IT CORPORATION
A Member of The IT Group

PHASE II ENVIRONMENTAL SITE ASSESSMENT OF THE CLOSED ALUMAX EXTRUSION FACILITY 320 SOUTH ROBERTS ROAD DUNKIRK, NEW YORK

Prepared for

ALCOA

July 19, 1999

IT CORPORATION
Gateway View Plaza
1600 West Carson Street
Pittsburgh, Pennsylvania 15219

Storm sewers - No water sample collect
high TCE in South sewer sediment
high Btex in North sewer sediment

GW- highest results VOC - TCE @ MW-11
well depth MW-9 6'bgs to MW-12 17'bgs suggest
East to west gradient.
GW Elev. MW-9 99.63 to MW-12 96.55
further confirm gradient

No GW elev. on site well PW-1

ADNY WALL-SS01 - BTEX elevated

ADNY FM-SS01 - TCE GTO <0.8 clean-up value.

ADNY Swale SS01 - PCBs 13,000

IT Contracted to Clean South side Swale -
Clean Sewer catch basins -

Soil boring around MW-11 & one well upgradient

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EXECUTIVE SUMMARY

IT Corporation (IT) performed a Phase II Environmental Assessment of the closed Alumax Extrusions, Inc. property located at 320 South Roberts Road, Dunkirk, New York (Site). This assessment addressed potential environmental issues documented in a report entitled, "Phase I Environmental Site Assessment of 320 South Roberts Road, Dunkirk, New York" (ICF Kaiser, 1998). The Phase II Environmental Site Assessment and this documenting report were performed in general accordance with the ASTM Standard E 1903-97 "Standard Guide for Environmental Site Assessment: Phase II Environmental Site Assessment Process". The results of the Phase II site assessment indicated the following:

- **Sitewide Soils**: Most of the soil analytical data from samples collected during the Phase II Environmental Assessment indicated concentrations of semi-volatile organic compounds (SVOCs) exceeding the New York Department of Environmental Conservation's Recommended Soil Clean-up Criteria and concentrations of metals exceeding the default statewide background concentrations. Based on the sample results, it appears that the sitewide soils may be addressed via the New York State Voluntary Clean-up Program. Under this program a risk-based approach could be implemented to seek a release from liability for the Site or portions of the Site. Industrial zoning along with the limited groundwater usage in the site area also favors a risk-based approach. Additionally, most of the site is paved with either concrete or asphalt that limits both contact and infiltration. Specific areas of investigation are discussed below.

- **Combination Sewer Catch Basins**: Sediments found within sewer catch basins are impacted by trichloroethylene, ethylbenzene, 1,2-dichloroethene, xylene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and metals at concentrations which, if released from the sewer system, would exceed the New York State (NYS)-recommended soil clean-up objectives. However, the sediments are contained within the sewer system and thus are not subject to the soil clean-up criteria. IT recommends the removal, characterization and proper disposal of impacted sediments within the sewer catch basins. Additionally, soils in the vicinity of the catch basins should be evaluated for potential impacts.

- **Swale:** Soil within the swale on the north side of the Site contains polychlorinated biphenyls (PCBs)and SVOCs that exceed the NYS recommended soil clean-up objectives and metals exceed the default statewide background values. This swale is unpaved and appears to primarily receive drainage from the railroad right-of-way on the adjacent property. A conservative estimate of soil volume contained within this swale is 9 cubic yards and includes all sediment in swale. Based on the small volume of material, Alcoa may choose to excavate and properly manage this material.

- **Transformer Oil Dust Control**: PCBs were detected in a single soil sample in an area under brick pavement at a concentration of 1.7 mg/kg which exceeds the NYS recommended surface soil clean-up objective (1.0 mg/kg), but below the subsurface soil clean-up objective (10 mg/kg). Bricks were missing from some areas of the pavement, exposing soils. Soils with PCBs marginally exceeding surface clean up standards suggest a possibility for further delineation or reestablishment of the protective cap formerly provided by the brick surface.

- **Railroad Retaining Wall Fill**: The retaining wall fill consists of a pile of soil and rock fragments at the base of a retaining wall located along the railroad right-of-way. No pavement is present in this area. Four SVOCs in a retaining wall fill sample exceeded NYS soil clean-up objectives. Six metals detected in the retaining wall fill sample exceeded the default statewide background values. The

volume of fill is estimated to be 16 cubic yards. The nature of the constituents identified in this fill is generally consistent with the analytical results found throughout the Site.

- **Fill Material in the Southwest Corner of Building**: Arsenic, chromium, copper, iron, mercury, nickel, and zinc detected in the fill material soil in this area exceed default statewide background values for soils. Trichloroethylene, phenanthrene, fluoranthene, and pyrene were detected in this sample below the NYS recommended soil clean-up objectives. The metal concentrations associated with this fill material were generally consistent with analytical results from other area of the Site and therefore may be within the range of Site background. This area is unpaved; however, the material appears to be contained within a concrete structure.

- **Southern Disturbed Area**: Two soil samples were collected from an apparent disturbed area identified on historical aerial photographs (1938 and 1956). Fill material containing coal and slag was identified in one boring in this area. Ten (10) SVOCs exceeded NYS recommended soil clean-up objectives. Nine (9) metals were detected exceeding default statewide background concentrations. The SVOCs detected are generally associated with coal and coal tar derivatives. This is consistent with historical site use as a coal storage area and a locomotive plant. The metal results are generally consistent with Site-wide analytical results. This area is paved.

- **Decommissioned Waste Oil Tank Area**: This tank is an above ground storage tank which formerly contained Waste Oil. The tank is situated on a concrete pad; however, a strip of sparsely vegetated, unpaved soil is present around the perimeter of the pad. Two near surface soil samples were collected in the vicinity of the decommissioned waste oil tank located near the north east corner of the Main building. The sample results indicated up to 3,600 mg/kg of total petroleum hydrocarbons (diesel range organic compounds). Benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(ghi)perylene exceeded the NYS recommended soil clean-up objectives. Arsenic, beryllium, chromium, copper, mercury, nickel, and zinc exceeded the default statewide soil background values. This was also in close proximity to an area on the Roblin Steel property where an oil spill was noted in a previous report. Metals were elevated compared to sitewide analytical results. The elevated chromium and nickel concentrations may be related to electric arc furnaces formerly operated by Roblin Steel and Allegheny Ludlum on the adjacent property.

- **Former Waste Oil Tank/Existing Transformer:** A water sample was collected from the transformer pad sump located near the northeast corner of the Main building. This pad overlapped the secondary containment of a former aboveground waste oil tank. This sump contained gravel and little soil was present. Volatile organic compounds (VOCs), SVOCs, and PCBs were not detected in this sample. Total recoverable petroleum hydrocarbons were detected at 210 mg/l. All metals were below the respective Federal Primary Drinking Water Standard. This entire area is concrete paved with a pavement thickness exceeding 12 inches.

- **Former Utility Samples:** Soil samples collected west of the building indicated arsenic, chromium, copper, iron, mercury, nickel, and zinc exceeding the statewide default soil background values. However, the metals concentrations were generally consistent with Site-wide analytical results. This area paved with concrete.

- **Asbestos Containing Materials:** The transite siding on the southern bay of the main building was identified as asbestos containing material. Flooring in the office area was also identified as asbestos containing material. This material appeared in good condition. NYS regulations require special handling if asbestos containing material is removed or otherwise disturbed.

- **Lead Containing Paint:** Based on the sample results, the green and white paint located on the walls of the middle and north bays of the main building are considered to be lead-containing, based on the USEPA and HUD definitions of lead paint. Yellow paint sampled in the former paint room also tested as lead containing. Portions of both the green and white paint were peeling. Occupational standards apply to the abatement and handling of lead paint.

The sample results did not indicate on-site concerns related to the existing groundwater well, the Niagara Mohawk Substation, the former transformer, or the former diesel tank. The radiation survey did not indicate any areas exceeding background.

1.0 INTRODUCTION

IT Corporation (IT) was retained by the Alcoa, Inc. (Alcoa) to complete a Phase II Environmental Site Assessment (Phase II ESA) of the closed Alumax Extrusions, Inc. facility (Site), located at 320 South Roberts Road, Dunkirk, Chautauqua County, New York. Figure I and 2 show the Site Location and Site Layout, respectively. This report presents the findings of the Phase II Environmental Assessment.

1.1 OVERVIEW AND APPROACH

The Phase II ESA was completed to further assess the potential environmental issues identified in the report entitled "Phase I Environmental Site Assessment of 320 South Roberts Road, Dunkirk, New York" (ICF Kaiser, 1998) and follows the scope of work presented in a Scope and Budget Estimate (ICF Kaiser) dated December 17, 1998. The scope of work performed during this Phase II investigation is presented in Section 2.0.

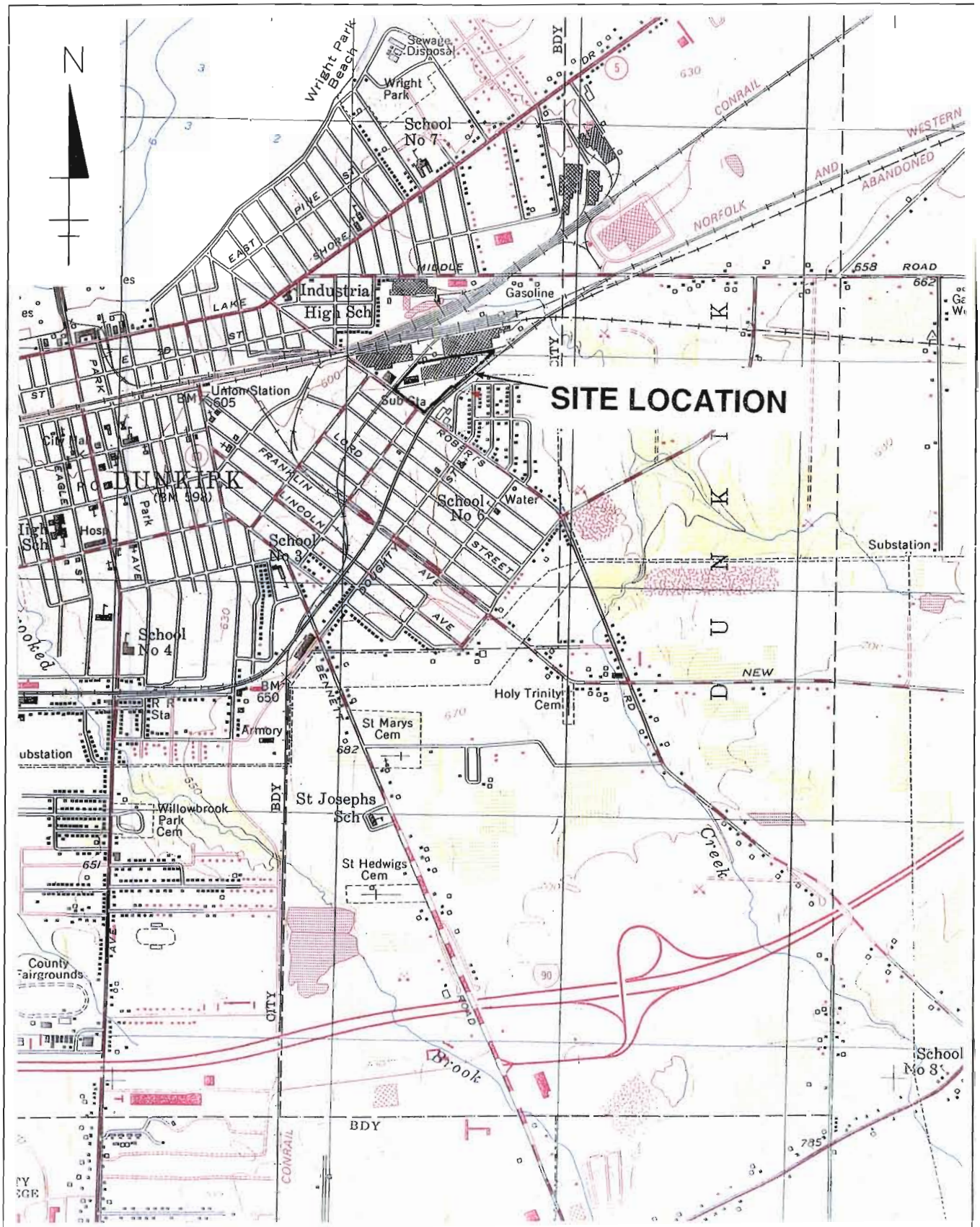


FIGURE 1

THE CLOSED ALUMAX–DUNKIRK FACILITY
320 S. ROBERTS ROAD
DUNKIRK, CHATAUQUA CO., N.Y.

SITE LOCATION

IT Corporation
PITTSBURGH, PA

DATE: 11/17/98	DR.: BRENT
SCALE: 1"=2000'	E/F NO.: 20151001

JOB NO.: 78274500100000 PLOT SCALE: 1=1

STARTED ON: 06/22/99 REVISED: 7/16/99

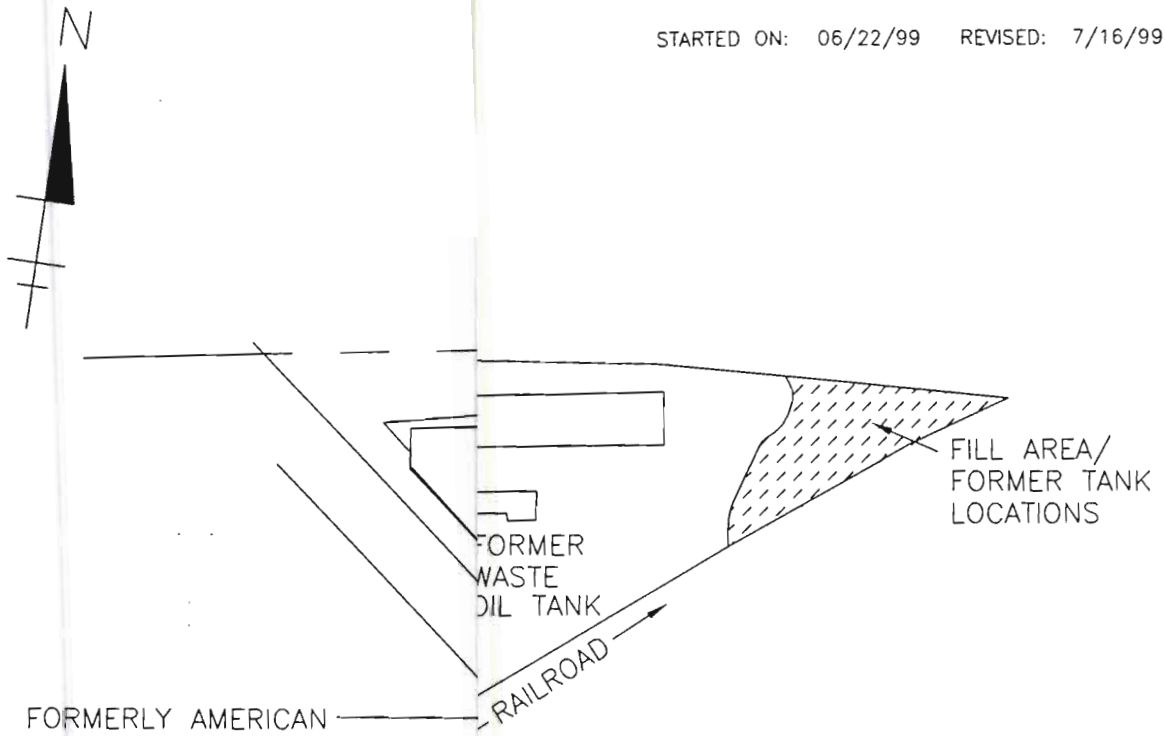


FIGURE 2

CILITY

GENERAL SITE LAYOUT

DATE: 11/16/98	DR.: D.M.
SCALE: 1" ≈ 200'	E/F NO.: 20155001

2.0 PHASE II - SCOPE OF WORK

The scope of work was divided into 6 tasks, which are discussed below. Samples were analyzed by Quanterra Environmental Services, North Canton, Ohio with the exception of the lead and asbestos samples that were analyzed by International Asbestos Testing Laboratories (IATL), Mount Laurel, New Jersey.

2.1 TASK 1 - CHARACTERIZATION OF CATCH BASIN SEDIMENTS

Nineteen catch basins were identified during the Phase II ESA (Figure 3). These catch basins were divided into two areas: 1) the North Sewers System, catch basins receiving drainage from the northeast portion of the Site; and 2) the South Sewer System, catch basins receiving drainage from the southern and western portions of the Site. The volume of sediment within each catch basin was assessed using a hand driven bucket auger. Sediment samples were screened using an organic vapor meter and a gamma radiation meter. Composite samples were collected, one from the south sewer catch basins and one from the north sewer catch basins. Composite sediment samples were analyzed for Target Compound List (TCL) semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, and polychlorinated biphenyls (PCBs). Additionally, two discrete volatile organic compound (VOCs) samples, one from the South Sewer System and one from the North Sewer System, were collected as grab samples using Encore® samplers. The VOC sample locations, NS-8 and SS-11 on Figure 3, were chosen based on field screening using an organic vapor meter with a photoionization detector (PID).

2.2 TASK 2 - FILL MATERIAL EVALUATION

The fill material evaluation focused on three areas, fill material identified below a railroad retaining wall, a disturbed area identified on historical aerial photographs (1938 and 1956), and fill material of unknown origin located inside the southwest corner of the building (Figure 2).

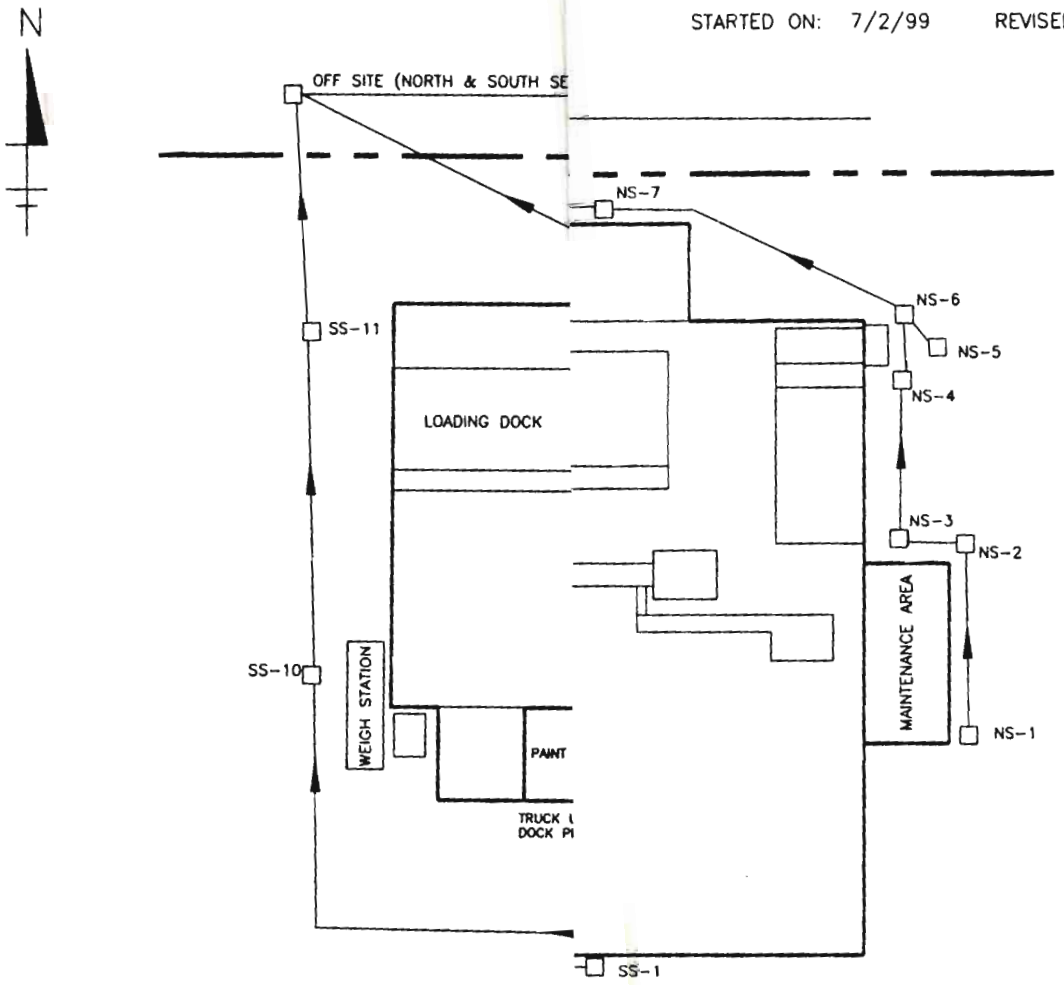
The fill material located below the railroad retaining wall was evaluated by collecting one grab sample via hand auger techniques. This sample was analyzed for TCL VOC, TCL SVOC, TAL metals, and PCBs.

The disturbed area identified in the southern portion of the Site on historical aerial photographs (1938 and 1956) was evaluated by advancing four hand auger borings to bedrock. Two composite samples from this area were sent for laboratory analysis (TCL VOCs, TCL SVOC, TAL metals, and PCB analyses). VOC samples were collected as grab samples.

The fill material identified in the southwest corner of the Main Building was assessed via one hand auger boring. A composite sample collected from this boring was analyzed for TCL SVOCs, TAL metals, and PCBs. A TCL VOC sample was also collected from this location from a discrete location within the soil column in order to prevent loss of volatile organic compounds due to mixing.

JOB NO.: 78274500100000 PLOT SCALE: 1=60

STARTED ON: 7/2/99 REVISED: 00/00/00



1 – NORTH SEWER CATCH BASIN #1

2 – SOUTH SEWER CATCH BASIN #2

ER TRACING BASED ON SITE OBSERVATIONS

FIGURE 3

Y

SEWER CATCH BASINS

DATE: 7/2/99	DR.: B. SNYDER
SCALE: AS NOTED	E/F NO.: 20155006

2.3 TASK 3 - SOILS EVALUATION

The soil evaluation focused on the following eight areas (Figure 2):

- **Stormwater Swale:** Soils in the swale located along the southern side of the Site was evaluated via the collection of one grab sample collected using a hand auger. To assess the sample collection location, three borings were advanced to bedrock along the centerline of the swale. One sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals, and PCBs.

- **Former Transformer:** Near surface soils in the vicinity of a former transformer on the north side of the building was sampled for PCBs using a hand driven bucket auger.

- **Suspected Transformer Oil Dust Control Area:** One sample was collected from an area in the northwest portion of the Site to evaluate a former owner's use of transformer oil for dust control. This near surface sample was collected using a hand driven bucket auger and analyzed for PCBs.

- **Niagara Mohawk Substation:** One boring was advanced in the vicinity of a former Niagara Mohawk substation, located on the adjacent property to the south of the Site. One soil sample was collected from this boring to determine the potential impact on the Site by potential PCB use on this adjacent property.

- **Former Utilities:** Soils in the vicinity of former utilities were evaluated via three soil borings. Two of these borings were located west of the building and the third was located along the north side of the building. Additional samples were planned; however, it was determined in the field that these utilities are actually located on the adjacent property to the north. The samples from these areas were analyzed for TCL VOCs, TCL SVOCs, TAL metals, and PCBs.

- **Decommissioned Waste Oil Tank Area:** Near surface soil samples (2) were collected on the north and east side of the above ground waste oil tank located on the north side of the building. These samples were analyzed for TCL VOCs, TCL SVOCs, TAL Metals, Total Petroleum Hydrocarbons (TPH), and PCBs.

- **Former Fuel Oil Tank:** One soil sample was collected from the base of the fuel oil tank excavation. This sample was analyzed for TCL VOCs, TCL SVOCs, TAL Metals, TPH, and PCBs.

- **Former Waste Oil Tank/Existing Transformers:** One water sample was collected from an area backfilled with gravel contained in a concrete foundation around the base of the transformer to assess potential leaks from the transformer and former waste oil tank. The secondary containment for the above ground waste oil storage tank, formerly located on the east side of the building, was connected to this gravel filled transformer sump therefore allowing material potentially spilled from either the former waste oil tank or the transformer to accumulate in this structure. The water sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals, TPH, and PCBs. A water sample was collected because the concrete in this area was too thick to easily access soils and insufficient soil was present in this structure to allow the collection of a soil sample.

2.4 TASK 4 - ASBESTOS AND LEAD PAINT ANALYSIS

Samples of suspected asbestos containing materials and potentially lead containing paint chips identified and collected during the Phase I Site Assessment were submitted to International Asbestos Testing Laboratories, Mt. Laurel, New Jersey. The asbestos samples were submitted for bulk asbestos analysis via polarized light microscopy. This analysis is in accordance with USEPA protocol. New York State requires electron microscopy for non-friable materials, such as floor tiles and mastic. This additional analysis is recommended if these non-friable materials are to be removed. The asbestos samples have been archived at the laboratory if this additional analysis is required. The paint samples were analyzed for lead content (% by weight).

2.5 TASK 5 - GROUNDWATER EVALUATION

A single groundwater well was identified on the Site. This well was sampled for TCL VOCs, TCL SVOCs, TAL metals, PCBs, and radiological parameters (gamma isotropic, gross alpha, and gross beta radiation). The well was purged using the low flow sampling method. This method required the evacuation of at least 6/10 of the water column and stabilization of the following parameters: pH, specific conductance, turbidity, dissolved oxygen, temperature, and reduction-oxidation potential.

2.6 TASK 6 - RADIATION SURVEY

A radiation survey was performed within the Main building and selected areas outside the Main building using a gamma-scintillation meter. Selected exterior areas and soil samples were also screened using the gamma-scintillation meter. These areas included the sewer catch basins and the suspected fill areas.

3.0 PHASE II - RESULTS

3.1 TASK 1 – CHARACTERIZATION OF CATCH BASIN SEDIMENTS

Eight catch basins (NS-1 through NS-8) were included in the north sewer system and eleven catch basins (SS-1 through SS-11) were included in the south sewer system (Figure 3). Appendix A includes descriptions of each catch basin. These two sewer systems join at a manhole located on an adjacent property to the north. The TCL VOC sediment samples were taken from NS-8 at a depth of approximately 38 inches and SS-11 at a depth of approximately 30 inches. The TCL VOC sediment sample was collected from NS-8 because it had the highest PID reading (maximum 150 ppm) of the sediments in the north sewer. No volatile organic vapors were detected via the PID in the south sewer sediment; therefore, the sample was collected from SS-11 because it appeared visually stained and all drainage from the south sewer would be expected to pass through this catch basin. One composite sediment sample from the north sewer catch basins and one composite sediment sample from the south sewer catch basins were collected and analyzed for TCL SVOC, TAL metals, PCBs, and total solids. Each sample was comprised of equal parts from each catch basin that contained sediment from either the north or south sewer system. However, it should be noted that NS-6 and SS-10 could not be accessed due to difficulty removing cover plate and were not sampled.

As shown on Table 1, VOCs were detected in samples from the North Sewer System: ethylbenzene (11,000 ug/kg), xylene (72,000 ug/kg), and 1,2-dichloroethene (2,300 ug/kg). SVOCs were also detected in these samples, including: phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, and benzo(a)pyrene. Aroclor 1260 (a PCB) was detected at a concentration of 140 ug/kg. Most of the TAL metals were also identified in the North Sewer system catch basin sediment. The total volume of sediment in the North Sewer catch basins is estimated to be 10 cubic yards.

The analytical results (Table 1) indicated the following VOC's in the samples from the South Sewer System: trichloroethylene (1,800 ug/kg), and 1,2-dichloroethene (290 ug/kg). SVOCs detected in these samples include: Bis(2-ehtylhexyl)phthalate, phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(a)pyrene. Aroclor 1254 (a PCB) was detected at a concentration of 120 ug/kg. Most of the TAL metals were also identified in the North Sewer system. The total volume of sediment in the South Sewer catch basins is estimated to be 5 cubic yards.

Discussion of Results

The sample results indicate VOCs, SVOCs, and metals concentrations which may warrant removal and proper disposal.

3.2 TASK 2 – POTENTIAL FILL MATERIAL EVALUATION

Three areas were evaluated as part of the fill material evaluation: 1) the known fill material placed at the foot of a railroad retaining wall, 2) the Southern Disturbed Area, a disturbed area identified on historical aerial photographs, and 3) fill material located in the southwest corner of the building (Figure 4).

