98	10/06/98	10/20/98	10/20/98

Sample: 10B 48030988060 SW1

Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/27/98	09/30/98	NA	10/05/98	10/15/98
Percent Moisture	ASTM D2216	09/27/98	09/30/98	NA		10/05/98
Polychlorinated Biphenyls	SW 8082	09/27/98	09/30/98	NA	10/05/98	10/18/98
Semivolatile Organics	SW 8270C	09/27/98	09/30/98	NA	10/05/98	10/21/98
Volatiles by GC/MS	SW 8260B	09/27/98	09/30/98	NA		10/09/98

Sample: 10C 48030988060 SW1

Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organic Carbon, Total	LECO/D513G	09/27/98	09/30/98	NA		10/08/98

Sample: 11A 48030988061 SD1

Matrix: SEDIMENT

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/27/98	09/30/98	10/06/98	10/07/98	10/09/98
Mercury, TCLP Extracted	SW 1311/7470	09/27/98	09/30/98	10/06/98	10/20/98	10/20/98

Order # 98-09-259
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 11B 48030988061 SD1

Matrix: SEDIMENT

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/27/98	09/30/98	NA	10/05/98	10/15/98
Percent Moisture	ASTM D2216	09/27/98	09/30/98	NA		10/05/98
Polychlorinated Biphenyls	SW 8082	09/27/98	09/30/98	NA	10/05/98	10/18/98
Semivolatile Organics	SW 8270C	09/27/98	09/30/98	NA	10/05/98	10/21/98
Volatiles by GC/MS	SW 8260B	09/27/98	09/30/98	NA		10/09/98

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LGN. 9809259
CSN

Chain of Custody Record / Analysis Request

Company Name: 611 CES/CEVO
Company Address: 21885 2 ST ELMENDORF AFB AK 99506-4420
Telephone: (907) 552-1617
FAX: 4601

Project Name: CAPE RUMANZOV LAND FILL
Report To: CARL HORNIG
Sampler: CARL HORNIG
P.O. Number:

Sample ID	Date Collected	Time Collected	Matrix Soil/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA/HCl	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	DRO by AK103	RRO by AK103	TCLP/RCRA METALS	EPA 8081/8082	8260	8270	PSA SWT	TOC	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
980309-051 SW3	26 Sep	1400	Aq							✓									✓	✓				
052 SD3		1345	Sed																					
053 SW3		1415	Soil																					
054 SW1		1500	Aq																					
055 SD1		1530	Sed																✓	✓				
056 SW1		1600	Soil																					
057 SD2	27 Sep	1045	Sed									X	X											
058 SW2		1110	Aq																					
059 SW1		1045	Aq																✓	✓				
060 SW1		1120	Soil																					
061 SD1		1450	Sed																					
TRIP BLANK																								

COMMENTS

DELIVERABLES
- ☒ Level I
- ☐ ADEC Format
- ☐ ACOE
- ☐ Other
- ☐ EDF - Format _____ specify

TURNAROUND
- ☐ 2 Business Days
- ☐ 5 Business Days
- ☐ 10-15 Business Days
- ☒ Other: 15-21 #Business Days

RELINQUISHED BY SAMPLER	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY.
Signature: Carl A Horning	Signature: Lorraine Andela	Signature: Lorraine Andela	Signature: [illegible]
Printed Name: CARL A HORNIG	Printed Name: Lorraine Andela	Printed Name: Lorraine Andela	Printed Name: [illegible]
Firm: 611 CES/CEVO	Firm: Analytica	Firm: Analytica	Firm: Analytica
Date/Time:	Date/Time: 9/28/98-1630	Date/Time: 9/29/98 0855	Date/Time: 9-30-98 0945

ANALYTICA USE ONLY.
Airbill / Freight #:
Condition of Sample Containers.
Temp Received: A 2.1°C B 4.9°C C °C
# of Coolers: 3
Seals: A B C

OF 1

INSTRUCTIONS FOR COMPLETING CHAIN-OF-CUSTODY RECORD

Record the client name, address, contact, and a phone and fax number where the client contact can be reached in case of questions.

Project ID/Description: Record the name of the project of client/site location, and the project number as assigned by the field team. (example-613215; x,y,z Chemical Co., WA).

P.O.: Record a purchase order number for billing and reference purposes.

Sample Matrix: Use on (1) chain-of-custody record per sample matrix. Circle the matrix which most accurately represents the samples included on the C-O-C, (i.e. water, soil, oil, sludge). For multiphasic samples (e.g., oil and water), or a non1listed matrix, circle "other" and describe the matrix in the space provided.

Date and Time Collected: Record the date and exact time each sample was collected. Use 24 hr. clock.

Client ID: List the complete identifying name/number of each of the samples you send. These ID's must correspond with the identifying labels on the sample containers.

Number of Containers: Indicate the number of containers being shipped for the respective samples to be analyzed.

Comments: The comment section can be used to record the waybill or air bill number if the samples are being sent by a shipping company, any special instructions to the laboratory regarding the processing of the samples or an indication if the samples are suspected to contain high concentrations of any hazardous materials.

Signatures: When releasing custody of these samples, use the "Relinquished By" space to sign your full name, date and time of release. After verifying that all samples indicated are present, the person receiving the samples will sign in the "Received By" space to take custody of the samples.

All other sections of the C-O-C record are for Analytica use, and should be left blank.

COOLER RECEIPT FORM

CLIENT Elmer - ARCO CSN# _____ PROJECT Cape Romanzof ORD# 980925-5

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS/DISCREPANCIES

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 9-30-98 Chain of Custody # _____
by print [illegible] sign [illegible]

1. Did cooler come with a shipping slip air bill, etc. ? _____ (YES) NO
   If YES, enter carrier name & air bill number here: Fedex 812886481 5
2. Were custody seals on outside of cooler? _____ (YES) NO
   How many & where: 2 Front + Side seal date: 9-25-98 seal name: L. Andel
3. Were custody seals unbroken and intact on the date and time of arrival? _____ (YES) NO
4. Did you screen samples for radioactivity using the Geiger Counter? _____ YES (NO)
5. Were custody papers sealed in a plastic bag & taped inside to the lid? _____ (YES) NO
6. Were custody papers filled out properly ink, signed, etc ? _____ (YES) NO
7. Did you sign custody papers in the appropriate place? _____ (YES) NO
8. Was project identifiable from custody paper?, If yes, enter project name at the top of this form ____ (YES) NO
9. If required, was enough ice used? (YES) NO Type of ice: WET (BLUE) Temp 4 °C
10. Have designate person initial here to acknowledge receipt of cooler: [illegible] date: 9-30-98

B. LOG-IN PHASE: Date samples were logged-in: 9-30-98
by print [illegible] sign [illegible]

11. Describe type of packing in cooler: Bubble Wrap
12. Were all bottles sealed in separate plastic bags? _____ YES (NO)
13. Did all bottles arrive unbroken & were labels in good condition? _____ (YES) NO
14. Were all bottle labels complete ID,date,time,signature,preservative,etc. ? _____ (YES) NO
15. Did all bottle labels agree with custody papers? Not all Samples have time
16. Number of samples received 7 Number of bottles received 37
17. Were correct containers used for the tests indicated? _____ (YES) NO
18. Were correct preservatives added to samples? _____ (YES) NO
19. Was a sufficient amount of sample sent for tests indicated? _____ (YES) NO
20. Were bubbles absent in volatile samples? If NO, list by Sample #/ID _____ YES (NO)
21. Was the project manager called and status discussed? If yes, give details on the back of this form ____ YES (NO)
22. Who was called? _____ By whom? _____ date _____

ANALYTICA
ALASKA INC.
SOUTHEAST DIVISION

5438 Shuane Drive, Juneau, AK 99801 • (907) 780-6668 • FAX (907) 780-6670

U.S.A.F. 611th/CEVO
21885 2nd Street
Elmendorf AFB, AK 99506-4420

Attn: Carl Hornig

Order #: J8-09-141
Date: 11/25/98 12:15
Work ID: Cape Romanzov Landfill
Date Received: 09/30/98
Date Completed: 11/25/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988053 SW3
02	48030988056 SW1
03	48030988060 SW1

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Respectfully Submitted,

David Wetzel
Project Manager

ANALYTICA ALASKA, S.E
5438 Shaune Drive
Juneau, AK 99801
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REPORT OF SIEVE ANALYSIS

CLIENT: USAF 611 CES/CEVO
PROJECT: Cape Romanzof Landfill
CONTACT: Carl Hornig
REPORT DATE: 25-Nov-98
LAB NUMBER: J809141-01A

DATE SAMPLED: 26-Sep-98
SAMPLED BY: Carl Hornig
SAMPLED FROM: 48030988053 SW3
MATERIAL: Soil
DATE REC'D: 30-Sep-98

Technician: Aaron Wanstall
Date Tested:
Checked By: David Wetzel

Total Dry Weight: 0.4351 kg
Dry Weight Fine: 110.0 g

SIEVE SIZE	CUMULATIVE DRY WEIGHT	UNITS	%RETAINED	X% #10 MINUS	% PASSING	SPECIFICATION
4 "		kg	0%	N/A	100%	
3 "		kg	0%	N/A	100%	
2"		kg	0%	N/A	100%	
1 1/2 "		kg	0.0%	N/A	100%	
1 "		kg	0.0%	N/A	100%	
3/4 "	0.0377	kg	8.7%	N/A	91.3%	
1/2 "	0.0504	kg	11.6%	N/A	88.4%	
3/8 "	0.0637	kg	14.6%	N/A	85.4%	
#4	0.1044	kg	24.0%	N/A	76.0%	
#8	0.1420	kg	32.6%	N/A	67.4%	
#10	0.1522	kg	35.0%	N/A	65.0%	
#20	27.1	g	24.6%	75.4%	49.0%	
#40	51.1	g	46.5%	53.5%	34.8%	
#60	66.6	g	60.5%	39.5%	25.7%	
#80	72.9	g	66.3%	33.7%	21.9%	
#100	76.4	g	69.5%	30.5%	19.9%	
#200	86.4	g	78.5%	21.5%	13.9%	
Pan	110.0	g				

Sample analyzed according to ASTM D-422, "Particle Size Analysis of Soils".

Reviewed By

grav. constant (cm/s2) 981

PARTICLE SIZE ANALYSIS WORKSHEET
ASTM D422

Sample #	time (min)	R (gm/l)	RL (gm/l)	Concen. in Suspension (gm/l)	Oven Dry Weight (gm)	P (%)	Mean Particle Diameter (um)	Comments
J809141-01A	0.67	21.0	5	16	110.0	14.5	66.3	
	1	19.0	5	14	110.0	12.7	55.0	
	3	13.5	5	8.5	110.0	7.7	32.8	
	10	10.5	5	5.5	110.0	5.0	18.3	
	30	8.5	5	3.5	110.0	3.2	10.7	
	60	8.0	5	3	110.0	2.7	7.6	
	120	7.0	5	2	110.0	1.8	5.4	
	1440	7.0	5	2	110.0	1.8	1.6	

ANALYTICA ALASKA, S.E
5438 Shaune Drive
Juneau, AK 99801
(907)780-6668 Tel.
(907)780-6670 Fax

REPORT OF SIEVE ANALYSIS

CLIENT: USAF 611 CES/CEVO
PROJECT: Cape Romanzof Landfill
CONTACT: Carl Hornig
REPORT DATE: 25-Nov-98
LAB NUMBER: J809141-02A

DATE SAMPLED: 26-Sep-98
SAMPLED BY: Carl Hornig
SAMPLED FROM: 48030988056 SW1
MATERIAL: Soil
DATE REC'D: 30-Sep-98

Technician: Aaron Wanstall
Date Tested:
Checked By: David Wetzel

Total Dry Weight: 0.2519 kg
Dry Weight Fine: 50.0 g

SIEVE SIZE	CUMULATIVE DRY WEIGHT	UNITS	%RETAINED	X% #10 MINUS	% PASSING	SPECIFICATION
4 "		kg	0%	N/A	100%	
3 "		kg	0%	N/A	100%	
2"		kg	0%	N/A	100%	
1 1/2 "		kg	0.0%	N/A	100%	
1 "		kg	0.0%	N/A	100%	
3/4 "		kg	0.0%	N/A	100.0%	
1/2 "	0.0054	kg	2.1%	N/A	97.9%	
3/8 "	0.0289	kg	11.5%	N/A	88.5%	
#4	0.0575	kg	22.8%	N/A	77.2%	
#8	0.0885	kg	35.1%	N/A	64.9%	
#10	0.0971	kg	38.5%	N/A	61.5%	
#20	12.9	g	25.8%	74.2%	45.6%	
#40	22.3	g	44.6%	55.4%	34.0%	
#60	28.0	g	56.0%	44.0%	27.0%	
#80	30.3	g	60.6%	39.4%	24.2%	
#100	31.5	g	63.0%	37.0%	22.7%	
#200	35.0	g	70.0%	30.0%	18.4%	
Pan	50.0	g				

Sample analyzed according to ASTM D-422, "Particle Size Analysis of Soils".

Reviewed By

grav. constant (cm/s2) 981

PARTICLE SIZE ANALYSIS WORKSHEET
ASTM D422

Sample #	time (min)	R (gm/l)	RL (gm/l)	Concen. in Suspension (gm/l)	Oven Dry Weight (gm)	P (%)	Mean Particle Diameter (um)	Comments
J809141-02A	0.67	17.0	5	12	50.0	24.0	68.0	
	1	16.0	5	11	50.0	22.0	56.0	
	3	13.0	5	8	50.0	16.0	32.9	
	10	9.5	5	4.5	50.0	9.0	18.4	
	30	8.0	5	3	50.0	6.0	10.7	
	60	7.0	5	2	50.0	4.0	7.6	
	120	6.0	5	1	50.0	2.0	5.4	
	1440	5.0	5	0	50.0	0.0	1.6	

ANALYTICA ALASKA, S.E
5438 Shaune Drive
Juneau, AK 99801
(907)780-6668 Tel.
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REPORT OF SIEVE ANALYSIS

CLIENT: USAF 611 CES/CEVO
PROJECT: Cape Romanzof Landfill
CONTACT: Carl Hornig
REPORT DATE: 25-Nov-98
LAB NUMBER: J809141-03A

DATE SAMPLED: 27-Sep-98
SAMPLED BY: Carl Hornig
SAMPLED FROM: 48030988060 SW1
MATERIAL: Soil
DATE REC'D: 30-Sep-98

Technician: Aaron Wanstall
Date Tested:
Checked By: David Wetzel

Total Dry Weight: 0.2693 kg
Dry Weight Fine: 50.0 g

SIEVE SIZE	CUMULATIVE DRY WEIGHT	UNITS	%RETAINED	X% #10 MINUS	% PASSING	SPECIFICATION
4 "		kg	0%	N/A	100%	
3 "		kg	0%	N/A	100%	
2"		kg	0%	N/A	100%	
1 1/2 "		kg	0.0%	N/A	100%	
1 "		kg	0.0%	N/A	100%	
3/4 "		kg	0.0%	N/A	100.0%	
1/2 "	0.0281	kg	10.4%	N/A	89.6%	
3/8 "	0.0323	kg	12.0%	N/A	88.0%	
#4	0.0695	kg	25.8%	N/A	74.2%	
#8	0.1116	kg	41.4%	N/A	58.6%	
#10	0.1220	kg	45.3%	N/A	54.7%	
#20	19.2	g	38.4%	61.6%	33.7%	
#40	29.7	g	59.4%	40.6%	22.2%	
#60	34.9	g	69.8%	30.2%	16.5%	
#80	36.9	g	73.8%	26.2%	14.3%	
#100	38.0	g	76.0%	24.0%	13.1%	
#200	40.5	g	81.0%	19.0%	10.4%	
Pan	50.0	g				

Sample analyzed according to ASTM D-422, "Particle Size Analysis of Soils".

Reviewed By

grav. constant (cm/s2) 981

PARTICLE SIZE ANALYSIS WORKSHEET
ASTM D422

Sample #	time (min)	R (gm/l)	RL (gm/l)	Concen. in Suspension (gm/l)	Oven Dry Weight (gm)	P (%)	Mean Particle Diameter (um)	Comments
J809141-03A	0.67	11.5	5	6.5	50.0	13.0	70.2	
	1	11.0	5	6	50.0	12.0	57.6	
	3	10.0	5	5	50.0	10.0	33.5	
	10	8.5	5	3.5	50.0	7.0	18.5	
	30	6.5	5	1.5	50.0	3.0	10.8	
	60	6.0	5	1	50.0	2.0	7.6	
	120	6.0	5	1	50.0	2.0	5.4	
	1440	6.0	5	1	50.0	2.0	1.6	

Order # J8-09-141
ANALYTICA AK SE

U.S.A.F. 611th/CEVO
DATES REPORT

Sample: 01A 48030988053 SW3 Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Grain Size	ASTM D422	09/26/98	09/30/98	NA		

Sample: 02A 48030988056 SW1 Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Grain Size	ASTM D422	09/26/98	09/30/98	NA		

Sample: 03A 48030988060 SW1 Matrix: SOIL

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Grain Size	ASTM D422	09/27/98	09/30/98	NA		

ANALYTICA
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LGN: J8·09·141
CSN:

Chain of Custody Record / Analysis Request

186
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Company Name: 611 CES/CEVO
Company Address: 21885 2 OT ELMENDORF AFB AK 99506-4420
Telephone: (907) 552-1617
FAX: 4601

Project Name: CAPE ROMANZOV LAND FILL
Report To: CARL HORNIG
Sampler: CARL HORNIG
P.O. Number:

Sample ID		Date Collected	Time Collected	Matrix Soil/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA Vial	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	TCLP/RCRA METALS	EPA 8081/8082	8260	8270	PSA	PCB to 50 ppm	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880051	SW3	26 Sep	1400	Aq							✓		↓	↓	✓	✓	✓	✓	✓	✓				
052	SD3		1345	SED																				
053	SW3		1415	SOIL									X	X										
054	SW1		1500	Aq																				
055	SD1		1530	SED															✓	✓				
056	SW1		1600	SOIL																				
057	SD2	27 Sep	1045	SED									X	X										
058	SW2		1110	Aq									X	X										
059	SW1		1045	Aq															✓	✓				
060	SW1		1120	SOIL																				
061	SD1		1450	SED																				
TRIP BLANK																								

COMMENTS: ✓ to SW1

DELIVERABLES
- [x] Level I
- [ ] ADEC Format
- [ ] ACOE
- [ ] Other
- [ ] EDF - Format. specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [ ] 10-15 Business Days
- [x] Other 15-21 #Business Days

RELINQUISHED BY SAMPLER:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Carl A Hornig	Signature: Lorraine Andela	Signature: Lorraine Andela	Signature: J. Frost
Printed Name: CARL A HORNIG	Printed Name: Lorraine Andela	Printed Name: Lorraine Andela	Printed Name: J. Frost
Firm: 611 CES/CEVO	Firm: Analytica AK	Firm: Analytica AK	Firm: Analytica AK-SE.
Date:	Date/Time: 9/28/98 1630	Date/Time: 9/29 1515	Date/Time: 9/30/98 09:00

ANALYTICA USE ONLY:
Airbill / Freight #:
Condition of Sample Containers:
Temp Received: ABC °C
# of Coolers: 3
Seals: A B C
2.1°C 4.9°C °C

OF 1

ANALYTICA
ALASKA INC

811 W. 8th Avenue, Anchorage, AK 99501 • (907) 258-2155 • FAX (907) 258-6634

USAF - 611TH CES/CEVO
21885 2ND STREET
ELMENDORF AFB, AK 99506-4420
(907) 552-1617/FAX 4601
Attn: MR. CARL HORNIG

Order #: A8-09-137
Date Reported: 10/30/98 16:55
Project Name: CAPE ROMANZOF LAND FILL
Date Received: 09/29/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988052 SD3
02	48030988053 SW3
03	48030988055 SD1
04	48030988056 SW1
05	48030988057 SD2
06	48030988060 SW1
07	48030988061 SD1

Enclosed are the analytical results for the submitted samples. All analyses met quality assurance objectives, except where noted in the case narratives. If you have any questions regarding the analyses, please feel free to call.

Bradley C. Olson
Vice President - Operations

84 188

Analytica Alaska, Inc.

811 W. 8th Ave. Anchorage, AK 99501 Phone-(907)258-2155 FAX-(907)258-6634

tabular sampl r p rt - fuels

AAI Project ID: **A809137**

30-Oct-98

Client: **USAF - 611TH CES/CEVO**

Project Name: **CAPE ROMANZOF LAND FILL**

Sample ID	Client Sample ID	Matrix	Benzene	Toluene	Ethylbenzene	Xylenes, Total	GRO	Units	DRO	RRO	Units
A809137-01	48030988052 SD3	SOIL	()	()	()	()	U (3.4)	mg/Kg	18 (8.1)	94 (8.1)	mg/Kg
A809137-02	48030988053 SW3	SOIL	()	()	()	()	U (1.3)	mg/Kg	5.9 (4.8)	41 (4.8)	mg/Kg
A809137-03	48030988055 SD1	SOIL	()	()	()	()	U (1.6)	mg/Kg	8.8 (4.8)	44 (4.8)	mg/Kg
A809137-04	48030988056 SW1	SOIL	()	()	()	()	U (1.2)	mg/Kg	20 (4.6)	170 (4.6)	mg/Kg
A809137-05	48030988057 SD2	SOIL	()	()	()	()	U (1.1)	mg/Kg	180 (25)	1000 (25)	mg/Kg
A809137-06	48030988060 SW1	SOIL	()	()	()	()	U (1.5)	mg/Kg	18 (4.5)	130 (4.5)	mg/Kg
A809137-07	48030988061 SD1	SOIL	()	()	()	()	U (1.3)	mg/Kg	16 (5.1)	100 (5.1)	mg/Kg

The number in parentheses is the reporting limit "U" Indicates analyte was not detected. "()" Indicates analyte was not analyzed for. "J" indicates value is estimated.

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
CASE NARRATIVE

ADEC Laboratory Approval Number: UST-014

The samples were received properly packed in three coolers at 2.1°C, 4.9° and 5.1 and were refrigerated upon receipt.

Data Flag Definitions:

U - Indicates this analytes was searched for and not detected at the reporting limits listed.

D - Indicates the surrogate was diluted out of the sample due to high levels of organics native to the samples.

M - Indicates matrix effects are responsible for surrogate recoveries which are out of limits.

NC - Indicates analyte was detected in original analysis but not confirmed in secondary analysis.

DR - Indicates result is from secondary analysis at dilution.

S - Indicates corrective action did not accomplish desired results or corrective action not performed for cause. See QC Evaluation Summary for details.

B - Indicates analyte was found in Method Blank. Result should be considered as potentially biased high. See QC Evaluation Summary for details.

< - Indicates sample not preserved according to AK101 requirements. True value is greater than or equal to the reported value.

W - Sample reported on a wet weight basis due to missing percent moisture aliquot.

J - Sample result is estimated. See QC Evaluation Summary for details.

Analyst: _____ Date: 11/2/98

Analyst: _____ Date: 11/02/98

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988052 SD3
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: 01A
Method: 5030/AK101
Matrix: SOIL

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100907.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 51.5

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	3.4	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	90 %	60 - 120
p-Bromofluorobenzene	64 %	60 - 120

Client ID: 48030988052 SD3
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: 01B
Method: 3550/AK102/3
Matrix: SOIL

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/21/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102127.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 51.5

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	18	8.1	
Residual Range Organics	RRO	94	8.1	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	35 M %	60 - 120
Squalane	53 M %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988053 SW3
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: 02A
Method: 5030/AK101
Matrix: SOIL

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100908.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 18.3

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	1.3	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	80 %	60 - 120
p-Bromofluorobenzene	73 %	60 - 120

Client ID: 48030988053 SW3
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: 02B
Method: 3550/AK102/3
Matrix: SOIL

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/21/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102123.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 18.3

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	5.9	4.8	
Residual Range Organics	RRO	41	4.8	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	82 %	60 - 120
Squalane	120 %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988055 SD1
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: 03A
Method: 5030/AK101
Matrix: SOIL

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100909.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 19.1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	1.6	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	89 %	60 - 120
p-Bromofluorobenzene	73 %	60 - 120

Client ID: 48030988055 SD1
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: 03B
Method: 3550/AK102/3
Matrix: SOIL

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/21/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102141.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 19.1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	8.8	4.8	
Residual Range Organics	RRO	44	4.8	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	72 %	60 - 120
Squalane	105 %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: **48030988056 SW1**
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: **04A**
Method: 5030/AK101
Matrix: **SOIL**

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100910.D
UNITS: **mg/Kg**
DILUTION: 1
% MOISTURE: 14.5

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	1.2	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	89 %	60 - 120
p-Bromofluorobenzene	38 %	60 - 120

Client ID: **48030988056 SW1**
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: **04B**
Method: 3550/AK102/3
Matrix: **SOIL**

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/21/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102129.D
UNITS: **mg/Kg**
DILUTION: 1
% MOISTURE: 14.5

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	**20**	4.6	
Residual Range Organics	RRO	**170**	4.6	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	53 M %	60 - 120
Squalane	73 %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988057 SD2
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: 05A
Method: 5030/AK101
Matrix: SOIL

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100911.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 23.4

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	1.1	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	89 %	60 - 120
p-Bromofluorobenzene	47 %	60 - 120

Client ID: 48030988057 SD2
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: 05B
Method: 3550/AK102/3
Matrix: SOIL

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/22/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102187.D
UNITS: mg/Kg
DILUTION: 5
% MOISTURE: 23.4

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	180	25	
Residual Range Organics	RRO	1000	25	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	D %	60 - 120
Squalane	D %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988060 SW1
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: 06A
Method: 5030/AK101
Matrix: SOIL

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100912.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 12.5

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	1.5	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	85 %	60 - 120
p-Bromofluorobenzene	80 %	60 - 120

Client ID: 48030988060 SW1
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: 06B
Method: 3550/AK102/3
Matrix: SOIL

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/21/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102143.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 12.5

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	18	4.5	
Residual Range Organics	RRO	130	4.5	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	72 %	60 - 120
Squalane	107 %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988061 SD1
Test Description: GRO in soil by AK101.
Collected: 09/26/98 00:00

Lab ID: 07A
Method: 5030/AK101
Matrix: SOIL

ANALYSIS DATE: 10/09/98
ANALYST: SWG
INSTRUMENT ID: BORIS
Sample reported on a dry weight basis.

FILE ID: B8100913.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 22.1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	1.3	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	85 %	60 - 120
p-Bromofluorobenzene	71 %	60 - 120

Client ID: 48030988061 SD1
Test Description: DRO/RRO in soil-AK102&103
Collected: 09/26/98 00:00

Lab ID: 07B
Method: 3550/AK102/3
Matrix: SOIL

EXTRACTION DATE: 10/07/98
ANALYSIS DATE: 10/21/98
ANALYST: GSM
INSTRUMENT ID: WOOF
Sample reported on a dry weight basis.

FILE ID: W8102125.D
UNITS: mg/Kg
DILUTION: 1
% MOISTURE: 22.1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	16	5.1	
Residual Range Organics	RRO	100	5.1	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	77 %	60 - 120
Squalane	114 %	60 - 120

Order # A8-09-137
Analytica Ak.

USAF - 611TH CES/CEVO
TEST METHODOLOGIES

Method AK101 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of gasoline range organics (GRO).

The quantitation range extends from the beginnning of C6 to the beginning of C10.

Methods AK102 & AK103
from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of diesel range organics (DRO).

The quantitation range for AK102 extends from the beginning of C10 to the beginning of C25.
The standard used is a 1:1:1 mixture of Kerosene, DF1, and DF2.

The quantitation range for AK103 extends from the beginning of C25 to the end of C36. A mixture of 1:1 SAE 30 & SAE 40 motor oils are used for instrument calibration.

Solids are prepared via sonication according to methods AK102, AK103, and USEPA SW-846 method 3550.

ANALYTICA
ALASKA INC.

Support Documentation

ANALYTICA ALASKA INC.
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Suite 200
Broomfield, Colorado 80021
(303) 469-8868
FAX (303) 469-5254

LGN: A8L[redacted]37
CSN: A8102

Chain of Custody Record / Analysis Request

Company Name: 611 CES/CEVO
Company Address: 21885 2 OT ELMENDORF AFB AK 99506-4420
Telephone: (907) 552-1617
FAX: 4601

Project Name: CAPE ROMANZOV LAND FILL
Report To: CARL HORNIG
Sampler: CARL HORNIG
P O Number:

Sample ID	Date Collected	Time Collected	Matrix Soil/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA/HCl	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	TCLP/RCRA METALS	EPA 8081/8082	8260	8270 SWT	PSA	TOC	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880 51 SW3	26 SEP	1400	Aq							✓		✓	✓				✓	✓					2
052 SD3		1345	SED																				3
053 SW3		1415	SOIL																				4
054 SW1		1500	Aq														✓	✓					5
055 SD1		1530	SED																				
056 SW1		1600	SOIL																				
057 SD2	27 SEP	1045	SED									X	X										
058 SW2		1110	Aq									X	X										
059 SW1		1645	Aq														✓	✓					6
060 SW1		1120	SOIL																				
061 SD1		1150	SED																				
TRIP BLANK																							

COMMENTS

DELIVERABLES
- [x] Level I
- [ ] ADEC Format
- [ ] ACOE
- [ ] Other
- [ ] EDF - Format _____ specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [ ] 10-15 Business Days
- [x] Other 15-21 #Business Days

ANALYTICA USE ONLY
Airbill / Freight #
Condition of Sample Containers
Temp Received: A B C
# of Coolers: 3
Seals:
A: 2.1°C | B: 4.9°C | C: 5.1°C

RELINQUISHED BY SAMPLER	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Carl A Hornig	Signature: [signature]	Signature: [signature]	Signature
Printed Name: CARL A HORNIG	Printed Name: Lorraine Andela	Printed Name: Lorraine Andela	Printed Name
Firm: 611 CES/CEVO	Firm: Analytica AK	Firm: Analytica AK	Firm
Date/Time:	Date/Time: 9/28/98 1630	Date/Time: 9/29/98 1355	Date/Time

PAGE 1 OF 1

84 199

ANALYTICA
ALASKA INC

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USAF - 611TH CES/CEVO
21885 2ND STREET
ELMENDORF AFB, AK 99506-4420
(907) 552-1617/FAX 4601
Attn: MR. CARL HORNIG

Order #: A8-09-136
Date Reported: 10/29/98 12:47
Project Name: CAPE ROMANZOF LAND FILL
Date Received: 09/29/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988051 SW3
02	48030988054 SW1
03	48030988058 SW2
04	48030988059 SW1
05	TRIP BLANK

Enclosed are the analytical results for the submitted samples. All analyses met quality assurance objectives, except where noted in the case narratives. If you have any questions regarding the analyses, please feel free to call.

Bradley C. Olson
Vice President - Operations

Order # A8-09-136
Analytica Ak.

USAF - 611TH CES/CEVO
CASE NARRATIVE

ADEC Laboratory Approval Number: UST-014

The samples were received properly packed in three coolers at 2.1°C, 4.9°C, and 5.1°C, and were refrigerated upon receipt.

Data Flag Definitions:

U - Indicates this analytes was searched for and not detected at the reporting limits listed.

D - Indicates the surrogate was diluted out of the sample due to high levels of organics native to the samples.

M - Indicates matrix effects are responsible for surrogate recoveries which are out of limits.

NC - Indicates analyte was detected in original analysis but not confirmed in secondary analysis.

DR - Indicates result is from secondary analysis at dilution.

S - Indicates corrective action did not accomplish desired results or corrective action not performed for cause. See QC Evaluation Summary for details.

B - Indicates analyte was found in Method Blank. See QC Evaluation Summary for details.

< - Indicates sample not preserved according to AK101 requirements. True value is greater than or equal to the reported value.

Analyst: _____ Date: 10/29/98

Analyst: _____ Date: 10/29/98

Order # A8-09-136
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988051 SW3
Test Description: GRO in water by AK101.
Collected: 09/26/98 00:00

Lab ID: 01A
Method: 5030/AK101
Matrix: WATER

ANALYSIS DATE: 10/08/98
ANALYST: SWG
INSTRUMENT ID: BORIS

FILE ID: B8100820.D
UNITS: µg/L
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	87 %	60 - 120
p-Bromofluorobenzene	90 %	60 - 120

Client ID: 48030988051 SW3
Test Description: DRO in water by AK102.
Collected: 09/26/98 00:00

Lab ID: 01B
Method: 3510\AK102
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/14/98
ANALYST: GSM
INSTRUMENT ID: WOOF

FILE ID: W8101448.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	U	0.21	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	87 %	60 - 120

Client ID: 48030988051 SW3
Test Description: RRO in water by AK103.
Collected: 09/26/98 00:00

Lab ID: 01B
Method: 3510\AK103
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/14/98
ANALYST: GSM
INSTRUMENT ID: WOOF

FILE ID: W8101448.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	U	0.21	

SURROGATE	%RECOVERY	LIMITS
Squalane	79 %	60 - 120

Order # A8-09-136
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988054 SW1
Test Description: GRO in water by AK101.
Collected: 09/26/98 00:00

Lab ID: 02A
Method: 5030/AK101
Matrix: WATER

ANALYSIS DATE: 10/08/98
ANALYST: SWG
INSTRUMENT ID: BORIS

FILE ID: B8100821.D
UNITS: µg/L
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	85 %	60 - 120
p-Bromofluorobenzene	89 %	60 - 120

Client ID: 48030988054 SW1
Test Description: DRO in water by AK102.
Collected: 09/26/98 00:00

Lab ID: 02B
Method: 3510\AK102
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/19/98
ANALYST: ENA
INSTRUMENT ID: BERTHA

FILE ID: B8101941.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	U	0.20	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	104 %	60 - 120

Client ID: 48030988054 SW1
Test Description: RRO in water by AK103.
Collected: 09/26/98 00:00

Lab ID: 02B
Method: 3510\AK103
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/19/98
ANALYST: ENA
INSTRUMENT ID: BERTHA

FILE ID: B8101941.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	U	0.40	

SURROGATE	%RECOVERY	LIMITS
Squalane	106 %	60 - 120

Order # A8-09-136
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988058 SW2
Test Description: GRO in water by AK101.
Collected: 09/27/98 00:00

Lab ID: 03A
Method: 5030/AK101
Matrix: WATER

ANALYSIS DATE: 10/08/98
ANALYST: SWG
INSTRUMENT ID: BORIS

FILE ID: B8100822.D
UNITS: µg/L
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	85 %	60 - 120
p-Bromofluorobenzene	89 %	60 - 120

Client ID: 48030988058 SW2
Test Description: DRO in water by AK102.
Collected: 09/27/98 00:00

Lab ID: 03B
Method: 3510\AK102
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/19/98
ANALYST: ENA
INSTRUMENT ID: BERTHA

FILE ID: B8101943.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	U	0.22	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	103 %	60 - 120

Client ID: 48030988058 SW2
Test Description: RRO in water by AK103.
Collected: 09/27/98 00:00

Lab ID: 03B
Method: 3510\AK103
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/19/98
ANALYST: ENA
INSTRUMENT ID: BERTHA

FILE ID: B8101943.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	U	4.4	

SURROGATE	%RECOVERY	LIMITS
Squalane	107 %	60 - 120

Order # A8-09-136
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988059 SW1
Test Description: GRO in water by AK101.
Collected: 09/27/98 00:00

Lab ID: 04A
Method: 5030/AK101
Matrix: WATER

ANALYSIS DATE: 10/08/98
ANALYST: SWG
INSTRUMENT ID: BORIS

FILE ID: B8100823.D
UNITS: µg/L
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	87 %	60 - 120
p-Bromofluorobenzene	90 %	60 - 120

Client ID: 48030988059 SW1
Test Description: DRO in water by AK102.
Collected: 09/27/98 00:00

Lab ID: 04B
Method: 3510\AK102
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/19/98
ANALYST: ENA
INSTRUMENT ID: BERTHA

FILE ID: B8101945.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	U	0.23	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	110 %	60 - 120

Client ID: 48030988059 SW1
Test Description: RRO in water by AK103.
Collected: 09/27/98 00:00

Lab ID: 04B
Method: 3510\AK103
Matrix: WATER

EXTRACTION DATE: 09/30/98
ANALYSIS DATE: 10/19/98
ANALYST: ENA
INSTRUMENT ID: BERTHA

FILE ID: B8101945.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	U	4.7	

SURROGATE	%RECOVERY	LIMITS
Squalane	111 %	60 - 120

Method AK101 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of gasoline range organics (GRO).