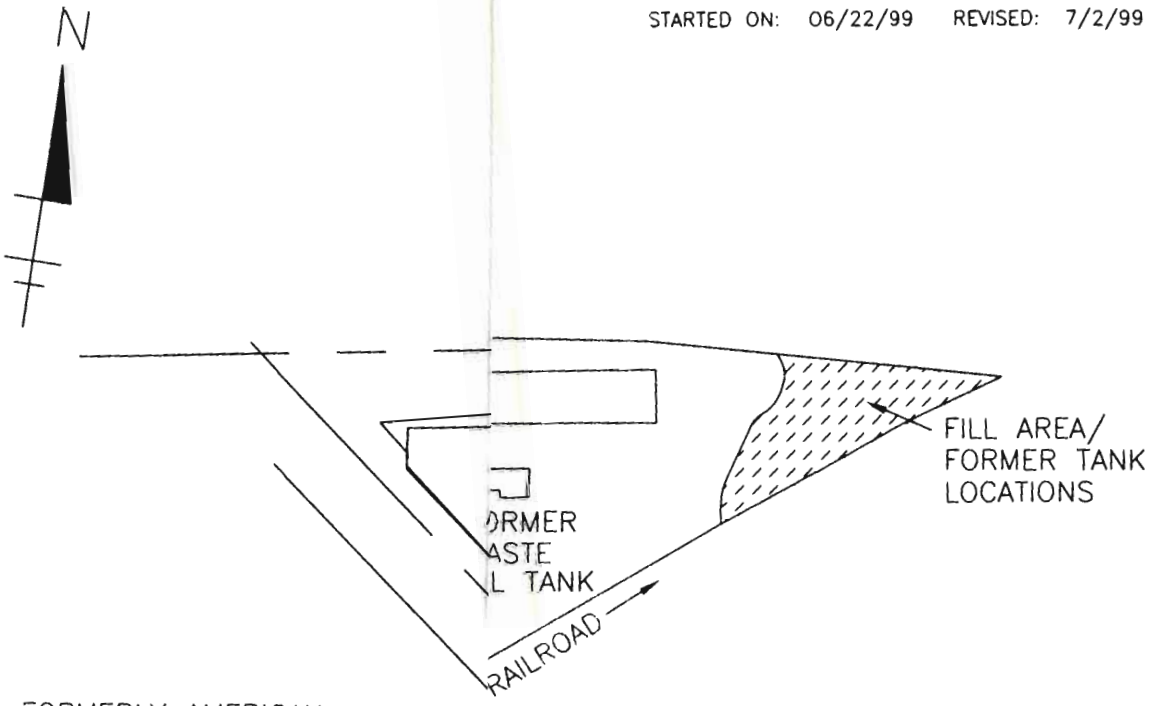
TABLE 1
NORTH/SOUTH SEWERS-COMPOSITE CATCH BASIN SAMPLES
ANALYTICAL RESULTS
ALUMAX EXTRUSIONS, INC.
DUNKIRK, NEW YORK

Sample Location	North Sewers	South Sewers
Sample Designation	ADNY-NS-SD01A	ADNY-SS-SD01
Sample Matrix	Sediment	Sediment
Volatile Organic Compound ug/kg		
Acetone	ND(<6,000)	ND(<1,100)
Trichloroethylene	ND(<1,500)	1,800
Ethylbenzene	11,000	ND(<290)
Xylenes (total)	72,000	ND(<570)
1,2-Dichloroethene	2,300	290
Semi-Volatile Organic Compounds ug/kg		
Bis(2-ethylhexyl)phthalate	ND(<4,600)	4,100
Phenanthrene	13,000	13,000
Fluoranthene	14,000	16,000
Pyrene	14,000	13,000
Benzo(a)anthracene	7,000	6,500
Chrysene	7,000	6,800
Benzo(b)fluoranthene	8,100	7,000
Benzo(k)fluoranthene	ND(<4,600)	3,200
Benzo(a) pyrene	5,700	5,000
Benzo(ghi)perylene	ND(<4,600)	ND(<2,900)
Dibenz(a,h)anthracene	ND(<4,600)	ND(<2,900)
Ideno(1,2,3-cd)pyrene	ND(<4,600)	ND(<2,900)
2-Methylnaphthalene	ND(<4,600)	ND(<2,900)
Metals mg/kg		
Aluminum	16,000	9,200
Antimony	ND (<8.3) J	ND (<7.8) J
Arsenic	9	11.5
Barium	210	113
Beryllium	1.4	ND (<0.65)
Cadmium	1.9	1.9
Calcium	60,600 J	19,800 J
Chromium	174 J	51.7 J
Cobalt	8.1	11.1
Copper	136 J	99.2 J
Iron	39,300	29,300
Lead	158 J	182 J
Magnesium	14,500	52,900
Manganese	1,490	629
Mercury	1.5	0.15
Nickel	158	520
Potassium	1110	1,320
Selenium	0.88	1.2
Silver	ND (<1.4)	1.6 J
Sodium	ND(<690)	ND(<650)
Thallium	ND(<1.4)	ND(<1.3)
Vanadium	17.9	11.4
Zinc	920 J	762 J
PCBs ug/kg		
Aroclor 1016	ND(<46)	ND(<43)
Aroclor 1221	ND(<46)	ND(<43)
Aroclor 1232	ND(<46)	ND(<43)
Aroclor 1242	ND(<46)	ND(<43)
Aroclor 1248	ND(<46)	ND(<43)
Aroclor 1254	ND(<46)	120
Aroclor 1260	140	ND(<43)
Total PCBs	140	120
Percent Solids	72.50%	76.90%

Note:
ND = Not Detected Above Detection Limit

JOB NO.: 78274500100000 PLOT SCALE: 1=1

STARTED ON: 06/22/99 REVISED: 7/2/99



LEGEND:

■ SAM

▲ BOR CILITY

	FIGURE 4
	SAMPLE COLLECTION LOCATIONS
DATE: 11/16/98	DR.: D.M.
SCALE: 1" ≈ 200'	E/F NO.: 20155002

Railroad Retaining Wall Fill

One sample (ADNY-WALL-SS01) was collected from approximately the center of the fill material below the railroad retaining wall. The area was screened with a magnetic locator (Schonstedt, Model GA-52B). The magnetic locator indicated the presence of metal associated with this fill material. Surface metal and iron reinforcing within the retaining wall could account for all the metal indicated by the magnetic locator. The fill material is sparsely vegetated and unpaved.

The retaining wall fill material is a wedge shape approximately 5 feet high at wall by 12 feet wide at the base by 52 feet long. The sample was taken at a depth of approximately 2 to 2.5 feet into the center of the pile. The material encountered was over 50 percent shale. As initially collected, the sample consisted of shale mixed with medium brown organic clay. However, to the extent practicable, the shale fragments were removed from the sample prior to placement in the sample containers.

The analytical results for sample for ADNY-WALL-SS01 indicated the presence of ethyl benzene (380 ug/kg), xylene (1,700 ug/kg), phenanthrene (1,200 ug/kg), fluoranthene (3,100 ug/kg), pyrene(4,200 ug/kg), benzo(a)anthracene (1,900 ug/kg), chrysene (2,100 ug/kg), benzo(b)fluoranthene (2,200 ug/kg), benzo(a)pyrene (2,100 ug/kg), benzo(ghi)perylene (1,300 ug/kg), and ideno(1,2,3-cd)pyrene (1,100 ug/kg). PCBs were detected at a concentration of 57 ug/kg (Aroclor 1254). Most of the TAL metals were also detected (see Table 2).

The VOCs and PCBs results did not exceed the soil clean-up objectives. Four SVOCs exceed the soil clean-up objectives: benzo(a)anthracene (1,900 vs. 224 ug/kg), chrysene (2,100 vs. 40 ug/kg), benzo(b)fluoranthene (2,200 vs. 1,100 ug/kg), and Benzo(a)pyrene (2100 vs. 61 ug/kg). Metals results were compared to the default background concentrations presented in the guidance document; however, the recommended soil clean-up objective is site background and further evaluation of site background may be appropriate. The following metals exceed the default background concentrations: arsenic, beryllium, chromium, copper, iron, magnesium.

Discussion of Results

Four SVOC exceeded the recommended NYS soil clean-up objectives. Six metals exceed the default statewide background value. The types of constituents and nature of the site would indicate that an alternative clean-up objective is appropriate; however, the derivation of an alternative clean-up standard would require NYS DEC review.

Southern Disturbed Area

Four hand auger borings were completed to bedrock on the southern portion of the site. Only one of these borings (SDA-B1) contained apparent fill material. This boring contained a layer from 8 to 13 inches in depth which contained coal and slag. The presence of coal and slag is consistent with historical references indicating coal storage in this area. Descriptive logs of soil borings SDA-1 through 4 are provided in Appendix B. Gray shale bedrock was encountered at less than 19 inches in each boring. Soil samples were collected from SDA-B1 (Sample Number ADNY-SDA-SS01, from the layer containing coal and slag) and SDA-B2 (Sample Number ADNY-SDA-SS02). These samples were analyzed for TCL VOCs, TCL SVOCs, TAL metals, PCBs, and total solids.

Acetone was the only VOC detected in the soil samples from the Southern Disturbed Area and was detected below the NYS recommended soil clean-up objective. Ten (10) SVOCs exceed the NYS recommended soil

NY PTO-SS01?

Sample Location	rmer Utilities	Former Diesel Tank
Sample Designation	NY-UT-SS03	ADNY-DTK-SS01
Sample Matrix	Soil	Soil
Volatile Organic Compound (ug/kg)	ND(<20)	ND(<17)
Acetone	ND(<5.1)	ND(<4.1)
Trichloroethylene	ND(<5.1)	ND(<4.1)
Ethylbenzene	ND(<5.1)	ND(<4.1)
Xylenes (total)	ND(<5.1)	ND(<4.1)
1,2-Dichloroethene		
Semi-Volatile Organic Compounds (ug/kg)	ND(<400)	ND(<370)
Anthracene	ND(<400)	380
Bis(2-ethylhexyl)phthalate	ND(<400)	ND(<370)
Phenanthrene	ND(<400)	ND(<370)
Fluoranthene	ND(<400)	ND(<370)
Pyrene	ND(<400)	ND(<370)
Benzo(a)anthracene	ND(<400)	ND(<370)
Chrysene	ND(<400)	ND(<370)
Benzo(b)fluoranthene	ND(<400)	ND(<370)
Benzo(k)fluoranthene	ND(<400)	ND(<370)
Benzo(a) pyrene	ND(<400)	ND(<370)
Benzo(ghi)perylene	ND(<400)	ND(<370)
Dibenz(a,h)anthracene	ND(<400)	ND(<370)
Ideno(1,2,3-cd)pyrene	ND(<400)	ND(<370)
2-Methylnaphthalene		
Metals (mg/kg)	10,700	9,190
Aluminum	ND(<7.3) J	ND(<6.8) J
Antimony	10.7	14.1
Arsenic	149	240
Barium	ND(<0.61)	ND(0.57)
Beryllium	ND(<0.61)	ND(0.57)
Cadmium	15,100 J	2,120 J
Calcium	17.5 J	11.8 J
Chromium	11.9	9.2
Cobalt	44 J	33.2 J
Copper	24,600	27,300
Iron	19.7 J	16.9 J
Lead	5,610	3,480
Magnesium	872	1,020
Manganese	ND(<0.12)	ND(<0.11)
Mercury	33.4	30.1
Nickel	1,660	1,180
Potassium	ND(<0.61)	ND(<0.57)
Selenium	ND(<1.2)	ND(<1.1)
Silver	ND(<608)	ND(<566)
Sodium	ND(<1.2)	ND(<1.1)
Thallium	18.7	14.2
Vanadium	83.2 J	139 J
Zinc		
PCBs (ug/kg)	ND(<40)	ND(<37)
Aroclor 1016	ND(<40)	ND(<37)
Aroclor 1221	ND(<40)	ND(<37)
Aroclor 1232	ND(<40)	ND(<37)
Aroclor 1242	ND(<40)	ND(<37)
Aroclor 1248	ND(<40)	ND(<37)
Aroclor 1254	ND(<40)	ND(<37)
Aroclor 1260	ND	ND
Total PCBs		
Total Petroleum Hydrocarbons (mg/kg)	NA	4.6
TPH (418.1)	NA	19
TPH (Deisel Range Organics)		
	82.20%	88.30%
Percent Solids		

Notes:
J = Estimated Value
NA = Not Analyzed
ND = Not Detected Above Detection Lim

clean-up objectives (Table 2). PCBs were detected in both samples from the southern disturbed areas (67 and 85 ug/kg). Arsenic, beryllium, chromium, copper, iron, magnesium, mercury, nickel, and zinc exceed the default statewide background values for soils.

Discussion of Results

Ten (10) SVOCs exceeded the NYS recommended soil clean-up objectives. Metals were detected exceeding the default statewide background values. These are generic screening values and site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Fill Material – Southwest Corner of Building

Fill material of unknown origin was identified in the southwest corner of Main Building. This material comprised an area approximately 20 ft. X 7 ft. located in the southwest corner of the building contained fill material. The boring indicated that this material was approximately 3 ft. deep, resulting in a calculated volume of approximately 16 cubic yards. This fill material is unpaved and appeared to be contained within a concrete structure constructed to house a fire hydrant. Neither the PID nor the gamma scintillation meter readings exceeded background.

The boring indicated that the top 15 inches consisted of yellow sand. Medium brown loam with some coal and shale fragments was identified from 15-36 inches deep. The auger could not be advanced past 36 inches. One sample was collected from this boring (ADNY-FM-SS01).

Trichloroethylene (670 ug/kg) was the only VOC detected in sample ADNY-FM-SS01. Phenanthrene, fluoranthene, and pyrene were the only SVOCs detected. SVOCs and VOCs were not detected above the NYSDEC recommended soil clean-up objectives. PCBs were not detected. Arsenic, chromium, copper, iron, mercury, nickel, and zinc exceeded the default statewide background concentrations.

Discussion of Results

Seven (7) metals exceeded the default statewide background values in soils. These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable. VOCs, SVOCs, and PCBs were below the recommended soil clean-up objectives

3.3 TASK 3 – SOILS EVALUATION

The soils investigation included the following areas: the stormwater swale, the former transformer, transformer dust control area, the Niagara Mohawk electrical substation, former utilities, decommissioned waste oil tank, former fuel oil tank, former waste oil tank/transformer (Figure 4).

Stormwater Swale

The borings completed in the stormwater swale located along the southside of the property indicated no soil was present on the west side of the swale increasing to approximately 18 inches on the west side of the swale. The swale was measured to be approximately 175 feet long and is unpaved.

Boring Swale A was taken at the west end of the swale material in this area was approximately 18 inches deep. The depth to bedrock was approximately 8 inches and 3 inches in boring Swale B and C, respectively. Boring Swale B was located 50 feet east and boring Swale C was located 100 feet east of Swale A. The soil sample was collected from boring Swale A.

The sample results indicated that all VOCs were below detection limits. The following SVOCs exceeded the respective NYS recommended soil clean-up objective: benzo(a)anthracene (2,900 ug/kg) chrysene (3,600 ug/kg), benzo(b)anthracene (4,700 ug/kg), benzo(k)fluoranthene (1,600 ug/kg), and benzo(b)pyrene (8,200 ug/kg). PCBs (Aroclor 1254) were detected at 13 mg/kg.

Arsenic (20.7 vs. 7.5 mg/kg), chromium (32.8 vs. 10 mg/kg), copper (125 vs. 25 mg/kg), iron (43,400 vs. 2,000 mg/kg), mercury (0.38 vs. 0.1 mg/kg), nickel (97.4 vs. 13 mg/kg), and zinc (510 vs. 20 mg/kg) exceed the default statewide background values.

Discussion of Results

PCBs (13 mg/kg) and SSVOCs in the sample from the swale exceed the NYS soil clean-up objectives and may require further action. An on-Site source of the PCBs and SVOCs identified in this sample are not apparent; however, it appears that this swale primarily receives runoff from the railroad right-of-way that borders on the southside of the site.

Metals were detected above the statewide background values. These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Former Transformer

One sample was collected from beneath the concrete in the vicinity of former transformer located on the north side of the building. This sample was comprised of near surface soils beneath a cracked portion of the concrete. It should be noted that the concrete in this area appeared to be in generally good condition and no staining was noted. No PCBs were detected in the sample taken from this area (Table 3).

Discussion of Results

PCBs were not detected. No further action is warranted.

Transformer Oil Dust Control Area

This sample was taken from a 1/2-1 foot depth interval below a depression in a brick paved area. This soil in this area was comprised of dark brown sand with some gravel. However, gray staining was also noted. The sample results indicated the presence of PCBs (Aroclor 1248) at a concentration of 1.7 mg/kg (Table 3).

Discussion of Results

The sample results indicated the presence of PCBs at a concentration of 1.7 mg/kg. This concentration exceeds the NYS soil clean-up objective of 1 mg/kg in surface soil samples, but is below the subsurface soil clean-up objective of 10 mg/kg. This indicated that PCBs are present in the area where the former owner stated that he used PCB oils as a dust control agent. The subsurface soil clean-up objective appears to apply to the sample area. However, some bricks were missing in this general area and soils are present at the surface in these areas. It should be noted that the PCB congener (Aroclor 1248) is different than those identified in other portions of the site (Aroclor 1254 and 1260).

TABLE 3
PCB SOIL RESULTS
ALUMAX EXTRUSIONS, INC.
DUNKIRK, NEW YORK

Sample Location		Niagara Mohawk	Potential Transformer Oil	Former Transformer Area
Sample Designation	Soil Clean-up	ADNY-NIMO-SS01	ADNY-PTO-SS1	ADNY-T1-SS01
Sample Matrix	Objectives	Soil	Soil	Soil
PCBs ug/kg				
Aroclor 1016		ND (<38)	ND(<360)	ND(<39)
Aroclor 1221		ND (<38)	ND(<360)	ND(<39)
Aroclor 1232		ND (<38)	ND(<360)	ND(<39)
Aroclor 1242		ND (<38)	ND(<360)	ND(<39)
Aroclor 1248		ND (<38)	1,700	ND(<39)
Aroclor 1254		ND (<38)	ND(<360)	ND(<39)
Aroclor 1260		ND (<38)	ND(<360)	ND(<39)
Total PCBs	1,000 at surface	ND	1,700	ND
	10,000 subsurface			

Note:
ND = Not Detected Above Detection Limit

Niagara Mohawk Substation

One composite sample (ADNY-NIMO-SS01) was collected from a hand boring along the property line. The PID did not detect the presence of organic vapors in the boring. Gamma scintillation readings were within the range of background. No soil staining was observed. The analytical results did not indicate the presence of PCBs (Table 3).

Discussion of Results

No indication of PCB contamination was identified on the Site in association with the Niagara Mohawk substation.

Former Utilities

Soils in the vicinity of former utilities were evaluated via three soil borings. Two of these borings (ADNY-UT-SS01 and ADNY-UT–SS02) were located in a concrete paved area west of the building and the third (ADNY-UT-SS03) was located in an open utility sump or trench along the north side of the building.

Samples ADNY-UT-SS01 were located approximately 80 feet west of the Main Building just south of the suspected location of a former steam tunnel. The assumed location of this tunnel was based on the known location of the tunnel within the Main building projected to the location of the former power house located on the adjacent property to the west. ADNY-UT-SS02 was located 21 feet north of ADNY-UT-SS01. Bedrock was encountered at a depth of 66 and 26 inches in ADNY-UT-SS01 and –UT-SS02, respectively. A layer of cinders and slag was encountered from approximately ½ to 1-½ feet in both borings. The cinders were underlain by gray clay in both borings. The PID did not detect the presence of organic vapors in either boring. Gamma scintillation readings were within the range of background.

The sample results from ADNY-UT-SS01 and ADNY-UT-SS02 did not indicate the presence of VOCs, SVOCs, or PCBs. Arsenic, chromium, copper, iron, mercury, nickel, and zinc exceeded the default statewide soil background levels.

ADNY-UT-SS03 was collected from the soil accumulated in a utility sump or an open end in a utility trench on the north side of the building. This utility run was approximately 3 feet deep and was filled with medium brown clay with some gravel (approximately 10 percent). VOCs, SVOCs, and PCBs were not detected above detection limits. Arsenic, chromium, copper, nickel, and zinc were detected above the default statewide soil background value.

Discussion of Results

VOCs, SVOCs, and PCBs were below the NYS recommended soil clean-up objectives. Five (5) metals were detected above the default statewide background concentrations. These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Decommissioned Waste Oil Tank Area

Near surface soil samples (2) were collected on the north (sample ADNY-WOT-SS01) and east (sample ADNY-WOT-SS02) sides of the decommissioned above ground waste oil tank located on the north side of the building. These samples were analyzed for TCL VOCs, TCL SVOCs, TAL Metals, Total Petroleum Hydrocarbons (TPH), and PCBs.

The analytical results did not indicate the presence of VOCs. The following SVOCs were detected above the soil clean-up objectives: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(ghi)perylene. Arsenic, beryllium, chromium, copper, mercury, nickel, and zinc exceeded the default statewide background soil value. PCBs (Aroclor 1260) were also detected in these soil samples at concentrations of 120 and 96 ug/kg. These results are below the soil clean-up objective of 1 mg/kg in surface soils. TPH were also detected in these soils samples, maximum concentrations of 260 mg/kg (method 418.1) and 3,600 mg/kg (TPH-diesel range organic compounds).

Discussion of Results

SVOCs and metals were detected at concentrations exceeding the soil clean-up objectives. TPH was also detected. NYS relies on the VOC and SVOC constituents within the TPH and does not have a recommended soil clean-up objective for TPH. The recommended soil clean-up objectives are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Former Diesel Tank

One soil sample was collected from the base of the fuel oil tank excavation. The analytical results from this sample did not detect VOCs or PCBs above detection limits. Bis(2-ethylhexyl)phthalate was the only SVOC detected and the sample results were below the soil clean-up objectives. Relatively low concentrations of TPH were also detected (4.6 mg/kg via method 418.1 and 19 mg/kg via TPH-diesel range organic compounds). Arsenic, chromium, copper, nickel, and zinc exceeded the default statewide soil background values.

Discussion of Results

The sample results did not indicate a substantial release from the former diesel tank. TPH was detected at concentrations of 4.6 and 19 mg/kg which may be indicative of background levels based on the history of the site.

Former Waste Oil Tank/Existing Transformer

One sample (ADNY-SUMP-001) was collected from an area backfilled with gravel around the base of the transformer (Table 4). The secondary containment for the waste oil tank, formerly located on the eastside of the building, was connected to this gravel filled transformer sump therefore allowing material potentially spilled from either the former waste oil tank or the transformer to accumulate in this structure (Figure 5). The water sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals, TPH, and PCBs. Volatile organic compounds (VOCs), SVOCs, and PCBs were not detected in this sample. Total recoverable petroleum hydrocarbons were detected at 210 mg/l. All metals were below the respective Federal Primary Drinking Water Standard.

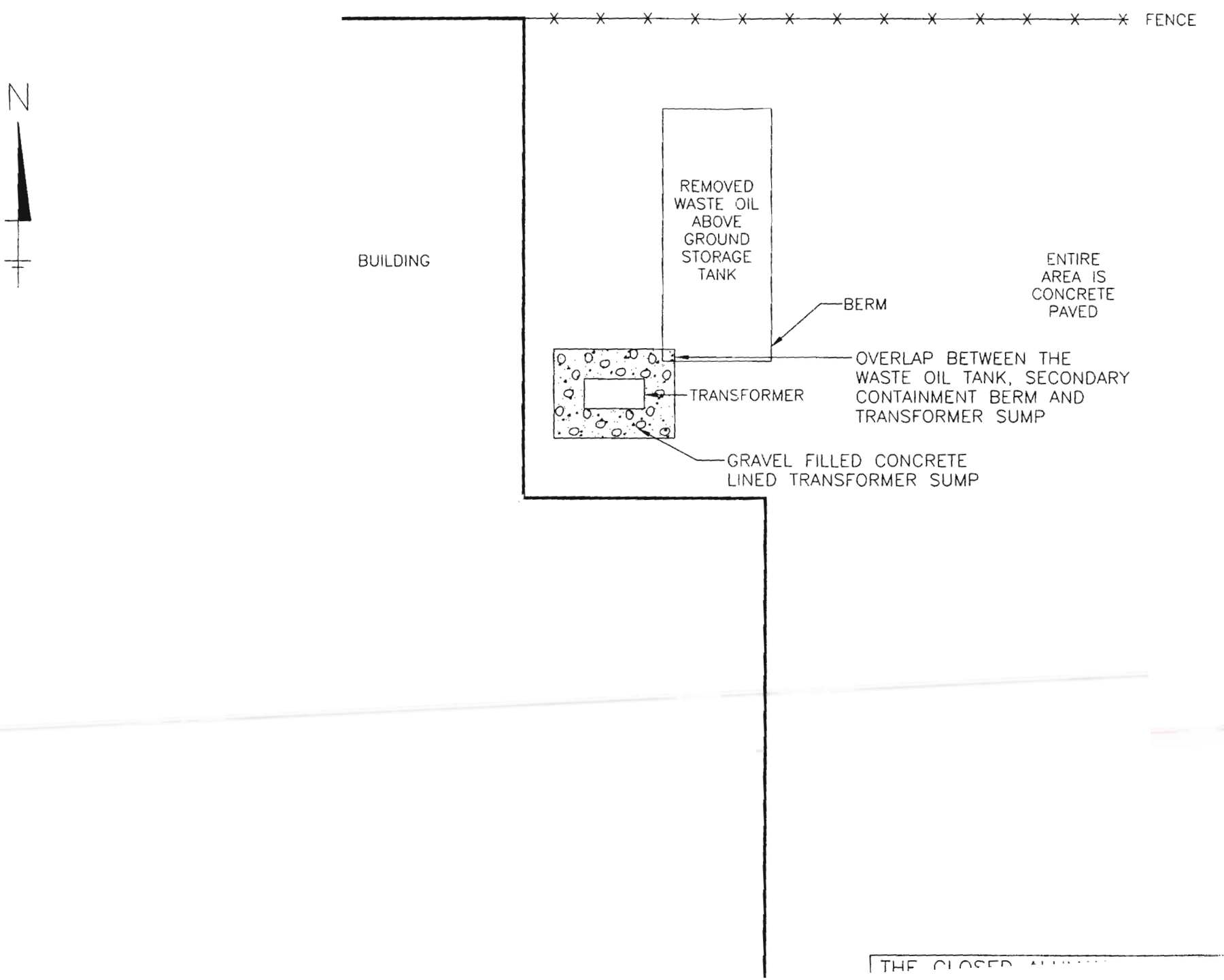
Discussion of Results

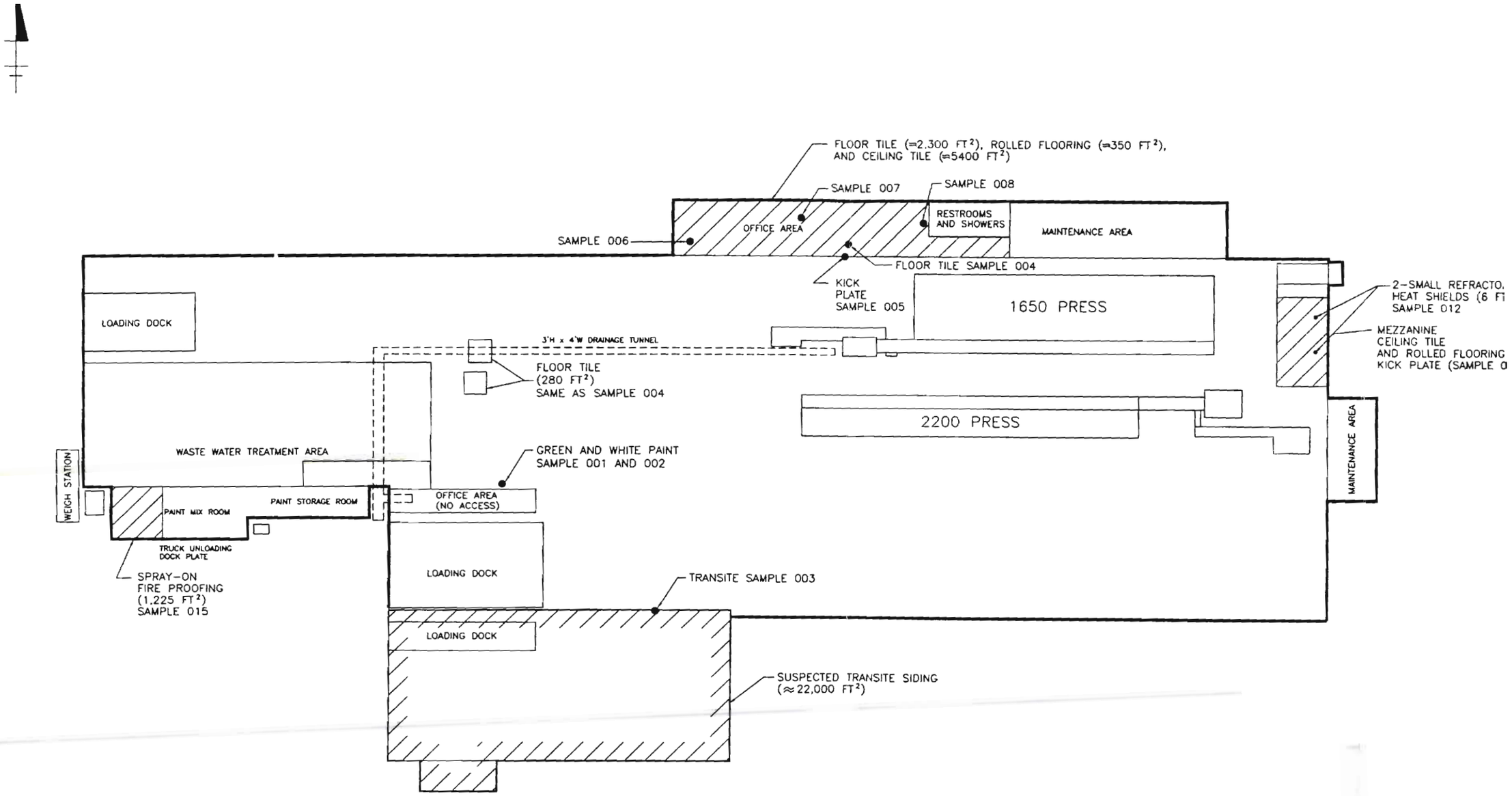
Only TPH was detected at concentrations of 210 mg/l in this sample. This sample was collected from a concrete lined structure which is expected to act as containment for this material.

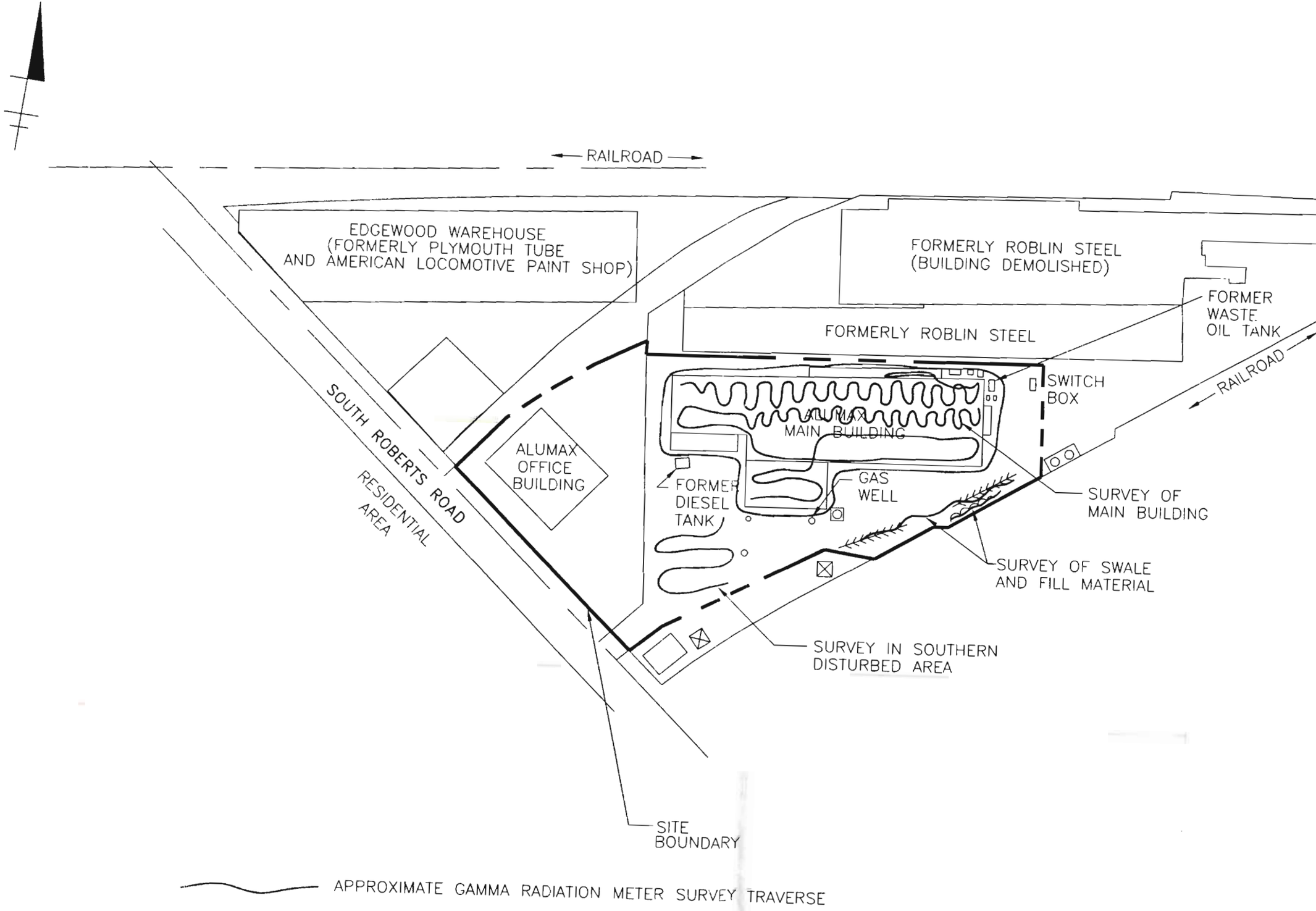
TABLE 4
WATER SAMPLE RESULTS
ALUMAX EXTRUSIONS, INC.
DUNKIRK, NEW YORK

Sample Location	Water Well	Transformer Sump
Sample Designation	ADNY-PW1	ADNY-Sump-001
Sample Matrix	Groundwater	Water
Volatile Organic Compound ug/L		
Acetone	ND (<20)	ND (<20)
Trichloroethylene	ND (<5)	ND (<5)
Ethylbenzene	ND (<5)	ND (<5)
Xylenes (total)	ND (<5)	ND (<5)
1,2-Dichloroethene	ND (<5)	ND (<5)
Semi-Volatile Organic Compounds ug/L		
Bis(2-ethylhexyl)phthalate	ND (<10)	ND (<200)
Phenanthrene	ND (<10)	ND (<200)
Fluoranthene	ND (<10)	ND (<200)
Pyrene	ND (<10)	ND (<200)
Benzo(a)anthracene	ND (<10)	ND (<200)
Chrysene	ND (<10)	ND (<200)
Benzo(b)fluoranthene	ND (<10)	ND (<200)
Benzo(k)fluoranthene	ND (<10)	ND (<200)
Benzo(a) pyrene	ND (<10)	ND (<200)
Benzo(ghi)perylene	ND (<10)	ND (<200)
Dibenz(a,h)anthracene	ND (<10)	ND (<200)
Ideno(1,2,3-cd)pyrene	ND (<10)	ND (<200)
2-Methylnaphthalene	ND (<10)	ND (<200)
Metals mg/L		
Aluminum	ND(<0.20)	0.71 J
Antimony	ND(<0.060)	ND(<0.060)
Arsenic	ND(<0.010)	ND(<0.010)
Barium	ND(<0.20)	0.2
Beryllium	ND(<0.0050)	ND(<0.0050)
Cadmium	ND(<0.0050)	ND(<0.0050)
Calcium	128	75.9
Chromium	ND(<0.010)	0.015
Cobalt	ND(<0.050)	ND(<0.050)
Copper	ND(<0.025)	ND(<0.025)
Iron	3.6	7.1 J
Lead	ND(<0.0030)	0.0078
Magnesium	24.9	12.8
Manganese	0.41	2.2
Mercury	ND(0.00020)	ND(<0.00020)
Nickel	ND(<0.040)	ND(<0.040)
Potassium	ND(<5.0)	8.1
Selenium	ND(<0.0050)	ND(<0.0050)
Silver	ND(<0.010)	ND(<0.010)
Sodium	233	23.8
Thallium	ND(<0.010)	ND(<0.010)
Vanadium	ND(<0.050)	ND(<0.050)
Zinc	ND(<0.020)	0.35
PCBs ug/L		
Aroclor 1016	ND(<1.0)	ND(<1.0)
Aroclor 1221	ND(<1.0)	ND(<1.0)
Aroclor 1232	ND(<1.0)	ND(<1.0)
Aroclor 1242	ND(<1.0)	ND(<1.0)
Aroclor 1248	ND(<1.0)	ND(<1.0)
Aroclor 1254	ND(<1.0)	ND(<1.0)
Aroclor 1260	ND(<1.0)	ND(<1.0)
Total PCBs	ND	ND
Total Petroleum Hydrocarbons mg/L		
TPH (418.1)	NA	210
TPH (Deisel Range Organics)	NA	29

Notes:
J = Estimated Value
NA = Not Analyzed
ND = Not Detected Above Detection Limits
Parameters Shown on Table is Limited to Constituents
Dectected in Either the Sample or Other Samples Collected During Phase II Assessment


N
FENCE
BUILDING
REMOVED WASTE OIL ABOVE GROUND STORAGE TANK
BERM
ENTIRE AREA IS CONCRETE PAVED
OVERLAP BETWEEN THE WASTE OIL TANK, SECONDARY CONTAINMENT BERM AND TRANSFORMER SUMP
TRANSFORMER
GRAVEL FILLED CONCRETE LINED TRANSFORMER SUMP


FLOOR TILE (≈2,300 FT²), ROLLED FLOORING (≈350 FT²), AND CEILING TILE (≈5400 FT²)
SAMPLE 007
SAMPLE 008
OFFICE AREA
RESTROOMS AND SHOWERS
MAINTENANCE AREA
SAMPLE 006
FLOOR TILE SAMPLE 004
KICK PLATE SAMPLE 005
1650 PRESS
2-SMALL REFRACTO. HEAT SHIELDS (6 FT SAMPLE 012
MEZZANINE CEILING TILE AND ROLLED FLOORING KICK PLATE (SAMPLE 0
LOADING DOCK
3'H x 4'W DRAINAGE TUNNEL
FLOOR TILE (280 FT²) SAME AS SAMPLE 004
2200 PRESS
MAINTENANCE AREA
WASTE WATER TREATMENT AREA
GREEN AND WHITE PAINT SAMPLE 001 AND 002
WEIGH STATION
PAINT MIX ROOM
PAINT STORAGE ROOM
OFFICE AREA (NO ACCESS)
TRUCK UNLOADING DOCK PLATE
SPRAY-ON FIRE PROOFING (1,225 FT²) SAMPLE 015
LOADING DOCK
TRANSITE SAMPLE 003
LOADING DOCK
SUSPECTED TRANSITE SIDING (≈22,000 FT²)


RAILROAD
EDGEWOOD WAREHOUSE
(FORMERLY PLYMOUTH TUBE
AND AMERICAN LOCOMOTIVE PAINT SHOP)
FORMERLY ROBLIN STEEL
(BUILDING DEMOLISHED)
FORMERLY ROBLIN STEEL
FORMER
WASTE
OIL TANK
SWITCH
BOX
RAILROAD
SOUTH ROBERTS ROAD
RESIDENTIAL
AREA
ALUMAX
OFFICE
BUILDING
ALUMAX
MAIN BUILDING
FORMER
DIESEL
TANK
GAS
WELL
SURVEY OF
MAIN BUILDING
SURVEY OF SWALE
AND FILL MATERIAL
SURVEY IN SOUTHERN
DISTURBED AREA
SITE
BOUNDARY
APPROXIMATE GAMMA RADIATION METER SURVEY TRAVERSE

clean-up objectives (Table 2). PCBs were detected in both samples from the southern disturbed areas (67 and 85 ug/kg). Arsenic, beryllium, chromium, copper, iron, magnesium, mercury, nickel, and zinc exceed the default statewide background values for soils.

Discussion of Results

Ten (10) SVOCs exceeded the NYS recommended soil clean-up objectives. Metals were detected exceeding the default statewide background values. These are generic screening values and site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Fill Material – Southwest Corner of Building

Fill material of unknown origin was identified in the southwest corner of Main Building. This material comprised an area approximately 20 ft. X 7 ft. located in the southwest corner of the building contained fill material. The boring indicated that this material was approximately 3 ft. deep, resulting in a calculated volume of approximately 16 cubic yards. This fill material is unpaved and appeared to be contained within a concrete structure constructed to house a fire hydrant. Neither the PID nor the gamma scintillation meter readings exceeded background.

The boring indicated that the top 15 inches consisted of yellow sand. Medium brown loam with some coal and shale fragments was identified from 15-36 inches deep. The auger could not be advanced past 36 inches. One sample was collected from this boring (ADNY-FM-SS01).

Trichloroethylene (670 ug/kg) was the only VOC detected in sample ADNY-FM-SS01. Phenanthrene, fluoranthene, and pyrene were the only SVOCs detected. SVOCs and VOCs were not detected above the NYSDEC recommended soil clean-up objectives. PCBs were not detected. Arsenic, chromium, copper, iron, mercury, nickel, and zinc exceeded the default statewide background concentrations.

Discussion of Results

Seven (7) metals exceeded the default statewide background values in soils. These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable. VOCs, SVOCs, and PCBs were below the recommended soil clean-up objectives

3.3 TASK 3 – SOILS EVALUATION

The soils investigation included the following areas: the stormwater swale, the former transformer, transformer dust control area, the Niagara Mohawk electrical substation, former utilities, decommissioned waste oil tank, former fuel oil tank, former waste oil tank/transformer (Figure 4).

Stormwater Swale

The borings completed in the stormwater swale located along the southside of the property indicated no soil was present on the west side of the swale increasing to approximately 18 inches on the west side of the swale. The swale was measured to be approximately 175 feet long and is unpaved.

Boring Swale A was taken at the west end of the swale material in this area was approximately 18 inches deep. The depth to bedrock was approximately 8 inches and 3 inches in boring Swale B and C, respectively. Boring Swale B was located 50 feet east and boring Swale C was located 100 feet east of Swale A. The soil sample was collected from boring Swale A.

The sample results indicated that all VOCs were below detection limits. The following SVOCs exceeded the respective NYS recommended soil clean-up objective: benzo(a)anthracene (2,900 ug/kg) chrysene (3,600 ug/kg), benzo(b)anthracene (4,700 ug/kg), benzo(k)fluoranthene (1,600 ug/kg), and benzo(b)pyrene (8,200 ug/kg). PCBs (Aroclor 1254) were detected at 13 mg/kg.

Arsenic (20.7 vs. 7.5 mg/kg), chromium (32.8 vs. 10 mg/kg), copper (125 vs. 25 mg/kg), iron (43,400 vs. 2,000 mg/kg), mercury (0.38 vs. 0.1 mg/kg), nickel (97.4 vs. 13 mg/kg), and zinc (510 vs. 20 mg/kg) exceed the default statewide background values.

Discussion of Results

PCBs (13 mg/kg) and SSVOCs in the sample from the swale exceed the NYS soil clean-up objectives and may require further action. An on-Site source of the PCBs and SVOCs identified in this sample are not apparent; however, it appears that this swale primarily receives runoff from the railroad right-of-way that borders on the southside of the site.

Metals were detected above the statewide background values. These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Former Transformer

One sample was collected from beneath the concrete in the vicinity of former transformer located on the north side of the building. This sample was comprised of near surface soils beneath a cracked portion of the concrete. It should be noted that the concrete in this area appeared to be in generally good condition and no staining was noted. No PCBs were detected in the sample taken from this area (Table 3).

Discussion of Results

PCBs were not detected. No further action is warranted.

Transformer Oil Dust Control Area

This sample was taken from a 1/2-1 foot depth interval below a depression in a brick paved area. This soil in this area was comprised of dark brown sand with some gravel. However, gray staining was also noted. The sample results indicated the presence of PCBs (Aroclor 1248) at a concentration of 1.7 mg/kg (Table 3).

Discussion of Results

The sample results indicated the presence of PCBs at a concentration of 1.7 mg/kg. This concentration exceeds the NYS soil clean-up objective of 1 mg/kg in surface soil samples, but is below the subsurface soil clean-up objective of 10 mg/kg. This indicated that PCBs are present in the area where the former owner stated that he used PCB oils as a dust control agent. The subsurface soil clean-up objective appears to apply to the sample area. However, some bricks were missing in this general area and soils are present at the surface in these areas. It should be noted that the PCB congener (Aroclor 1248) is different than those identified in other portions of the site (Aroclor 1254 and 1260).

TABLE 3
PCB SOIL RESULTS
ALUMAX EXTRUSIONS, INC.
DUNKIRK, NEW YORK

Sample Location		Niagara Mohawk	Potential Transformer Oil	Former Transformer Area
Sample Designation	Soil Clean-up	ADNY-NIMO-SS01	ADNY-PTO-SS1	ADNY-T1-SS01
Sample Matrix	Objectives	Soil	Soil	Soil
PCBs ug/kg				
Aroclor 1016		ND (<38)	ND(<360)	ND(<39)
Aroclor 1221		ND (<38)	ND(<360)	ND(<39)
Aroclor 1232		ND (<38)	ND(<360)	ND(<39)
Aroclor 1242		ND (<38)	ND(<360)	ND(<39)
Aroclor 1248		ND (<38)	1,700	ND(<39)
Aroclor 1254		ND (<38)	ND(<360)	ND(<39)
Aroclor 1260		ND (<38)	ND(<360)	ND(<39)
Total PCBs	1,000 at surface	ND	1,700	ND
	10,000 subsurface			

Note:
ND = Not Detected Above Detection Limit

Niagara Mohawk Substation

One composite sample (ADNY-NIMO-SS01) was collected from a hand boring along the property line. The PID did not detect the presence of organic vapors in the boring. Gamma scintillation readings were within the range of background. No soil staining was observed. The analytical results did not indicate the presence of PCBs (Table 3).

Discussion of Results

No indication of PCB contamination was identified on the Site in association with the Niagara Mohawk substation.

Former Utilities

Soils in the vicinity of former utilities were evaluated via three soil borings. Two of these borings (ADNY-UT-SS01 and ADNY-UT–SS02) were located in a concrete paved area west of the building and the third (ADNY-UT-SS03) was located in an open utility sump or trench along the north side of the building.

Samples ADNY-UT-SS01 were located approximately 80 feet west of the Main Building just south of the suspected location of a former steam tunnel. The assumed location of this tunnel was based on the known location of the tunnel within the Main building projected to the location of the former power house located on the adjacent property to the west. ADNY-UT-SS02 was located 21 feet north of ADNY-UT-SS01. Bedrock was encountered at a depth of 66 and 26 inches in ADNY-UT-SS01 and –UT-SS02, respectively. A layer of cinders and slag was encountered from approximately ½ to 1-½ feet in both borings. The cinders were underlain by gray clay in both borings. The PID did not detect the presence of organic vapors in either boring. Gamma scintillation readings were within the range of background.

The sample results from ADNY-UT-SS01 and ADNY-UT-SS02 did not indicate the presence of VOCs, SVOCs, or PCBs. Arsenic, chromium, copper, iron, mercury, nickel, and zinc exceeded the default statewide soil background levels.

ADNY-UT-SS03 was collected from the soil accumulated in a utility sump or an open end in a utility trench on the north side of the building. This utility run was approximately 3 feet deep and was filled with medium brown clay with some gravel (approximately 10 percent). VOCs, SVOCs, and PCBs were not detected above detection limits. Arsenic, chromium, copper, nickel, and zinc were detected above the default statewide soil background value.

Discussion of Results

VOCs, SVOCs, and PCBs were below the NYS recommended soil clean-up objectives. Five (5) metals were detected above the default statewide background concentrations. These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Decommissioned Waste Oil Tank Area

Near surface soil samples (2) were collected on the north (sample ADNY-WOT-SS01) and east (sample ADNY-WOT-SS02) sides of the decommissioned above ground waste oil tank located on the north side of the building. These samples were analyzed for TCL VOCs, TCL SVOCs, TAL Metals, Total Petroleum Hydrocarbons (TPH), and PCBs.

The analytical results did not indicate the presence of VOCs. The following SVOCs were detected above the soil clean-up objectives: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(ghi)perylene. Arsenic, beryllium, chromium, copper, mercury, nickel, and zinc exceeded the default statewide background soil value. PCBs (Aroclor 1260) were also detected in these soil samples at concentrations of 120 and 96 ug/kg. These results are below the soil clean-up objective of 1 mg/kg in surface soils. TPH were also detected in these soils samples, maximum concentrations of 260 mg/kg (method 418.1) and 3,600 mg/kg (TPH-diesel range organic compounds).

Discussion of Results

SVOCs and metals were detected at concentrations exceeding the soil clean-up objectives. TPH was also detected. NYS relies on the VOC and SVOC constituents within the TPH and does not have a recommended soil clean-up objective for TPH. The recommended soil clean-up objectives are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Former Diesel Tank

One soil sample was collected from the base of the fuel oil tank excavation. The analytical results from this sample did not detect VOCs or PCBs above detection limits. Bis(2-ethylhexyl)phthalate was the only SVOC detected and the sample results were below the soil clean-up objectives. Relatively low concentrations of TPH were also detected (4.6 mg/kg via method 418.1 and 19 mg/kg via TPH-diesel range organic compounds). Arsenic, chromium, copper, nickel, and zinc exceeded the default statewide soil background values.

Discussion of Results

The sample results did not indicate a substantial release from the former diesel tank. TPH was detected at concentrations of 4.6 and 19 mg/kg which may be indicative of background levels based on the history of the site.

Former Waste Oil Tank/Existing Transformer

One sample (ADNY-SUMP-001) was collected from an area backfilled with gravel around the base of the transformer (Table 4). The secondary containment for the waste oil tank, formerly located on the eastside of the building, was connected to this gravel filled transformer sump therefore allowing material potentially spilled from either the former waste oil tank or the transformer to accumulate in this structure (Figure 5). The water sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals, TPH, and PCBs. Volatile organic compounds (VOCs), SVOCs, and PCBs were not detected in this sample. Total recoverable petroleum hydrocarbons were detected at 210 mg/l. All metals were below the respective Federal Primary Drinking Water Standard.

Discussion of Results

Only TPH was detected at concentrations of 210 mg/l in this sample. This sample was collected from a concrete lined structure which is expected to act as containment for this material.

TABLE 4
WATER SAMPLE RESULTS
ALUMAX EXTRUSIONS, INC.
DUNKIRK, NEW YORK

Sample Location	Water Well	Transformer Sump
Sample Designation	ADNY-PW1	ADNY-Sump-001
Sample Matrix	Groundwater	Water
Volatile Organic Compound ug/L		
Acetone	ND (<20)	ND (<20)
Trichloroethylene	ND (<5)	ND (<5)
Ethylbenzene	ND (<5)	ND (<5)
Xylenes (total)	ND (<5)	ND (<5)
1,2-Dichloroethene	ND (<5)	ND (<5)
Semi-Volatile Organic Compounds ug/L		
Bis(2-ethylhexyl)phthalate	ND (<10)	ND (<200)
Phenanthrene	ND (<10)	ND (<200)
Fluoranthene	ND (<10)	ND (<200)
Pyrene	ND (<10)	ND (<200)
Benzo(a)anthracene	ND (<10)	ND (<200)
Chrysene	ND (<10)	ND (<200)
Benzo(b)fluoranthene	ND (<10)	ND (<200)
Benzo(k)fluoranthene	ND (<10)	ND (<200)
Benzo(a) pyrene	ND (<10)	ND (<200)
Benzo(ghi)perylene	ND (<10)	ND (<200)
Dibenz(a,h)anthracene	ND (<10)	ND (<200)
Ideno(1,2,3-cd)pyrene	ND (<10)	ND (<200)
2-Methylnaphthalene	ND (<10)	ND (<200)
Metals mg/L		
Aluminum	ND(<0.20)	0.71 J
Antimony	ND(<0.060)	ND(<0.060)
Arsenic	ND(<0.010)	ND(<0.010)
Barium	ND(<0.20)	0.2
Beryllium	ND(<0.0050)	ND(<0.0050)
Cadmium	ND(<0.0050)	ND(<0.0050)
Calcium	128	75.9
Chromium	ND(<0.010)	0.015
Cobalt	ND(<0.050)	ND(<0.050)
Copper	ND(<0.025)	ND(<0.025)
Iron	3.6	7.1 J
Lead	ND(<0.0030)	0.0078
Magnesium	24.9	12.8
Manganese	0.41	2.2
Mercury	ND(0.00020)	ND(<0.00020)
Nickel	ND(<0.040)	ND(<0.040)
Potassium	ND(<5.0)	8.1
Selenium	ND(<0.0050)	ND(<0.0050)
Silver	ND(<0.010)	ND(<0.010)
Sodium	233	23.8
Thallium	ND(<0.010)	ND(<0.010)
Vanadium	ND(<0.050)	ND(<0.050)
Zinc	ND(<0.020)	0.35
PCBs ug/L		
Aroclor 1016	ND(<1.0)	ND(<1.0)
Aroclor 1221	ND(<1.0)	ND(<1.0)
Aroclor 1232	ND(<1.0)	ND(<1.0)
Aroclor 1242	ND(<1.0)	ND(<1.0)
Aroclor 1248	ND(<1.0)	ND(<1.0)
Aroclor 1254	ND(<1.0)	ND(<1.0)
Aroclor 1260	ND(<1.0)	ND(<1.0)
Total PCBs	ND	ND
Total Petroleum Hydrocarbons mg/L		
TPH (418.1)	NA	210
TPH (Deisel Range Organics)	NA	29

Notes:
J = Estimated Value
NA = Not Analyzed
ND = Not Detected Above Detection Limits
Parameters Shown on Table is Limited to Constituents
Dectected in Either the Sample or Other Samples Collected During Phase II Assessment

3.4 TASK 4 – ASBESTOS AND LEAD PAINT ANALYSIS

Samples of suspected asbestos containing materials and paint samples collected during the Phase I – ESA was sent for laboratory analysis (Figure 6). The analytical results indicated that the following materials contained asbestos: corrugated transite siding found on the south bay (20% chrysotile asbestos), beige mottled floor tile found in the west end of the office area (trace (<1%) chrysotile asbestos), and brown rolled flooring found in the east end of the office area (20% chrysotile asbestos). The beige mottled floor tile was estimated to cover approximately 1,750 square feet and the brown rolled flooring was estimated to cover approximately 326 square feet. The sample of the beige mottled flooring contained less than 1 percent chrysotile. However, it is recommended that additional samples of this material be collected and analyzed for a better determination of the asbestos content.

The samples were analyzed for asbestos via polarized light microscopy, which is the method recommended by the USEPA; however, New York State requires electron microscopy for final determination of asbestos content of floor tiles (required for only when microscopy does not detect asbestos).

Green and white paint chips found in the central and north bay's were analyzed for lead and respectively contained 1.5 and 2.6 percent lead by weight. Blue and yellow paint chips from the former paint room were also analyzed for lead and respectively contained 0.31 and 1.9 percent by weight.

Discussion of Results

Corrugated transite siding on the south bay of the Main building and brown rolled flooring found in a portion of the office located on the north side of the Main building. Mottled beige floor tiles contained trace amounts of asbestos and additional analysis is recommended. These materials appeared in good condition at the time of the site visit. Additionally, these materials are considered to be non-friable except during removal or demolition.

The regulatory limit for lead (USEPA/HUD) is 0.5% in schools and residential buildings. This limit does not apply to industrial buildings; however, occupational regulations do affect the abatement of lead containing paint. The white, green, and yellow paint chips collected in the main building are all considered to be lead containing paints. Areas of the green and white paint are peeling.

3.5 TASK 5 – GROUNDWATER EVALUATION

The groundwater investigation consisted of the collection of a groundwater sample from the existing Site well using low flow sampling methods. The well is approximately 74 ft deep relative to ground surface with a water level approximately 4 feet below ground surface. Twelve-inch steel surface casing extends to a depth of approximately 6 feet below ground surface with the remainder of the well completed as an open hole. The pump intake was situated at a depth of approximately 39 feet below ground surface.

The groundwater analytical results did not identify any VOCs, SVOCs, or PCBs exceeding the detection limit (Table 5 and Appendix B). Calcium, magnesium, manganese, and sodium were the only metals detected above detection limits. These metals are all naturally occurring. The radiological parameters (gross alpha, gross beta, and gamma) were either non-detected or below the minimal detectable activity. The field measurements stabilized as follows:

pH=7.1 standard units
Specific Conductance = 1.9 mS/cm
Turbidity = <10 NTU
Dissolved Oxygen = 0.2 mg/l
Temperature = 16 degrees C
Oxidation-Reduction Potential = -230 mV

Discussion of Results

The groundwater results met the Federal Drinking Water Standards.