The quantitation range is from the beginning of C6 to the beginning of C10.

Method AK102 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of diesel range organics (DRO).

The quantitation range extends from the beginning of C10 to the beginning of C25. The standard used is a 1:1:1 mixture of Kerosine, DF1, and DF2.

Waters are prepared via liquid/liquid extraction per AK102.

Liquids are prepared according to method AK103 and USEPA SW-846 method 3510.

Method AK103 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of residual range organics (RRO).

The quantitation range of this method extends from the beginning of C25 to the end of C36. A mixture of 1:1:1 SAE 30, SAE 40, & SAE 50 motor oils are used for instrument calibration.

ANALYTICA
ALASKA INC.

Support Documentation

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FAX: (303) 469-5254

LGN: A80
CSN. A8125

Chain of Custody Record / Analysis Request

Company Name: 611 CES/CEVO
Company Address: 21885 2 OT ELMENDORF AFB AK 99506-4420
Telephone: (907) 552-1617
FAX: 4601

Project Name: CAPE ROMANZOV LAND FILL
Report To: CARL HORNIG
Sampler: CARL HORNIG
P O Number:

Sample ID		Date Collected	Time Collected	Matrix Soil/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml VOHO	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	TCLP/RCRA METALS	EPA 8081/8082	8260	8270 SWT	PSA	TOC	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880 51	SW3	26 Sep	1400	Aq							✓		✓	✓					✓	✓				1
052	SD3		1345	Sed																				2
053	SW3		1415	Soil																				
054	SW1		1500	Aq																				
055	SD1		1530	Sed															✓	✓				
056	SW1		1600	Soil																				3
057	SD2	27 Sep	1045	Sed									x	x										4
058	SW2		1110	Aq									x	x										
059	SW1		1145	Aq															✓	✓				
060	SW1		1120	Soil																				
061	SD1		1150	Sed																				5
TRIP BLANK																								

COMMENTS

DELIVERABLES
- [x] Level I
- [ ] ADEC Format
- [ ] ACOE
- [ ] Other
- [ ] EDF - Format: specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [ ] 10-15 Business Days
- [x] Other: 15-21 #Business Days

RELINQUISHED BY SAMPLER:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Carl A Hornig	Signature: Lorraine Andela	Signature: Lorraine Andela	Signature:
Printed Name: CARL A HORNIG	Printed Name: Lorraine Andela	Printed Name: Lorraine Andela	Printed Name:
Firm: 611 CES/CEVO	Firm: Analytica Alaska Inc.	Firm: Analytica Alaska Inc.	Firm:
Date/Time:	Date/Time: 9/28/98 1630	Date/Time: 9/29/98 0855	Date/Time:

ANALYTICA USE ONLY:
Airbill / Freight #:
Condition of Sample Containers:
Temp Received: A B C °C
# of Coolers: 3
Seals: A B In
A 2.1°C B 4.9°C C

PAGE 1 OF 1

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ENVIRONMENTAL
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Department of the Air Force
611 CES/CEVO
21-885 2nd St.
Elmendorf AFB, AK 99506-0875
Attn: Carl A. Hornig

Order #: 98-11-140
Date: 12/03/98 16:08
Work ID: CAPE ROMANZOF - CALL #B002
Date Received: 11/17/98
Date Completed: 12/03/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988054 SW1
02	48030988059 SW1

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire K. Toon

Claire K. Toon
Project Manager

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
CASE NARRATIVE

Samples were prepared and analyzed according to methods outlined in the following references:

- Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 3, January 1995.

The results reported here are from samples which were re-extracted, outside the analytical holding times, per client request. Results for these samples were previously reported as AEL sample numbers 9809259-04B and 9809259-09B.

Problems encountered with the analyses are discussed in the following narrative.

The results from this analysis do not confirm the detection of toxaphene at 18 ug/L in the original extract of sample 48030988059 SW1. No toxaphene was detected in the second extract of this sample. The laboratory is currently investigating the cause of this discrepancy, and believes the first analysis to be in error. A more detailed description of how the error occurred will be provided as this information becomes available.

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01A 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.025	ug/L	12/01/98
alpha-BHC		ND		0.025	ug/L	12/01/98
beta-BHC		ND		0.025	ug/L	12/01/98
delta-BHC		ND		0.025	ug/L	12/01/98
gamma-BHC (Lindane)		ND		0.025	ug/L	12/01/98
alpha-Chlordane		ND		0.025	ug/L	12/01/98
gamma-Chlordane		ND		0.050	ug/L	12/01/98
4,4'-DDD		ND		0.050	ug/L	12/01/98
4,4'-DDE		ND		0.050	ug/L	12/01/98
4,4'-DDT		ND		0.025	ug/L	12/01/98
Dieldrin		ND		0.050	ug/L	12/01/98
Endosulfan I		ND		0.050	ug/L	12/01/98
Endosulfan II		ND		0.050	ug/L	12/01/98
Endosulfan Sulfate		ND		0.050	ug/L	12/01/98
Endrin		ND		0.050	ug/L	12/01/98
Endrin Aldehyde		ND		0.025	ug/L	12/01/98
Heptachlor		ND		0.025	ug/L	12/01/98
Heptachlor Epoxide		ND		0.25	ug/L	12/01/98
Methoxychlor		ND		0.75	ug/L	12/01/98
Toxaphene						
SURROGATES, % Recovery		100		Min: 45		Max: 124
Tetrachlorometaxylene		60.0		Min: 45		Max: 124
Decachlorobiphenyl						

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02A 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Organochlorine Pesticides	SW 8081A						
Aldrin		ND		0.028	ug/L		12/01/98
alpha-BHC		ND		0.028	ug/L		12/01/98
beta-BHC		ND		0.028	ug/L		12/01/98
delta-BHC		ND		0.028	ug/L		12/01/98
gamma-BHC (Lindane)		ND		0.028	ug/L		12/01/98
alpha-Chlordane		ND		0.028	ug/L		12/01/98
gamma-Chlordane		ND		0.028	ug/L		12/01/98
4,4'-DDD		ND		0.056	ug/L		12/01/98
4,4'-DDE		ND		0.056	ug/L		12/01/98
4,4'-DDT		ND		0.056	ug/L		12/01/98
Dieldrin		ND		0.028	ug/L		12/01/98
Endosulfan I		ND		0.056	ug/L		12/01/98
Endosulfan II		ND		0.056	ug/L		12/01/98
Endosulfan Sulfate		ND		0.056	ug/L		12/01/98
Endrin		ND		0.056	ug/L		12/01/98
Endrin Aldehyde		ND		0.028	ug/L		12/01/98
Heptachlor		ND		0.028	ug/L		12/01/98
Heptachlor Epoxide		ND		0.28	ug/L		12/01/98
Methoxychlor		ND		0.83	ug/L		12/01/98
Toxaphene							
SURROGATES, % Recovery							
Tetrachlorometaxylene		90.9		Min: 45		Max:	124
Decachlorobiphenyl		54.5		Min: 45		Max:	124

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field...
ND = not detected at the reported limit
NA = analyte not applicable (see case narrative/methods for discussion)

Q (qualifier) field...
GENERAL:
* = Recovery or %RPD outside method specifications
H = value is estimated due to analysis run outside EPA holding times
E = reported concentration is above the instrument calibration range
D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences

ORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected in the laboratory method blank
J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)

INORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)
W = post digestion spike did not meet criteria (85-115%)
S = reported value determined by the Method of Standard Additions

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

3520_P:	Continuous Liquid-Liquid Extraction (Pesticides)	METHOD: 3520B
PST_8W:	ORGANOCHLORINE PESTICIDES	METHOD: 8081A

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 01A 48030988054 SW1

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/26/98	11/17/98	NA	11/18/98	12/01/98

Sample: 02A 48030988059 SW1

Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/27/98	11/17/98	NA	11/18/98	12/01/98

325 Interlocken Parkway #200
Broomfield, CO 80021
Phone: (303) 469-8868
Fax. (303) 469-5254

Analytica Environmental Laboratories

Fax

To: Carl Homig, 611 CES/CEVO **From:** Claire Toon, AEL

Fax: 907-552-4601 **Pages:** 3

Phone: 907-552-2612 **Date:** December 30, 1998

Re: Toxaphene Memo **CC:**

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:**

Attached is a copy of the memo Dr. Huntington created in regard to the false positive reported for toxaphene for the Cape Romanzof project. I will follow up with hardcopy in the mail. If you should have any further questions, please feel free to give me a call at 800-873-8707 Ext. 110.

ANALYTICA ENVIRONMENTAL LABORATORIES
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Memo to: Angie Caudell
From: John Huntington
Subject: Toxaphene False Positives
Date: 12/15/98

We have already acknowledged that the analysis of sample 98-09-259 –09A resulted in a false positive for Toxaphene. The client (Elmendorf AFB) sample number is 38030988059 SW1. We have investigated the events leading up to this result and we believe we understand what occurred. This memo serves to document our observations and presents the general Corrective Actions we have undertaken.

Cause of the False Positive.

The analytical runs conducted on this sample are summarized in the attached database output. The first analysis was conducted on 10/21/98 using the PCB extract, produced in prep batch 9801259. The chromatogram shows a clear Toxaphene pattern and no evidence for PCBs.

The pesticide extract, which is derived from the same extract used for PCBs but is not subjected to sulfuric acid cleanup, was analyzed on 10/26/98 and 10/29/98. This analysis also showed clear evidence for Toxaphene. There are no prior sample runs that show the presence of Toxaphene, so carryover on the autosampler is unlikely.

In reviewing the prep history, we realized that the laboratory had a project from a known high-level Toxaphene site which was prepared on 10/7/98, six days after the sample prep date of 10/1/98 for the Elmendorf samples. One of the samples associated with this project had over 5,000 ppm of Toxaphene, and another had over 2,000 ppm. Thus they would be likely candidates for contamination except for the fact that the prep was conducted later than the Elmendorf samples.

However, further review shows that the Elmendorf samples and the high-Toxaphene samples were subjected to final concentration on the same day. If crossover contamination occurred at this step, it would have only required 0.0003% of the high level sample extract to be communicated to the Elmendorf sample in order to result in the observed apparent concentration..

We are confident that this is exactly what occurred – cross contamination in the sample prep lab due to the extremely high concentration samples concentrated at the same time as the Elmendorf sample.

Corrective Action.

Corrective action for this kind of problem falls into two categories: a) prevention of the contamination by improved laboratory practices; and b) detection of cross-contamination events in time to take corrective action prior to issuance of a report.

Category a) Corrective Actions. In general, a review of laboratory practice in the sample prep laboratory indicates that proper cleaning, of glassware is being conducted, and that proper precautions are in place to avoid carryover from syringes, pipettes, etc. A training review is in order, however, given this occurance.

More importantly, sample prep had been informed by the project manager that the Toxaphene site could have samples with concentrations as high as 10,000 ppm. Knowing this, the sample prep laboratory should have isolated the preparation of these samples from any others. Dirty glassware arising from such a sample set should be cleaned at least twice with special attention, and no other samples should be handled when such samples are being worked with. In addition, notes and flags should follow the sample extracts as they work their way through the laboratory. The latter procedures were followed, but isolation of the high-level samples from the others during sample prep did not occur.

Our general sample prep SOPs are being revised to call specifically for such isolation in time of high-level sample preps, and for special handling of glassware from such preps. This isolation of suspected high level samples from normal samples is the main emphasis of our corrective action.

Category b) Corrective Actions. The failure to take action when a Toxaphene hit was observed in the Elmendorf sample was due mainly to the fact that the start date of the sample prep preceded the extraction for the high-level samples. Thus the reviewer assumed that there was no possibility of cross-contamination. The review procedure for these kinds of problems is being revised to include reviewing the sample prep completion date information.

In addition, Toxaphene itself is among a group of seldom-seen targets that need to raise flags when detected. In general, all detections of targets such as this should be reviewed in greater detail than normal. This should include a review of the sample history within the laboratory with the intent of uncovering any potential contamination opportunities. The sooner such a review occurs the easier it is to conduct and the more likely it will be successful.

All of these issues will be easier to control when we install the new LIMS sometime in February of 1999, because our ability to quickly access relevent information will be much improved.

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Department of the Air Force
611 CES/CEVO
21-885 2nd St.
Elmendorf AFB, AK 99506-0875
Attn: Carl A. Hornig

Order #: 98-10-036
Date: 11/05/98 13:43
Work ID: CAPE ROMANZOF - CALL #B002
Date Received: 10/05/98
Date Completed: 11/05/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988 063 CMW3
02	48030988 064 CMW6
03	48030988 065 MW1
04	48030988 066 MW7
05	48030988 067 MW4
06	48030988 068 CMW5
07	48030988 069 CMW5
08	48030988 070 CMW1
09	TRIP BLANK

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire K. Toon

Claire K. Toon
Project Manager

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
CASE NARRATIVE

Samples were prepared and analyzed according to methods outlined in the following references:

- Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, January 1996.

Problems encountered with the analyses are discussed in the following narrative.

The Trip Blank contains toluene and m,p-xylenes at levels below reporting limits. Re-analysis on the following day did not confirm the presence of these compounds. The presence of these compounds in the samples is due to an isolated contamination incident, and is not attributed to the samples. Methylene chloride was also present in the Trip Blank; however, no methylene chloride was detected in the samples.

The pesticides and PCB analyses of sample "48030988 070 CMW1" are reported with one of the two surrogate recoveries below quality control guidelines. These low recoveries were verified by secondary analyses, and are attributed to sample matrix effect. The method blank and method blank spike associated with these analyses show all surrogate recoveries within QC limits.

The 8270 semivolatile results for samples "48030988 065 MW1", "48030988 069 CMW5", and "48030988 070 CMW1" are reported with surrogate and sixth internal standard recoveries outside quality control guidelines. These results were confirmed by secondary analysis and are attributed to sample matrix effects. The method blank and method blank spike, which are analyzed in the absence of sample matrix, show all surrogate recoveries within QC guidelines.

The sample conatiners received for TCLP metals analysis were preserved with nitric acid. Due to the nature of the TCLP analysis, samples should not be preserved prior to TCLP extraction. However, since the samples contained less than 0.5% solids, and the filtrate is therefore the TCLP extract, preservation in this case did not impact the results. All sample results were below the TCLP Maximum Contaminant Levels.