3.6 TASK 6 – RADIATION SURVEY

The interior of the building was screened with a gamma scintillation meter. The path taken during the radiation survey is shown in Figure 7. Additionally, readings were taken on cracks, seams, drains, and railroad tracks in the flooring that may act as accumulation points. Readings generally ranged 10 to 20 uR/hr, which was within background ranges. Soil screening and a screening survey on the exterior of the building were all within background values (10 to 20 uR/hr).

Discussion of Results

No indication of an anomalous radiation source was encountered during the gamma scintillation survey of the Site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The sample analyses indicated the presence of SVOCs exceeding the NYS recommended soil clean-up criteria and metals exceeding the default statewide background values at locations distrubuted over most of the site. These constituents are consistent with the former site usage: coal storage (SVOCs and metals), locomotive manufacturing (oils – lubricants and fuel), brass and iron foundry (heavy metals). These are generic screening values and Site specific evaluation/risk assessment may indicate that the concentrations identified are acceptable.

Evaluation of areas targeted during the Phase II environmental assessment indicated the following:

- **Sewer Catch Basins**: Sediments found within sewer catch basins are impacted by trichloroethylene, ethylbenzene, 1,2-dichloroethene, xylene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and metals at concentrations which exceed the New York State (NYS) recommended soil clean-up objectives. However, the sediments are contained within the sewer system and are not subject to the soil clean-up criteria.

- **Swale:** Soils within the swale on the north side of the Site contains PCBs and SVOCs that exceed the NYS recommended soil clean-up objectives and metals exceed the default statewide background value. This swale appears to primarily receive drainage from the railroad right-of-way on the adjacent property. The soil within this swale a conservative estimate of sediment volume contained within this swale is 9 cubic yards and includes all sediment in swale.

- **Transformer Oil Dust Control**: PCB concentrations which exceed the NYS recommended surface soil clean-up objective, but are below the subsurface soil clean-up objective were detected in a sample from an area under brick pavement. However, the bricks were missing from some areas of the pavement exposing soils. The extent of the PCBs was not assessed.

- **Railroad Retaining Wall Fill**: Four semi-volatile organic compounds (SVOCs) detected in retaining wall fill sample exceed NYS soil clean-up objectives. Six metals detected in the retaining wall fill sample exceed the default statewide background values. The volume of fill is estimated to be 16 cubic yards. The nature of the constituents identified in this fill is generally consistent with the Site-wide analytical results.

- **Fill Material in the Southwest Corner of Building**: Arsenic, chromium, copper, iron, mercury, nickel, and zinc detected in the fill material soil exceed default statewide background value for soils. Trichloroethylene, phenanthrene, fluoranthene, and pyrene were detected in this sample below the NYS recommended soil clean-up objectives. The metal concentrations associated with this fill material were generally consistent with Site-wide analytical results and therefore may be within the range of Site background.

- **Southern Disturbed Area**: Two soil samples were collected from an apparent disturbed area identified on the historical aerial photograph. Fill material containing coal and slag was identified in one boring in this area. Ten (10) SVOCs exceeded NYS recommended soil clean-up objectives. Nine (9) metals were detected exceeding default statewide background concentrations. The SVOCs detected are generally associated with coal and coal tar derivatives. This is consistent with historical site use as a

coal storage area and a locomotive plant. The metal results are generally consistent with sitewide analytical results. This area is paved.

- **Decommissioned Waste Oil Tank Area**: Two near surface soil samples were collected in the vicinity of the decommissioned, above ground waste oil storage tank located near the north east corner of the Main building. The sample results indicated up to 3,600 mg/kg of total petroleum hydrocarbons (diesel range organic compounds). Benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(ghi)perylene exceeded the NYS recommended soil clean-up objectives. Arsenic, beryllium, chromium, copper, mercury, nickel, and zinc exceeded the default statewide soil background values. This was also in close proximity to an area on the Roblin Steel property where an oil spill was noted in a previous report. Metals were elevated compared to sitewide analytical results. The elevated chromium and nickel concentrations may be related to electric arc furnaces formerly operated by Roblin Steel and Allegheny Ludlum on the adjacent property.

- **Former Waste Oil Tank/Existing Transformer:** A water sample was collected from the transformer pad sump located near the northeast corner of the Main building. This pad overlapped the secondary containment of a former aboveground waste oil tank. This sump contained gravel and little soil was present. Volatile organic compounds (VOCs), SVOCs, and PCBs were not detected in this sample. Total recoverable petroleum hydrocarbons were detected at 210 mg/l. All metals were below the respective Federal Primary Drinking Water Standard.

- **Former Utility Samples:** Soil samples collected west of the building indicated arsenic, chromium, copper, iron, mercury, nickel, and zinc exceeding the statewide default soil background values. The metals concentrations were generally consistent with Site-wide analytical results.

- **Asbestos Containing Materials:** The transite siding on the southern bay of the main building was identified as asbestos containing material. Flooring in the office area was also identified as asbestos containing material. This material appeared in good condition. NYS regulations require special handling if asbestos containing material is removed or otherwise disturbed.

- **Lead Containing Paint:** Based on the sample results, the green and white paint located on the walls of the middle and north bays of the main building are considered to be lead containing, based on the USEPA and HUD definitions of lead paint. Yellow paint sampled in the former paint room also tested as lead containing. Portions of both the green and white paint were peeling. Occupational standards apply to the abatement and handling of lead paint.

The sample results did not indicate on-site concerns related to the existing groundwater well, the Niagara Mohawk Substation, the former transformer, or the former diesel tank. The radiation survey did not indicate any areas exceeding background.

Recommendations

The following recommendations are offered:

1. **Site-wide Soils**: Soil areas with analytical results exceeding default statewide background for metals or exceeding NYS recommended soil clean-up objectives for SVOCs should be evaluated further via an abbreviated human health risk assessment. This approach is utilized by the NYS Voluntary Clean-up Program. Areas included in this analysis should include the railroad retaining wall fill, the southern

disturbed area, the former utilities samples, the decommissioned waste oil tank, and the fill material in the southwest corner of the building.

2. **Swale:** PCB and SVOC concentrations in swale soil sample results exceed the NYS recommended soil clean-up objectives. The extent of the PCBs in this area may need to be evaluated further. However, impacted sediments appear to be limited and could be excavated. If sediments are excavated they should be properly managed in accordance with local, state, and federal regulations.

3. **Transformer Oil Dust Control Area**: The extent of PCB contaminated soil should be delineated. The sample analyzed indicated that PCBs are present at concentrations above the recommended soil clean-up objective for surface soil but below the soil clean-up objective for subsurface soils. Soils with PCB marginally exceeding surface clean up standards suggest a possibility for further delineation or reestablishment of the protective cap formerly provided by the brick surface.

4. **Sewers:** Sediment within the sewer catch basins should be removed and properly managed to prevent potential releases to the environment.

5.0 REFERENCES

ICF Kaiser Engineers, Inc., 1998. "Phase I Environmental Assessment of 320 South Roberts Road, Dunkirk, New York". December 15, 1998.

New York Department of Environmental Conservation (NYSDEC), 1994. "Technical and Administrative Guidance Memorandum: Determination of Soil Clean-up Objectives and Clean-up levels". January 24, 1994.

APPENDIX A

CATCH BASIN DESCRIPTIONS

SS-6
Dimensions: 48 inches-diameter
Depth of Sediment: 14 inches
Construction: Metal
Sediment Description: Gray Sand and Gravel
PID: 0 ppm
Gamma Meter: Background (20 uR/hr)

SS-7
Dimensions: 36 inches X 30 inches X 32 inches deep
Depth of Sediment: 12 inches
Construction: Cinder Block
Sediment Description: Dark brown clay with gray mottles
PID: 0 ppm
Gamma Meter: Background (20 uR/hr)

SS-8
Dimensions: 36 inches X 36 inches X 80 inches deep
Depth of Sediment: 18 inches
Construction: Poured concrete
Sediment Description: Black stained sand and gravel
PID: 0 ppm
Gamma Meter: Background (20 uR/hr)

SS-9
Dimensions: 35 inches X 39 inches X 18 inches deep (L-shaped)
Depth of Sediment: 6 inches
Construction: metal
Sediment Description
PID: 0 ppm
Gamma Meter: Background (20 uR/hr)

SS-10
No access, could not remove lid

SS-11
Dimensions: 26 inches X 26 inches X 37 inches deep
Depth of Sediment: 15 inches
Construction: Poured Concrete
Sediment Description: Dark gray-black stained sand and gravel with some clay
PID: 0 ppm
Gamma Meter: Background (20 uR/hr)

APPENDIX B

LABORATORY DATA PACKAGES

RELEASE OF VALIDATED DATA

Project: Alumax – Buffalo

Date: June 23, 1999

SDG: A9E210127

Reviewer: Edward Sedlmyer

Validation was performed on the volatile, semivolatile, PCB, extractable petrole
hydrocarbons, total recoverable petroleum hydrocarbons, and metal analytical
aqueous sample collected at the Alumax project site. Quanterra Inc. (North Ca
analyzed the samples using SW-846 methods. The data validation was perfor
accordance with the *National Functional Guidelines (Organics and Inorganics 2/9*
SW-846 methodology. Samples in this SDG included:

Not an SWAP approved LAB

Field Sample ID	Lab Sample ID	Field Sample ID	Lab Sample ID
ADNY-SUMP-001	A9E210127-001		

The data package contained only QC summary forms so raw data review and quantification verification could not be performed. The following QC parameters were reviewed:

VOLATILE ORGANICS

Method: SW-846 Method 8260B

Holding Time: The holding time requirements are 7 days for unpreserved aqueous samples and 14 days for preserved aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No compounds were detected in the method blank associated with this data package.

Surrogates: All surrogate recoveries met criteria for samples associated with this data package.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The volatile results were acceptable as reported and no qualification of the data was necessary.

SEMIVOLATILE ORGANICS

Holding Time: The technical holding time requirements are 7 days to extraction and 40 days from extraction to analysis for aqueous samples. All samples were extracted and analyzed within the technical holding time criteria.

Laboratory Blanks: No compounds were detected in the method blank associated with this data package.

Surrogates: All surrogate recoveries met criteria for samples associated with this data package.

Matrix Spike/Duplicate: The MS/MSD associated with this data package met accuracy and precision criteria.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: Sample ADNY-SUMP-001 required a dilution due to high concentrations of non-target compounds. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The semivolatile results were acceptable as reported and no qualification of the data was necessary.

PCBs

Method: SW-846 Method 8082.

Holding Time: The holding time requirements are 7 days to extraction for aqueous samples (preserved or unpreserved), 14 days to extraction for soil samples, and 40 days from extraction to analysis for aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No PCBs were detected in the method blank associated with this data package.

Surrogates: All surrogate recoveries met criteria for samples associated with this data package.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The PCB results were acceptable as reported and no qualification of the data was necessary.

EXTRACTABLE PETROLEUM HYDROCARBONS

Method: SW-846 Method 8015B.

Holding Time: The holding time requirements are 7 days to extraction for aqueous samples (preserved or unpreserved), 14 days to extraction for soil samples, and 40 days from extraction to analysis for aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No petroleum hydrocarbons were detected in the method blank associated with this data package.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: Sample ADNY-SUMP-001 required a dilution due to high concentrations of petroleum hydrocarbons. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The petroleum hydrocarbon results were acceptable as reported and no qualification of the data was necessary.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Method: MCAWW 418.1.

Holding Time: The holding time requirements are 28 days for aqueous samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No petroleum hydrocarbons were detected in the method blank associated with this data package.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: Sample ADNY-SUMP-001 required a dilution due to high concentrations of petroleum hydrocarbons. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The petroleum hydrocarbon results were acceptable as reported and no qualification of the data was necessary.

METALS

Holding Time: The technical holding time requirement is 28 days for mercury and 180 days for all other metals. All of the samples were analyzed within the holding times.

Laboratory Blanks: No metals greater than the reporting limits were detected in any method blanks associated with this data package.

Laboratory Control Sample: The metals LCSs associated with these samples met the laboratory recovery criteria.

Matrix Spike Recovery: The MS/MSD associated with this data package had recoveries outside of the 80-120% criteria for aluminum (121%) and iron (69% and 40%). The aluminum and iron results have been qualified "J" as estimated for all samples.

Reported CRQLs: All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The metals results were qualified as follows:

Metal	Samples	Qualifier
Aluminum	All samples	J
Iron	All samples	J

Quanterra Incorporated
4101 Shuffel Drive, NW
North Canton, Ohio 44720

330 497-9396 Telephone
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ANALYTICAL REPORT

ALUMAX BUFFALO

Lot #: A9E210127

Larry Martin

IT Group/ICF Kaiser Engineers,

QUANTERRA INCORPORATED

Gary L. Wood
Project Manager

June 9, 1999

CASE NARRATIVE

The following report contains the analytical results for one water sample submitted to Quanterra-North Canton by IT Corporation from the Alumax Buffalo site. The sample was received May 20, 1999, according to documented sample acceptance procedures.

Sample submitted for total recoverable petroleum hydrocarbon and total petroleum hydrocarbon-diesel range organics analyses was extracted after the recommended holding time had been exceeded.

Quanterra-North Canton utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameters listed on the method reference page in accordance with the method indicated.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

Supplemental QC Information

GC/MS SEMIVOLATILES

Sample ADNY-SUMP-001 had elevated reporting limits due to sample matrix.

METALS

Matrix spike/spike duplicate recoveries were outside the acceptance limits for some analytes. The acceptable LCS analysis data indicated that the analytical system was operating within control and this condition is most likely due to matrix interference. See the Matrix Spike Report for the affected analytes which will be flagged with a "N".

GENERAL CHEMISTRY

There are samples reported with dilutions due to limited sample volume.

ANALYTICAL METHODS SUMMARY

A9E210127

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
PCBs	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Total Recoverable Petroleum Hydrocarbons	MCAWW 418.1
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9E210127

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CW30F	001	ADNY-SUMP-001	05/18/99	09:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity preasure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

GC/MS Volatiles

Lot-Sample #...: A9E210127-001 Work Order #...: CW30F102 Matrix.....: WATER
Date Sampled...: 05/18/99 09:30 Date Received..: 05/20/99
Prep Date.....: 05/28/99 Analysis Date..: 05/28/99
Prep Batch #...: 9152256
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	10	ug/L
Bromomethane	ND	10	ug/L
Vinyl chloride	ND	10	ug/L
Chloroethane	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Acetone	ND	20	ug/L
Carbon disulfide	ND	5.0	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethene (total)	ND	5.0	ug/L
Chloroform	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
2-Butanone	ND	20	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Dibromochloromethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Benzene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
4-Methyl-2-pentanone	ND	20	ug/L
2-Hexanone	ND	20	ug/L
Tetrachloroethene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(80 - 120)
Toluene-d8	97	(88 - 110)
Bromofluorobenzene	107	(86 - 115)
Dibromofluoromethane	89	(86 - 118)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

GC/MS Semivolatiles

Lot-Sample #...: A9E210127-001 **Work Order #...:** CW30F101 **Matrix.....:** WATER
Date Sampled...: 05/18/99 09:30 **Date Received..:** 05/20/99
Prep Date.....: 05/22/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9142108
Dilution Factor: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	200	ug/L
bis(2-Chloroethyl)-ether	ND	200	ug/L
2-Chlorophenol	ND	200	ug/L
1,3-Dichlorobenzene	ND	200	ug/L
1,4-Dichlorobenzene	ND	200	ug/L
1,2-Dichlorobenzene	ND	200	ug/L
2-Methylphenol	ND	200	ug/L
2,2'-oxybis(1-Chloro-propane)	ND	200	ug/L
4-Methylphenol	ND	200	ug/L
N-Nitrosodi-n-propyl-amine	ND	200	ug/L
Hexachloroethane	ND	200	ug/L
Nitrobenzene	ND	200	ug/L
Isophorone	ND	200	ug/L
2-Nitrophenol	ND	200	ug/L
2,4-Dimethylphenol	ND	200	ug/L
bis(2-Chloroethoxy) methane	ND	200	ug/L
2,4-Dichlorophenol	ND	200	ug/L
1,2,4-Trichlorobenzene	ND	200	ug/L
Naphthalene	ND	200	ug/L
4-Chloroaniline	ND	200	ug/L
Hexachlorobutadiene	ND	200	ug/L
4-Chloro-3-methylphenol	ND	200	ug/L
2-Methylnaphthalene	ND	200	ug/L
Hexachlorocyclopenta-diene	ND	1000	ug/L
2,4,6-Trichlorophenol	ND	200	ug/L
2,4,5-Trichlorophenol	ND	200	ug/L
2-Chloronaphthalene	ND	200	ug/L
2-Nitroaniline	ND	1000	ug/L
Dimethyl phthalate	ND	200	ug/L
Acenaphthylene	ND	200	ug/L
2,6-Dinitrotoluene	ND	200	ug/L
3-Nitroaniline	ND	1000	ug/L
Acenaphthene	ND	200	ug/L
2,4-Dinitrophenol	ND	1000	ug/L

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

GC/MS Semivolatiles

Lot-Sample #...: A9E210127-001 Work Order #...: CW30F101 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Nitrophenol	ND	1000	ug/L
Dibenzofuran	ND	200	ug/L
2,4-Dinitrotoluene	ND	200	ug/L
Diethyl phthalate	ND	200	ug/L
4-Chlorophenyl phenyl ether	ND	200	ug/L
Fluorene	ND	200	ug/L
4-Nitroaniline	ND	1000	ug/L
4,6-Dinitro-2-methylphenol	ND	1000	ug/L
N-Nitrosodiphenylamine	ND	200	ug/L
4-Bromophenyl phenyl ether	ND	200	ug/L
Hexachlorobenzene	ND	200	ug/L
Pentachlorophenol	ND	200	ug/L
Phenanthrene	ND	200	ug/L
Anthracene	ND	200	ug/L
Carbazole	ND	200	ug/L
Di-n-butyl phthalate	ND	200	ug/L
Fluoranthene	ND	200	ug/L
Pyrene	ND	200	ug/L
Butyl benzyl phthalate	ND	200	ug/L
3,3'-Dichlorobenzidine	ND	1000	ug/L
Benzo(a)anthracene	ND	200	ug/L
Chrysene	ND	200	ug/L
bis(2-Ethylhexyl) phthalate	ND	200	ug/L
Di-n-octyl phthalate	ND	200	ug/L
Benzo(b)fluoranthene	ND	200	ug/L
Benzo(k)fluoranthene	ND	200	ug/L
Benzo(a)pyrene	ND	200	ug/L
Indeno(1,2,3-cd)pyrene	ND	200	ug/L
Dibenz(a,h)anthracene	ND	200	ug/L
Benzo(ghi)perylene	ND	200	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	76 DIL	(40 - 114)
2-Fluorobiphenyl	89 DIL	(45 - 118)
Terphenyl-d14	71 DIL	(33 - 141)
Phenol-d5	66 DIL	(17 - 101)
2-Fluorophenol	74 DIL	(21 - 100)
2,4,6-Tribromophenol	60 DIL	(16 - 129)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

GC Semivolatiles

Lot-Sample #...:	A9E210127-001	Work Order #...:	CW30F10V	Matrix.....:	WATER
Date Sampled...:	05/18/99 09:30	Date Received..:	05/20/99		
Prep Date.....:	05/27/99	Analysis Date..:	06/03/99		
Prep Batch #...:	9147120				
Dilution Factor:	20	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Total Petroleum Hydrocarbons-Extractable	29000	2000	ug/L

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

GC Semivolatiles

Lot-Sample #...:	A9E210127-001	**Work Order #...:**	CW30F103	**Matrix.....:** WATER
Date Sampled...:	05/18/99 09:30	**Date Received..:**	05/20/99	
Prep Date.....:	05/24/99	**Analysis Date..:**	06/02/99	
Prep Batch #...:	9144134			
Dilution Factor:	1	**Method.....:**	SW846 8082	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	60	(10 - 130)
Decachlorobiphenyl	31	(10 - 116)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

TOTAL Metals

Lot-Sample #...: A9E210127-001 Matrix.....: WATER
Date Sampled...: 05/18/99 09:30 Date Received..: 05/20/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9144110						
Aluminum	**0.71**	**0.20** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F108**
Arsenic	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/27/99	CW30F104
Lead	**0.0078**	**0.0030** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/27/99**	**CW30F105**
Antimony	ND	0.060 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F109
Barium	**0.33**	**0.20** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10A**
Selenium	ND	0.0050 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/27/99	CW30F106
Beryllium	ND	0.0050 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F10C
Thallium	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/27/99	CW30F107
Cadmium	ND	0.0050 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/27/99	CW30F10D
Calcium	**75.9**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10E**
Chromium	**0.015**	**0.010** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10F**
Cobalt	ND	0.050 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F10G
Copper	ND	0.025 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F10H
Iron	**7.1**	**0.10** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10J**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

TOTAL Metals

Lot-Sample #...: A9E210127-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**12.8**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10K**
Manganese	**2.2**	**0.015** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10L**
Nickel	ND	0.040 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F10M
Potassium	**8.1**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10N**
Silver	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F10P
Sodium	**23.8**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10Q**
Vanadium	ND	0.050 Dilution Factor: 1	mg/L	SW846 6010B	05/24-05/25/99	CW30F10R
Mercury	ND	0.00020 Dilution Factor: 1	mg/L	SW846 7470A	05/24-05/25/99	CW30F10U
Zinc	**0.35**	**0.020** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/24-05/25/99**	**CW30F10T**

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SUMP-001

General Chemistry

Lot-Sample #...: A9E210127-001 Work Order #...: CW30F Matrix.....: WATER
Date Sampled...: 05/18/99 09:30 Date Received..: 05/20/99

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Recoverable Petroleum Hydrocarbons	210	52	mg/L	MCAWW 418.1	06/07/99	9158206

Dilution Factor: 52

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. If the dilution is more than 5X, the recoveries will be reported as diluted out. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E210127 **Work Order #...:** CWDWA102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A9F010000-256 CWDWA103-LCSD
Prep Date.....: 05/28/99 **Analysis Date..:** 05/28/99
Prep Batch #...: 9152256
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**98**	**(70 - 122)**			**SW846 8260B**
	96	**(70 - 122)**	**2.8**	**(0-26)**	**SW846 8260B**
Trichloroethene	**96**	**(82 - 112)**			**SW846 8260B**
	95	**(82 - 112)**	**0.16**	**(0-15)**	**SW846 8260B**
Benzene	**100**	**(83 - 110)**			**SW846 8260B**
	100	**(83 - 110)**	**0.28**	**(0-13)**	**SW846 8260B**
Toluene	**102**	**(86 - 119)**			**SW846 8260B**
	101	**(86 - 119)**	**0.21**	**(0-16)**	**SW846 8260B**
Chlorobenzene	**96**	**(85 - 115)**			**SW846 8260B**
	97	**(85 - 115)**	**0.23**	**(0-15)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(80 - 120)
	93	(80 - 120)
Toluene-d8	96	(88 - 110)
	98	(88 - 110)
Bromofluorobenzene	105	(86 - 115)
	110	(86 - 115)
Dibromofluoromethane	90	(86 - 118)
	92	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW4HQ102 **Matrix.....:** WATER
LCS Lot-Sample#: A9E220000-108
Prep Date.....: 05/22/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9142108
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichlorobenzene	**49**	**(44 - 142)**	**SW846 8270C**
Acenaphthene	**56**	**(47 - 145)**	**SW846 8270C**
2,4-Dinitrotoluene	**65**	**(60 - 134)**	**SW846 8270C**
Pyrene	**73**	**(68 - 131)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**52**	**(10 - 230)**	**SW846 8270C**
1,4-Dichlorobenzene	**51**	**(20 - 124)**	**SW846 8270C**
Pentachlorophenol	**41**	**(14 - 176)**	**SW846 8270C**
Phenol	**51**	**(10 - 112)**	**SW846 8270C**
2-Chlorophenol	**56**	**(23 - 134)**	**SW846 8270C**
4-Chloro-3-methylphenol	**53**	**(22 - 147)**	**SW846 8270C**
4-Nitrophenol	**46**	**(30 - 162)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(40 - 114)
2-Fluorobiphenyl	55	(45 - 118)
Terphenyl-d14	74	(33 - 141)
Phenol-d5	59	(17 - 101)
2-Fluorophenol	57	(21 - 100)
2,4,6-Tribromophenol	43	(16 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW98C102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A9E270000-120 CW98C103-LCSD
Prep Date.....: 05/27/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9147120
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Total Petroleum Hydrocarbons-Extractable	**85**	**(17 - 110)**			**SW846 8015B**
	78	**(17 - 110)**	**8.1**	**(0-77)**	**SW846 8015B**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW5Q0102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A9E240000-134 CW5Q0103-LCSD
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144134
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**79**	**(66 - 111)**			**SW846 8082**
	84	**(66 - 111)**	**6.2**	**(0-23)**	**SW846 8082**
Aroclor 1260	**88**	**(65 - 111)**			**SW846 8082**
	96	**(65 - 111)**	**8.0**	**(0-23)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 130)
	81	(10 - 130)
Decachlorobiphenyl	76	(10 - 116)
	84	(10 - 116)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A9E240000-110 **Prep Batch #...:** 9144110					
Barium	96	(87 - 110)	SW846 6010B	05/24-05/25/99	CW5NP12N
		Dilution Factor: 1			
Beryllium	96	(85 - 110)	SW846 6010B	05/24-05/25/99	CW5NP12P
		Dilution Factor: 1			
Cadmium	102	(89 - 115)	SW846 6010B	05/24-05/25/99	CW5NP12Q
		Dilution Factor: 1			
Calcium	97	(86 - 109)	SW846 6010B	05/24-05/25/99	CW5NP12R
		Dilution Factor: 1			
Chromium	100	(86 - 112)	SW846 6010B	05/24-05/25/99	CW5NP12T
		Dilution Factor: 1			
Cobalt	94	(83 - 107)	SW846 6010B	05/24-05/25/99	CW5NP12U
		Dilution Factor: 1			
Copper	101	(84 - 112)	SW846 6010B	05/24-05/25/99	CW5NP12V
		Dilution Factor: 1			
Iron	95	(80 - 120)	SW846 6010B	05/24-05/25/99	CW5NP12W
		Dilution Factor: 1			
Magnesium	97	(88 - 112)	SW846 6010B	05/24-05/25/99	CW5NP12X
		Dilution Factor: 1			
Selenium	100	(80 - 120)	SW846 6010B	05/24-05/27/99	CW5NP13A
		Dilution Factor: 1			
Thallium	97	(80 - 120)	SW846 6010B	05/24-05/27/99	CW5NP13C
		Dilution Factor: 1			
Aluminum	100	(87 - 115)	SW846 6010B	05/24-05/25/99	CW5NP13D
		Dilution Factor: 1			
Antimony	100	(87 - 108)	SW846 6010B	05/24-05/25/99	CW5NP13E
		Dilution Factor: 1			
Manganese	96	(88 - 117)	SW846 6010B	05/24-05/25/99	CW5NP130
		Dilution Factor: 1			

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	99	(85 - 116)	SW846 6010B	05/24-05/25/99	CW5NP131
		Dilution Factor: 1			
Potassium	93	(87 - 106)	SW846 6010B	05/24-05/25/99	CW5NP132
		Dilution Factor: 1			
Silver	96	(93 - 120)	SW846 6010B	05/24-05/25/99	CW5NP133
		Dilution Factor: 1			
Sodium	103	(88 - 107)	SW846 6010B	05/24-05/25/99	CW5NP134
		Dilution Factor: 1			
Vanadium	97	(86 - 111)	SW846 6010B	05/24-05/25/99	CW5NP135
		Dilution Factor: 1			
Zinc	102	(83 - 120)	SW846 6010B	05/24-05/25/99	CW5NP136
		Dilution Factor: 1			
Mercury	96	(80 - 120)	SW846 7470A	05/24-05/25/99	CW5NP137
		Dilution Factor: 1			
Arsenic	98	(80 - 120)	SW846 6010B	05/24-05/27/99	CW5NP138
		Dilution Factor: 1			
Lead	90	(80 - 120)	SW846 6010B	05/24-05/27/99	CW5NP139
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: A9E210127 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Recoverable Petroleum Hydrocarbons	WO#:CWKDK102-LCS/CWKDK103-LCSD					LCS Lot-Sample#: A9F070000-206	
	80	(75 - 125)			MCAWW 418.1	06/07/99	9158206
	90	(75 - 125)	11	(0-20)	MCAWW 418.1	06/07/99	9158206

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E210127 **Work Order #...:** CWDWA101 **Matrix.....:** WATER
MB Lot-Sample #: A9F010000-256

Prep Date.....: 05/28/99
Analysis Date..: 05/28/99 **Prep Batch #...:** 9152256
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
Vinyl chloride	ND	10	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Acetone	ND	20	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
2-Butanone	ND	20	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Dibromochloromethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Benzene	ND	5.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/L	SW846 8260B
2-Hexanone	ND	20	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(80 - 120)
Toluene-d8	96	(88 - 110)
Bromofluorobenzene	110	(86 - 115)
Dibromofluoromethane	89	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW4HQ101 **Matrix.....:** WATER
MB Lot-Sample #: A9E220000-108

Prep Date.....: 05/22/99
Analysis Date..: 06/01/99 **Prep Batch #...:** 9142108
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichlorobenzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichlorophenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichlorophenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW4HQ101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	73	(40 - 114)
2-Fluorobiphenyl	68	(45 - 118)
Terphenyl-d14	86	(33 - 141)
Phenol-d5	70	(17 - 101)
2-Fluorophenol	68	(21 - 100)
2,4,6-Tribromophenol	48	(16 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW98C101 **Matrix.....:** WATER
MB Lot-Sample #: A9E270000-120

Prep Date.....: 05/27/99
Analysis Date..: 06/01/99 **Prep Batch #...:** 9147120
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Total Petroleum Hydrocarbons-Extractable	ND	100	ug/L	SW846 8015B

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW5Q0101 **Matrix.....:** WATER
MB Lot-Sample #: A9E240000-134

Prep Date.....: 05/24/99
Analysis Date..: 06/01/99 **Prep Batch #...:** 9144134
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(10 - 130)
Decachlorobiphenyl	96	(10 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A9E240000-110 **Prep Batch #...:** 9144110						
Aluminum	ND	0.20	mg/L	SW846 6010B	05/24-05/25/99	CW5NP12E
		Dilution Factor: 1				
Arsenic	ND	0.010	mg/L	SW846 6010B	05/24-05/27/99	CW5NP129
		Dilution Factor: 1				
Antimony	ND	0.060	mg/L	SW846 6010B	05/24-05/25/99	CW5NP12F
		Dilution Factor: 1				
Lead	ND	0.0030	mg/L	SW846 6010B	05/24-05/27/99	CW5NP12A
		Dilution Factor: 1				
Barium	ND	0.20	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11P
		Dilution Factor: 1				
Selenium	ND	0.0050	mg/L	SW846 6010B	05/24-05/27/99	CW5NP12C
		Dilution Factor: 1				
Beryllium	ND	0.0050	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11Q
		Dilution Factor: 1				
Thallium	ND	0.010	mg/L	SW846 6010B	05/24-05/27/99	CW5NP12D
		Dilution Factor: 1				
Cadmium	ND	0.0050	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11R
		Dilution Factor: 1				
Calcium	ND	5.0	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11T
		Dilution Factor: 1				
Chromium	ND	0.010	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11U
		Dilution Factor: 1				
Cobalt	ND	0.050	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11V
		Dilution Factor: 1				
Copper	ND	0.025	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11W
		Dilution Factor: 1				
Iron	ND	0.10	mg/L	SW846 6010B	05/24-05/25/99	CW5NP11X
		Dilution Factor: 1				
Magnesium	ND	5.0	mg/L	SW846 6010B	05/24-05/25/99	CW5NP120
		Dilution Factor: 1				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	0.015	mg/L	SW846 6010B	05/24-05/25/99	CW5NP121
		Dilution Factor: 1				
Nickel	ND	0.040	mg/L	SW846 6010B	05/24-05/25/99	CW5NP122
		Dilution Factor: 1				
Potassium	ND	5.0	mg/L	SW846 6010B	05/24-05/25/99	CW5NP123
		Dilution Factor: 1				
Silver	ND	0.010	mg/L	SW846 6010B	05/24-05/25/99	CW5NP124
		Dilution Factor: 1				
Sodium	ND	5.0	mg/L	SW846 6010B	05/24-05/25/99	CW5NP125
		Dilution Factor: 1				
Vanadium	ND	0.050	mg/L	SW846 6010B	05/24-05/25/99	CW5NP126
		Dilution Factor: 1				
Mercury	ND	0.00020	mg/L	SW846 7470A	05/24-05/25/99	CW5NP128
		Dilution Factor: 1				
Zinc	ND	0.020	mg/L	SW846 6010B	05/24-05/25/99	CW5NP127
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A9E210127 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Recoverable Petroleum Hydrocarbons		Work Order #: CWKDK101		MB Lot-Sample #:	A9F070000-206	
	ND	1.0	mg/L	MCAWW 418.1	06/07/99	9158206
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E210127 **Work Order #...:** CW44612H-MS **Matrix.....:** WATER
MS Lot-Sample #: A9E210236-011 CW44612J-MSD
Date Sampled...: 05/19/99 14:20 **Date Received..:** 05/21/99
Prep Date.....: 05/22/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9142108
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichlorobenzene	45	(44 - 142)			SW846 8270C
	50	(44 - 142)	9.9	(0-28)	SW846 8270C
Acenaphthene	53	(47 - 145)			SW846 8270C
	54	(47 - 145)	2.6	(0-28)	SW846 8270C
2,4-Dinitrotoluene	69	(39 - 139)			SW846 8270C
	68	(39 - 139)	0.76	(0-22)	SW846 8270C
Pyrene	84	(52 - 115)			SW846 8270C
	79	(52 - 115)	7.0	(0-25)	SW846 8270C
N-Nitrosodi-n-propyl-amine	54	(10 - 230)			SW846 8270C
	54	(10 - 230)	0.06	(0-55)	SW846 8270C
1,4-Dichlorobenzene	46	(20 - 124)			SW846 8270C
	51	(20 - 124)	10	(0-32)	SW846 8270C
Pentachlorophenol	56	(14 - 176)			SW846 8270C
	52	(14 - 176)	6.2	(0-49)	SW846 8270C
Phenol	48	(10 - 112)			SW846 8270C
	52	(10 - 112)	7.8	(0-23)	SW846 8270C
2-Chlorophenol	53	(23 - 134)			SW846 8270C
	57	(23 - 134)	8.0	(0-29)	SW846 8270C
4-Chloro-3-methylphenol	54	(22 - 147)			SW846 8270C
	54	(22 - 147)	0.33	(0-37)	SW846 8270C
4-Nitrophenol	65	(10 - 132)			SW846 8270C
	58	(10 - 132)	12	(0-47)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(40 - 114)
	60	(40 - 114)
2-Fluorobiphenyl	52	(45 - 118)
	54	(45 - 118)
Terphenyl-d14	86	(33 - 141)
	78	(33 - 141)
Phenol-d5	55	(17 - 101)
	59	(17 - 101)
2-Fluorophenol	52	(21 - 100)
	57	(21 - 100)
2,4,6-Tribromophenol	44	(16 - 129)
	45	(16 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER
Date Sampled...: 05/20/99 07:27 **Date Received..:** 05/22/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9E220183-001 **Prep Batch #...:** 9144110							
Aluminum	121 N	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE15E
	114	(80 - 120)	2.6	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE15F
		Dilution Factor: 1					
Antimony	95	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE15H
	92	(80 - 120)	3.1	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE15J
		Dilution Factor: 1					
Arsenic	95	(80 - 120)			SW846 6010B	05/24-05/27/99	CW5GE151
	94	(80 - 120)	0.49	(0-20)	SW846 6010B	05/24-05/27/99	CW5GE152
		Dilution Factor: 1					
Barium	93	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE13A
	91	(80 - 120)	2.0	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE13C
		Dilution Factor: 1					
Beryllium	92	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE13E
	89	(80 - 120)	3.3	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE13F
		Dilution Factor: 1					
Cadmium	94	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE13H
	90	(80 - 120)	5.2	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE13J
		Dilution Factor: 1					
Calcium	92	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE13L
	87	(80 - 120)	4.4	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE13M
		Dilution Factor: 1					
Chromium	96	(80 - 120)			SW846 6010B	05/24-05/27/99	CW5GE13P
	95	(80 - 120)	0.35	(0-20)	SW846 6010B	05/24-05/27/99	CW5GE13Q
		Dilution Factor: 1					
Cobalt	91	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE13T
	88	(80 - 120)	3.2	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE13U
		Dilution Factor: 1					
Copper	96	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE13W
	94	(80 - 120)	1.8	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE13X
		Dilution Factor: 1					
Iron	69 N	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE141
	40 N	(80 - 120)	7.3	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE142
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER
Date Sampled...: 05/20/99 07:27 **Date Received..:** 05/22/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Lead	92	(80 - 120)			SW846 6010B	05/24-05/27/99	CW5GE154
	92	(80 - 120)	0.32	(0-20)	SW846 6010B	05/24-05/27/99	CW5GE155
		Dilution Factor: 1					
Magnesium	96	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE144
	95	(80 - 120)	0.96	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE145
		Dilution Factor: 1					
Manganese	90	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE147
	86	(80 - 120)	3.8	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE148
		Dilution Factor: 1					
Mercury	104	(80 - 120)			SW846 7470A	05/24-05/25/99	CW5GE14W
	103	(80 - 120)	1.2	(0-20)	SW846 7470A	05/24-05/25/99	CW5GE14X
		Dilution Factor: 1					
Nickel	95	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE14A
	91	(80 - 120)	4.1	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE14C
		Dilution Factor: 1					
Potassium	94	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE14E
	93	(80 - 120)	0.52	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE14F
		Dilution Factor: 1					
Selenium	95	(80 - 120)			SW846 6010B	05/24-05/27/99	CW5GE157
	95	(80 - 120)	0.07	(0-20)	SW846 6010B	05/24-05/27/99	CW5GE158
		Dilution Factor: 1					
Silver	97	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE14H
	97	(80 - 120)	0.0	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE14J
		Dilution Factor: 1					
Sodium	95	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE14L
	94	(80 - 120)	0.83	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE14M
		Dilution Factor: 1					
Thallium	97	(80 - 120)			SW846 6010B	05/24-05/27/99	CW5GE15A
	97	(80 - 120)	0.07	(0-20)	SW846 6010B	05/24-05/27/99	CW5GE15C
		Dilution Factor: 1					
Vanadium	93	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE14P
	90	(80 - 120)	2.6	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE14Q
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E210127 **Matrix.....:** WATER
Date Sampled...: 05/20/99 07:27 **Date Received..:** 05/22/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	92	(80 - 120)			SW846 6010B	05/24-05/25/99	CW5GE14T
	93	(80 - 120)	0.67	(0-20)	SW846 6010B	05/24-05/25/99	CW5GE14U

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

№ 5147

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	TCL VOA	TCL SVOA	PCB	TPH 418.1	TPH DRO	Metals (TAL)	REMARKS
	Alumax Buffalo								
SAMPLERS: (Signature)									
Ed Sedlmyer									

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOA	TCL SVOA	PCB	TPH 418.1	TPH DRO	Metals (TAL)	REMARKS
ADNY-Sump-001	5/19/99	07:30		X	ADNY-Sump-001	10	X	X	X	X	X	X	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Ed Sedlmyer	5/19/99 10:00				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		Tami Stephe	5-20-99 9:15		

820-5

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

RELEASE OF VALIDATED DATA

Project: Alumax – Buffalo

Date: June 23, 1999

SDG: A9E070141

Reviewer: Edward Sedlmyer

Validation was performed on the volatile, semivolatile, PCB, extractable petroleum hydrocarbons, total recoverable petroleum hydrocarbons, and metal analytical results for 17 soil and 2 aqueous samples collected at the Alumax project site. Quanterra Inc. (North Canton, OH) analyzed the samples using SW-846 methods. The data validation was performed in accordance with the *National Functional Guidelines (Organics and Inorganics 2/94)*, as applied to SW-846 methodology. Samples in this SDG included:

Field Sample ID	Lab Sample ID	Field Sample ID	Lab Sample ID
ADNY-SWALE-SS01	A9E070141-001	TRIP BLANK TB01	A9E070141-002
ADNY-NIMO-SS01	A9E070141-003	ADNY-WALL-SS01	A9E070141-004
ADNY-PW1	A9E070141-005	ADNY-NS-SD01A	A9E070141-006
ADNY-SS-SD001	A9E070141-007	ADNY-SDA-SS01	A9E070141-008
ADNY-SDA-SS02	A9E070141-009	ADNY-PTO-SS1	A9E070141-010
ADNY-T1-SS01	A9E070141-011	ADNY-WOT-SS01	A9E070141-012
ADNY-WOT-SS02	A9E070141-013	EB-1 (Equipment blank)	A9E070141-014
ADNY-FM-SS01	A9E070141-015	ADNY-UT-SS01	A9E070141-016
ADNY-UT-SS02	A9E070141-017	ADNY-DTK-SS01	A9E070141-018
ADNY-UT-SS03	A9E070141-019		

The data package contained only QC summary forms so raw data review and quantification verification could not be performed. The following QC parameters were reviewed:

VOLATILE ORGANICS

Method: SW-846 Method 8260B

Holding Time: The holding time requirements are 7 days for unpreserved aqueous samples and 14 days for preserved aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No compounds were detected in the method blank associated with this data package.

Surrogates: The following samples had surrogates outside of criteria and have been qualified "J" accordingly:

TRIP BLANK TB01 – had a low dibromofluoromethane recovery (69%, below the 86-118% criteria). All results have been qualified "J" as estimated.

ADNY-SWALE-SS01 – had low toluene-d8 and bromofluorobenzene recoveries (74%, below the 86-122% criteria and 59%, below the 60-137% criteria, respectively). All results have been qualified "J" as estimated.

ADNY-SDA-SS01 – had high toluene-d8 and bromofluorobenzene recoveries (176%, above the 86-122% criteria and 152%, above the 60-137% criteria, respectively). All detects have been qualified "J" as estimated, no action was taken on the non-detects.

ADNY-SDA-SS02 - had high toluene-d8 and bromofluorobenzene recoveries (134%, above the 86-122% criteria and 140%, above the 60-137% criteria, respectively). All detects have been qualified "J" as estimated, no action was taken on the non-detects.

ADNY-UT-SS03 – had high toluene-d8 recovery (134%, above the 86-122% criteria). No detects were reported so no action was taken on the high surrogate recovery.

All other surrogate recoveries met criteria for samples associated with this data package.

Matrix Spike/Duplicate: The MS/MSD associated with batch 9138132 had high recoveries for 1,1-dichloroethene (118% and 127%) and trichloroethene (120%) above the 75-113% criteria. No action was taken since the LCS met recovery criteria.

The MS/MSD associated with batch 9139168 had a high recovery for trichloroethene (114%, above the 75-113% criteria). No action was taken since the LCS met recovery criteria.

The MS/MSD associated with batch 9131235 had low recoveries for chlorobenzene (78% and 79%, below the 81-113% criteria). No action was taken since the LCS met recovery criteria.

Laboratory Control Sample: The LCSs associated with this data package met accuracy criteria.

Reported CRQLs: Samples ADNY-WALL-SS01, ADNY-NS-SD01A, ADNY-SS-SD001, and ADNY-WOT-SS02 required dilutions for target and non-target compounds. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The volatile results were acceptable as reported with the following qualifications:

Compound	Sample	Qualifier
All compounds	TRIP BLANK TB01 and ADNY-SWALE-SS01	J
All detections	ADNY-SDA-SS01 and ADNY-SDA-SS02	J

SEMIVOLATILE ORGANICS

Holding Time: The holding time requirements are 7 days to extraction for aqueous samples (preserved or unpreserved), 14 days to extraction for soil samples, and 40 days from extraction to analysis for aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No compounds were detected in the method blanks associated with this data package.

Surrogates: All surrogate recoveries met criteria for samples associated with this data package.

Matrix Spike/Duplicate: The MS/MSDs associated with this data package met accuracy and precision criteria.

Laboratory Control Sample: The LCSs associated with this data package met accuracy criteria.

Reported CRQLs: Sample AADNY-WALL-SS01, ADNY-NS-SD01A, and ADNY-SS-SD001, ADNY-SDA-SS02, ADNY-WOT-SS01, ADNY-WOT-SS02 required a dilution due to high concentrations of target and non-target compounds. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The semivolatile results were acceptable as reported and no qualification of the data was necessary.

PCBs

Method: SW-846 Method 8082.

Holding Time: The holding time requirements are 7 days to extraction for aqueous samples (preserved or unpreserved), 14 days to extraction for soil samples, and 40 days from extraction to analysis for aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No PCBs were detected in the method blanks associated with this data package.

Surrogates: Sample ADNY-SWALE-SS01 had a high decachlorobiphenyl recovery (143%, above the 10-138% criteria). All detections have been qualified "J" as estimated.

Sample ADNY-NS-SD01A had a high decachlorobiphenyl recovery (152%, above the 10-138% criteria). All detections have been qualified "J" as estimated.

Sample ADNY-WOT-SS02 had a high decachlorobiphenyl recovery (408%, above the 10-138% criteria). All detections have been qualified "J" as estimated.

Matrix Spike/Duplicate: The spike recoveries for the MS/MSD associated with this data package could not be calculated due to a dilution. No action was necessary.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: Sample ADNY-PTO-SS1 required a dilution due to a high concentration of a target compound. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The PCB results were acceptable as reported and no qualification of the data was necessary.

EXTRACTABLE PETROLEUM HYDROCARBONS

Method: SW-846 Method 8015B.

Holding Time: The holding time requirements are 7 days to extraction for aqueous samples (preserved or unpreserved), 14 days to extraction for soil samples, and 40 days from extraction to analysis for aqueous and soil samples. All samples were analyzed within the holding time criteria.

Matrix Spike/Duplicate: The spike recoveries for the MS/MSD associated with this data package could not be calculated due to a dilution. No action was necessary.

Laboratory Blanks: No petroleum hydrocarbons were detected in the method blank associated with this data package.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: Sample ADNY-WOT-SS01 and ADNY-WOT-SS02 required dilutions due to high concentrations of petroleum hydrocarbons. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The petroleum hydrocarbon results were acceptable as reported and no qualification of the data was necessary.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Method: MCAWW 418.1.

Holding Time: The holding time requirements are 28 days for aqueous and soil samples. All samples were analyzed within the holding time criteria.

Laboratory Blanks: No petroleum hydrocarbons were detected in the method blank associated with this data package.

Matrix Spike/Duplicate: The MS/MSD associated with this data package had low recoveries (7.5% and 16.0%, below the 75-125% criteria). No action was taken since the LCS met recovery criteria.

Laboratory Control Sample: The LCS associated with this data package met accuracy criteria.

Reported CRQLs: Sample ADNY-WOT-SS01 and ADNY-WOT-SS02 required a dilution due to high concentrations of petroleum hydrocarbons. All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The petroleum hydrocarbon results were acceptable as reported and no qualification of the data was necessary.

METALS

Holding Time: The technical holding time requirement is 28 days for mercury and 180 days for all other metals. All of the samples were analyzed within the holding times.

Laboratory Blanks: Zinc (0.034 mg/L) was detected in the method blank associated with batch# 9130113. However, zinc was not detected in any associated samples so no qualification of the data was necessary.

No other metals greater than the reporting limits were detected in the method blanks associated with this data package.

Laboratory Control Sample: Silver had a high recovery (152%, above the 81-120% criteria). The detected silver results for sample ADNY-SS-SD001 has been qualified "J" as estimated.

Matrix Spike Recovery: The MS/MSD performed on sample ADNY-SWALE-SS01 had recoveries outside of the 80-120% criteria for antimony (73% and 72%), lead (13% and 0%), calcium (48%), chromium (140%), copper (456%), and zinc (147%). The RPDs were outside of the 20% for lead (200%), chromium (28%), and copper (75%). The following results have been qualified "J" as estimated:

Antimony – All samples except ADNY-PW1 and EB1.

Lead – All samples except ADNY-PW1 and EB1.

Calcium – All samples except ADNY-PW1 and EB1.

Chromium – ADNY-SWALE-SS01, ADNY-Wall-SS01, ADNY-NS-SD01A, ADNY-SS-SD001, ADNY-SDA-SS01, ADNY-SDA-SS02, ADNY-WOT-SS01, ADNY-WOT-SS02, ADNY-FM-SS01, ADNY-UT-SS01, ADNY-UT-SS02, ADNY-DTK-SS01, and ADNY-UT-SS03.

Copper – ADNY-SWALE-SS01, ADNY-Wall-SS01, ADNY-NS-SD01A, ADNY-SS-SD001, ADNY-SDA-SS01, ADNY-SDA-SS02, ADNY-WOT-SS01, ADNY-WOT-SS02, ADNY-FM-SS01, ADNY-UT-SS01, ADNY-UT-SS02, ADNY-DTK-SS01, and ADNY-UT-SS03.

Zinc - ADNY-SWALE-SS01, ADNY-Wall-SS01, ADNY-NS-SD01A, ADNY-SS-SD001, ADNY-SDA-SS01, ADNY-SDA-SS02, ADNY-WOT-SS01, ADNY-WOT-SS02, ADNY-FM-SS01, ADNY-UT-SS01, ADNY-UT-SS02, ADNY-DTK-SS01, and ADNY-UT-SS03.

Reported CRQLs: All quantitation limits were reported correctly.

Sample Paperwork: The chain-of-custody was properly completed, and all samples were properly preserved and received in good condition.

Summary: The metals results were qualified as follows:

Metal	Samples	Qualifier
Silver	ADNY-SS-SD001	J
Antimony, lead, calcium	All samples except ADNY-PW1 and EB1	J
Chromium, copper, zinc	ADNY-SWALE-SS01, ADNY-WALL-SS01, ADNY-NS-SD01A, ADNY-SS-SD001, ADNY-SDA-SS01, ADNY-SDA-SS02, ADNY-WOT-SS01, ADNY-WOT-SS02, ADNY-FM-SS01, ADNY-UT-SS01, ADNY-UT-SS02, ADNY-DTK-SS01, and ADNY-UT-SS03	J

Quanterra Incorporated
4101 Shuffel Drive, NW
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ANALYTICAL REPORT

PROJECT NO. ADNY/782745

ADNY

Lot #: A9E070141

Larry Martin

IT Group/ICF Kaiser Engineers,

QUANTERRA INCORPORATED

Gary L. Wood
Project Manager

June 18, 1999

CASE NARRATIVE

The following report contains the analytical results for seventeen solid samples and two water samples submitted to Quanterra-North Canton by IT Group/ICF Kaiser Engineers, Inc. from the ADNY site, project number 782745. The samples were received May 6, 7, and 8, 1999, according to documented sample acceptance procedures.

Samples submitted for gross alpha, gross beta, and gamma spectroscopy analyses were performed at Quanterra-St. Louis. These results are presented in this report.

Quanterra-North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the method reference page in accordance with the method indicated. Results were provided by facsimile transmission to Bill Randall on May 18 and 25, 1999.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

The samples were received at the laboratory at temperatures of 2.9, 1.0, and 0.6° C.

Supplemental QC Information

GC/MS VOLATILES

The MS/MSD failed recovery criteria associated with batch 9138132. The check sample associated with this batch was in control. This is believed to be a matrix effect; therefore, no further corrective action was taken.

Surrogate recovery is out in sample TRIP BLANK TB01. Reextraction and/or reanalysis was performed in accordance with exceeded criteria corrective action required by QAPjP. Reextraction and/or reanalysis achieved similar results; therefore, the best data is reported.

Surrogate recovery is out in sample ADNY-SWALE-SS01. The associated QC was acceptable. No further corrective action taken. Surrogates were out due to probable matrix effect.

Internal standard areas were outside acceptance limits for samples ADNY-UT-SS02, ADNY-UT-SS03, ADNY-SDA-SS02, ADNY-WOT-SS01, and ADNY-SDA-SS01 due to matrix effects.

Samples ADNY-WA11-SS01, ADNY-NS-SD01A, ADNY-SS-SD001, and ADNY-WOT-SS02 were diluted during analysis due to high concentrations of unlisted compounds (TICs) in this sample.

CASE NARRATIVE (CONTINUED)

GC/MS SEMIVOLATILES

Samples ADNY-NS-SD01A, ADNY-WOT-SS01, and ADNY-WOT-SS02 had elevated reporting limits due to sample matrix or TICs.

METALS

Method blank contamination occurred. All affected analytes which were not detected in the sample at levels greater than the reporting limits are flagged with "MBE".

Matrix spike/spike duplicate recoveries were outside the acceptance limits for some analytes. The acceptable LCS analysis data indicated that the analytical system was operating within control and this condition is most likely due to matrix interference. See the Matrix Spike Report for the affected analytes which will be flagged with a "N".

Matrix spike recovery and relative percent difference (RPD) data were not calculated for some analytes due to the sample concentration reading greater than four times the spike amount. See the Matrix Spike Report for the affected analytes which will be flagged with NC, MSB.

Matrix spike/spike duplicate relative percent difference (RPD) exceeded the acceptance limits for some analytes. The imprecision may be attributed to sample heterogeneity. See the Matrix Spike Report for the affected analytes which will be flagged with "*".

Dilutions were performed on sample(s) in this lot due to high non-target constituent concentrations. Results will be flagged with "G" on the Report Pages.

Dilutions were performed on sample(s) in this lot due to high target constituent concentrations. See Report Pages for the dilution performed on each element.

Due to a problem with the * spike program, not all elements are included on the Matrix Spike Sample Report. The Matrix Spike Sample Report for the batch is included to prove that we perform a Matrix Spike/Matrix Spike Duplicate per QC batch requirements.

The LCS for silver associated with batch 9133259 exceeded control limits. Since all associated results are ND, the results were accepted.

CASE NARRATIVE (CONTINUED)

GENERAL CHEMISTRY

Matrix spike/matrix spike duplicate (MS/MSD) percent recoveries were outside the acceptance limits for some parameters. The acceptable laboratory control sample analysis data indicated that the analytical systems were operating within control and this condition is most likely due to matrix interference. See the Matrix Spike Sample Evaluation Reports for the affected parameters which will be flagged with N.

There are samples reported with dilutions due to either high target analytes or matrix interference.