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01A 48030988 063 CMW3 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		1.2	J	2.0	ug/L	10/13/98
Toluene		ND		2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		0.66	J	2.0	ug/L	10/13/98
m,p-Xylenes		ND		2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01A 48030988 063 CMW3 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B	ND		2.0	ug/L	10/13/98
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		10	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		2.0	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		50	ug/L	10/13/98
Acetone		ND		10	ug/L	10/13/98
Acrylonitrile		ND		50	ug/L	10/13/98
2-Butanone		ND		2.0	ug/L	10/13/98
Carbon Disulfide		ND		10	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		20	ug/L	10/13/98
2-Hexanone		ND		2.0	ug/L	10/13/98
Iodomethane		ND		20	ug/L	10/13/98
4-Methyl-2-pentanone		ND		5.0	ug/L	10/13/98
Vinyl Acetate		ND		2.0	ug/L	10/13/98
tert-Butyl methyl ether						
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01D 48030988 063 CMW3 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	10/31/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	10/31/98
2-Chlorophenol		ND		5.0	ug/L	10/31/98
1,3-Dichlorobenzene		ND		5.0	ug/L	10/31/98
1,4-Dichlorobenzene		ND		5.0	ug/L	10/31/98
Benzyl alcohol		ND		10	ug/L	10/31/98
1,2-Dichlorobenzene		ND		5.0	ug/L	10/31/98
2-Methylphenol		ND		5.0	ug/L	10/31/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	10/31/98
4-Methylphenol		ND		5.0	ug/L	10/31/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	10/31/98
Hexachloroethane		ND		5.0	ug/L	10/31/98
Nitrobenzene		ND		5.0	ug/L	10/31/98
Isophorone		ND		5.0	ug/L	10/31/98
2-Nitrophenol		ND		5.0	ug/L	10/31/98
2,4-Dimethylphenol		ND		50	ug/L	10/31/98
Benzoic acid		ND		5.0	ug/L	10/31/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	10/31/98
2,4-Dichlorophenol		ND		5.0	ug/L	10/31/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	10/31/98
Naphthalene		ND		5.0	ug/L	10/31/98
4-Chloroaniline		ND		5.0	ug/L	10/31/98
Hexachlorobutadiene		ND		5.0	ug/L	10/31/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	10/31/98
2-Methylnaphthalene		ND		5.0	ug/L	10/31/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	10/31/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	10/31/98
2,4,5-Trichlorophenol		ND		10	ug/L	10/31/98
2-Chloronaphthalene		ND		50	ug/L	10/31/98
2-Nitroaniline		ND		5.0	ug/L	10/31/98
Dimethylphthalate		ND		5.0	ug/L	10/31/98
Acenaphthylene		ND		50	ug/L	10/31/98
3-Nitroaniline		ND		5.0	ug/L	10/31/98
Acenaphthene		ND		50	ug/L	10/31/98
2,4-Dinitrophenol		ND		50	ug/L	10/31/98
4-Nitrophenol		ND		5.0	ug/L	10/31/98
Dibenzofuran		ND		5.0	ug/L	10/31/98
2,6-Dinitrotoluene		ND		5.0	ug/L	10/31/98
2,4-Dinitrotoluene		ND		5.0	ug/L	10/31/98
Diethylphthalate		ND		5.0	ug/L	10/31/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	10/31/98
Fluorene		ND		5.0	ug/L	10/31/98
4-Nitroaniline		ND		50	ug/L	10/31/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	10/31/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	10/31/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 01D 48030988 063 CMW3 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Semivolatile Organics	SW 8270C					
Hexachlorobenzene		ND		5.0	ug/L	10/31/98
Pentachlorophenol		ND		5.0	ug/L	10/31/98
Phenanthrene		ND		5.0	ug/L	10/31/98
Anthracene		ND		5.0	ug/L	10/31/98
Di-n-butylphthalate		ND		5.0	ug/L	10/31/98
Fluoranthene		ND		5.0	ug/L	10/31/98
Pyrene		ND		5.0	ug/L	10/31/98
Butylbenzylphthalate		ND		5.0	ug/L	10/31/98
3,3'-Dichlorobenzidine		ND		20	ug/L	10/31/98
Benzo(a)Anthracene		ND		5.0	ug/L	10/31/98
Chrysene		ND		5.0	ug/L	10/31/98
Bis(2-Ethylhexyl)phthalate		1.0	JB	5.0	ug/L	10/31/98
Di-n-octylphthalate		ND		5.0	ug/L	10/31/98
Benzo(b)fluoranthene		ND		5.0	ug/L	10/31/98
Benzo(k)fluoranthene		ND		5.0	ug/L	10/31/98
Benzo(a)pyrene		ND		5.0	ug/L	10/31/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	10/31/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	10/31/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	10/31/98
SURROGATES, % Recovery						
2-Fluorophenol		64.0		Min: 21	Max: 100	
d5-Phenol		60.0		Min: 10	Max: 94	
d5-Nitrobenzene		77.0		Min: 35	Max: 114	
2-Fluorobiphenyl		83.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		86.7		Min: 10	Max: 123	
d14-Terphenyl		85.0		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: **01E** **48030988 063 CMW3** Collected: **09/29/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.025	ug/L	10/26/98
alpha-BHC		ND		0.025	ug/L	10/26/98
beta-BHC		ND		0.025	ug/L	10/26/98
delta-BHC		ND		0.025	ug/L	10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L	10/26/98
alpha-Chlordane		ND		0.025	ug/L	10/26/98
gamma-Chlordane		ND		0.050	ug/L	10/26/98
4,4'-DDD		ND		0.050	ug/L	10/26/98
4,4'-DDE		ND		0.050	ug/L	10/26/98
4,4'-DDT		ND		0.025	ug/L	10/26/98
Dieldrin		ND		0.050	ug/L	10/26/98
Endosulfan I		ND		0.050	ug/L	10/26/98
Endosulfan II		ND		0.050	ug/L	10/26/98
Endosulfan Sulfate		ND		0.050	ug/L	10/26/98
Endrin		ND		0.050	ug/L	10/26/98
Endrin Aldehyde		ND		0.025	ug/L	10/26/98
Heptachlor		ND		0.025	ug/L	10/26/98
Heptachlor Epoxide		ND		0.25	ug/L	10/26/98
Methoxychlor		ND		0.75	ug/L	10/26/98
Toxaphene						
SURROGATES, % Recovery		75.0		Min: 45	Max: 124	
Tetrachlorometaxylene		60.0		Min: 45	Max: 124	
Decachlorobiphenyl						
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		1.0	ug/L	10/26/98
PCB-1232		ND		0.50	ug/L	10/26/98
PCB-1242		ND		0.50	ug/L	10/26/98
PCB-1248		ND		0.50	ug/L	10/26/98
PCB-1254		ND		0.50	ug/L	10/26/98
PCB-1260		ND		0.50	ug/L	10/26/98
PCB-1016		ND		0.50	ug/L	10/26/98
SURROGATES, % Recovery		75.0		Min: 29	Max: 133	
Tetrachlorometaxylene		60.0		Min: 26	Max: 137	
Decachlorobiphenyl						

Sample: **01G** **48030988 063 CMW3** Collected: **09/29/98** Matrix: **WATER**

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.50		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02A 48030988 064 CMW6 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		1.2	J	2.0	ug/L	10/13/98
Toluene		ND		2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		0.69	J	2.0	ug/L	10/13/98
m,p-Xylenes		ND		2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02A 48030988 064 CMW6 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		98.0		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02D 48030988 064 CMW6 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/02/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/02/98
2-Chlorophenol		ND		5.0	ug/L	11/02/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/02/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/02/98
Benzyl alcohol		ND		10	ug/L	11/02/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/02/98
2-Methylphenol		ND		5.0	ug/L	11/02/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/02/98
4-Methylphenol		ND		5.0	ug/L	11/02/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/02/98
Hexachloroethane		ND		5.0	ug/L	11/02/98
Nitrobenzene		ND		5.0	ug/L	11/02/98
Isophorone		ND		5.0	ug/L	11/02/98
2-Nitrophenol		ND		5.0	ug/L	11/02/98
2,4-Dimethylphenol		ND		50	ug/L	11/02/98
Benzoic acid		ND		5.0	ug/L	11/02/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/02/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/02/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/02/98
Naphthalene		ND		5.0	ug/L	11/02/98
4-Chloroaniline		ND		5.0	ug/L	11/02/98
Hexachlorobutadiene		ND		5.0	ug/L	11/02/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/02/98
2-Methylnaphthalene		ND		5.0	ug/L	11/02/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/02/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/02/98
2,4,5-Trichlorophenol		ND		10	ug/L	11/02/98
2-Chloronaphthalene		ND		50	ug/L	11/02/98
2-Nitroaniline		ND		5.0	ug/L	11/02/98
Dimethylphthalate		ND		5.0	ug/L	11/02/98
Acenaphthylene		ND		50	ug/L	11/02/98
3-Nitroaniline		ND		5.0	ug/L	11/02/98
Acenaphthene		ND		50	ug/L	11/02/98
2,4-Dinitrophenol		ND		50	ug/L	11/02/98
4-Nitrophenol		ND		5.0	ug/L	11/02/98
Dibenzofuran		ND		5.0	ug/L	11/02/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/02/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/02/98
Diethylphthalate		ND		5.0	ug/L	11/02/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/02/98
Fluorene		ND		5.0	ug/L	11/02/98
4-Nitroaniline		ND		50	ug/L	11/02/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/02/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/02/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02D 48030988 064 CMW6 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Semivolatile Organics	SW 8270C	ND		5.0	ug/L	11/02/98
Hexachlorobenzene		ND		5.0	ug/L	11/02/98
Pentachlorophenol		ND		5.0	ug/L	11/02/98
Phenanthrene		ND		5.0	ug/L	11/02/98
Anthracene		ND		5.0	ug/L	11/02/98
Di-n-butylphthalate		ND		5.0	ug/L	11/02/98
Fluoranthene		ND		5.0	ug/L	11/02/98
Pyrene		1.0	JB	5.0	ug/L	11/02/98
Butylbenzylphthalate		ND		20	ug/L	11/02/98
3,3'-Dichlorobenzidine		ND		5.0	ug/L	11/02/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/02/98
Chrysene		5.1	B	5.0	ug/L	11/02/98
Bis(2-Ethylhexyl)phthalate		ND		5.0	ug/L	11/02/98
Di-n-octylphthalate		ND		5.0	ug/L	11/02/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/02/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/02/98
Benzo(a)pyrene		ND		5.0	ug/L	11/02/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/02/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/02/98
Benzo(g,h,i)perylene						
SURROGATES, % Recovery						
2-Fluorophenol		66.0		Min: 21	Max: 100	
d5-Phenol		54.7		Min: 10	Max: 94	
d5-Nitrobenzene		72.0		Min: 35	Max: 114	
2-Fluorobiphenyl		96.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		80.0		Min: 10	Max: 123	
d14-Terphenyl		110		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02E 48030988 064 CMW6 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units			Analyzed
Organochlorine Pesticides	SW 8081A							
Aldrin		ND		0.025	ug/L			10/26/98
alpha-BHC		ND		0.025	ug/L			10/26/98
beta-BHC		ND		0.025	ug/L			10/26/98
delta-BHC		ND		0.025	ug/L			10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L			10/26/98
alpha-Chlordane		ND		0.025	ug/L			10/26/98
gamma-Chlordane		ND		0.050	ug/L			10/26/98
4,4'-DDD		ND		0.050	ug/L			10/26/98
4,4'-DDE		ND		0.050	ug/L			10/26/98
4,4'-DDT		ND		0.025	ug/L			10/26/98
Dieldrin		ND		0.050	ug/L			10/26/98
Endosulfan I		ND		0.050	ug/L			10/26/98
Endosulfan II		ND		0.050	ug/L			10/26/98
Endosulfan Sulfate		ND		0.050	ug/L			10/26/98
Endrin		ND		0.050	ug/L			10/26/98
Endrin Aldehyde		ND		0.025	ug/L			10/26/98
Heptachlor		ND		0.025	ug/L			10/26/98
Heptachlor Epoxide		ND		0.25	ug/L			10/26/98
Methoxychlor		ND		0.75	ug/L			10/26/98
Toxaphene								
SURROGATES, % Recovery		85.0		Min:	45	Max:	124	
Tetrachlorometaxylene		95.0		Min:	45	Max:	124	
Decachlorobiphenyl								
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		1.0	ug/L			10/26/98
PCB-1232		ND		0.50	ug/L			10/26/98
PCB-1242		ND		0.50	ug/L			10/26/98
PCB-1248		ND		0.50	ug/L			10/26/98
PCB-1254		ND		0.50	ug/L			10/26/98
PCB-1260		ND		0.50	ug/L			10/26/98
PCB-1016								
SURROGATES, % Recovery		85.0		Min:	29	Max:	133	
Tetrachlorometaxylene		95.0		Min:	26	Max:	137	
Decachlorobiphenyl								

Sample: 02G 48030988 064 CMW6 Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.31		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03A 48030988 065 MW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		5.3		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		0.97	J	2.0	ug/L	10/13/98
Toluene		ND		2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		0.48	J	2.0	ug/L	10/13/98
m,p-Xylenes		ND		2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03A 48030988 065 MW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		110		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03D 48030988 065 MW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/02/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/02/98
2-Chlorophenol		ND		5.0	ug/L	11/02/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/02/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/02/98
Benzyl alcohol		ND		10	ug/L	11/02/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/02/98
2-Methylphenol		ND		5.0	ug/L	11/02/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/02/98
4-Methylphenol		ND		5.0	ug/L	11/02/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/02/98
Hexachloroethane		ND		5.0	ug/L	11/02/98
Nitrobenzene		ND		5.0	ug/L	11/02/98
Isophorone		ND		5.0	ug/L	11/02/98
2-Nitrophenol		ND		5.0	ug/L	11/02/98
2,4-Dimethylphenol		ND		5.0	ug/L	11/02/98
Benzoic acid		ND		50	ug/L	11/02/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/02/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/02/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/02/98
Naphthalene		ND		5.0	ug/L	11/02/98
4-Chloroaniline		ND		5.0	ug/L	11/02/98
Hexachlorobutadiene		ND		5.0	ug/L	11/02/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/02/98
2-Methylnaphthalene		ND		5.0	ug/L	11/02/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/02/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/02/98
2,4,5-Trichlorophenol		ND		10	ug/L	11/02/98
2-Chloronaphthalene		ND		50	ug/L	11/02/98
2-Nitroaniline		ND		5.0	ug/L	11/02/98
Dimethylphthalate		ND		5.0	ug/L	11/02/98
Acenaphthylene		ND		50	ug/L	11/02/98
3-Nitroaniline		ND		5.0	ug/L	11/02/98
Acenaphthene		ND		50	ug/L	11/02/98
2,4-Dinitrophenol		ND		50	ug/L	11/02/98
4-Nitrophenol		ND		5.0	ug/L	11/02/98
Dibenzofuran		ND		5.0	ug/L	11/02/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/02/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/02/98
Diethylphthalate		ND		5.0	ug/L	11/02/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/02/98
Fluorene		ND		5.0	ug/L	11/02/98
4-Nitroaniline		ND		50	ug/L	11/02/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/02/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/02/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03D 48030988 065 MW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Semivolatile Organics	SW 8270C					
Hexachlorobenzene		ND		5.0	ug/L	11/02/98
Pentachlorophenol		ND		5.0	ug/L	11/02/98
Phenanthrene		ND		5.0	ug/L	11/02/98
Anthracene		ND		5.0	ug/L	11/02/98
Di-n-butylphthalate		ND		5.0	ug/L	11/02/98
Fluoranthene		ND		5.0	ug/L	11/02/98
Pyrene		ND		5.0	ug/L	11/02/98
Butylbenzylphthalate		3.5	JB	5.0	ug/L	11/02/98
3,3'-Dichlorobenzidine		ND		20	ug/L	11/02/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/02/98
Chrysene		ND		5.0	ug/L	11/02/98
Bis(2-Ethylhexyl)phthalate		14	B	5.0	ug/L	11/02/98
Di-n-octylphthalate		ND		5.0	ug/L	11/02/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/02/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/02/98
Benzo(a)pyrene		ND		5.0	ug/L	11/02/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/02/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/02/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	11/02/98
SURROGATES, % Recovery						
2-Fluorophenol		0.640	*	Min: 21	Max: 100	
d5-Phenol		6.60	*	Min: 10	Max: 94	
d5-Nitrobenzene		69.0		Min: 35	Max: 114	
2-Fluorobiphenyl		75.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		16.0		Min: 10	Max: 123	
d14-Terphenyl		96.0		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 03E 48030988 065 MW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units			Analyzed
Organochlorine Pesticides	SW 8081A							
Aldrin		ND		0.025	ug/L			10/26/98
alpha-BHC		ND		0.025	ug/L			10/26/98
beta-BHC		ND		0.025	ug/L			10/26/98
delta-BHC		ND		0.025	ug/L			10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L			10/26/98
alpha-Chlordane		ND		0.025	ug/L			10/26/98
gamma-Chlordane		ND		0.050	ug/L			10/26/98
4,4'-DDD		ND		0.050	ug/L			10/26/98
4,4'-DDE		ND		0.050	ug/L			10/26/98
4,4'-DDT		ND		0.025	ug/L			10/26/98
Dieldrin		ND		0.050	ug/L			10/26/98
Endosulfan I		ND		0.050	ug/L			10/26/98
Endosulfan II		ND		0.050	ug/L			10/26/98
Endosulfan Sulfate		ND		0.050	ug/L			10/26/98
Endrin		ND		0.050	ug/L			10/26/98
Endrin Aldehyde		ND		0.025	ug/L			10/26/98
Heptachlor		ND		0.025	ug/L			10/26/98
Heptachlor Epoxide		ND		0.25	ug/L			10/26/98
Methoxychlor		ND		0.75	ug/L			10/26/98
Toxaphene								
SURROGATES, % Recovery								
Tetrachlorometaxylene		85.0		Min:	45	Max:	124	
Decachlorobiphenyl		85.0		Min:	45	Max:	124	
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		1.0	ug/L			10/26/98
PCB-1232		ND		0.50	ug/L			10/26/98
PCB-1242		ND		0.50	ug/L			10/26/98
PCB-1248		ND		0.50	ug/L			10/26/98
PCB-1254		ND		0.50	ug/L			10/26/98
PCB-1260		ND		0.50	ug/L			10/26/98
PCB-1016		ND		0.50	ug/L			10/26/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		85.0		Min:	29	Max:	133	
Decachlorobiphenyl		85.0		Min:	26	Max:	137	

Sample: 03G 48030988 065 MW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.33		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04A 48030988 066 MW7 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
Toluene		1.1	J	2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		0.54	J	2.0	ug/L	10/13/98
m,p-Xylenes		ND		2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04A 48030988 066 MW7 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		112		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04D 48030988 066 MW7 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/01/98
2-Chlorophenol		ND		5.0	ug/L	11/01/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/01/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/01/98
Benzyl alcohol		ND		10	ug/L	11/01/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/01/98
2-Methylphenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/01/98
4-Methylphenol		ND		5.0	ug/L	11/01/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/01/98
Hexachloroethane		ND		5.0	ug/L	11/01/98
Nitrobenzene		ND		5.0	ug/L	11/01/98
Isophorone		ND		5.0	ug/L	11/01/98
2-Nitrophenol		ND		5.0	ug/L	11/01/98
2,4-Dimethylphenol		ND		50	ug/L	11/01/98
Benzoic acid		ND		5.0	ug/L	11/01/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/01/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/01/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/01/98
Naphthalene		ND		5.0	ug/L	11/01/98
4-Chloroaniline		ND		5.0	ug/L	11/01/98
Hexachlorobutadiene		ND		5.0	ug/L	11/01/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/01/98
2-Methylnaphthalene		ND		5.0	ug/L	11/01/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/01/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/01/98
2,4,5-Trichlorophenol		ND		10	ug/L	11/01/98
2-Chloronaphthalene		ND		50	ug/L	11/01/98
2-Nitroaniline		ND		5.0	ug/L	11/01/98
Dimethylphthalate		ND		5.0	ug/L	11/01/98
Acenaphthylene		ND		50	ug/L	11/01/98
3-Nitroaniline		ND		5.0	ug/L	11/01/98
Acenaphthene		ND		50	ug/L	11/01/98
2,4-Dinitrophenol		ND		50	ug/L	11/01/98
4-Nitrophenol		ND		5.0	ug/L	11/01/98
Dibenzofuran		ND		5.0	ug/L	11/01/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/01/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/01/98
Diethylphthalate		ND		5.0	ug/L	11/01/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/01/98
Fluorene		ND		5.0	ug/L	11/01/98
4-Nitroaniline		ND		50	ug/L	11/01/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/01/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/01/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04D 48030988 066 MW7 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Hexachlorobenzene		ND		5.0	ug/L	11/01/98
Pentachlorophenol		ND		5.0	ug/L	11/01/98
Phenanthrene		ND		5.0	ug/L	11/01/98
Anthracene		ND		5.0	ug/L	11/01/98
Di-n-butylphthalate		ND		5.0	ug/L	11/01/98
Fluoranthene		ND		5.0	ug/L	11/01/98
Pyrene		ND		5.0	ug/L	11/01/98
Butylbenzylphthalate		ND		5.0	ug/L	11/01/98
3,3'-Dichlorobenzidine		ND		20	ug/L	11/01/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/01/98
Chrysene		ND		5.0	ug/L	11/01/98
Bis(2-Ethylhexyl)phthalate		1.4	JB	5.0	ug/L	11/01/98
Di-n-octylphthalate		ND		5.0	ug/L	11/01/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(a)pyrene		ND		5.0	ug/L	11/01/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/01/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/01/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	11/01/98
SURROGATES, % Recovery						
2-Fluorophenol		50.7		Min: 21	Max: 100	
d5-Phenol		44.7		Min: 10	Max: 94	
d5-Nitrobenzene		69.0		Min: 35	Max: 114	
2-Fluorobiphenyl		77.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		66.0		Min: 10	Max: 123	
d14-Terphenyl		63.0		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 04E 48030988 066 MW7 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Organochlorine Pesticides	SW 8081A						
Aldrin		ND		0.025	ug/L		10/26/98
alpha-BHC		ND		0.025	ug/L		10/26/98
beta-BHC		ND		0.025	ug/L		10/26/98
delta-BHC		ND		0.025	ug/L		10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L		10/26/98
alpha-Chlordane		ND		0.025	ug/L		10/26/98
gamma-Chlordane		ND		0.025	ug/L		10/26/98
4,4'-DDD		ND		0.050	ug/L		10/26/98
4,4'-DDE		ND		0.050	ug/L		10/26/98
4,4'-DDT		ND		0.050	ug/L		10/26/98
Dieldrin		ND		0.025	ug/L		10/26/98
Endosulfan I		ND		0.050	ug/L		10/26/98
Endosulfan II		ND		0.050	ug/L		10/26/98
Endosulfan Sulfate		ND		0.050	ug/L		10/26/98
Endrin		ND		0.050	ug/L		10/26/98
Endrin Aldehyde		ND		0.050	ug/L		10/26/98
Heptachlor		ND		0.025	ug/L		10/26/98
Heptachlor Epoxide		ND		0.025	ug/L		10/26/98
Methoxychlor		ND		0.25	ug/L		10/26/98
Toxaphene		ND		0.75	ug/L		10/26/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		80.0		Min:	45	Max:	124
Decachlorobiphenyl		70.0		Min:	45	Max:	124
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		1.0	ug/L		10/26/98
PCB-1232		ND		0.50	ug/L		10/26/98
PCB-1242		ND		0.50	ug/L		10/26/98
PCB-1248		ND		0.50	ug/L		10/26/98
PCB-1254		ND		0.50	ug/L		10/26/98
PCB-1260		ND		0.50	ug/L		10/26/98
PCB-1016		ND		0.50	ug/L		10/26/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		80.0		Min:	29	Max:	133
Decachlorobiphenyl		70.0		Min:	26	Max:	137

Sample: 04G 48030988 066 MW7 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		1.5		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		0.057		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05A 48030988 067 MW4 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
Toluene		1.0	J	2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
m,p-Xylenes		0.49	J	2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene		ND		2.0	ug/L	10/13/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05A 48030988 067 MW4 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		106		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05D 48030988 067 MW4 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/01/98
2-Chlorophenol		ND		5.0	ug/L	11/01/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/01/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/01/98
Benzyl alcohol		ND		10	ug/L	11/01/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/01/98
2-Methylphenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/01/98
4-Methylphenol		ND		5.0	ug/L	11/01/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/01/98
Hexachloroethane		ND		5.0	ug/L	11/01/98
Nitrobenzene		ND		5.0	ug/L	11/01/98
Isophorone		ND		5.0	ug/L	11/01/98
2-Nitrophenol		ND		5.0	ug/L	11/01/98
2,4-Dimethylphenol		ND		50	ug/L	11/01/98
Benzoic acid		ND		5.0	ug/L	11/01/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/01/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/01/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/01/98
Naphthalene		ND		5.0	ug/L	11/01/98
4-Chloroaniline		ND		5.0	ug/L	11/01/98
Hexachlorobutadiene		ND		5.0	ug/L	11/01/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/01/98
2-Methylnaphthalene		ND		5.0	ug/L	11/01/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/01/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/01/98
2,4,5-Trichlorophenol		ND		10	ug/L	11/01/98
2-Chloronaphthalene		ND		50	ug/L	11/01/98
2-Nitroaniline		ND		5.0	ug/L	11/01/98
Dimethylphthalate		ND		5.0	ug/L	11/01/98
Acenaphthylene		ND		50	ug/L	11/01/98
3-Nitroaniline		ND		5.0	ug/L	11/01/98
Acenaphthene		ND		50	ug/L	11/01/98
2,4-Dinitrophenol		ND		50	ug/L	11/01/98
4-Nitrophenol		ND		5.0	ug/L	11/01/98
Dibenzofuran		ND		5.0	ug/L	11/01/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/01/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/01/98
Diethylphthalate		ND		5.0	ug/L	11/01/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/01/98
Fluorene		ND		5.0	ug/L	11/01/98
4-Nitroaniline		ND		50	ug/L	11/01/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/01/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/01/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05D 48030988 067 MW4 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Hexachlorobenzene		ND		5.0	ug/L	11/01/98
Pentachlorophenol		ND		5.0	ug/L	11/01/98
Phenanthrene		ND		5.0	ug/L	11/01/98
Anthracene		ND		5.0	ug/L	11/01/98
Di-n-butylphthalate		ND		5.0	ug/L	11/01/98
Fluoranthene		ND		5.0	ug/L	11/01/98
Pyrene		ND		5.0	ug/L	11/01/98
Butylbenzylphthalate		ND		5.0	ug/L	11/01/98
3,3'-Dichlorobenzidine		ND		20	ug/L	11/01/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/01/98
Chrysene		ND		5.0	ug/L	11/01/98
Bis(2-Ethylhexyl)phthalate		ND		5.0	ug/L	11/01/98
Di-n-octylphthalate		ND		5.0	ug/L	11/01/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(a)pyrene		ND		5.0	ug/L	11/01/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/01/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/01/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	11/01/98
SURROGATES, % Recovery						
2-Fluorophenol		48.7		Min: 21	Max: 100	
d5-Phenol		44.0		Min: 10	Max: 94	
d5-Nitrobenzene		69.0		Min: 35	Max: 114	
2-Fluorobiphenyl		70.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		54.7		Min: 10	Max: 123	
d14-Terphenyl		55.0		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 05E 48030988 067 MW4 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.025	ug/L	10/26/98
alpha-BHC		ND		0.025	ug/L	10/26/98
beta-BHC		ND		0.025	ug/L	10/26/98
delta-BHC		ND		0.025	ug/L	10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L	10/26/98
alpha-Chlordane		ND		0.025	ug/L	10/26/98
gamma-Chlordane		ND		0.050	ug/L	10/26/98
4,4'-DDD		ND		0.050	ug/L	10/26/98
4,4'-DDE		ND		0.050	ug/L	10/26/98
4,4'-DDT		ND		0.025	ug/L	10/26/98
Dieldrin		ND		0.050	ug/L	10/26/98
Endosulfan I		ND		0.050	ug/L	10/26/98
Endosulfan II		ND		0.050	ug/L	10/26/98
Endosulfan Sulfate		ND		0.050	ug/L	10/26/98
Endrin		ND		0.050	ug/L	10/26/98
Endrin Aldehyde		ND		0.025	ug/L	10/26/98
Heptachlor		ND		0.025	ug/L	10/26/98
Heptachlor Epoxide		ND		0.25	ug/L	10/26/98
Methoxychlor		ND		0.75	ug/L	10/26/98
Toxaphene						
SURROGATES, % Recovery						
Tetrachlorometaxylene		90.0		Min: 45	Max: 124	
Decachlorobiphenyl		85.0		Min: 45	Max: 124	
Polychlorinated Biphenyls	SW 8082					
PCB-1221		ND		1.0	ug/L	10/26/98
PCB-1232		ND		0.50	ug/L	10/26/98
PCB-1242		ND		0.50	ug/L	10/26/98
PCB-1248		ND		0.50	ug/L	10/26/98
PCB-1254		ND		0.50	ug/L	10/26/98
PCB-1260		ND		0.50	ug/L	10/26/98
PCB-1016		ND		0.50	ug/L	10/26/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		90.0		Min: 29	Max: 133	
Decachlorobiphenyl		85.0		Min: 26	Max: 137	

Sample: 05G 48030988 067 MW4 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.40		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06A 48030988 068 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		1.1	J	2.0	ug/L	10/13/98
Toluene		ND		2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		0.64	J	2.0	ug/L	10/13/98
m,p-Xylenes		ND		2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene						

Sample: 06A 48030988 068 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06D 48030988 068 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/01/98
2-Chlorophenol		ND		5.0	ug/L	11/01/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/01/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/01/98
Benzyl alcohol		ND		10	ug/L	11/01/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/01/98
2-Methylphenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/01/98
4-Methylphenol		ND		5.0	ug/L	11/01/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/01/98
Hexachloroethane		ND		5.0	ug/L	11/01/98
Nitrobenzene		ND		5.0	ug/L	11/01/98
Isophorone		ND		5.0	ug/L	11/01/98
2-Nitrophenol		ND		5.0	ug/L	11/01/98
2,4-Dimethylphenol		ND		5.0	ug/L	11/01/98
Benzoic acid		ND		50	ug/L	11/01/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/01/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/01/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/01/98
Naphthalene		ND		5.0	ug/L	11/01/98
4-Chloroaniline		ND		5.0	ug/L	11/01/98
Hexachlorobutadiene		ND		5.0	ug/L	11/01/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/01/98
2-Methylnaphthalene		ND		5.0	ug/L	11/01/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/01/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/01/98
2,4,5-Trichlorophenol		ND		5.0	ug/L	11/01/98
2-Chloronaphthalene		ND		10	ug/L	11/01/98
2-Nitroaniline		ND		50	ug/L	11/01/98
Dimethylphthalate		ND		5.0	ug/L	11/01/98
Acenaphthylene		ND		5.0	ug/L	11/01/98
3-Nitroaniline		ND		50	ug/L	11/01/98
Acenaphthene		ND		5.0	ug/L	11/01/98
2,4-Dinitrophenol		ND		50	ug/L	11/01/98
4-Nitrophenol		ND		50	ug/L	11/01/98
Dibenzofuran		ND		5.0	ug/L	11/01/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/01/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/01/98
Diethylphthalate		ND		5.0	ug/L	11/01/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/01/98
Fluorene		ND		5.0	ug/L	11/01/98
4-Nitroaniline		ND		50	ug/L	11/01/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/01/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/01/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06D 48030988 068 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Semivolatile Organics	SW 8270C					
Hexachlorobenzene		ND		5.0	ug/L	11/01/98
Pentachlorophenol		ND		5.0	ug/L	11/01/98
Phenanthrene		ND		5.0	ug/L	11/01/98
Anthracene		ND		5.0	ug/L	11/01/98
Di-n-butylphthalate		ND		5.0	ug/L	11/01/98
Fluoranthene		ND		5.0	ug/L	11/01/98
Pyrene		ND		5.0	ug/L	11/01/98
Butylbenzylphthalate		ND		5.0	ug/L	11/01/98
3,3'-Dichlorobenzidine		ND		20	ug/L	11/01/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/01/98
Chrysene		ND		5.0	ug/L	11/01/98
Bis(2-Ethylhexyl)phthalate		1.3	JB	5.0	ug/L	11/01/98
Di-n-octylphthalate		ND		5.0	ug/L	11/01/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(a)pyrene		ND		5.0	ug/L	11/01/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/01/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/01/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	11/01/98
SURROGATES, % Recovery						
2-Fluorophenol		51.3		Min: 21	Max: 100	
d5-Phenol		46.7		Min: 10	Max: 94	
d5-Nitrobenzene		67.0		Min: 35	Max: 114	
2-Fluorobiphenyl		70.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		61.3		Min: 10	Max: 123	
d14-Terphenyl		74.0		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 06E 48030988 068 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units		Analyzed
Organochlorine Pesticides	SW 8081A						
Aldrin		ND		0.025	ug/L		10/26/98
alpha-BHC		ND		0.025	ug/L		10/26/98
beta-BHC		ND		0.025	ug/L		10/26/98
delta-BHC		ND		0.025	ug/L		10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L		10/26/98
alpha-Chlordane		ND		0.025	ug/L		10/26/98
gamma-Chlordane		ND		0.050	ug/L		10/26/98
4,4'-DDD		ND		0.050	ug/L		10/26/98
4,4'-DDE		ND		0.050	ug/L		10/26/98
4,4'-DDT		ND		0.025	ug/L		10/26/98
Dieldrin		ND		0.050	ug/L		10/26/98
Endosulfan I		ND		0.050	ug/L		10/26/98
Endosulfan II		ND		0.050	ug/L		10/26/98
Endosulfan Sulfate		ND		0.050	ug/L		10/26/98
Endrin		ND		0.050	ug/L		10/26/98
Endrin Aldehyde		ND		0.025	ug/L		10/26/98
Heptachlor		ND		0.025	ug/L		10/26/98
Heptachlor Epoxide		ND		0.25	ug/L		10/26/98
Methoxychlor		ND		0.75	ug/L		10/26/98
Toxaphene							
SURROGATES, % Recovery							
Tetrachlorometaxylene		75.0		Min: 45		Max: 124	
Decachlorobiphenyl		95.0		Min: 45		Max: 124	
Polychlorinated Biphenyls	SW 8082						
PCB-1221		ND		1.0	ug/L		10/26/98
PCB-1232		ND		0.50	ug/L		10/26/98
PCB-1242		ND		0.50	ug/L		10/26/98
PCB-1248		ND		0.50	ug/L		10/26/98
PCB-1254		ND		0.50	ug/L		10/26/98
PCB-1260		ND		0.50	ug/L		10/26/98
PCB-1016		ND		0.50	ug/L		10/26/98
SURROGATES, % Recovery							
Tetrachlorometaxylene		75.0		Min: 29		Max: 133	
Decachlorobiphenyl		95.0		Min: 26		Max: 137	

Sample: 06G 48030988 068 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.34		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 07A 48030988 069 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
Toluene		0.75	J	2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
m,p-Xylenes		0.40	J	2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene		ND		2.0	ug/L	10/13/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 07A 48030988 069 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		102		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 07D 48030988 069 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/01/98
2-Chlorophenol		ND		5.0	ug/L	11/01/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/01/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/01/98
Benzyl alcohol		ND		10	ug/L	11/01/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/01/98
2-Methylphenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/01/98
4-Methylphenol		ND		5.0	ug/L	11/01/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/01/98
Hexachloroethane		ND		5.0	ug/L	11/01/98
Nitrobenzene		ND		5.0	ug/L	11/01/98
Isophorone		ND		5.0	ug/L	11/01/98
2-Nitrophenol		ND		5.0	ug/L	11/01/98
2,4-Dimethylphenol		ND		50	ug/L	11/01/98
Benzoic acid		ND		5.0	ug/L	11/01/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/01/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/01/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/01/98
Naphthalene		ND		5.0	ug/L	11/01/98
4-Chloroaniline		ND		5.0	ug/L	11/01/98
Hexachlorobutadiene		ND		5.0	ug/L	11/01/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/01/98
2-Methylnaphthalene		ND		5.0	ug/L	11/01/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/01/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/01/98
2,4,5-Trichlorophenol		ND		10	ug/L	11/01/98
2-Chloronaphthalene		ND		50	ug/L	11/01/98
2-Nitroaniline		ND		5.0	ug/L	11/01/98
Dimethylphthalate		ND		5.0	ug/L	11/01/98
Acenaphthylene		ND		50	ug/L	11/01/98
3-Nitroaniline		ND		5.0	ug/L	11/01/98
Acenaphthene		ND		50	ug/L	11/01/98
2,4-Dinitrophenol		ND		50	ug/L	11/01/98
4-Nitrophenol		ND		5.0	ug/L	11/01/98
Dibenzofuran		ND		5.0	ug/L	11/01/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/01/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/01/98
Diethylphthalate		ND		5.0	ug/L	11/01/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/01/98
Fluorene		ND		5.0	ug/L	11/01/98
4-Nitroaniline		ND		50	ug/L	11/01/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/01/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/01/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 07D 48030988 069 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C	(continued from previous page)				
Hexachlorobenzene		ND		5.0	ug/L	11/01/98
Pentachlorophenol		ND		5.0	ug/L	11/01/98
Phenanthrene		ND		5.0	ug/L	11/01/98
Anthracene		ND		5.0	ug/L	11/01/98
Di-n-butylphthalate		ND		5.0	ug/L	11/01/98
Fluoranthene		ND		5.0	ug/L	11/01/98
Pyrene		ND		5.0	ug/L	11/01/98
Butylbenzylphthalate		ND		5.0	ug/L	11/01/98
3,3'-Dichlorobenzidine		ND		20	ug/L	11/01/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/01/98
Chrysene		ND		5.0	ug/L	11/01/98
Bis(2-Ethylhexyl)phthalate		ND		5.0	ug/L	11/01/98
Di-n-octylphthalate		ND		5.0	ug/L	11/01/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(a)pyrene		ND		5.0	ug/L	11/01/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/01/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/01/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	11/01/98
SURROGATES, % Recovery						
2-Fluorophenol		0.733	*	Min: 21	Max: 100	
d5-Phenol		4.27	*	Min: 10	Max: 94	
d5-Nitrobenzene		74.0		Min: 35	Max: 114	
2-Fluorobiphenyl		75.0		Min: 43	Max: 116	
2,4,6-Tribromophenol		10.0		Min: 10	Max: 123	
d14-Terphenyl		84.0		Min: 33	Max: 141	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 07E 48030988 069 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units			Analyzed
Organochlorine Pesticides	SW 8081A							
Aldrin		ND		0.025	ug/L			10/26/98
alpha-BHC		ND		0.025	ug/L			10/26/98
beta-BHC		ND		0.025	ug/L			10/26/98
delta-BHC		ND		0.025	ug/L			10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L			10/26/98
alpha-Chlordane		ND		0.025	ug/L			10/26/98
gamma-Chlordane		ND		0.050	ug/L			10/26/98
4,4'-DDD		ND		0.050	ug/L			10/26/98
4,4'-DDE		ND		0.050	ug/L			10/26/98
4,4'-DDT		ND		0.025	ug/L			10/26/98
Dieldrin		ND		0.050	ug/L			10/26/98
Endosulfan I		ND		0.050	ug/L			10/26/98
Endosulfan II		ND		0.050	ug/L			10/26/98
Endosulfan Sulfate		ND		0.050	ug/L			10/26/98
Endrin		ND		0.050	ug/L			10/26/98
Endrin Aldehyde		ND		0.025	ug/L			10/26/98
Heptachlor		ND		0.025	ug/L			10/26/98
Heptachlor Epoxide		ND		0.25	ug/L			10/26/98
Methoxychlor		ND		0.75	ug/L			10/26/98
Toxaphene								
SURROGATES, % Recovery								
Tetrachlorometaxylene		75.0		Min:	45	Max:	124	
Decachlorobiphenyl		75.0		Min:	45	Max:	124	
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		1.0	ug/L			10/26/98
PCB-1232		ND		0.50	ug/L			10/26/98
PCB-1242		ND		0.50	ug/L			10/26/98
PCB-1248		ND		0.50	ug/L			10/26/98
PCB-1254		ND		0.50	ug/L			10/26/98
PCB-1260		ND		0.50	ug/L			10/26/98
PCB-1016		ND		0.50	ug/L			10/26/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		75.0		Min:	29	Max:	133	
Decachlorobiphenyl		75.0		Min:	26	Max:	137	