ANALYTICAL METHODS SUMMARY

A9E070141

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
PCBs	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Total Recoverable Petroleum Hydrocarbons	MCAWW 418.1
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9E070141

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CVHT1	001	ADNY-SWALE-SS01	05/05/99	10:00
CVHT3	002	TRIP BLANK TB01	05/05/99	
CVHT4	003	ADNY-NIMO-SS01	05/05/99	11:10
CVHT7	004	ADNY-WA11-SS01	05/05/99	12:30
CVHT9	005	ADNY-PW1	05/05/99	15:20
CVHTD	006	ADNY-NS-SD01A	05/05/99	17:50
CVHTN	007	ADNY-SS-SD001	05/06/99	09:40
CVHTQ	008	ADNY-SDA-SS01	05/06/99	12:50
CVHTV	009	ADNY-SDA-SS02	05/06/99	13:35
CVHTW	010	ADNY-PTO-SS1	05/06/99	14:25
CVHV2	011	ADNY-T1-SS01	05/06/99	14:55
CVHV5	012	ADNY-WOT-SS01	05/06/99	15:40
CVHV8	013	ADNY-WOT-SS02	05/06/99	17:15
CVKLK	014	EB-1 (EQUIPMENT BLANK)	05/07/99	07:45
CVKLL	015	ADNY-FM-SS01	05/07/99	08:10
CVKLM	016	ADNY-UT-SS01	05/07/99	09:50
CVKLN	017	ADNY-UT-SS02	05/07/99	10:45
CVKLP	018	ADNY-DTK-SS01	05/07/99	13:40
CVKLQ	019	ADNY-UT-SS03	05/07/99	15:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-001 **Work Order #...:** CVHT1103 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 1.01
% Moisture.....: 53 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	22	ug/kg
Bromomethane	ND	22	ug/kg
Vinyl chloride	ND	22	ug/kg
Chloroethane	ND	22	ug/kg
Methylene chloride	ND	11	ug/kg
Acetone	ND	43	ug/kg
Carbon disulfide	ND	11	ug/kg
1,1-Dichloroethene	ND	11	ug/kg
1,1-Dichloroethane	ND	11	ug/kg
1,2-Dichloroethene (total)	ND	11	ug/kg
Chloroform	ND	11	ug/kg
1,2-Dichloroethane	ND	11	ug/kg
2-Butanone	ND	43	ug/kg
1,1,1-Trichloroethane	ND	11	ug/kg
Carbon tetrachloride	ND	11	ug/kg
Bromodichloromethane	ND	11	ug/kg
1,2-Dichloropropane	ND	11	ug/kg
cis-1,3-Dichloropropene	ND	11	ug/kg
Trichloroethene	ND	11	ug/kg
Dibromochloromethane	ND	11	ug/kg
1,1,2-Trichloroethane	ND	11	ug/kg
Benzene	ND	11	ug/kg
trans-1,3-Dichloropropene	ND	11	ug/kg
Bromoform	ND	11	ug/kg
4-Methyl-2-pentanone	ND	43	ug/kg
2-Hexanone	ND	43	ug/kg
Tetrachloroethene	ND	11	ug/kg
1,1,2,2-Tetrachloroethane	ND	11	ug/kg
Toluene	ND	11	ug/kg
Chlorobenzene	ND	11	ug/kg
Ethylbenzene	ND	11	ug/kg
Styrene	ND	11	ug/kg
Xylenes (total)	ND	22	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	78	(75 - 117)
Toluene-d8	74 *	(86 - 122)
Bromofluorobenzene	59 *	(60 - 137)
Dibromofluoromethane	73	(70 - 135)

(Continued on next page)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-001 Work Order #...: CVHT1103 Matrix.....: SOLID

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-001 **Work Order #...:** CVHT1102 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/20/99
Prep Batch #...: 9131122
Dilution Factor: 1
% Moisture.....: 53 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	710	ug/kg
bis(2-Chloroethyl)-ether	ND	710	ug/kg
2-Chlorophenol	ND	710	ug/kg
1,3-Dichlorobenzene	ND	710	ug/kg
1,4-Dichlorobenzene	ND	710	ug/kg
1,2-Dichlorobenzene	ND	710	ug/kg
2-Methylphenol	ND	710	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	710	ug/kg
4-Methylphenol	ND	710	ug/kg
N-Nitrosodi-n-propyl-amine	ND	710	ug/kg
Hexachloroethane	ND	710	ug/kg
Nitrobenzene	ND	710	ug/kg
Isophorone	ND	710	ug/kg
2-Nitrophenol	ND	710	ug/kg
2,4-Dimethylphenol	ND	710	ug/kg
bis(2-Chloroethoxy) methane	ND	710	ug/kg
2,4-Dichlorophenol	ND	710	ug/kg
1,2,4-Trichlorobenzene	ND	710	ug/kg
Naphthalene	ND	710	ug/kg
4-Chloroaniline	ND	710	ug/kg
Hexachlorobutadiene	ND	710	ug/kg
4-Chloro-3-methylphenol	ND	710	ug/kg
2-Methylnaphthalene	ND	710	ug/kg
Hexachlorocyclopenta-diene	ND	3400	ug/kg
2,4,6-Trichlorophenol	ND	710	ug/kg
2,4,5-Trichlorophenol	ND	710	ug/kg
2-Chloronaphthalene	ND	710	ug/kg
2-Nitroaniline	ND	3400	ug/kg
Dimethyl phthalate	ND	710	ug/kg
Acenaphthylene	ND	710	ug/kg
2,6-Dinitrotoluene	ND	710	ug/kg
3-Nitroaniline	ND	3400	ug/kg
Acenaphthene	ND	710	ug/kg

(Continued on next page)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-001 Work Order #...: CVHT1102 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	3400	ug/kg
4-Nitrophenol	ND	3400	ug/kg
Dibenzofuran	ND	710	ug/kg
2,4-Dinitrotoluene	ND	710	ug/kg
Diethyl phthalate	ND	710	ug/kg
4-Chlorophenyl phenyl ether	ND	710	ug/kg
Fluorene	ND	710	ug/kg
4-Nitroaniline	ND	3400	ug/kg
4,6-Dinitro-2-methylphenol	ND	3400	ug/kg
N-Nitrosodiphenylamine	ND	710	ug/kg
4-Bromophenyl phenyl ether	ND	710	ug/kg
Hexachlorobenzene	ND	710	ug/kg
Pentachlorophenol	ND	710	ug/kg
Phenanthrene	**2500**	**710**	**ug/kg**
Anthracene	**710**	**710**	**ug/kg**
Carbazole	ND	710	ug/kg
Di-n-butyl phthalate	ND	710	ug/kg
Fluoranthene	**5000**	**710**	**ug/kg**
Pyrene	**4600**	**710**	**ug/kg**
Butyl benzyl phthalate	ND	710	ug/kg
3,3'-Dichlorobenzidine	ND	3400	ug/kg
Benzo(a)anthracene	**2900**	**710**	**ug/kg**
Chrysene	**3600**	**710**	**ug/kg**
bis(2-Ethylhexyl) phthalate	ND	710	ug/kg
Di-n-octyl phthalate	ND	710	ug/kg
Benzo(b)fluoranthene	**4700**	**710**	**ug/kg**
Benzo(k)fluoranthene	**1600**	**710**	**ug/kg**
Benzo(a)pyrene	**3200**	**710**	**ug/kg**
Indeno(1,2,3-cd)pyrene	**2000**	**710**	**ug/kg**
Dibenz(a,h)anthracene	ND	710	ug/kg
Benzo(ghi)perylene	**2000**	**710**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	70	(23 - 120)
2-Fluorobiphenyl	83	(30 - 115)
Terphenyl-d14	104	(18 - 137)
Phenol-d5	64	(24 - 113)
2-Fluorophenol	71	(25 - 121)
2,4,6-Tribromophenol	91	(19 - 122)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-001 Work Order #...: CVHT1102 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

- This value represents a probable combination of 3-Methylphenol (m- cresol) and 4-methylphenol (p-cresol).

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

GC Semivolatiles

Lot-Sample #...: A9E070141-001 **Work Order #...:** CVHT1104 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 20
% Moisture.....: 53 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1400	ug/kg
Aroclor 1221	ND	1400	ug/kg
Aroclor 1232	ND	1400	ug/kg
Aroclor 1242	ND	1400	ug/kg
Aroclor 1248	ND	1400	ug/kg
Aroclor 1254	**13000**	**1400**	**ug/kg**
Aroclor 1260	ND	1400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	72 DIL	(10 - 129)
Decachlorobiphenyl	143 DIL,*	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-001 Matrix.....: SOLID
Date Sampled...: 05/05/99 10:00 Date Received..: 05/06/99
% Moisture.....: 53

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	10300	42.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT1109
Arsenic	29.7	2.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT1105
Lead	299	0.64 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT1106
Antimony	ND	12.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT110A
Barium	138	42.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110C
Selenium	1.5	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT1107
Beryllium	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110D
Thallium	ND	2.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT1108
Cadmium	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT110E
Calcium	15100	1070 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110F
Chromium	32.8	2.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT110G
Cobalt	ND	10.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110H
Copper	120	5.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110J
Iron	43400	21.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110K

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-001 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	3940	1070 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110L
Manganese	1250	3.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110M
Nickel	97.4	8.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110N
Potassium	1220	1070 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110P
Silver	ND	2.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110Q
Sodium	ND	1070 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110R
Vanadium	25.3	10.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110T
Mercury	0.38	0.21 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHT110V
Zinc	510	4.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT110U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SWALE-SS01

General Chemistry

Lot-Sample #...: A9E070141-001 Work Order #...: CVHT1 Matrix.....: SOLID
Date Sampled...: 05/05/99 10:00 Date Received..: 05/06/99
% Moisture.....: 53

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	46.7	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: TRIP BLANK TB01

GC/MS Volatiles

Lot-Sample #...: A9E070141-002 **Work Order #...:** CVHT3101 **Matrix.....:** WATER
Date Sampled...: 05/05/99 **Date Received..:** 05/06/99
Prep Date.....: 05/18/99 **Analysis Date..:** 05/18/99
Prep Batch #...: 9139168
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	10	ug/L
Bromomethane	ND	10	ug/L
Vinyl chloride	ND	10	ug/L
Chloroethane	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Acetone	ND	20	ug/L
Carbon disulfide	ND	5.0	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethene (total)	ND	5.0	ug/L
Chloroform	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
2-Butanone	ND	20	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Dibromochloromethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Benzene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
4-Methyl-2-pentanone	ND	20	ug/L
2-Hexanone	ND	20	ug/L
Tetrachloroethene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(80 - 120)
Toluene-d8	95	(88 - 110)
Bromofluorobenzene	102	(86 - 115)
Dibromofluoromethane	69 *	(86 - 118)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: TRIP BLANK TB01

GC/MS Volatiles

Lot-Sample #...: A9E070141-002 Work Order #...: CVHT3101 Matrix.....: WATER

NOTE(S):

- Surrogate recovery is outside stated control limits.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NIMO-SS01

GC Semivolatiles

Lot-Sample #...: A9E070141-003 **Work Order #...:** CVHT4102 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 11:10 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	52	(10 - 129)
Decachlorobiphenyl	91	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NIMO-SS01

General Chemistry

Lot-Sample #...: A9E070141-003 Work Order #...: CVHT4 Matrix.....: SOLID
Date Sampled...: 05/05/99 11:10 Date Received..: 05/06/99
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	86.3	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

GC/MS Volatiles

Lot-Sample #...:	A9E070141-004	**Work Order #...:**	CVHT7103	**Matrix.....:**	SOLID
Date Sampled...:	05/05/99 12:30	**Date Received..:**	05/06/99		
Prep Date.....:	05/06/99	**Analysis Date..:**	05/16/99		
Prep Batch #...:	9131221				
Dilution Factor:	0.99				
% Moisture.....:	13	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	1100	ug/kg
Benzene	ND	290	ug/kg
Bromodichloromethane	ND	290	ug/kg
Bromoform	ND	290	ug/kg
Bromomethane	ND	570	ug/kg
2-Butanone	ND	1100	ug/kg
Carbon disulfide	ND	290	ug/kg
Carbon tetrachloride	ND	290	ug/kg
Chlorobenzene	ND	290	ug/kg
Dibromochloromethane	ND	290	ug/kg
Chloroethane	ND	570	ug/kg
Chloroform	ND	290	ug/kg
Chloromethane	ND	570	ug/kg
1,1-Dichloroethane	ND	290	ug/kg
1,2-Dichloroethane	ND	290	ug/kg
1,1-Dichloroethene	ND	290	ug/kg
1,2-Dichloroethene (total)	ND	290	ug/kg
1,2-Dichloropropane	ND	290	ug/kg
cis-1,3-Dichloropropene	ND	290	ug/kg
trans-1,3-Dichloropropene	ND	290	ug/kg
Ethylbenzene	**380**	**290**	**ug/kg**
2-Hexanone	ND	1100	ug/kg
Methylene chloride	ND	290	ug/kg
4-Methyl-2-pentanone	ND	1100	ug/kg
Styrene	ND	290	ug/kg
1,1,2,2-Tetrachloroethane	ND	290	ug/kg
Tetrachloroethene	ND	290	ug/kg
Toluene	ND	290	ug/kg
1,1,1-Trichloroethane	ND	290	ug/kg
1,1,2-Trichloroethane	ND	290	ug/kg
Trichloroethene	ND	290	ug/kg
Vinyl chloride	ND	570	ug/kg
Xylenes (total)	**1700**	**570**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	69	(51 - 124)
Toluene-d8	86	(58 - 116)
Bromofluorobenzene	67	(53 - 122)
Dibromofluoromethane	86	(49 - 119)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-004 Work Order #...: CVHT7103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Elevated reporting limits due to TICs.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-004 **Work Order #...:** CVHT7102 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 12:30 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/21/99
Prep Batch #...: 9131122
Dilution Factor: 2
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	760	ug/kg
bis(2-Chloroethyl)-ether	ND	760	ug/kg
2-Chlorophenol	ND	760	ug/kg
1,3-Dichlorobenzene	ND	760	ug/kg
1,4-Dichlorobenzene	ND	760	ug/kg
1,2-Dichlorobenzene	ND	760	ug/kg
2-Methylphenol	ND	760	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	760	ug/kg
4-Methylphenol	ND	760	ug/kg
N-Nitrosodi-n-propyl-amine	ND	760	ug/kg
Hexachloroethane	ND	760	ug/kg
Nitrobenzene	ND	760	ug/kg
Isophorone	ND	760	ug/kg
2-Nitrophenol	ND	760	ug/kg
2,4-Dimethylphenol	ND	760	ug/kg
bis(2-Chloroethoxy) methane	ND	760	ug/kg
2,4-Dichlorophenol	ND	760	ug/kg
1,2,4-Trichlorobenzene	ND	760	ug/kg
Naphthalene	ND	760	ug/kg
4-Chloroaniline	ND	760	ug/kg
Hexachlorobutadiene	ND	760	ug/kg
4-Chloro-3-methylphenol	ND	760	ug/kg
2-Methylnaphthalene	ND	760	ug/kg
Hexachlorocyclopenta-diene	ND	3700	ug/kg
2,4,6-Trichlorophenol	ND	760	ug/kg
2,4,5-Trichlorophenol	ND	760	ug/kg
2-Chloronaphthalene	ND	760	ug/kg
2-Nitroaniline	ND	3700	ug/kg
Dimethyl phthalate	ND	760	ug/kg
Acenaphthylene	ND	760	ug/kg
2,6-Dinitrotoluene	ND	760	ug/kg
3-Nitroaniline	ND	3700	ug/kg
Acenaphthene	ND	760	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-004 **Work Order #...:** CVHT7102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	3700	ug/kg
4-Nitrophenol	ND	3700	ug/kg
Dibenzofuran	ND	760	ug/kg
2,4-Dinitrotoluene	ND	760	ug/kg
Diethyl phthalate	ND	760	ug/kg
4-Chlorophenyl phenyl ether	ND	760	ug/kg
Fluorene	ND	760	ug/kg
4-Nitroaniline	ND	3700	ug/kg
4,6-Dinitro-2-methylphenol	ND	3700	ug/kg
N-Nitrosodiphenylamine	ND	760	ug/kg
4-Bromophenyl phenyl ether	ND	760	ug/kg
Hexachlorobenzene	ND	760	ug/kg
Pentachlorophenol	ND	760	ug/kg
Phenanthrene	**1200**	**760**	**ug/kg**
Anthracene	ND	760	ug/kg
Carbazole	ND	760	ug/kg
Di-n-butyl phthalate	ND	760	ug/kg
Fluoranthene	**3100**	**760**	**ug/kg**
Pyrene	**4200**	**760**	**ug/kg**
Butyl benzyl phthalate	ND	760	ug/kg
3,3'-Dichlorobenzidine	ND	3700	ug/kg
Benzo(a)anthracene	**1900**	**760**	**ug/kg**
Chrysene	**2100**	**760**	**ug/kg**
bis(2-Ethylhexyl) phthalate	ND	760	ug/kg
Di-n-octyl phthalate	ND	760	ug/kg
Benzo(b)fluoranthene	**2200**	**760**	**ug/kg**
Benzo(k)fluoranthene	ND	760	ug/kg
Benzo(a)pyrene	**2100**	**760**	**ug/kg**
Indeno(1,2,3-cd)pyrene	**1100**	**760**	**ug/kg**
Dibenz(a,h)anthracene	ND	760	ug/kg
Benzo(ghi)perylene	**1300**	**760**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	70 DIL	(23 - 120)
2-Fluorobiphenyl	82 DIL	(30 - 115)
Terphenyl-d14	103 DIL	(18 - 137)
Phenol-d5	64 DIL	(24 - 113)
2-Fluorophenol	70 DIL	(25 - 121)
2,4,6-Tribromophenol	86 DIL	(19 - 122)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-004 Work Order #...: CVHT7102 Matrix.....: SOLID

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

GC Semivolatiles

Lot-Sample #...: A9E070141-004 **Work Order #...:** CVHT7104 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 12:30 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	**57**	**38**	**ug/kg**
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(10 - 129)
Decachlorobiphenyl	83	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-004 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 12:30 **Date Received..:** 05/06/99
% Moisture.....: 13

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**10800**	**23.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT7109**
Arsenic	**26.6**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHT7105**
Lead	**137**	**0.35** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHT7106**
Antimony	ND	6.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT710A
Barium	**152**	**23.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT710C**
Selenium	**0.73**	**0.58** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHT7107**
Beryllium	**0.83**	**0.58** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT710D**
Thallium	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT7108
Cadmium	ND	0.58 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHT710E
Calcium	**28100**	**576** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT710F**
Chromium	**32.6**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHT710G**
Cobalt	**9.4**	**5.8** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT710H**
Copper	**67.4**	**2.9** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT710J**
Iron	**30100**	**11.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHT710K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-004 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	6200	576 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710L
Manganese	1190	1.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710M
Nickel	97.1	4.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710N
Potassium	994	576 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710P
Silver	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710Q
Sodium	ND	576 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710R
Vanadium	12.5	5.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710T
Mercury	ND	0.12 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHT710V
Zinc	114	2.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHT710U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WA11-SS01

General Chemistry

Lot-Sample #...: A9E070141-004 Work Order #...: CVHT7 Matrix.....: SOLID
Date Sampled...: 05/05/99 12:30 Date Received..: 05/06/99
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	86.8	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PW1

GC/MS Volatiles

Lot-Sample #...: A9E070141-005 **Work Order #...:** CVHT9102 **Matrix.....:** WATER
Date Sampled...: 05/05/99 15:20 **Date Received..:** 05/06/99
Prep Date.....: 05/17/99 **Analysis Date..:** 05/17/99
Prep Batch #...: 9138132
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	10	ug/L
Bromomethane	ND	10	ug/L
Vinyl chloride	ND	10	ug/L
Chloroethane	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Acetone	ND	20	ug/L
Carbon disulfide	ND	5.0	ug/L
1,1-Dichloroethene	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethene (total)	ND	5.0	ug/L
Chloroform	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L
2-Butanone	ND	20	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Dibromochloromethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Benzene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
4-Methyl-2-pentanone	ND	20	ug/L
2-Hexanone	ND	20	ug/L
Tetrachloroethene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
Xylenes (total)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	116	(80 - 120)
Toluene-d8	103	(88 - 110)
Bromofluorobenzene	93	(86 - 115)
Dibromofluoromethane	109	(86 - 118)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PW1

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-005 **Work Order #...:** CVHT9101 **Matrix.....:** WATER
Date Sampled...: 05/05/99 15:20 **Date Received..:** 05/06/99
Prep Date.....: 05/10/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9130114
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L
4-Methylphenol	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopenta-diene	ND	50	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
3-Nitroaniline	ND	50	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PW1

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-005 **Work Order #...:** CVHT9101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Carbazole	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(40 - 114)
2-Fluorobiphenyl	64	(45 - 118)
Terphenyl-d14	80	(33 - 141)
Phenol-d5	58	(17 - 101)
2-Fluorophenol	59	(21 - 100)
2,4,6-Tribromophenol	76	(16 - 129)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PW1

GC Semivolatiles

Lot-Sample #...: A9E070141-005 **Work Order #...:** CVHT9103 **Matrix.....:** WATER
Date Sampled...: 05/05/99 15:20 **Date Received..:** 05/06/99
Prep Date.....: 05/10/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9130104
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(10 - 130)
Decachlorobiphenyl	84	(10 - 116)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PW1

TOTAL Metals

Lot-Sample #...: A9E070141-005 **Matrix.....:** WATER
Date Sampled...: 05/05/99 15:20 **Date Received..:** 05/06/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9130113						
Aluminum	ND	0.20 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT9108
Arsenic	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT9104
Lead	ND	0.0030 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT9105
Antimony	ND	0.060 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT9109
Barium	ND	0.20 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910A
Selenium	ND	0.0050 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT9106
Beryllium	ND	0.0050 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910C
Thallium	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT9107
Cadmium	ND	0.0050 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910D
Calcium	**128**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/10-05/12/99**	**CVHT910E**
Chromium	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910F
Cobalt	ND	0.050 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910G
Copper	ND	0.025 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910H
Iron	**3.6**	**0.10** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/10-05/12/99**	**CVHT910J**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PW1

TOTAL Metals

Lot-Sample #...: A9E070141-005 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**24.9**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/10-05/12/99**	**CVHT910K**
Manganese	**0.41**	**0.015** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/10-05/12/99**	**CVHT910L**
Nickel	ND	0.040 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910M
Potassium	ND	5.0 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/14/99	CVHT910N
Silver	ND	0.010 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910P
Sodium	**233**	**5.0** Dilution Factor: 1	**mg/L**	**SW846 6010B**	**05/10-05/14/99**	**CVHT910Q**
Vanadium	ND	0.050 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910R
Mercury	ND	0.00020 Dilution Factor: 1	mg/L	SW846 7470A	05/10-05/13/99	CVHT910U
Zinc	ND MBE	0.020 Dilution Factor: 1	mg/L	SW846 6010B	05/10-05/12/99	CVHT910T

NOTE(S):

MBE This analyte is present in the associated method blank.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

General Chemistry

Lot-Sample #...: A9E070141-012 Work Order #...: CVHV5 Matrix.....: SOLID
Date Sampled...: 05/06/99 15:40 Date Received..: 05/07/99
% Moisture.....: 9.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	90.3	0.10	%	MCAWW 160.3 MOD	05/18-05/19/99	9138134
	Dilution Factor: 1					
Total Recoverable Petroleum Hydrocarbons	3600	550	mg/kg	MCAWW 418.1	05/19-05/20/99	9139119
	Dilution Factor: 50					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

GC/MS Volatiles

Lot-Sample #...: A9E070141-013 **Work Order #...:** CVHV8103 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 17:15 **Date Received..:** 05/07/99
Prep Date.....: 05/07/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131225
Dilution Factor: 0.81
% Moisture.....: 12 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	920	ug/kg
Benzene	ND	230	ug/kg
Bromodichloromethane	ND	230	ug/kg
Bromoform	ND	230	ug/kg
Bromomethane	ND	460	ug/kg
2-Butanone	ND	920	ug/kg
Carbon disulfide	ND	230	ug/kg
Carbon tetrachloride	ND	230	ug/kg
Chlorobenzene	ND	230	ug/kg
Dibromochloromethane	ND	230	ug/kg
Chloroethane	ND	460	ug/kg
Chloroform	ND	230	ug/kg
Chloromethane	ND	460	ug/kg
1,1-Dichloroethane	ND	230	ug/kg
1,2-Dichloroethane	ND	230	ug/kg
1,1-Dichloroethene	ND	230	ug/kg
1,2-Dichloroethene (total)	ND	230	ug/kg
1,2-Dichloropropane	ND	230	ug/kg
cis-1,3-Dichloropropene	ND	230	ug/kg
trans-1,3-Dichloropropene	ND	230	ug/kg
Ethylbenzene	ND	230	ug/kg
2-Hexanone	ND	920	ug/kg
Methylene chloride	ND	230	ug/kg
4-Methyl-2-pentanone	ND	920	ug/kg
Styrene	ND	230	ug/kg
1,1,2,2-Tetrachloroethane	ND	230	ug/kg
Tetrachloroethene	ND	230	ug/kg
Toluene	ND	230	ug/kg
1,1,1-Trichloroethane	ND	230	ug/kg
1,1,2-Trichloroethane	ND	230	ug/kg
Trichloroethene	ND	230	ug/kg
Vinyl chloride	ND	460	ug/kg
Xylenes (total)	ND	460	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	78	(51 - 124)
Toluene-d8	81	(58 - 116)
Bromofluorobenzene	73	(53 - 122)
Dibromofluoromethane	83	(49 - 119)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-013 **Work Order #...:** CVHV8102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	6100	ug/kg
4-Nitrophenol	ND	6100	ug/kg
Dibenzofuran	ND	1200	ug/kg
2,4-Dinitrotoluene	ND	1200	ug/kg
Diethyl phthalate	ND	1200	ug/kg
4-Chlorophenyl phenyl ether	ND	1200	ug/kg
Fluorene	ND	1200	ug/kg
4-Nitroaniline	ND	6100	ug/kg
4,6-Dinitro-2-methylphenol	ND	6100	ug/kg
N-Nitrosodiphenylamine	ND	1200	ug/kg
4-Bromophenyl phenyl ether	ND	1200	ug/kg
Hexachlorobenzene	ND	1200	ug/kg
Pentachlorophenol	ND	1200	ug/kg
Phenanthrene	ND	1200	ug/kg
Anthracene	ND	1200	ug/kg
Carbazole	ND	1200	ug/kg
Di-n-butyl phthalate	ND	1200	ug/kg
Fluoranthene	**1700**	**1200**	**ug/kg**
Pyrene	**1400**	**1200**	**ug/kg**
Butyl benzyl phthalate	ND	1200	ug/kg
3,3'-Dichlorobenzidine	ND	6100	ug/kg
Benzo(a)anthracene	ND	1200	ug/kg
Chrysene	ND	1200	ug/kg
bis(2-Ethylhexyl) phthalate	ND	1200	ug/kg
Di-n-octyl phthalate	ND	1200	ug/kg
Benzo(b)fluoranthene	**1300**	**1200**	**ug/kg**
Benzo(k)fluoranthene	ND	1200	ug/kg
Benzo(a)pyrene	ND	1200	ug/kg
Indeno(1,2,3-cd)pyrene	ND	1200	ug/kg
Dibenz(a,h)anthracene	ND	1200	ug/kg
Benzo(ghi)perylene	ND	1200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74 DIL	(23 - 120)
2-Fluorobiphenyl	86 DIL	(30 - 115)
Terphenyl-d14	108 DIL	(18 - 137)
Phenol-d5	64 DIL	(24 - 113)
2-Fluorophenol	79 DIL	(25 - 121)
2,4,6-Tribromophenol	85 DIL	(19 - 122)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-013 Work Order #...: CVHV8102 Matrix.....: SOLID

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

GC Semivolatiles

Lot-Sample #...:	A9E070141-013	**Work Order #...:**	CVHV8104	**Matrix.....:**	SOLID
Date Sampled...:	05/06/99 17:15	**Date Received..:**	05/07/99		
Prep Date.....:	05/11/99	**Analysis Date..:**	05/16/99		
Prep Batch #...:	9131114				
Dilution Factor:	1				
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	**96**	**38**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(10 - 129)
Decachlorobiphenyl	408 *	(10 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

GC Semivolatiles

Lot-Sample #...: A9E070141-013 Work Order #...: CVHV810W Matrix.....: SOLID
Date Sampled...: 05/06/99 17:15 Date Received..: 05/07/99
Prep Date.....: 05/12/99 Analysis Date..: 05/13/99
Prep Batch #...: 9131347
Dilution Factor: 5
% Moisture.....: 12 Method.....: SW846 8015B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (Extractables)	200	17	mg/kg

NOTE(S):
Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

TOTAL Metals

Lot-Sample #...: A9E070141-013 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	10300	569 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810L
Manganese	1740	1.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810M
Nickel	180	4.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810N
Potassium	719	569 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810P
Silver	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810Q
Sodium	ND	569 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810R
Vanadium	22.3	5.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810T
Mercury	0.12	0.11 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHV810V
Zinc	855	2.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV810U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS02

General Chemistry

Lot-Sample #...: A9E070141-013 Work Order #...: CVHV8 Matrix.....: SOLID
Date Sampled...: 05/06/99 17:15 Date Received..: 05/07/99
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	87.9	0.10	%	MCAWW 160.3 MOD	05/18-05/19/99	9138134
	Dilution Factor: 1					
Total Recoverable Petroleum Hydrocarbons	2100	280	mg/kg	MCAWW 418.1	05/19-05/20/99	9139119
	Dilution Factor: 25					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: EB-1 (EQUIPMENT BLANK)

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-014 **Work Order #...:** CVKLK101 **Matrix.....:** WATER
Date Sampled...: 05/07/99 07:45 **Date Received..:** 05/08/99
Prep Date.....: 05/10/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9130114
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L
4-Methylphenol	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopenta-diene	ND	50	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
3-Nitroaniline	ND	50	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: EB-1 (EQUIPMENT BLANK)

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-014 Work Order #...: CVKLK101 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	10	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Carbazole	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74	(40 - 114)
2-Fluorobiphenyl	68	(45 - 118)
Terphenyl-d14	107	(33 - 141)
Phenol-d5	66	(17 - 101)
2-Fluorophenol	63	(21 - 100)
2,4,6-Tribromophenol	62	(16 - 129)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: EB-1 (EQUIPMENT BLANK)

TOTAL Metals

Lot-Sample #...: A9E070141-014 **Matrix.....:** WATER
Date Sampled...: 05/07/99 07:45 **Date Received..:** 05/08/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9130113						
Aluminum	ND	0.20	mg/L	SW846 6010B	05/10-05/12/99	CVKLK108
		Dilution Factor: 1				
Arsenic	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKLK104
		Dilution Factor: 1				
Lead	ND	0.0030	mg/L	SW846 6010B	05/10-05/12/99	CVKLK105
		Dilution Factor: 1				
Antimony	ND	0.060	mg/L	SW846 6010B	05/10-05/12/99	CVKLK109
		Dilution Factor: 1				
Barium	ND	0.20	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10A
		Dilution Factor: 1				
Selenium	ND	0.0050	mg/L	SW846 6010B	05/10-05/12/99	CVKLK106
		Dilution Factor: 1				
Beryllium	ND	0.0050	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10C
		Dilution Factor: 1				
Thallium	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKLK107
		Dilution Factor: 1				
Cadmium	ND	0.0050	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10D
		Dilution Factor: 1				
Calcium	ND	5.0	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10E
		Dilution Factor: 1				
Chromium	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10F
		Dilution Factor: 1				
Cobalt	ND	0.050	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10G
		Dilution Factor: 1				
Copper	ND	0.025	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10H
		Dilution Factor: 1				
Iron	ND	0.10	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10J
		Dilution Factor: 1				

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: EB-1 (EQUIPMENT BLANK)

TOTAL Metals

Lot-Sample #...: A9E070141-014 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	ND	5.0	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10K
		Dilution Factor: 1				
Manganese	ND	0.015	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10L
		Dilution Factor: 1				
Nickel	ND	0.040	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10M
		Dilution Factor: 1				
Potassium	ND	5.0	mg/L	SW846 6010B	05/10-05/14/99	CVKLK10N
		Dilution Factor: 1				
Silver	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10P
		Dilution Factor: 1				
Sodium	ND	5.0	mg/L	SW846 6010B	05/10-05/14/99	CVKLK10Q
		Dilution Factor: 1				
Vanadium	ND	0.050	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10R
		Dilution Factor: 1				
Mercury	ND	0.00020	mg/L	SW846 7470A	05/10-05/13/99	CVKLK10U
		Dilution Factor: 1				
Zinc	ND MBE	0.020	mg/L	SW846 6010B	05/10-05/12/99	CVKLK10T
		Dilution Factor: 1				

NOTE(S):

MBE This analyte is present in the associated method blank.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-015 **Work Order #...:** CVKLL103 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 08:10 **Date Received..:** 05/08/99
Prep Date.....: 05/08/99 **Analysis Date..:** 05/18/99
Prep Batch #...: 9131235
Dilution Factor: 1.04
% Moisture.....: 18 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	1300	ug/kg
Benzene	ND	320	ug/kg
Bromodichloromethane	ND	320	ug/kg
Bromoform	ND	320	ug/kg
Bromomethane	ND	640	ug/kg
2-Butanone	ND	1300	ug/kg
Carbon disulfide	ND	320	ug/kg
Carbon tetrachloride	ND	320	ug/kg
Chlorobenzene	ND	320	ug/kg
Dibromochloromethane	ND	320	ug/kg
Chloroethane	ND	640	ug/kg
Chloroform	ND	320	ug/kg
Chloromethane	ND	640	ug/kg
1,1-Dichloroethane	ND	320	ug/kg
1,2-Dichloroethane	ND	320	ug/kg
1,1-Dichloroethene	ND	320	ug/kg
1,2-Dichloroethene (total)	ND	320	ug/kg
1,2-Dichloropropane	ND	320	ug/kg
cis-1,3-Dichloropropene	ND	320	ug/kg
trans-1,3-Dichloropropene	ND	320	ug/kg
Ethylbenzene	ND	320	ug/kg
2-Hexanone	ND	1300	ug/kg
Methylene chloride	ND	320	ug/kg
4-Methyl-2-pentanone	ND	1300	ug/kg
Styrene	ND	320	ug/kg
1,1,2,2-Tetrachloroethane	ND	320	ug/kg
Tetrachloroethene	ND	320	ug/kg
Toluene	ND	320	ug/kg
1,1,1-Trichloroethane	ND	320	ug/kg
1,1,2-Trichloroethane	ND	320	ug/kg
Trichloroethene	**670**	**320**	**ug/kg**
Vinyl chloride	ND	640	ug/kg
Xylenes (total)	ND	640	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	87	(51 - 124)
Toluene-d8	83	(58 - 116)
Bromofluorobenzene	91	(53 - 122)
Dibromofluoromethane	81	(49 - 119)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-015 Work Order #...: CVKLL103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Elevated reporting limits due to TICs.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-015 **Work Order #...:** CVKLL102 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 08:10 **Date Received..:** 05/08/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/19/99
Prep Batch #...: 9131122
Dilution Factor: 1
% Moisture.....: 18 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	400	ug/kg
bis(2-Chloroethyl)-ether	ND	400	ug/kg
2-Chlorophenol	ND	400	ug/kg
1,3-Dichlorobenzene	ND	400	ug/kg
1,4-Dichlorobenzene	ND	400	ug/kg
1,2-Dichlorobenzene	ND	400	ug/kg
2-Methylphenol	ND	400	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	400	ug/kg
4-Methylphenol	ND	400	ug/kg
N-Nitrosodi-n-propyl-amine	ND	400	ug/kg
Hexachloroethane	ND	400	ug/kg
Nitrobenzene	ND	400	ug/kg
Isophorone	ND	400	ug/kg
2-Nitrophenol	ND	400	ug/kg
2,4-Dimethylphenol	ND	400	ug/kg
bis(2-Chloroethoxy) methane	ND	400	ug/kg
2,4-Dichlorophenol	ND	400	ug/kg
1,2,4-Trichlorobenzene	ND	400	ug/kg
Naphthalene	ND	400	ug/kg
4-Chloroaniline	ND	400	ug/kg
Hexachlorobutadiene	ND	400	ug/kg
4-Chloro-3-methylphenol	ND	400	ug/kg
2-Methylnaphthalene	ND	400	ug/kg
Hexachlorocyclopenta-diene	ND	2000	ug/kg
2,4,6-Trichlorophenol	ND	400	ug/kg
2,4,5-Trichlorophenol	ND	400	ug/kg
2-Chloronaphthalene	ND	400	ug/kg
2-Nitroaniline	ND	2000	ug/kg
Dimethyl phthalate	ND	400	ug/kg
Acenaphthylene	ND	400	ug/kg
2,6-Dinitrotoluene	ND	400	ug/kg
3-Nitroaniline	ND	2000	ug/kg
Acenaphthene	ND	400	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-015 **Work Order #...:** CVKLL102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	2000	ug/kg
4-Nitrophenol	ND	2000	ug/kg
Dibenzofuran	ND	400	ug/kg
2,4-Dinitrotoluene	ND	400	ug/kg
Diethyl phthalate	ND	400	ug/kg
4-Chlorophenyl phenyl ether	ND	400	ug/kg
Fluorene	ND	400	ug/kg
4-Nitroaniline	ND	2000	ug/kg
4,6-Dinitro-2-methylphenol	ND	2000	ug/kg
N-Nitrosodiphenylamine	ND	400	ug/kg
4-Bromophenyl phenyl ether	ND	400	ug/kg
Hexachlorobenzene	ND	400	ug/kg
Pentachlorophenol	ND	400	ug/kg
Phenanthrene	**770**	**400**	**ug/kg**
Anthracene	ND	400	ug/kg
Carbazole	ND	400	ug/kg
Di-n-butyl phthalate	ND	400	ug/kg
Fluoranthene	**680**	**400**	**ug/kg**
Pyrene	**490**	**400**	**ug/kg**
Butyl benzyl phthalate	ND	400	ug/kg
3,3'-Dichlorobenzidine	ND	2000	ug/kg
Benzo(a)anthracene	ND	400	ug/kg
Chrysene	ND	400	ug/kg
bis(2-Ethylhexyl) phthalate	ND	400	ug/kg
Di-n-octyl phthalate	ND	400	ug/kg
Benzo(b)fluoranthene	ND	400	ug/kg
Benzo(k)fluoranthene	ND	400	ug/kg
Benzo(a)pyrene	ND	400	ug/kg
Indeno(1,2,3-cd)pyrene	ND	400	ug/kg
Dibenz(a,h)anthracene	ND	400	ug/kg
Benzo(ghi)perylene	ND	400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(23 - 120)
2-Fluorobiphenyl	70	(30 - 115)
Terphenyl-d14	87	(18 - 137)
Phenol-d5	62	(24 - 113)
2-Fluorophenol	60	(25 - 121)
2,4,6-Tribromophenol	79	(19 - 122)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

GC Semivolatiles

Lot-Sample #...:	A9E070141-015	**Work Order #...:**	CVKLL104	**Matrix.....:**	SOLID
Date Sampled...:	05/07/99 08:10	**Date Received..:**	05/08/99		
Prep Date.....:	05/11/99	**Analysis Date..:**	05/16/99		
Prep Batch #...:	9131114				
Dilution Factor:	1				
% Moisture.....:	18	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	54	(10 - 129)
Decachlorobiphenyl	79	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-015 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 08:10 **Date Received..:** 05/08/99
% Moisture.....: 18

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**1500**	**24.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL109**
Arsenic	**12.5**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLL105**
Lead	**54.6**	**0.37** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLL106**
Antimony	ND	7.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLL10A
Barium	**39.2**	**24.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10C**
Selenium	ND	0.61 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLL107
Beryllium	ND	0.61 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLL10D
Thallium	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLL108
Cadmium	ND	0.61 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLL10E
Calcium	**762**	**613** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10F**
Chromium	**13.9**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLL10G**
Cobalt	ND	6.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLL10H
Copper	**60.7**	**3.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10J**
Iron	**28700**	**12.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-015 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	ND	613 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLL10L
Manganese	**254**	**1.8** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10M**
Nickel	**115**	**4.9** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10N**
Potassium	ND	613 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLL10P
Silver	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLL10Q
Sodium	ND	613 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLL10R
Vanadium	**10.9**	**6.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10T**
Mercury	**0.16**	**0.12** Dilution Factor: 1	**mg/kg**	**SW846 7471A**	**05/14-05/18/99**	**CVKLL10V**
Zinc	**28.5**	**2.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLL10U**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-FM-SS01

General Chemistry

Lot-Sample #...: A9E070141-015 **Work Order #...:** CVKLL **Matrix.....:** SOLID
Date Sampled...: 05/07/99 08:10 **Date Received..:** 05/08/99
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**81.6**	**0.10**	**%**	**MCAWW 160.3 MOD**	**05/18-05/19/99**	**9138134**
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-016 **Work Order #...:** CVKLM103 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 09:50 **Date Received..:** 05/08/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 0.86
% Moisture.....: 24 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	11	ug/kg
Bromomethane	ND	11	ug/kg
Vinyl chloride	ND	11	ug/kg
Chloroethane	ND	11	ug/kg
Methylene chloride	ND	5.6	ug/kg
Acetone	ND	23	ug/kg
Carbon disulfide	ND	5.6	ug/kg
1,1-Dichloroethene	ND	5.6	ug/kg
1,1-Dichloroethane	ND	5.6	ug/kg
1,2-Dichloroethene (total)	ND	5.6	ug/kg
Chloroform	ND	5.6	ug/kg
1,2-Dichloroethane	ND	5.6	ug/kg
2-Butanone	ND	23	ug/kg
1,1,1-Trichloroethane	ND	5.6	ug/kg
Carbon tetrachloride	ND	5.6	ug/kg
Bromodichloromethane	ND	5.6	ug/kg
1,2-Dichloropropane	ND	5.6	ug/kg
cis-1,3-Dichloropropene	ND	5.6	ug/kg
Trichloroethene	ND	5.6	ug/kg
Dibromochloromethane	ND	5.6	ug/kg
1,1,2-Trichloroethane	ND	5.6	ug/kg
Benzene	ND	5.6	ug/kg
trans-1,3-Dichloropropene	ND	5.6	ug/kg
Bromoform	ND	5.6	ug/kg
4-Methyl-2-pentanone	ND	23	ug/kg
2-Hexanone	ND	23	ug/kg
Tetrachloroethene	ND	5.6	ug/kg
1,1,2,2-Tetrachloroethane	ND	5.6	ug/kg
Toluene	ND	5.6	ug/kg
Chlorobenzene	ND	5.6	ug/kg
Ethylbenzene	ND	5.6	ug/kg
Styrene	ND	5.6	ug/kg
Xylenes (total)	ND	11	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(75 - 117)
Toluene-d8	118	(86 - 122)
Bromofluorobenzene	109	(60 - 137)
Dibromofluoromethane	97	(70 - 135)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-016 Work Order #...: CVKLM103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-016 **Work Order #...:** CVKLM102 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 09:50 **Date Received..:** 05/08/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/19/99
Prep Batch #...: 9131122
Dilution Factor: 1
% Moisture.....: 24 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	430	ug/kg
bis(2-Chloroethyl)-ether	ND	430	ug/kg
2-Chlorophenol	ND	430	ug/kg
1,3-Dichlorobenzene	ND	430	ug/kg
1,4-Dichlorobenzene	ND	430	ug/kg
1,2-Dichlorobenzene	ND	430	ug/kg
2-Methylphenol	ND	430	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	430	ug/kg
4-Methylphenol	ND	430	ug/kg
N-Nitrosodi-n-propyl-amine	ND	430	ug/kg
Hexachloroethane	ND	430	ug/kg
Nitrobenzene	ND	430	ug/kg
Isophorone	ND	430	ug/kg
2-Nitrophenol	ND	430	ug/kg
2,4-Dimethylphenol	ND	430	ug/kg
bis(2-Chloroethoxy) methane	ND	430	ug/kg
2,4-Dichlorophenol	ND	430	ug/kg
1,2,4-Trichlorobenzene	ND	430	ug/kg
Naphthalene	ND	430	ug/kg
4-Chloroaniline	ND	430	ug/kg
Hexachlorobutadiene	ND	430	ug/kg
4-Chloro-3-methylphenol	ND	430	ug/kg
2-Methylnaphthalene	ND	430	ug/kg
Hexachlorocyclopenta-diene	ND	2100	ug/kg
2,4,6-Trichlorophenol	ND	430	ug/kg
2,4,5-Trichlorophenol	ND	430	ug/kg
2-Chloronaphthalene	ND	430	ug/kg
2-Nitroaniline	ND	2100	ug/kg
Dimethyl phthalate	ND	430	ug/kg
Acenaphthylene	ND	430	ug/kg
2,6-Dinitrotoluene	ND	430	ug/kg
3-Nitroaniline	ND	2100	ug/kg
Acenaphthene	ND	430	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-016 **Work Order #...:** CVKLM102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	2100	ug/kg
4-Nitrophenol	ND	2100	ug/kg
Dibenzofuran	ND	430	ug/kg
2,4-Dinitrotoluene	ND	430	ug/kg
Diethyl phthalate	ND	430	ug/kg
4-Chlorophenyl phenyl ether	ND	430	ug/kg
Fluorene	ND	430	ug/kg
4-Nitroaniline	ND	2100	ug/kg
4,6-Dinitro-2-methylphenol	ND	2100	ug/kg
N-Nitrosodiphenylamine	ND	430	ug/kg
4-Bromophenyl phenyl ether	ND	430	ug/kg
Hexachlorobenzene	ND	430	ug/kg
Pentachlorophenol	ND	430	ug/kg
Phenanthrene	ND	430	ug/kg
Anthracene	ND	430	ug/kg
Carbazole	ND	430	ug/kg
Di-n-butyl phthalate	ND	430	ug/kg
Fluoranthene	ND	430	ug/kg
Pyrene	ND	430	ug/kg
Butyl benzyl phthalate	ND	430	ug/kg
3,3'-Dichlorobenzidine	ND	2100	ug/kg
Benzo(a)anthracene	ND	430	ug/kg
Chrysene	ND	430	ug/kg
bis(2-Ethylhexyl) phthalate	ND	430	ug/kg
Di-n-octyl phthalate	ND	430	ug/kg
Benzo(b)fluoranthene	ND	430	ug/kg
Benzo(k)fluoranthene	ND	430	ug/kg
Benzo(a)pyrene	ND	430	ug/kg
Indeno(1,2,3-cd)pyrene	ND	430	ug/kg
Dibenz(a,h)anthracene	ND	430	ug/kg
Benzo(ghi)perylene	ND	430	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(23 - 120)
2-Fluorobiphenyl	68	(30 - 115)
Terphenyl-d14	100	(18 - 137)
Phenol-d5	60	(24 - 113)
2-Fluorophenol	60	(25 - 121)
2,4,6-Tribromophenol	77	(19 - 122)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

GC Semivolatiles

Lot-Sample #...:	A9E070141-016	**Work Order #...:**	CVKLM104	**Matrix.....:**	SOLID
Date Sampled...:	05/07/99 09:50	**Date Received..:**	05/08/99		
Prep Date.....:	05/11/99	**Analysis Date..:**	05/16/99		
Prep Batch #...:	9131114				
Dilution Factor:	1				
% Moisture.....:	24	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	42	(10 - 129)
Decachlorobiphenyl	93	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-016 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 09:50 **Date Received..:** 05/08/99
% Moisture.....: 24

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**13700**	**26.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLM109**
Arsenic	**10.8**	**1.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLM105**
Lead	**16.9**	**0.39** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLM106**
Antimony	ND	7.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLM10A
Barium	**261**	**26.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLM10C**
Selenium	ND	0.65 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLM107
Beryllium	ND	0.65 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10D
Thallium	ND	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLM108
Cadmium	ND	0.65 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLM10E
Calcium	**2930**	**654** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLM10F**
Chromium	**20.1**	**1.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLM10G**
Cobalt	**13.1**	**6.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLM10H**
Copper	**38.2**	**3.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLM10J**
Iron	**28000**	**13.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLM10K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-016 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	5350	654 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10L
Manganese	252	2.0 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10M
Nickel	39.5	5.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10N
Potassium	946	654 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10P
Silver	ND	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10Q
Sodium	ND	654 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10R
Vanadium	22.2	6.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10T
Mercury	ND	0.13 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVKLM10V
Zinc	72.2	2.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLM10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS01

General Chemistry

Lot-Sample #...: A9E070141-016 Work Order #...: CVKLM Matrix.....: SOLID
Date Sampled...: 05/07/99 09:50 Date Received..: 05/08/99
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	76.4	0.10	%	MCAWW 160.3 MOD	05/18-05/19/99	9138134

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

GC/MS Volatiles

Lot-Sample #...: A9E070141-017 **Work Order #...:** CVKLN103 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 10:45 **Date Received..:** 05/08/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 0.88
% Moisture.....: 20 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	11	ug/kg
Bromomethane	ND	11	ug/kg
Vinyl chloride	ND	11	ug/kg
Chloroethane	ND	11	ug/kg
Methylene chloride	ND	5.5	ug/kg
Acetone	ND	22	ug/kg
Carbon disulfide	ND	5.5	ug/kg
1,1-Dichloroethene	ND	5.5	ug/kg
1,1-Dichloroethane	ND	5.5	ug/kg
1,2-Dichloroethene (total)	ND	5.5	ug/kg
Chloroform	ND	5.5	ug/kg
1,2-Dichloroethane	ND	5.5	ug/kg
2-Butanone	ND	22	ug/kg
1,1,1-Trichloroethane	ND	5.5	ug/kg
Carbon tetrachloride	ND	5.5	ug/kg
Bromodichloromethane	ND	5.5	ug/kg
1,2-Dichloropropane	ND	5.5	ug/kg
cis-1,3-Dichloropropene	ND	5.5	ug/kg
Trichloroethene	ND	5.5	ug/kg
Dibromochloromethane	ND	5.5	ug/kg
1,1,2-Trichloroethane	ND	5.5	ug/kg
Benzene	ND	5.5	ug/kg
trans-1,3-Dichloropropene	ND	5.5	ug/kg
Bromoform	ND	5.5	ug/kg
4-Methyl-2-pentanone	ND	22	ug/kg
2-Hexanone	ND	22	ug/kg
Tetrachloroethene	ND	5.5	ug/kg
1,1,2,2-Tetrachloroethane	ND	5.5	ug/kg
Toluene	ND	5.5	ug/kg
Chlorobenzene	ND	5.5	ug/kg
Ethylbenzene	ND	5.5	ug/kg
Styrene	ND	5.5	ug/kg
Xylenes (total)	ND	11	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(75 - 117)
Toluene-d8	110	(86 - 122)
Bromofluorobenzene	98	(60 - 137)
Dibromofluoromethane	104	(70 - 135)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

GC/MS Volatiles

Lot-Sample #...: A9E070141-017 Work Order #...: CVKLN103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-017 **Work Order #...:** CVKLN102 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 10:45 **Date Received..:** 05/08/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/19/99
Prep Batch #...: 9131122
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	410	ug/kg
bis(2-Chloroethyl)-ether	ND	410	ug/kg
2-Chlorophenol	ND	410	ug/kg
1,3-Dichlorobenzene	ND	410	ug/kg
1,4-Dichlorobenzene	ND	410	ug/kg
1,2-Dichlorobenzene	ND	410	ug/kg
2-Methylphenol	ND	410	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	410	ug/kg
4-Methylphenol	ND	410	ug/kg
N-Nitrosodi-n-propyl-amine	ND	410	ug/kg
Hexachloroethane	ND	410	ug/kg
Nitrobenzene	ND	410	ug/kg
Isophorone	ND	410	ug/kg
2-Nitrophenol	ND	410	ug/kg
2,4-Dimethylphenol	ND	410	ug/kg
bis(2-Chloroethoxy) methane	ND	410	ug/kg
2,4-Dichlorophenol	ND	410	ug/kg
1,2,4-Trichlorobenzene	ND	410	ug/kg
Naphthalene	ND	410	ug/kg
4-Chloroaniline	ND	410	ug/kg
Hexachlorobutadiene	ND	410	ug/kg
4-Chloro-3-methylphenol	ND	410	ug/kg
2-Methylnaphthalene	ND	410	ug/kg
Hexachlorocyclopenta-diene	ND	2000	ug/kg
2,4,6-Trichlorophenol	ND	410	ug/kg
2,4,5-Trichlorophenol	ND	410	ug/kg
2-Chloronaphthalene	ND	410	ug/kg
2-Nitroaniline	ND	2000	ug/kg
Dimethyl phthalate	ND	410	ug/kg
Acenaphthylene	ND	410	ug/kg
2,6-Dinitrotoluene	ND	410	ug/kg
3-Nitroaniline	ND	2000	ug/kg
Acenaphthene	ND	410	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-017 Work Order #...: CVKLN102 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	2000	ug/kg
4-Nitrophenol	ND	2000	ug/kg
Dibenzofuran	ND	410	ug/kg
2,4-Dinitrotoluene	ND	410	ug/kg
Diethyl phthalate	ND	410	ug/kg
4-Chlorophenyl phenyl ether	ND	410	ug/kg
Fluorene	ND	410	ug/kg
4-Nitroaniline	ND	2000	ug/kg
4,6-Dinitro-2-methylphenol	ND	2000	ug/kg
N-Nitrosodiphenylamine	ND	410	ug/kg
4-Bromophenyl phenyl ether	ND	410	ug/kg
Hexachlorobenzene	ND	410	ug/kg
Pentachlorophenol	ND	410	ug/kg
Phenanthrene	ND	410	ug/kg
Anthracene	ND	410	ug/kg
Carbazole	ND	410	ug/kg
Di-n-butyl phthalate	ND	410	ug/kg
Fluoranthene	ND	410	ug/kg
Pyrene	ND	410	ug/kg
Butyl benzyl phthalate	ND	410	ug/kg
3,3'-Dichlorobenzidine	ND	2000	ug/kg
Benzo(a)anthracene	ND	410	ug/kg
Chrysene	ND	410	ug/kg
bis(2-Ethylhexyl) phthalate	ND	410	ug/kg
Di-n-octyl phthalate	ND	410	ug/kg
Benzo(b)fluoranthene	ND	410	ug/kg
Benzo(k)fluoranthene	ND	410	ug/kg
Benzo(a)pyrene	ND	410	ug/kg
Indeno(1,2,3-cd)pyrene	ND	410	ug/kg
Dibenz(a,h)anthracene	ND	410	ug/kg
Benzo(ghi)perylene	ND	410	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(23 - 120)
2-Fluorobiphenyl	67	(30 - 115)
Terphenyl-d14	91	(18 - 137)
Phenol-d5	56	(24 - 113)
2-Fluorophenol	55	(25 - 121)
2,4,6-Tribromophenol	78	(19 - 122)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

GC Semivolatiles

Lot-Sample #...: A9E070141-017 **Work Order #...:** CVKLN104 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 10:45 **Date Received..:** 05/08/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	71	(10 - 129)
Decachlorobiphenyl	91	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

TOTAL Metals

Lot-Sample #...: A9E070141-017 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 10:45 **Date Received..:** 05/08/99
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**10100**	**25.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLN109**
Arsenic	**11.9**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLN105**
Lead	**46.5**	**0.37** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLN106**
Antimony	ND	7.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLN10A
Barium	**131**	**25.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLN10C**
Selenium	ND	0.62 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLN107
Beryllium	ND	0.62 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10D
Thallium	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLN108
Cadmium	ND	0.62 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLN10E
Calcium	**3100**	**624** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLN10F**
Chromium	**15.8**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLN10G**
Cobalt	**10.8**	**6.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLN10H**
Copper	**52.2**	**3.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLN10J**
Iron	**26500**	**12.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLN10K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

TOTAL Metals

Lot-Sample #...: A9E070141-017 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	2800	624 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10L
Manganese	714	1.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10M
Nickel	30.6	5.0 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10N
Potassium	1020	624 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10P
Silver	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10Q
Sodium	ND	624 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10R
Vanadium	20.0	6.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10T
Mercury	0.29	0.12 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVKLN10V
Zinc	93.9	2.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLN10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS02

General Chemistry

Lot-Sample #...: A9E070141-017 **Work Order #...:** CVKLN **Matrix.....:** SOLID
Date Sampled...: 05/07/99 10:45 **Date Received..:** 05/08/99
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**80.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**05/18-05/19/99**	**9138134**

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-DTK-SS01

GC/MS Volatiles

Lot-Sample #...:	A9E070141-018	**Work Order #...:**	CVKLP103	**Matrix.....:**	SOLID
Date Sampled...:	05/07/99 13:40	**Date Received..:**	05/08/99		
Prep Date.....:	05/14/99	**Analysis Date..:**	05/14/99		
Prep Batch #...:	9138240				
Dilution Factor:	0.73				
% Moisture.....:	12	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	8.3	ug/kg
Bromomethane	ND	8.3	ug/kg
Vinyl chloride	ND	8.3	ug/kg
Chloroethane	ND	8.3	ug/kg
Methylene chloride	ND	4.1	ug/kg
Acetone	ND	17	ug/kg
Carbon disulfide	ND	4.1	ug/kg
1,1-Dichloroethene	ND	4.1	ug/kg
1,1-Dichloroethane	ND	4.1	ug/kg
1,2-Dichloroethene (total)	ND	4.1	ug/kg
Chloroform	ND	4.1	ug/kg
1,2-Dichloroethane	ND	4.1	ug/kg
2-Butanone	ND	17	ug/kg
1,1,1-Trichloroethane	ND	4.1	ug/kg
Carbon tetrachloride	ND	4.1	ug/kg
Bromodichloromethane	ND	4.1	ug/kg
1,2-Dichloropropane	ND	4.1	ug/kg
cis-1,3-Dichloropropene	ND	4.1	ug/kg
Trichloroethene	ND	4.1	ug/kg
Dibromochloromethane	ND	4.1	ug/kg
1,1,2-Trichloroethane	ND	4.1	ug/kg
Benzene	ND	4.1	ug/kg
trans-1,3-Dichloropropene	ND	4.1	ug/kg
Bromoform	ND	4.1	ug/kg
4-Methyl-2-pentanone	ND	17	ug/kg
2-Hexanone	ND	17	ug/kg
Tetrachloroethene	ND	4.1	ug/kg
1,1,2,2-Tetrachloroethane	ND	4.1	ug/kg
Toluene	ND	4.1	ug/kg
Chlorobenzene	ND	4.1	ug/kg
Ethylbenzene	ND	4.1	ug/kg
Styrene	ND	4.1	ug/kg
Xylenes (total)	ND	8.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	101	(75 - 117)
Toluene-d8	103	(86 - 122)
Bromofluorobenzene	100	(60 - 137)
Dibromofluoromethane	98	(70 - 135)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NS-SD01A