Sample: 07G 48030988 069 CMW5 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.42		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		ND		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 08A 48030988 070 CMW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		ND		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
Toluene		1.1	J	2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
m,p-Xylenes		1.1	J	2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 08A 48030988 070 CMW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Volatiles by GC/MS	SW 8260B					
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		102		Min: 86	Max: 115	

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 08D 48030988 070 CMW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Semivolatile Organics	SW 8270C					
Phenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroethyl) ether		ND		5.0	ug/L	11/01/98
2-Chlorophenol		ND		5.0	ug/L	11/01/98
1,3-Dichlorobenzene		ND		5.0	ug/L	11/01/98
1,4-Dichlorobenzene		ND		5.0	ug/L	11/01/98
Benzyl alcohol		ND		10	ug/L	11/01/98
1,2-Dichlorobenzene		ND		5.0	ug/L	11/01/98
2-Methylphenol		ND		5.0	ug/L	11/01/98
bis(2-Chloroisopropyl) ether		ND		5.0	ug/L	11/01/98
4-Methylphenol		ND		5.0	ug/L	11/01/98
n-Nitroso-di-n-propylamine		ND		5.0	ug/L	11/01/98
Hexachloroethane		ND		5.0	ug/L	11/01/98
Nitrobenzene		ND		5.0	ug/L	11/01/98
Isophorone		ND		5.0	ug/L	11/01/98
2-Nitrophenol		ND		5.0	ug/L	11/01/98
2,4-Dimethylphenol		ND		5.0	ug/L	11/01/98
Benzoic acid		ND		50	ug/L	11/01/98
bis(2-Chloroethoxy)methane		ND		5.0	ug/L	11/01/98
2,4-Dichlorophenol		ND		5.0	ug/L	11/01/98
1,2,4-Trichlorobenzene		ND		5.0	ug/L	11/01/98
Naphthalene		ND		5.0	ug/L	11/01/98
4-Chloroaniline		ND		5.0	ug/L	11/01/98
Hexachlorobutadiene		ND		5.0	ug/L	11/01/98
4-Chloro-3-methylphenol		ND		5.0	ug/L	11/01/98
2-Methylnaphthalene		ND		5.0	ug/L	11/01/98
Hexachlorocyclopentadiene		ND		5.0	ug/L	11/01/98
2,4,6-Trichlorophenol		ND		5.0	ug/L	11/01/98
2,4,5-Trichlorophenol		ND		5.0	ug/L	11/01/98
2-Chloronaphthalene		ND		10	ug/L	11/01/98
2-Nitroaniline		ND		50	ug/L	11/01/98
Dimethylphthalate		ND		5.0	ug/L	11/01/98
Acenaphthylene		ND		5.0	ug/L	11/01/98
3-Nitroaniline		ND		50	ug/L	11/01/98
Acenaphthene		ND		5.0	ug/L	11/01/98
2,4-Dinitrophenol		ND		50	ug/L	11/01/98
4-Nitrophenol		ND		50	ug/L	11/01/98
Dibenzofuran		ND		5.0	ug/L	11/01/98
2,6-Dinitrotoluene		ND		5.0	ug/L	11/01/98
2,4-Dinitrotoluene		ND		5.0	ug/L	11/01/98
Diethylphthalate		ND		5.0	ug/L	11/01/98
4-Chlorophenyl-phenylether		ND		5.0	ug/L	11/01/98
Fluorene		ND		5.0	ug/L	11/01/98
4-Nitroaniline		ND		50	ug/L	11/01/98
4,6-Dinitro-2-methylphenol		ND		5.0	ug/L	11/01/98
n-Nitrosodiphenylamine		ND		5.0	ug/L	11/01/98
4-Bromophenyl-phenylether						

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 08D 48030988 070 CMW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
		(continued from previous page)				
Semivolatile Organics	SW 8270C					
Hexachlorobenzene		ND		5.0	ug/L	11/01/98
Pentachlorophenol		ND		5.0	ug/L	11/01/98
Phenanthrene		ND		5.0	ug/L	11/01/98
Anthracene		ND		5.0	ug/L	11/01/98
Di-n-butylphthalate		ND		5.0	ug/L	11/01/98
Fluoranthene		ND		5.0	ug/L	11/01/98
Pyrene		ND		5.0	ug/L	11/01/98
Butylbenzylphthalate		ND		5.0	ug/L	11/01/98
3,3'-Dichlorobenzidine		ND		20	ug/L	11/01/98
Benzo(a)Anthracene		ND		5.0	ug/L	11/01/98
Chrysene		ND		5.0	ug/L	11/01/98
Bis(2-Ethylhexyl)phthalate		1.0	JB	5.0	ug/L	11/01/98
Di-n-octylphthalate		ND		5.0	ug/L	11/01/98
Benzo(b)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(k)fluoranthene		ND		5.0	ug/L	11/01/98
Benzo(a)pyrene		ND		5.0	ug/L	11/01/98
Indeno(1,2,3-cd)pyrene		ND		5.0	ug/L	11/01/98
Dibenz(a,h)anthracene		ND		5.0	ug/L	11/01/98
Benzo(g,h,i)perylene		ND		5.0	ug/L	11/01/98
SURROGATES, % Recovery						
2-Fluorophenol		48.0		Min: 21	Max: 100	
d5-Phenol		16.7		Min: 10	Max: 94	
d5-Nitrobenzene		73.0		Min: 35	Max: 114	
2-Fluorobiphenyl		180	*	Min: 43	Max: 116	
2,4,6-Tribromophenol		80.0		Min: 10	Max: 123	
d14-Terphenyl		69.0		Min: 33	Max: 141	

Sample: 08E 48030988 070 CMW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units			Analyzed
Organochlorine Pesticides	SW 8081A							
Aldrin		ND		0.025	ug/L			10/26/98
alpha-BHC		ND		0.025	ug/L			10/26/98
beta-BHC		ND		0.025	ug/L			10/26/98
delta-BHC		ND		0.025	ug/L			10/26/98
gamma-BHC (Lindane)		ND		0.025	ug/L			10/26/98
alpha-Chlordane		ND		0.025	ug/L			10/26/98
gamma-Chlordane		ND		0.050	ug/L			10/26/98
4,4'-DDD		ND		0.050	ug/L			10/26/98
4,4'-DDE		ND		0.050	ug/L			10/26/98
4,4'-DDT		ND		0.025	ug/L			10/26/98
Dieldrin		ND		0.050	ug/L			10/26/98
Endosulfan I		ND		0.050	ug/L			10/26/98
Endosulfan II		ND		0.050	ug/L			10/26/98
Endosulfan Sulfate		ND		0.050	ug/L			10/26/98
Endrin		ND		0.050	ug/L			10/26/98
Endrin Aldehyde		ND		0.025	ug/L			10/26/98
Heptachlor		ND		0.025	ug/L			10/26/98
Heptachlor Epoxide		ND		0.25	ug/L			10/26/98
Methoxychlor		ND		0.75	ug/L			10/26/98
Toxaphene								
SURROGATES, % Recovery								
Tetrachlorometaxylene		65.0		Min:	45	Max:	124	
Decachlorobiphenyl		17.0	*	Min:	45	Max:	124	
Polychlorinated Biphenyls	SW 8082							
PCB-1221		ND		1.0	ug/L			10/26/98
PCB-1232		ND		0.50	ug/L			10/26/98
PCB-1242		ND		0.50	ug/L			10/26/98
PCB-1248		ND		0.50	ug/L			10/26/98
PCB-1254		ND		0.50	ug/L			10/26/98
PCB-1260		ND		0.50	ug/L			10/26/98
PCB-1016		ND		0.50	ug/L			10/26/98
SURROGATES, % Recovery								
Tetrachlorometaxylene		65.0		Min:	29	Max:	133	
Decachlorobiphenyl		17.0	*	Min:	26	Max:	137	

Sample: 08G 48030988 070 CMW1 Collected: 09/30/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010					
Arsenic		ND		0.050	mg/L	10/15/98
Barium		0.79		0.020	mg/L	10/15/98
Cadmium		ND		0.0050	mg/L	10/15/98
Chromium		0.011		0.010	mg/L	10/15/98
Lead		ND		0.050	mg/L	10/15/98
Selenium		ND		0.10	mg/L	10/15/98
Silver		ND		0.010	mg/L	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	ND		0.0020	mg/L	10/20/98

Sample: 09A TRIP BLANK Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B					
Dichlorodifluoromethane		ND		5.0	ug/L	10/13/98
Chloromethane		ND		5.0	ug/L	10/13/98
Vinyl Chloride		ND		2.0	ug/L	10/13/98
Bromomethane		ND		5.0	ug/L	10/13/98
Chloroethane		ND		5.0	ug/L	10/13/98
Trichlorofluoromethane		ND		2.0	ug/L	10/13/98
1,1-Dichloroethene		ND		2.0	ug/L	10/13/98
Trichlorotrifluoroethane		ND		2.0	ug/L	10/13/98
Methylene Chloride		11		10	ug/L	10/13/98
trans-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
1,1-Dichloroethane		ND		2.0	ug/L	10/13/98
2,2-Dichloropropane		ND		2.0	ug/L	10/13/98
cis-1,2-Dichloroethene		ND		2.0	ug/L	10/13/98
Bromochloromethane		ND		2.0	ug/L	10/13/98
Chloroform		ND		2.0	ug/L	10/13/98
1,1,1-Trichloroethane		ND		2.0	ug/L	10/13/98
Carbon Tetrachloride		ND		2.0	ug/L	10/13/98
1,1-Dichloropropene		ND		2.0	ug/L	10/13/98
Benzene		ND		2.0	ug/L	10/13/98
1,2-Dichloroethane		ND		2.0	ug/L	10/13/98
Trichloroethene		ND		2.0	ug/L	10/13/98
1,2-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromomethane		ND		2.0	ug/L	10/13/98
Bromodichloromethane		ND		2.0	ug/L	10/13/98
cis-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
Toluene		0.94	J	2.0	ug/L	10/13/98
trans-1,3-Dichloropropene		ND		2.0	ug/L	10/13/98
1,1,2-Trichloroethane		ND		2.0	ug/L	10/13/98
Tetrachloroethene		ND		2.0	ug/L	10/13/98
1,3-Dichloropropane		ND		2.0	ug/L	10/13/98
Dibromochloromethane		ND		2.0	ug/L	10/13/98
1,2-Dibromoethane		ND		2.0	ug/L	10/13/98
Chlorobenzene		ND		2.0	ug/L	10/13/98
Ethylbenzene		ND		2.0	ug/L	10/13/98
1,1,1,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
m,p-Xylenes		0.63	J	2.0	ug/L	10/13/98
o-Xylene		ND		2.0	ug/L	10/13/98
Styrene		ND		2.0	ug/L	10/13/98
Bromoform		ND		2.0	ug/L	10/13/98
Isopropylbenzene		ND		2.0	ug/L	10/13/98
Bromobenzene		ND		2.0	ug/L	10/13/98
n-Propylbenzene		ND		2.0	ug/L	10/13/98
1,1,2,2-Tetrachloroethane		ND		2.0	ug/L	10/13/98
1,2,3-Trichloropropane		ND		2.0	ug/L	10/13/98
2-Chlorotoluene		ND		2.0	ug/L	10/13/98
1,3,5-Trimethylbenzene		ND		2.0	ug/L	10/13/98
4-Chlorotoluene		ND		2.0	ug/L	10/13/98

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 09A TRIP BLANK Collected: 09/29/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Volatiles by GC/MS	SW 8260B	(continued from previous page)				
tert-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2,4-Trimethylbenzene		ND		2.0	ug/L	10/13/98
sec-Butylbenzene		ND		2.0	ug/L	10/13/98
4-Isopropyltoluene		ND		2.0	ug/L	10/13/98
1,3-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,4-Dichlorobenzene		ND		2.0	ug/L	10/13/98
n-Butylbenzene		ND		2.0	ug/L	10/13/98
1,2-Dichlorobenzene		ND		2.0	ug/L	10/13/98
1,2-Dibromo-3-chloropropane		ND		10	ug/L	10/13/98
1,2,4-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Hexachlorobutadiene		ND		2.0	ug/L	10/13/98
Napthalene		ND		2.0	ug/L	10/13/98
1,2,3-Trichlorobenzene		ND		2.0	ug/L	10/13/98
Acetone		ND		50	ug/L	10/13/98
Acrylonitrile		ND		10	ug/L	10/13/98
2-Butanone		ND		50	ug/L	10/13/98
Carbon Disulfide		ND		2.0	ug/L	10/13/98
trans-1,4-Dichloro-2-buten		ND		10	ug/L	10/13/98
2-Chloroethyl Vinyl Ether		ND		10	ug/L	10/13/98
2-Hexanone		ND		20	ug/L	10/13/98
Iodomethane		ND		2.0	ug/L	10/13/98
4-Methyl-2-pentanone		ND		20	ug/L	10/13/98
Vinyl Acetate		ND		5.0	ug/L	10/13/98
tert-Butyl methyl ether		ND		2.0	ug/L	10/13/98
SURROGATES, % Recovery						
Dibromofluoromethane		100		Min: 80	Max: 120	
Toluene d-8		104		Min: 88	Max: 110	
p-Bromofluorobenzene		106		Min: 86	Max: 115	

THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field...
ND = not detected at the reported limit
NA = analyte not applicable (see case narrative/methods for discussion)

Q (qualifier) field...
GENERAL:
* = Recovery or %RPD outside method specifications
H = value is estimated due to analysis run outside EPA holding times
E = reported concentration is above the instrument calibration range
D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences

ORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected in the laboratory method blank
J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)

INORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)
W = post digestion spike did not meet criteria (85-115%)
S = reported value determined by the Method of Standard Additions

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

PCB_8W:	POLYCHLORINATED BIPHENYLS	METHOD: 8082
3520_P:	Continuous Liquid-Liquid Extraction (Pesticides)	METHOD: 3520B
PCBPRS:	Continuous Liquid-Liquid Extraction (PCBs)	METHOD: 3520B
PST_8W:	ORGANOCHLORINE PESTICIDES	METHOD: 8081A
1311EM:	TCLP EXTRACTION Toxicity Characteristic Leachate Procedure (Metals)	METHOD: 1311
1311HG:	MERCURY, TCLP Extracted Maximum Contaminant Level (mg/L)	METHOD: 1311/7470 0.2
ICPTWE:	Acid Digestion of TCLP Extracts for Total Metals Analysis by Inductively Coupled Plasma (ICP) Spectroscopy according to SW-846.	METHOD: 3010A
1311_M:	METALS (ICP), TCLP Extracted Maximum Contaminant Level (mg/L)	METHOD: 1311/6010
	Arsenic	5.0
	Barium	100
	Cadmium	1.0
	Chromium	5.0
	Lead	5.0
	Selenium	1.0
	Silver	5.0
8260_W:	VOLATILE ORGANIC COMPOUNDS (GC/MS)	METHOD: 8260B
3520_B:	Continuous Liquid-Liquid Extraction - BNAs The continuous liquid-liquid extraction used with this method (3520) is modified to conform with the EPA-CLP methodology (OLM01.0) in which dual pH extraction has been replaced with one 18 hour extraction at a pH of <2.0.	METHOD: 3520B
8270_W:	SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)	METHOD: 8270

Order # 98-10-036
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 01A 48030988 063 CMW3 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/29/98	10/05/98	NA		10/13/98

Sample: 01D 48030988 063 CMW3 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/29/98	10/05/98	NA	10/05/98	10/31/98

Sample: 01E 48030988 063 CMW3 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/29/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/29/98	10/05/98	NA	10/06/98	10/26/98

Sample: 01G 48030988 063 CMW3 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/29/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/29/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 02A 48030988 064 CMW6 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/29/98	10/05/98	NA		10/13/98

Sample: 02D 48030988 064 CMW6 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/29/98	10/05/98	NA	10/05/98	11/02/98

Sample: 02E 48030988 064 CMW6 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/29/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/29/98	10/05/98	NA	10/06/98	10/26/98

Sample: 02G 48030988 064 CMW6 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/29/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/29/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 03A 48030988 065 MW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/30/98	10/05/98	NA		10/13/98

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ANALYTICA, INC.

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Sample: 03D 48030988 065 MW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/30/98	10/05/98	NA	10/05/98	11/02/98

Sample: 03E 48030988 065 MW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/30/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/30/98	10/05/98	NA	10/06/98	10/26/98

Sample: 03G 48030988 065 MW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/30/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/30/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 04A 48030988 066 MW7 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/30/98	10/05/98	NA		10/13/98

Sample: 04D 48030988 066 MW7 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/30/98	10/05/98	NA	10/05/98	11/01/98

Sample: 04E 48030988 066 MW7 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/30/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/30/98	10/05/98	NA	10/06/98	10/26/98

Sample: 04G 48030988 066 MW7 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/30/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/30/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 05A 48030988 067 MW4 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/30/98	10/05/98	NA		10/13/98

Sample: 05D 48030988 067 MW4 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/30/98	10/05/98	NA	10/05/98	11/01/98

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Sample: 05E 48030988 067 MW4 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/30/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/30/98	10/05/98	NA	10/06/98	10/26/98

Sample: 05G 48030988 067 MW4 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/30/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/30/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 06A 48030988 068 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/30/98	10/05/98	NA		10/13/98

Sample: 06D 48030988 068 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/30/98	10/05/98	NA	10/05/98	11/01/98

Sample: 06E 48030988 068 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/30/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/30/98	10/05/98	NA	10/06/98	10/26/98

Sample: 06G 48030988 068 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/30/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/30/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 07A 48030988 069 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/30/98	10/05/98	NA		10/13/98

Sample: 07D 48030988 069 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/30/98	10/05/98	NA	10/05/98	11/01/98

Sample: 07E 48030988 069 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/30/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/30/98	10/05/98	NA	10/06/98	10/26/98

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Sample: 07G 48030988 069 CMW5 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/30/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/30/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 08A 48030988 070 CMW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/30/98	10/05/98	NA		10/13/98

Sample: 08D 48030988 070 CMW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Semivolatile Organics	SW 8270C	09/30/98	10/05/98	NA	10/05/98	11/01/98

Sample: 08E 48030988 070 CMW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Organochlorine Pesticides	SW 8081A	09/30/98	10/05/98	NA	10/06/98	10/26/98
Polychlorinated Biphenyls	SW 8082	09/30/98	10/05/98	NA	10/06/98	10/26/98

Sample: 08G 48030988 070 CMW1 — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
ICP Metals, TCLP Extracted	SW 1311/6010	09/30/98	10/05/98	10/12/98	10/14/98	10/15/98
Mercury, TCLP Extracted	SW 1311/7470	09/30/98	10/05/98	10/12/98	10/20/98	10/20/98

Sample: 09A TRIP BLANK — Matrix: WATER

Analysis	Method	Collected	Received	TCLP date	Extracted	Analyzed
Volatiles by GC/MS	SW 8260B	09/29/98	10/05/98	NA		10/13/98

ANALYTICA
ALASKA INC.
Web www.analyticagroup.com

811 W. 8th Ave.
Anchorage, AK 99501
(907) 258-2155
FAX (907) 258-6634
E-Mail analytic@eagle ptialaska.net

5438 Shaune Drive
Juneau, AK 99801
(907) 780-6668
FAX (907) 780-6670

325 Interlocken Parkway,
Suite 200
Broomfield, Colorado 80021
(303) 469-8868
FAX: (303) 469-5254

LGN: 98/0036
CSN: A80929

84 269

Chain of Custody Record / Analysis Request

Company Name: 611 CES /CEVO
Company Address: 21885 2ND ST. EIELSONDORF AFB AK 99506-4420
Telephone: (907) 552-1617
FAX (907) 552-4601
Project Name: CAPE ROMANZOV HAND FILL
Report To: CARL HORNIG
Sampler: CH
P O. Number

Sample ID	Date Collected	Time Collected	Matrix Soil/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml. VOA/HCl	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	8260	8270	8080	TCLP MTLS	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
48030988062 CMW2	29 SEP	1545	W							✓		✓	✓	✓	✓	✓	✓				
063 CMW3		1825	W							✓		✓	✓	✓	✓	✓	✓				
064 CMW6		1610	W							✓		✓	✓	✓	✓	✓	✓				
065 MW1	30 SEP	1115	W							✓		✓	✓	✓	✓	✓	✓				
066 MW7		1335	W							✓		✓	✓	✓	✓	✓	✓				
067 MW4		1830	W							✓		✓	✓	✓	✓	✓	✓				
068 CMW5		1450	W							✓		✓	✓	✓	✓	✓	✓				
069 CMW5		1500	W							✓		✓	✓	✓	✓	✓	✓				
070 CMW1		1650	W							✓				✓							
TRIP BLANK			W																		

OT Received

COMMENTS: 48030988062 CMW2 RECEIVED W/O LABELS OR VIALS.
C-O-C Received w/o Analysis Marked
ANALYZE WATER PHASE ONLY - DO NOT HOMOGENIZE SAMPLE.

DELIVERABLES
- [X] Level I
- [ ] ADEC Format
- [ ] ACOE
- [ ] Other
- [ ] EDF - Format: _____ specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [X] 10-15 Business Days
- [ ] other _____ #Business Days

ANALYTICA USE ONLY: ASD21078
Airbill / Freight #: Security Division
Condition of Sample Containers: No bill
Temp Received: A+D °C
# of Coolers: 1
Seals: A | B | C. | D
3.2°C | 3.8°C | | 6.0°C
OF 1

RELINQUISHED BY SAMPLER	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY
Signature: Carl A Horning	Signature:	Signature:	Signature:
Printed Name: CARL A HORNIG	Printed Name: B. OLSON	Printed Name:	Printed Name:
Firm	Firm: ANALYTICA	Firm:	Firm: Analytica
Date/Time	Date/Time: 10/02/98 12:00	Date/Time: 10/2/98 1350	Date/Time: 10-3-98 8:00

INSTRUCTIONS FOR COMPLETING CHAIN-OF-CUSTODY RECORD

Record the client name, address, contact, and a phone and fax number where the client contact can be reached in case of questions.

Project ID/Description: Record the name of the project of client/site location, and the project number as assigned by the field team. (example-613215; x,y,z Chemical Co., WA).

P.O.: Record a purchase order number for billing and reference purposes.

Sample Matrix: Use on (1) chain-of-custody record per sample matrix. Circle the matrix which most accurately represents the samples included on the C-O-C, (i.e. water, soil, oil, sludge). For multiphasic samples (e.g., oil and water), or a non1listed matrix, circle "other" and describe the matrix in the space provided.

Date and Time Collected: Record the date and exact time each sample was collected. Use 24 hr. clock.

Client ID: List the complete identifying name/number of each of the samples you send. These ID's must correspond with the identifying labels on the sample containers.

Number of Containers: Indicate the number of containers being shipped for the respective samples to be analyzed.

Comments: The comment section can be used to record the waybill or air bill number if the samples are being sent by a shipping company, any special instructions to the laboratory regarding the processing of the samples or an indication if the samples are suspected to contain high concentrations of any hazardous materials.

Signatures: When releasing custody of these samples, use the "Relinquished By" space to sign your full name, date and time of release. After verifying that all samples indicated are present, the person receiving the samples will sign in the "Received By" space to take custody of the samples.

All other sections of the C-O-C record are for Analytica use, and should be left blank.

COOLER RECEIPT FORM

CLIENT Elmendorf AFB CSN# A80524 PROJECT Cape Romanzoff ORD# 9810036

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS/DISCREPANCIES

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 10-5-98 Chain of Custody # —

by print [illegible] sign [illegible]

1. Did cooler come with a shipping slip air bill, etc. ? YES NO
   If YES, enter carrier name & air bill number here: Fedex 812886478 2
2. Were custody seals on outside of cooler? YES NO
   How many & where: 2 Sides seal date: 10-2-98 seal name: L. Andella
3. Were custody seals unbroken and intact on the date and time of arrival? YES NO
4. Did you screen samples for radioactivity using the Geiger Counter? YES NO
5. Were custody papers sealed in a plastic bag & taped inside to the lid? YES NO
6. Were custody papers filled out properly ink, signed, etc ? YES NO
7. Did you sign custody papers in the appropriate place? YES NO
8. Was project identifiable from custody paper?, If yes, enter project name at the top of this form YES NO
9. If required, was enough ice used? YES NO Type of ice: WET BLUE Temp 4 °C
10. Have designate person initial here to acknowledge receipt of cooler: [illegible] date: 10-5-98

B. LOG-IN PHASE: Date samples were logged-in: 10-5-98

by print [illegible] sign [illegible]

11. Describe type of packing in cooler: Bubble wrap Absorbent Pads
12. Were all bottles sealed in separate plastic bags? YES NO
13. Did all bottles arrive unbroken & were labels in good condition? YES NO
14. Were all bottle labels complete ID,date,time,signature,preservative,etc. ? N. Tests YES NO
15. Did all bottle labels agree with custody papers? YES NO
16. Number of samples received 9 Number of bottles received 59
17. Were correct containers used for the tests indicated? YES NO
18. Were correct preservatives added to samples? YES NO
19. Was a sufficient amount of sample sent for tests indicated? YES NO
20. Were bubbles absent in volatile samples? If NO, list by Sample #/ID All samples had YES NO
21. Was the project manager called and status discussed? If yes, give details on the back of this form YES NO
22. Who was called? Angie By whom? Claire date 10-5-98

.84 272

Rest & PCB required confirmed by Angie

84 273

Facsimile Cover Page

Analytica Environmental Laboratories, Inc.
325 Interlocken Parkway Suite 200
Broomfield, CO 80021

Voice: (303) 469-8868 **Fax:** (303) 469-5254

Sender: Claire Toon
Sent: Thursday, Dec 3, 1998 4:19 p.m.

To:

Company: 611 CES/CEVO
Phone:
FAX: 1-907-552-4601

Please Deliver to:

Carl Hornig

Pages: 8

Message:

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84 274

à

Department of the Air Force
611 CES/CEVO
21-885 2nd St.
Elmendorf AFB, AK 99506-0875
Attn: Carl A. Hornig

Order #: 98-11-140
Date: 12/03/98 16:08
Work ID: CAPE ROMANZOF - CALL #B002
Date Received: 11/17/98
Date Completed: 12/03/98

à

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988054 SW1
02	48030988059 SW1

à Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. A listing of data qualifiers and analytical codes is located on the TEST METHODOLOGIES page at the end of the report.

a If you have any questions regarding the analyses, please feel free to call.

Sincerely,

Claire K. Toon
Project Manager

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
CASE NARRATIVE

Samples were prepared and analyzed according to methods outlined in the following references:

- Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 3, January 1995.

The results reported here are from samples which were re-extracted, outside the analytical holding times, per client request. Results for these samples were previously reported as AEL sample numbers 9809259-04B and 9809259-09B.

Problems encountered with the analyses are discussed in the following narrative.

The results from this analysis do not confirm the detection of toxaphene at 18 ug/L in the original extract of sample 48030988059 SW1. No toxaphene was detected in the second extract of this sample. The laboratory is currently investigating the cause of this discrepancy, and believes the first analysis to be in error. A more detailed description of how the error occurred will be provided as this information becomes available.

à Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

à Sample: 01A 48030988054 SW1 Collected: 09/26/98 Matrix: WATER

à	Test Description	Method	Result	Q	Limit	Units	Analyzed
à	Organochlorine Pesticides	SW 8081A					
à	Aldrin		ND		0.025	ug/L	12/01/98
à	alpha-BHC		ND		0.025	ug/L	12/01/98
à	beta-BHC		ND		0.025	ug/L	12/01/98
à	delta-BHC		ND		0.025	ug/L	12/01/98
à	gamma-BHC (Lindane)		ND		0.025	ug/L	12/01/98
à	alpha-Chlordane		ND		0.025	ug/L	12/01/98
à	gamma-Chlordane		ND		0.025	ug/L	12/01/98
à	4,4'-DDD		ND		0.050	ug/L	12/01/98
à	4,4'-DDE		ND		0.050	ug/L	12/01/98
à	4,4'-DDT		ND		0.050	ug/L	12/01/98
à	Dieldrin		ND		0.025	ug/L	12/01/98
à	Endosulfan I		ND		0.050	ug/L	12/01/98
à	Endosulfan II		ND		0.050	ug/L	12/01/98
à	Endosulfan Sulfate		ND		0.050	ug/L	12/01/98
à	Endrin		ND		0.050	ug/L	12/01/98
à	Endrin Aldehyde		ND		0.050	ug/L	12/01/98
à	Heptachlor		ND		0.025	ug/L	12/01/98
à	Heptachlor Epoxide		ND		0.025	ug/L	12/01/98
	Methoxychlor		ND		0.25	ug/L	12/01/98
	Toxaphene		ND		0.75	ug/L	12/01/98
	SURROGATES, % Recovery						
	Tetrachlorometaxylene		100		Min: 45	Max: 124	
à	Decachlorobiphenyl		60.0		Min: 45	Max: 124	

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST RESULTS by SAMPLE

Sample: 02A 48030988059 SW1 Collected: 09/27/98 Matrix: WATER

Test Description	Method	Result	Q	Limit	Units	Analyzed
Organochlorine Pesticides	SW 8081A					
Aldrin		ND		0.028	ug/L	12/01/98
alpha-BHC		ND		0.028	ug/L	12/01/98
beta-BHC		ND		0.028	ug/L	12/01/98
delta-BHC		ND		0.028	ug/L	12/01/98
gamma-BHC (Lindane)		ND		0.028	ug/L	12/01/98
alpha-Chlordane		ND		0.028	ug/L	12/01/98
gamma-Chlordane		ND		0.028	ug/L	12/01/98
4,4'-DDD		ND		0.056	ug/L	12/01/98
4,4'-DDE		ND		0.056	ug/L	12/01/98
4,4'-DDT		ND		0.056	ug/L	12/01/98
Dieldrin		ND		0.028	ug/L	12/01/98
Endosulfan I		ND		0.056	ug/L	12/01/98
Endosulfan II		ND		0.056	ug/L	12/01/98
Endosulfan Sulfate		ND		0.056	ug/L	12/01/98
Endrin		ND		0.056	ug/L	12/01/98
Endrin Aldehyde		ND		0.056	ug/L	12/01/98
Heptachlor		ND		0.028	ug/L	12/01/98
Heptachlor Epoxide		ND		0.028	ug/L	12/01/98
Methoxychlor		ND		0.28	ug/L	12/01/98
Toxaphene		ND		0.83	ug/L	12/01/98
SURROGATES, % Recovery						
Tetrachlorometaxylene		90.9		Min: 45	Max: 124	
Decachlorobiphenyl		54.5		Min: 45	Max: 124	

à Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

à THE FOLLOWING CODES APPLY TO THE ANALYTICAL REPORT

RESULT field...
ND = not detected at the reported limit
NA = analyte not applicable (see case narrative/methods for discussion)

Q (qualifier) field...
GENERAL:
* = Recovery or %RPD outside method specifications
H = value is estimated due to analysis run outside EPA holding times
E = reported concentration is above the instrument calibration range
D = analyte was diluted to bring within instrument calibration range or to remove matrix interferences

ORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected in the laboratory method blank
J = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)

INORGANIC ANALYSIS DATA QUALIFIERS:
B = analyte was detected above the instrument detection limit (IDL) but below the analytical reporting limit (CRDL)
W = post digestion spike did not meet criteria (85-115%)
S = reported value determined by the Method of Standard Additions

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
TEST METHODOLOGIES

3520_P:	Continuous Liquid-Liquid Extraction (Pesticides)	METHOD: 3520B
PST_8W:	ORGANOCHLORINE PESTICIDES	METHOD: 8081A

Order # 98-11-140
ANALYTICA, INC.

Department of the Air Force
DATES REPORT

Sample: 01A 48030988054 SW1		Matrix: WATER			
Analysis	Method	Collected	Received	TCLP date	
Organochlorine Pesticides	SW 8081A	09/26/98	11/17/98	NA	
Sample: 02A 48030988059 SW1		Matrix: WATER			
Analysis	Method	Collected	Received	TCLP date	
Organochlorine Pesticides	SW 8081A	09/27/98	11/17/98	NA	

ANALYTICA ALASKA INC

811 W. 8th Avenue, Anchorage, AK 99501 • (907) 258-2155 • FAX (907) 258-6634

USAF - 611TH CES/CEVO
21885 2ND STREET
ELMENDORF AFB, AK 99506-4420
(907) 552-1617/FAX 4601
Attn: **MR. CARL HORNIG**

Order #: **A8-10-007**
Date Reported: 10/29/98 12:37
Project Name: **CAPE ROMANZOF LAND FILL**
Date Received: 10/02/98

SAMPLE IDENTIFICATION

Sample Number	Client Description
01	48030988063 CMW3
02	48030988064 CMW6
03	48030988065 MW1
04	48030988066 MW7
05	48030988067 MW4
06	48030988068 CMW5
07	48030988069 CMW5
08	48030988070 CMW1
09	TRIP BLANK

Enclosed are the analytical results for the submitted samples. All analyses met quality assurance objectives, except where noted in the case narratives. If you have any questions regarding the analyses, please feel free to call.

Bradley C. Olson
Vice President - Operations

Analytica Alaska, Inc.
811 W. 8th Ave. Anchorage, AK 99501 Phone-(907)258-2155 FAX-(907)258-6634

tabular sample r port - fuels

AAI Project ID: **A810007**

28-Oct-98

Client: **USAF - 611TH CES/CEVO**

Project Name: **CAPE ROMANZOF LAND FILL**

Sample ID	Client Sample ID	Matrix	Benzene	Toluene	Ethylbenzene	Xylenes, Total	GRO	Units	DRO	RRO	Units
A810007-01	48030988063 CMW3	WATER	()	()	()	()	U (100)	µg/L	U (0.22)	U (0.22)	µg/mL
A810007-02	48030988064 CMW6	WATER	()	()	()	()	U (100)	µg/L	U (0.22)	U (0.22)	µg/mL
A810007-03	48030988065 MW1	WATER	()	()	()	()	U (100)	µg/L	U (0.20)	U (0.20)	µg/mL
A810007-04	48030988066 MW7	WATER	()	()	()	()	U (100)	µg/L	0.23 (0.21)	U (0.21)	µg/mL
A810007-05	48030988067 MW4	WATER	()	()	()	()	U (100)	µg/L	0.29 (0.22)	3.2 (0.22)	µg/mL
A810007-06	48030988068 CMW5	WATER	()	()	()	()	U (100)	µg/L	0.22 (0.22)	U (0.22)	µg/mL
A810007-07	48030988069 CMW5	WATER	()	()	()	()	U (100)	µg/L	0.26 (0.23)	U (0.23)	µg/mL
A810007-08	48030988070 CMW1	WATER	()	()	()	()	U (100)	µg/L	U (0.22)	U (0.22)	µg/mL
A810007-09	TRIP BLANK	WATER	()	()	()	()	U (100)	µg/L	()	()	µg/mL

The number in parentheses is the reporting limit "U" Indicates analyte was not detected. "()" Indicates analyte was not analyzed for. "J" indicates value is estimated.

ADEC Laboratory Approval Number: UST-014

The samples were received properly packed in four coolers at 3.2°C, 3.8°C, 5.9°C, and 6.2°C, and were refrigerated upon receipt.

Data Flag Definitions:

U - Indicates this analytes was searched for and not detected at the reporting limits listed.

D - Indicates the surrogate was diluted out of the sample due to high levels of organics native to the samples.

M - Indicates matrix effects are responsible for surrogate recoveries which are out of limits.

NC - Indicates analyte was detected in original analysis but not confirmed in secondary analysis.

DR - Indicates result is from secondary analysis at dilution.

S - Indicates corrective action did not accomplish desired results or corrective action not performed for cause. See QC Evaluation Summary for details.

B - Indicates analyte was found in Method Blank. See QC Evaluation Summary for details.

< - Indicates sample not preserved according to AK101 requirements. True value is greater than or equal to the reported value.

Analyst: _____ Date: 10/29/98

Analyst: _____ Date: 10/29/98

Client ID: **48030988063 CMW3** Lab ID: **01A**
Test Description: GRO in water by AK101. Method: 5030/AK101
Collected: 09/29/98 00:00 Matrix: **WATER**

ANALYSIS DATE: 10/13/98 FILE ID: N8101307.D
ANALYST: SWG UNITS: **µg/L**
INSTRUMENT ID: NAT DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	**U**	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	95 %	60 - 120
p-Bromofluorobenzene	94 %	60 - 120

Client ID: **48030988063 CMW3** Lab ID: **01B**
Test Description: DRO in water by AK102. Method: 3510\AK102
Collected: 09/29/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101247.D
ANALYSIS DATE: 10/12/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	**U**	0.22	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	94 %	60 - 120

Client ID: **48030988063 CMW3** Lab ID: **01B**
Test Description: RRO in water by AK103. Method: 3510\AK103
Collected: 09/29/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101247.D
ANALYSIS DATE: 10/12/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	**U**	0.22	

SURROGATE	%RECOVERY	LIMITS
Squalane	120 %	60 - 120

Order # A8-10-007
Analytica Ak.

USAF - 611TH CES/CEVO
TEST RESULTS by SAMPLE

Client ID: 48030988064 CMW6
Test Description: GRO in water by AK101.
Collected: 09/29/98 00:00

Lab ID: 02A
Method: 5030/AK101
Matrix: WATER

ANALYSIS DATE: 10/13/98
ANALYST: SWG
INSTRUMENT ID: NAT

FILE ID: N8101308.D
UNITS: µg/L
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	93 %	60 - 120
p-Bromofluorobenzene	91 %	60 - 120

Client ID: 48030988064 CMW6
Test Description: DRO in water by AK102.
Collected: 09/29/98 00:00

Lab ID: 02B
Method: 3510\AK102
Matrix: WATER

EXTRACTION DATE: 10/05/98
ANALYSIS DATE: 10/12/98
ANALYST: GSM
INSTRUMENT ID: WOOF

FILE ID: W8101249.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	U	0.22	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	93 %	60 - 120

Client ID: 48030988064 CMW6
Test Description: RRO in water by AK103.
Collected: 09/29/98 00:00

Lab ID: 02B
Method: 3510\AK103
Matrix: WATER

EXTRACTION DATE: 10/05/98
ANALYSIS DATE: 10/12/98
ANALYST: GSM
INSTRUMENT ID: WOOF

FILE ID: W8101249.D
UNITS: µg/ml
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	U	0.22	

SURROGATE	%RECOVERY	LIMITS
Squalane	119 %	60 - 120

Client ID: **48030988065 MW1** Lab ID: **03A**
Test Description: GRO in water by AK101. Method: 5030/AK101
Collected: 09/30/98 00:00 Matrix: **WATER**

ANALYSIS DATE: 10/13/98 FILE ID: N8101309.D
ANALYST: SWG UNITS: µg/L
INSTRUMENT ID: NAT DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	98 %	60 - 120
p-Bromofluorobenzene	91 %	60 - 120

Client ID: **48030988065 MW1** Lab ID: **03B**
Test Description: DRO in water by AK102. Method: 3510\AK102
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101251.D
ANALYSIS DATE: 10/13/98 UNITS: µg/ml
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	U	0.20	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	97 %	60 - 120

Client ID: **48030988065 MW1** Lab ID: **03B**
Test Description: RRO in water by AK103. Method: 3510\AK103
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101251.D
ANALYSIS DATE: 10/13/98 UNITS: µg/ml
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	U	0.20	

SURROGATE	%RECOVERY	LIMITS
Squalane	120 %	60 - 120

Client ID: **48030988066 MW7** Lab ID: **04A**
Test Description: GRO in water by AK101. Method: 5030/AK101
Collected: 09/30/98 00:00 Matrix: **WATER**

ANALYSIS DATE: 10/13/98 FILE ID: N8101310.D
ANALYST: SWG UNITS: **µg/L**
INSTRUMENT ID: NAT DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	**U**	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	98 %	60 - 120
p-Bromofluorobenzene	93 %	60 - 120

Client ID: **48030988066 MW7** Lab ID: **04B**
Test Description: DRO in water by AK102. Method: 3510\AK102
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101253.D
ANALYSIS DATE: 10/13/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	**0.23**	0.21	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	89 %	60 - 120

Client ID: **48030988066 MW7** Lab ID: **04B**
Test Description: RRO in water by AK103. Method: 3510\AK103
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101253.D
ANALYSIS DATE: 10/13/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	**U**	0.21	

SURROGATE	%RECOVERY	LIMITS
Squalane	114 %	60 - 120

Client ID: **48030988067 MW4** Lab ID: **05A**
Test Description: GRO in water by AK101. Method: 5030/AK101
Collected: 09/30/98 00:00 Matrix: **WATER**

ANALYSIS DATE: 10/13/98 FILE ID: N8101311.D
ANALYST: SWG UNITS: µg/L
INSTRUMENT ID: NAT DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	96 %	60 - 120
p-Bromofluorobenzene	92 %	60 - 120

Client ID: **48030988067 MW4** Lab ID: **05B**
Test Description: DRO in water by AK102. Method: 3510\AK102
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101269.D
ANALYSIS DATE: 10/13/98 UNITS: µg/ml
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	0.29	0.22	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	98 %	60 - 120

Client ID: **48030988067 MW4** Lab ID: **05B**
Test Description: RRO in water by AK103. Method: 3510\AK103
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101269.D
ANALYSIS DATE: 10/13/98 UNITS: µg/ml
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	3.2	0.22	

SURROGATE	%RECOVERY	LIMITS
Squalane	120 %	60 - 120

Client ID: **48030988068 CMW5** Lab ID: **06A**
Test Description: GRO in water by AK101. Method: 5030/AK101
Collected: 09/30/98 00:00 Matrix: **WATER**

ANALYSIS DATE: 10/13/98 FILE ID: N8101312.D
ANALYST: SWG UNITS: **µg/L**
INSTRUMENT ID: NAT DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	**U**	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	97 %	60 - 120
p-Bromofluorobenzene	91 %	60 - 120

Client ID: **48030988068 CMW5** Lab ID: **06B**
Test Description: DRO in water by AK102. Method: 3510\AK102
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101255.D
ANALYSIS DATE: 10/13/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	**0.22**	0.22	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	98 %	60 - 120

Client ID: **48030988068 CMW5** Lab ID: **06B**
Test Description: RRO in water by AK103. Method: 3510\AK103
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101255.D
ANALYSIS DATE: 10/13/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	**U**	0.22	

SURROGATE	%RECOVERY	LIMITS
Squalane	119 %	60 - 120

Client ID: **48030988069 CMW5**
Test Description: GRO in water by AK101.
Collected: 09/30/98 00:00

Lab ID: **07A**
Method: 5030/AK101
Matrix: **WATER**

ANALYSIS DATE: 10/13/98
ANALYST: SWG
INSTRUMENT ID: NAT

FILE ID: N8101313.D
UNITS: **µg/L**
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	**U**	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	91 %	60 - 120
p-Bromofluorobenzene	94 %	60 - 120

Client ID: **48030988069 CMW5**
Test Description: DRO in water by AK102.
Collected: 09/30/98 00:00

Lab ID: **07B**
Method: 3510\AK102
Matrix: **WATER**

EXTRACTION DATE: 10/05/98
ANALYSIS DATE: 10/13/98
ANALYST: GSM
INSTRUMENT ID: WOOF

FILE ID: W8101257.D
UNITS: **µg/ml**
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	**0.26**	0.23	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	92 %	60 - 120

Client ID: **48030988069 CMW5**
Test Description: RRO in water by AK103.
Collected: 09/30/98 00:00

Lab ID: **07B**
Method: 3510\AK103
Matrix: **WATER**

EXTRACTION DATE: 10/05/98
ANALYSIS DATE: 10/13/98
ANALYST: GSM
INSTRUMENT ID: WOOF

FILE ID: W8101257.D
UNITS: **µg/ml**
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	**U**	0.23	

SURROGATE	%RECOVERY	LIMITS
Squalane	112 %	60 - 120

Client ID: **48030988070 CMW1** Lab ID: **08A**
Test Description: GRO in water by AK101. Method: 5030/AK101
Collected: 09/30/98 00:00 Matrix: **WATER**

ANALYSIS DATE: 10/13/98 FILE ID: N8101316.D
ANALYST: SWG UNITS: **µg/L**
INSTRUMENT ID: NAT DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	**U**	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	99 %	60 - 120
p-Bromofluorobenzene	93 %	60 - 120

Client ID: **48030988070 CMW1** Lab ID: **08B**
Test Description: DRO in water by AK102. Method: 3510\AK102
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101259.D
ANALYSIS DATE: 10/13/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Diesel Range Organics	DRO	**U**	0.22	

SURROGATE	%RECOVERY	LIMITS
o-Terphenyl	90 %	60 - 120

Client ID: **48030988070 CMW1** Lab ID: **08B**
Test Description: RRO in water by AK103. Method: 3510\AK103
Collected: 09/30/98 00:00 Matrix: **WATER**

EXTRACTION DATE: 10/05/98 FILE ID: W8101259.D
ANALYSIS DATE: 10/13/98 UNITS: **µg/ml**
ANALYST: GSM DILUTION: 1
INSTRUMENT ID: WOOF

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Residual Range Organics	RRO	**U**	0.22	

SURROGATE	%RECOVERY	LIMITS
Squalane	109 %	60 - 120

Client ID: **TRIP BLANK**
Test Description: GRO in water by AK101.
Collected: 09/30/98 00:00

Lab ID: **09A**
Method: 5030/AK101
Matrix: **WATER**

ANALYSIS DATE: 10/13/98
ANALYST: SWG
INSTRUMENT ID: NAT

FILE ID: N8101317.D
UNITS: µg/L
DILUTION: 1

PARAMETER	CAS # or ID	RESULT	LIMIT	Q
Gasoline Range Organics	GRO	U	100	

SURROGATE	%RECOVERY	LIMITS
α,α,α-Trifluorotoluene	99 %	60 - 120
p-Bromofluorobenzene	93 %	60 - 120

Method AK101 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of gasoline range organics (GRO).

The quantitation range is from the beginning of C6 to the beginning of C10.

Method AK102 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of diesel range organics (DRO).

The quantitation range extends from the beginning of C10 to the beginning of C25. The standard used is a 1:1:1 mixture of Kerosine, DF1, and DF2.

Waters are prepared via liquid/liquid extraction per AK102.

Liquids are prepared according to method AK103 and USEPA SW-846 method 3510.

Method AK103 from the State of Alaska Department of Environmental Conservation (ADEC), Storage Tank Program, Underground Storage Tanks Procedures Manual, 18 AAC 78, as amended through January 31, 1996; is referenced for the analysis of residual range organics (RRO).

The quantitation range of this method extends from the beginning of C25 to the end of C36. A mixture of 1:1:1 SAE 30, SAE 40, & SAE 50 motor oils are used for instrument calibration.

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Support Documentation

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84 295

Chain of Custody Record / Analysis Request

Company Name: 611 CES /CEVO
Company Address: 21885 2ND ST. EIELSONDORF AFB AK 99506-4420
Telephone: (907) 552-1617
FAX: (907) 552-4601
Sample ID

Project Name: CAPE ROMANZOV LAND FILL
Report To: CARL HORNIG
Sampler: CH
P O Number

Sample ID	Date Collected	Time Collected	Matrix Soil/Water (Circle One)	# Containers: 8 oz Glass	4 oz Glass	40 ml VOAs	1 Liter	BTEX by 5030/8021 or 602 (specify)	GRO by 5030/8015M	GRO by AK101	DRO by 3550/8100M	DRO by AK102	RRO by AK103	8260	8270	8080	TCLP MTLS	PH<2	Hold for Further Analysis	RUSH (see below)	LAB ID
480309880062 CMW2 (DO NOT received)	29 Sep	1515	W							✓		✓	✓	/	/	/	/				13
063 CMW3		1825	W							✓		✓	✓	⊘	⊘	⊘	⊘				1
064 CMW6		1910	W							✓		✓	✓	⊘	⊘	⊘	⊘				2
065 MW1	30 Sep	1115	W							✓		✓	✓	⊘	⊘	⊘	⊘				4
066 MW7		1335	W							✓		✓	✓	⊘	⊘	⊘	⊘				5
067 MW4		1830	W							✓		✓	✓	⊘	⊘	⊘	⊘				6
068 CMW5		1450	W							✓		✓	✓	⊘	⊘	⊘	⊘				7
069 CMW5		1500	W							✓		✓	✓	⊘	⊘	⊘	⊘				8
070 CMW1		1650	W							✓		✓	✓	⊘	⊘	⊘	⊘				9
TRIP BLANK			W							✓				⊘							

COMMENTS: 480309880062 CMW2 Received W/O 1L AMBERS OR VIALS.
C-O-C Received W/O ANALYSES MARKED
ANALYZE WATER PHASE ONLY - DO NOT HOMOGENIZE SAMPLE.

DELIVERABLES
- [X] Level I
- [ ] ADEC Format
- [ ] ACOE
- [ ] Other _____
- [ ] EDF - Format _____ specify

TURNAROUND
- [ ] 2 Business Days
- [ ] 5 Business Days
- [X] 10-15 Business Days
- [ ] other _____ #Business Days

RELINQUISHED BY SAMPLER	RECEIVED BY:	RELINQUISHED BY	RECEIVED BY:
Signature: Carl A Hornig	Signature:	Signature:	Signature
Printed Name: CARL A HORNIG	Printed Name: B. OLSON	Printed Name: Jonathan Andela	Printed Name.
Firm	Firm: ANALYTICA	Firm: Analytica AK	Firm.
Date/T	Date/Time: 10/02/98 12:00	Date/Time: 10/2/98 1350	Date/Time

ANALYTICA USE ONLY: HSD21078
Airbill / Freight # Security Aviation
Condition of Sample Containers: NO bill
Temp Received: A+D °C
# of Coolers: 4
Seals: A | B | C. | D
3.2°C | 3.8°C | | 6.0°C

OF

ORD# 98-09-228
SN# A80924
I ELMEN_AFB

ANALYTICA, INC.
CLIENT INVOICE

INVOICE# 114497
DATE 10/26/98
PAGE 1

INVOICE TO
Department of the Air Force
611 Civil Eng./CEVO
21885 2nd St.
Elmendorf AFB, AK 99506-4420
ATTEN Carl A. Hornig

REMIT TO
Analytica Environmental Labs
325 Interlocken Parkway
Suite 200
Broomfield, Colorado 80021
ATTEN Accounts Receivable
PHONE (303) 469-8868

WORK ID CAPE ROMANZOF - CALL #B002
P.O. # F65501-94A0009 FCA S98040117

RECEIVED 09/25/98 REPORTED 10/26/98
REPORT Department of the Air Force
ATTEN Carl A. Hornig

Charged to William Croy
VISA 09/25/98, per client
request.
Ref. S98040117 C.R.

	ID	CODE	DESCRIPTION	REMARKS	PRICE	QTY	DISCOUNT	AMOUNT
TESTS		PCB_8S	Polychlorinated Biphenyls		99.00	46		4554.00

SUBTOTAL $4,554.00

TOTAL INVOICE AMOUNT $4,554.00

All invoices are due and payable upon receipt. Outstanding balances over 30 days are subject to a finance charge of 1.5% per month.

TAB

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