GC/MS Volatiles

Lot-Sample #...: A9E070141-006 **Work Order #...:** CVHTD103 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 17:50 **Date Received..:** 05/06/99
Prep Date.....: 05/06/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131221
Dilution Factor: 4.36
% Moisture.....: 27 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	6000	ug/kg
Benzene	ND	1500	ug/kg
Bromodichloromethane	ND	1500	ug/kg
Bromoform	ND	1500	ug/kg
Bromomethane	ND	3000	ug/kg
2-Butanone	ND	6000	ug/kg
Carbon disulfide	ND	1500	ug/kg
Carbon tetrachloride	ND	1500	ug/kg
Chlorobenzene	ND	1500	ug/kg
Dibromochloromethane	ND	1500	ug/kg
Chloroethane	ND	3000	ug/kg
Chloroform	ND	1500	ug/kg
Chloromethane	ND	3000	ug/kg
1,1-Dichloroethane	ND	1500	ug/kg
1,2-Dichloroethane	ND	1500	ug/kg
1,1-Dichloroethene	ND	1500	ug/kg
1,2-Dichloroethene (total)	**2300**	**1500**	**ug/kg**
,2-Dichloropropane	ND	1500	ug/kg
is-1,3-Dichloropropene	ND	1500	ug/kg
trans-1,3-Dichloropropene	ND	1500	ug/kg
thylbenzene	**11000**	**1500**	**ug/kg**
-Hexanone	ND	6000	ug/kg
Methylene chloride	ND	1500	ug/kg
4-Methyl-2-pentanone	ND	6000	ug/kg
yrene	ND	1500	ug/kg
1,1,2,2-Tetrachloroethane	ND	1500	ug/kg
Tetrachloroethene	ND	1500	ug/kg
luene	ND	1500	ug/kg
1,1-Trichloroethane	ND	1500	ug/kg
1,1,2-Trichloroethane	ND	1500	ug/kg
Trichloroethene	ND	1500	ug/kg
yl chloride	ND	3000	ug/kg
Xylenes (total)	**72000**	**3000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
,2-Dichloroethane-d4	64 DIL	(51 - 124)
ene-d8	78 DIL	(58 - 116)
fluorobenzene	84 DIL	(53 - 122)
omofluoromethane	80 DIL	(49 - 119)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NS-SD01A

GC Semivolatiles

Lot-Sample #...: A9E070141-006 **Work Order #...:** CVHTD104 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 17:50 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 27 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	46	ug/kg
Aroclor 1221	ND	46	ug/kg
Aroclor 1232	ND	46	ug/kg
Aroclor 1242	ND	46	ug/kg
Aroclor 1248	ND	46	ug/kg
Aroclor 1254	ND	46	ug/kg
Aroclor 1260	**140**	**46**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(10 - 129)
Decachlorobiphenyl	152 *	(10 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NS-SD01A

TOTAL Metals

Lot-Sample #...: A9E070141-006 Matrix.....: SOLID
Date Sampled...: 05/05/99 17:50 Date Received..: 05/06/99
% Moisture.....: 27

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	16000	27.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD109
Arsenic	9.0	1.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD105
Lead	158	0.41 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD106
Antimony	ND	8.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD10A
Barium	210	27.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10C
Selenium	0.88	0.69 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD107
Beryllium	1.4	0.69 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10D
Thallium	ND	1.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD108
Cadmium	1.9	0.69 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD10E
Calcium	60600	690 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10F
Chromium	174	1.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTD10G
Cobalt	8.1	6.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10H
Copper	136	3.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10J
Iron	39300	13.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10K

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NS-SD01A

TOTAL Metals

Lot-Sample #...: A9E070141-006 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	14500	690 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10L
Manganese	1490	2.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10M
Nickel	158	5.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10N
Potassium	1110	690 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10P
Silver	ND	1.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10Q
Sodium	ND	690 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10R
Vanadium	17.9	6.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10T
Mercury	1.5	0.14 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHTD10V
Zinc	920	2.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTD10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-NS-SD01A

General Chemistry

Lot-Sample #...: A9E070141-006 Work Order #...: CVHTD Matrix.....: SOLID
Date Sampled...: 05/05/99 17:50 Date Received..: 05/06/99
% Moisture.....: 27

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	72.5	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

GC/MS Volatiles

Lot-Sample #...: A9E070141-007 Work Order #...: CVHTN103 Matrix.....: SOLID
Date Sampled...: 05/06/99 09:40 Date Received..: 05/07/99
Prep Date.....: 05/07/99 Analysis Date..: 05/16/99
Prep Batch #...: 9131225
Dilution Factor: 0.88
% Moisture.....: 23 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	1100	ug/kg
Benzene	ND	290	ug/kg
Bromodichloromethane	ND	290	ug/kg
Bromoform	ND	290	ug/kg
Bromomethane	ND	570	ug/kg
2-Butanone	ND	1100	ug/kg
Carbon disulfide	ND	290	ug/kg
Carbon tetrachloride	ND	290	ug/kg
Chlorobenzene	ND	290	ug/kg
Dibromochloromethane	ND	290	ug/kg
Chloroethane	ND	570	ug/kg
Chloroform	ND	290	ug/kg
Chloromethane	ND	570	ug/kg
1,1-Dichloroethane	ND	290	ug/kg
1,2-Dichloroethane	ND	290	ug/kg
1,1-Dichloroethene	ND	290	ug/kg
1,2-Dichloroethene (total)	**290**	**290**	**ug/kg**
1,2-Dichloropropane	ND	290	ug/kg
cis-1,3-Dichloropropene	ND	290	ug/kg
trans-1,3-Dichloropropene	ND	290	ug/kg
Ethylbenzene	ND	290	ug/kg
2-Hexanone	ND	1100	ug/kg
Methylene chloride	ND	290	ug/kg
4-Methyl-2-pentanone	ND	1100	ug/kg
Styrene	ND	290	ug/kg
1,1,2,2-Tetrachloroethane	ND	290	ug/kg
Tetrachloroethene	ND	290	ug/kg
Toluene	ND	290	ug/kg
1,1,1-Trichloroethane	ND	290	ug/kg
1,1,2-Trichloroethane	ND	290	ug/kg
Trichloroethene	**1800**	**290**	**ug/kg**
Vinyl chloride	ND	570	ug/kg
Xylenes (total)	ND	570	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	80	(51 - 124)
Toluene-d8	81	(58 - 116)
Bromofluorobenzene	73	(53 - 122)
Dibromofluoromethane	85	(49 - 119)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

GC/MS Volatiles

Lot-Sample #...: A9E070141-007 Work Order #...: CVHTN103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Elevated reporting limits due to TICs.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-007 **Work Order #...:** CVHTN102 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 09:40 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/21/99
Prep Batch #...: 9131122
Dilution Factor: 6.66
% Moisture.....: 23 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	2900	ug/kg
bis(2-Chloroethyl)-ether	ND	2900	ug/kg
2-Chlorophenol	ND	2900	ug/kg
1,3-Dichlorobenzene	ND	2900	ug/kg
1,4-Dichlorobenzene	ND	2900	ug/kg
1,2-Dichlorobenzene	ND	2900	ug/kg
2-Methylphenol	ND	2900	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	2900	ug/kg
4-Methylphenol	ND	2900	ug/kg
N-Nitrosodi-n-propyl-amine	ND	2900	ug/kg
Hexachloroethane	ND	2900	ug/kg
Nitrobenzene	ND	2900	ug/kg
Isophorone	ND	2900	ug/kg
2-Nitrophenol	ND	2900	ug/kg
2,4-Dimethylphenol	ND	2900	ug/kg
bis(2-Chloroethoxy) methane	ND	2900	ug/kg
2,4-Dichlorophenol	ND	2900	ug/kg
1,2,4-Trichlorobenzene	ND	2900	ug/kg
Naphthalene	ND	2900	ug/kg
4-Chloroaniline	ND	2900	ug/kg
Hexachlorobutadiene	ND	2900	ug/kg
4-Chloro-3-methylphenol	ND	2900	ug/kg
2-Methylnaphthalene	ND	2900	ug/kg
Hexachlorocyclopenta-diene	ND	14000	ug/kg
2,4,6-Trichlorophenol	ND	2900	ug/kg
2,4,5-Trichlorophenol	ND	2900	ug/kg
2-Chloronaphthalene	ND	2900	ug/kg
2-Nitroaniline	ND	14000	ug/kg
Dimethyl phthalate	ND	2900	ug/kg
Acenaphthylene	ND	2900	ug/kg
2,6-Dinitrotoluene	ND	2900	ug/kg
3-Nitroaniline	ND	14000	ug/kg
Acenaphthene	ND	2900	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-007 **Work Order #...:** CVHTN102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	14000	ug/kg
4-Nitrophenol	ND	14000	ug/kg
Dibenzofuran	ND	2900	ug/kg
2,4-Dinitrotoluene	ND	2900	ug/kg
Diethyl phthalate	ND	2900	ug/kg
4-Chlorophenyl phenyl ether	ND	2900	ug/kg
Fluorene	ND	2900	ug/kg
4-Nitroaniline	ND	14000	ug/kg
4,6-Dinitro-2-methylphenol	ND	14000	ug/kg
N-Nitrosodiphenylamine	ND	2900	ug/kg
4-Bromophenyl phenyl ether	ND	2900	ug/kg
Hexachlorobenzene	ND	2900	ug/kg
Pentachlorophenol	ND	2900	ug/kg
Phenanthrene	**13000**	**2900**	**ug/kg**
Anthracene	ND	2900	ug/kg
Carbazole	ND	2900	ug/kg
Di-n-butyl phthalate	ND	2900	ug/kg
Fluoranthene	**16000**	**2900**	**ug/kg**
Pyrene	**13000**	**2900**	**ug/kg**
Butyl benzyl phthalate	ND	2900	ug/kg
3,3'-Dichlorobenzidine	ND	14000	ug/kg
Benzo(a)anthracene	**6500**	**2900**	**ug/kg**
Chrysene	**6800**	**2900**	**ug/kg**
bis(2-Ethylhexyl) phthalate	**4100**	**2900**	**ug/kg**
Di-n-octyl phthalate	ND	2900	ug/kg
Benzo(b)fluoranthene	**7000**	**2900**	**ug/kg**
Benzo(k)fluoranthene	**3200**	**2900**	**ug/kg**
Benzo(a)pyrene	**5000**	**2900**	**ug/kg**
Indeno(1,2,3-cd)pyrene	ND	2900	ug/kg
Dibenz(a,h)anthracene	ND	2900	ug/kg
Benzo(ghi)perylene	ND	2900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	66 DIL	(23 - 120)
2-Fluorobiphenyl	79 DIL	(30 - 115)
Terphenyl-d14	107 DIL	(18 - 137)
Phenol-d5	56 DIL	(24 - 113)
2-Fluorophenol	72 DIL	(25 - 121)
2,4,6-Tribromophenol	68 DIL	(19 - 122)

(Continued on next page)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-007 Work Order #...: CVHTN102 Matrix.....: SOLID

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

GC Semivolatiles

Lot-Sample #...: A9E070141-007 **Work Order #...:** CVHTN104 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 09:40 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 23 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	**120**	**43**	**ug/kg**
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	64	(10 - 129)
Decachlorobiphenyl	82	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

TOTAL Metals

Lot-Sample #...: A9E070141-007 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 09:40 **Date Received..:** 05/07/99
% Moisture.....: 23

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**9200**	**26.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHTN109**
Arsenic	**11.5**	**1.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHTN105**
Lead	**182**	**0.39** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHTN106**
Antimony	ND	7.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTN10A
Barium	**113**	**26.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHTN10C**
Selenium	**1.2**	**0.65** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHTN107**
Beryllium	ND	0.65 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10D
Thallium	ND	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTN108
Cadmium	**1.9**	**0.65** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHTN10E**
Calcium	**19800**	**650** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHTN10F**
Chromium	**51.7**	**1.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHTN10G**
Cobalt	**11.1**	**6.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHTN10H**
Copper	**99.2**	**3.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHTN10J**
Iron	**29300**	**13.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHTN10K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

TOTAL Metals

Lot-Sample #...: A9E070141-007 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	5290	650 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10L
Manganese	629	2.0 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10M
Nickel	520	5.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10N
Potassium	1320	650 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10P
Silver	1.6	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10Q
Sodium	ND	650 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10R
Vanadium	11.4	6.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10T
Mercury	0.15	0.13 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHTN10V
Zinc	762	2.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTN10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SS-SD001

General Chemistry

Lot-Sample #...: A9E070141-007 Work Order #...: CVHTN Matrix.....: SOLID
Date Sampled...: 05/06/99 09:40 Date Received..: 05/07/99
% Moisture.....: 23

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	76.9	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-008 **Work Order #...:** CVHTQ103 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 12:50 **Date Received..:** 05/07/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 1.22
% Moisture.....: 21 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	15	ug/kg
Bromomethane	ND	15	ug/kg
Vinyl chloride	ND	15	ug/kg
Chloroethane	ND	15	ug/kg
Methylene chloride	ND	7.7	ug/kg
Acetone	**34**	**31**	**ug/kg**
Carbon disulfide	ND	7.7	ug/kg
1,1-Dichloroethene	ND	7.7	ug/kg
1,1-Dichloroethane	ND	7.7	ug/kg
1,2-Dichloroethene (total)	ND	7.7	ug/kg
Chloroform	ND	7.7	ug/kg
1,2-Dichloroethane	ND	7.7	ug/kg
2-Butanone	ND	31	ug/kg
1,1,1-Trichloroethane	ND	7.7	ug/kg
Carbon tetrachloride	ND	7.7	ug/kg
Bromodichloromethane	ND	7.7	ug/kg
1,2-Dichloropropane	ND	7.7	ug/kg
cis-1,3-Dichloropropene	ND	7.7	ug/kg
Trichloroethene	ND	7.7	ug/kg
Dibromochloromethane	ND	7.7	ug/kg
1,1,2-Trichloroethane	ND	7.7	ug/kg
Benzene	ND	7.7	ug/kg
trans-1,3-Dichloropropene	ND	7.7	ug/kg
Bromoform	ND	7.7	ug/kg
4-Methyl-2-pentanone	ND	31	ug/kg
2-Hexanone	ND	31	ug/kg
Tetrachloroethene	ND	7.7	ug/kg
1,1,2,2-Tetrachloroethane	ND	7.7	ug/kg
Toluene	ND	7.7	ug/kg
Chlorobenzene	ND	7.7	ug/kg
Ethylbenzene	ND	7.7	ug/kg
Styrene	ND	7.7	ug/kg
Xylenes (total)	ND	15	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(75 - 117)
Toluene-d8	176 *	(86 - 122)
Bromofluorobenzene	152 *	(60 - 137)
Dibromofluoromethane	104	(70 - 135)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-008 Work Order #...: CVHTQ103 Matrix.....: SOLID

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-008 **Work Order #...:** CVHTQ102 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 12:50 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/21/99
Prep Batch #...: 9131122
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	420	ug/kg
bis(2-Chloroethyl)-ether	ND	420	ug/kg
2-Chlorophenol	ND	420	ug/kg
1,3-Dichlorobenzene	ND	420	ug/kg
1,4-Dichlorobenzene	ND	420	ug/kg
1,2-Dichlorobenzene	ND	420	ug/kg
2-Methylphenol	ND	420	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	420	ug/kg
4-Methylphenol	ND	420	ug/kg
N-Nitrosodi-n-propyl-amine	ND	420	ug/kg
Hexachloroethane	ND	420	ug/kg
Nitrobenzene	ND	420	ug/kg
Isophorone	ND	420	ug/kg
2-Nitrophenol	ND	420	ug/kg
2,4-Dimethylphenol	ND	420	ug/kg
bis(2-Chloroethoxy) methane	ND	420	ug/kg
2,4-Dichlorophenol	ND	420	ug/kg
1,2,4-Trichlorobenzene	ND	420	ug/kg
Naphthalene	ND	420	ug/kg
4-Chloroaniline	ND	420	ug/kg
Hexachlorobutadiene	ND	420	ug/kg
4-Chloro-3-methylphenol	ND	420	ug/kg
2-Methylnaphthalene	**450**	**420**	**ug/kg**
Hexachlorocyclopenta-diene	ND	2000	ug/kg
2,4,6-Trichlorophenol	ND	420	ug/kg
2,4,5-Trichlorophenol	ND	420	ug/kg
2-Chloronaphthalene	ND	420	ug/kg
2-Nitroaniline	ND	2000	ug/kg
Dimethyl phthalate	ND	420	ug/kg
Acenaphthylene	ND	420	ug/kg
2,6-Dinitrotoluene	ND	420	ug/kg
3-Nitroaniline	ND	2000	ug/kg
Acenaphthene	ND	420	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-008 Work Order #...: CVHTQ102 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	2000	ug/kg
4-Nitrophenol	ND	2000	ug/kg
Dibenzofuran	ND	420	ug/kg
2,4-Dinitrotoluene	ND	420	ug/kg
Diethyl phthalate	ND	420	ug/kg
4-Chlorophenyl phenyl ether	ND	420	ug/kg
Fluorene	ND	420	ug/kg
4-Nitroaniline	ND	2000	ug/kg
4,6-Dinitro-2-methylphenol	ND	2000	ug/kg
N-Nitrosodiphenylamine	ND	420	ug/kg
4-Bromophenyl phenyl ether	ND	420	ug/kg
Hexachlorobenzene	ND	420	ug/kg
Pentachlorophenol	ND	420	ug/kg
Phenanthrene	**710**	**420**	**ug/kg**
Anthracene	ND	420	ug/kg
Carbazole	ND	420	ug/kg
Di-n-butyl phthalate	ND	420	ug/kg
Fluoranthene	**1000**	**420**	**ug/kg**
Pyrene	**930**	**420**	**ug/kg**
Butyl benzyl phthalate	ND	420	ug/kg
3,3'-Dichlorobenzidine	ND	2000	ug/kg
Benzo(a)anthracene	**570**	**420**	**ug/kg**
Chrysene	**810**	**420**	**ug/kg**
bis(2-Ethylhexyl) phthalate	ND	420	ug/kg
Di-n-octyl phthalate	ND	420	ug/kg
Benzo(b)fluoranthene	**1100**	**420**	**ug/kg**
Benzo(k)fluoranthene	**450**	**420**	**ug/kg**
Benzo(a)pyrene	**710**	**420**	**ug/kg**
Indeno(1,2,3-cd)pyrene	**520**	**420**	**ug/kg**
Dibenz(a,h)anthracene	ND	420	ug/kg
Benzo(ghi)perylene	**600**	**420**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(23 - 120)
2-Fluorobiphenyl	76	(30 - 115)
Terphenyl-d14	93	(18 - 137)
Phenol-d5	60	(24 - 113)
2-Fluorophenol	62	(25 - 121)
2,4,6-Tribromophenol	84	(19 - 122)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

GC Semivolatiles

Lot-Sample #...: A9E070141-008 **Work Order #...:** CVHTQ104 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 12:50 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	**67**	**42**	**ug/kg**
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(10 - 129)
Decachlorobiphenyl	90	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-008 Matrix.....: SOLID
Date Sampled...: 05/06/99 12:50 Date Received..: 05/07/99
% Moisture.....: 21

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	4320	25.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ109
Arsenic	44.0	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ105
Lead	74.5	0.38 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ106
Antimony	ND	7.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ10A
Barium	98.0	25.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10C
Selenium	1.2	0.63 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ107
Beryllium	ND	0.63 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10D
Thallium	ND	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ108
Cadmium	ND	0.63 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ10E
Calcium	2420	632 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10F
Chromium	27.2	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTQ10G
Cobalt	ND	6.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10H
Copper	80.5	3.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10J
Iron	31500	12.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10K

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-008 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	1490	632 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10L
Manganese	221	1.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10M
Nickel	43.5	5.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10N
Potassium	ND	632 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10P
Silver	ND	1.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10Q
Sodium	ND	632 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10R
Vanadium	14.8	6.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10T
Mercury	0.20	0.13 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHTQ10V
Zinc	124	2.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTQ10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS01

General Chemistry

Lot-Sample #...: A9E070141-008 **Work Order #...:** CVHTQ **Matrix.....:** SOLID
Date Sampled...: 05/06/99 12:50 **Date Received..:** 05/07/99
% Moisture.....: 21

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	79.1	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

GC/MS Volatiles

Lot-Sample #...: A9E070141-009 **Work Order #...:** CVHTV103 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 13:35 **Date Received..:** 05/07/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 0.92
% Moisture.....: 14 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	11	ug/kg
Bromomethane	ND	11	ug/kg
Vinyl chloride	ND	11	ug/kg
Chloroethane	ND	11	ug/kg
Methylene chloride	ND	5.4	ug/kg
Acetone	**24**	**22**	**ug/kg**
Carbon disulfide	ND	5.4	ug/kg
1,1-Dichloroethene	ND	5.4	ug/kg
1,1-Dichloroethane	ND	5.4	ug/kg
1,2-Dichloroethene (total)	ND	5.4	ug/kg
Chloroform	ND	5.4	ug/kg
1,2-Dichloroethane	ND	5.4	ug/kg
2-Butanone	ND	22	ug/kg
1,1,1-Trichloroethane	ND	5.4	ug/kg
Carbon tetrachloride	ND	5.4	ug/kg
Bromodichloromethane	ND	5.4	ug/kg
1,2-Dichloropropane	ND	5.4	ug/kg
cis-1,3-Dichloropropene	ND	5.4	ug/kg
Trichloroethene	ND	5.4	ug/kg
Dibromochloromethane	ND	5.4	ug/kg
1,1,2-Trichloroethane	ND	5.4	ug/kg
Benzene	ND	5.4	ug/kg
trans-1,3-Dichloropropene	ND	5.4	ug/kg
Bromoform	ND	5.4	ug/kg
4-Methyl-2-pentanone	ND	22	ug/kg
2-Hexanone	ND	22	ug/kg
Tetrachloroethene	ND	5.4	ug/kg
1,1,2,2-Tetrachloroethane	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
Chlorobenzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Styrene	ND	5.4	ug/kg
Xylenes (total)	ND	11	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	99	(75 - 117)
Toluene-d8	134 *	(86 - 122)
Bromofluorobenzene	140 *	(60 - 137)
Dibromofluoromethane	99	(70 - 135)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

GC/MS Volatiles

Lot-Sample #...: A9E070141-009 Work Order #...: CVHTV103 Matrix.....: SOLID

NOTE(S):

- Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-009 **Work Order #...:** CVHTV102 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 13:35 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/19/99
Prep Batch #...: 9131122
Dilution Factor: 8
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	3100	ug/kg
bis(2-Chloroethyl)-ether	ND	3100	ug/kg
2-Chlorophenol	ND	3100	ug/kg
1,3-Dichlorobenzene	ND	3100	ug/kg
1,4-Dichlorobenzene	ND	3100	ug/kg
1,2-Dichlorobenzene	ND	3100	ug/kg
2-Methylphenol	ND	3100	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	3100	ug/kg
4-Methylphenol	ND	3100	ug/kg
N-Nitrosodi-n-propyl-amine	ND	3100	ug/kg
Hexachloroethane	ND	3100	ug/kg
Nitrobenzene	ND	3100	ug/kg
Isophorone	ND	3100	ug/kg
2-Nitrophenol	ND	3100	ug/kg
2,4-Dimethylphenol	ND	3100	ug/kg
bis(2-Chloroethoxy) methane	ND	3100	ug/kg
2,4-Dichlorophenol	ND	3100	ug/kg
1,2,4-Trichlorobenzene	ND	3100	ug/kg
Naphthalene	ND	3100	ug/kg
4-Chloroaniline	ND	3100	ug/kg
Hexachlorobutadiene	ND	3100	ug/kg
4-Chloro-3-methylphenol	ND	3100	ug/kg
2-Methylnaphthalene	ND	3100	ug/kg
Hexachlorocyclopenta-diene	ND	15000	ug/kg
2,4,6-Trichlorophenol	ND	3100	ug/kg
2,4,5-Trichlorophenol	ND	3100	ug/kg
2-Chloronaphthalene	ND	3100	ug/kg
2-Nitroaniline	ND	15000	ug/kg
Dimethyl phthalate	ND	3100	ug/kg
Acenaphthylene	ND	3100	ug/kg
2,6-Dinitrotoluene	ND	3100	ug/kg
3-Nitroaniline	ND	15000	ug/kg
Acenaphthene	ND	3100	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-009 **Work Order #...:** CVHTV102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	15000	ug/kg
4-Nitrophenol	ND	15000	ug/kg
Dibenzofuran	ND	3100	ug/kg
2,4-Dinitrotoluene	ND	3100	ug/kg
Diethyl phthalate	ND	3100	ug/kg
4-Chlorophenyl phenyl ether	ND	3100	ug/kg
Fluorene	ND	3100	ug/kg
4-Nitroaniline	ND	15000	ug/kg
4,6-Dinitro-2-methylphenol	ND	15000	ug/kg
N-Nitrosodiphenylamine	ND	3100	ug/kg
4-Bromophenyl phenyl ether	ND	3100	ug/kg
Hexachlorobenzene	ND	3100	ug/kg
Pentachlorophenol	ND	3100	ug/kg
Phenanthrene	**6000**	**3100**	**ug/kg**
Anthracene	ND	3100	ug/kg
Carbazole	ND	3100	ug/kg
Di-n-butyl phthalate	ND	3100	ug/kg
Fluoranthene	**17000**	**3100**	**ug/kg**
Pyrene	**15000**	**3100**	**ug/kg**
Butyl benzyl phthalate	ND	3100	ug/kg
3,3'-Dichlorobenzidine	ND	15000	ug/kg
Benzo(a)anthracene	**10000**	**3100**	**ug/kg**
Chrysene	**9900**	**3100**	**ug/kg**
bis(2-Ethylhexyl) phthalate	ND	3100	ug/kg
Di-n-octyl phthalate	ND	3100	ug/kg
Benzo(b)fluoranthene	**13000**	**3100**	**ug/kg**
Benzo(k)fluoranthene	**5400**	**3100**	**ug/kg**
Benzo(a)pyrene	**8600**	**3100**	**ug/kg**
Indeno(1,2,3-cd)pyrene	**4400**	**3100**	**ug/kg**
Dibenz(a,h)anthracene	ND	3100	ug/kg
Benzo(ghi)perylene	**4300**	**3100**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	72 DIL	(23 - 120)
2-Fluorobiphenyl	88 DIL	(30 - 115)
Terphenyl-d14	111 DIL	(18 - 137)
Phenol-d5	71 DIL	(24 - 113)
2-Fluorophenol	72 DIL	(25 - 121)
2,4,6-Tribromophenol	86 DIL	(19 - 122)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-009 Work Order #...: CVHTV102 Matrix.....: SOLID

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

GC Semivolatiles

Lot-Sample #...: A9E070141-009 **Work Order #...:** CVHTV104 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 13:35 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	**85**	**39**	**ug/kg**
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	64	(10 - 129)
Decachlorobiphenyl	92	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

TOTAL Metals

Lot-Sample #...: A9E070141-009 Matrix.....: SOLID
Date Sampled...: 05/06/99 13:35 Date Received..: 05/07/99
% Moisture.....: 14

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	14900	23.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV109
Arsenic	45.0	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV105
Lead	297	0.35 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV106
Antimony	ND	7.0 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV10A
Barium	184	23.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10C
Selenium	0.65	0.58 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV107
Beryllium	1.1	0.58 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10D
Thallium	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV108
Cadmium	ND	0.58 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV10E
Calcium	39300	584 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10F
Chromium	27.7	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHTV10G
Cobalt	10.3	5.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10H
Copper	67.6	2.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10J
Iron	31000	11.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10K

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

TOTAL Metals

Lot-Sample #...: A9E070141-009 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	7620	584 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10L
Manganese	1650	1.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10M
Nickel	80.1	4.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10N
Potassium	1750	584 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10P
Silver	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10Q
Sodium	ND	584 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10R
Vanadium	19.0	5.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10T
Mercury	0.22	0.12 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHTV10V
Zinc	166	2.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHTV10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-SDA-SS02

General Chemistry

Lot-Sample #...: A9E070141-009 Work Order #...: CVHTV Matrix.....: SOLID
Date Sampled...: 05/06/99 13:35 Date Received..: 05/07/99
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	85.6	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PTO-SS1

GC Semivolatiles

Lot-Sample #...: A9E070141-010 **Work Order #...:** CVHTW102 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 14:25 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 10
% Moisture.....: 8.7 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	360	ug/kg
Aroclor 1221	ND	360	ug/kg
Aroclor 1232	ND	360	ug/kg
Aroclor 1242	ND	360	ug/kg
Aroclor 1248	**1700**	**360**	**ug/kg**
Aroclor 1254	ND	360	ug/kg
Aroclor 1260	ND	360	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	45 DIL	(10 - 129)
Decachlorobiphenyl	86 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-PTO-SS1

General Chemistry

Lot-Sample #...: A9E070141-010 **Work Order #...:** CVHTW **Matrix.....:** SOLID
Date Sampled...: 05/06/99 14:25 **Date Received..:** 05/07/99
% Moisture.....: 8.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**91.3**	**0.10**	**%**	**MCAWW 160.3 MOD**	**05/17-05/18/99**	**9137276**

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-T1-SS01

GC Semivolatiles

Lot-Sample #...: A9E070141-011 **Work Order #...:** CVHV2102 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 14:55 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(10 - 129)
Decachlorobiphenyl	91	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-T1-SS01

General Chemistry

Lot-Sample #...: A9E070141-011 Work Order #...: CVHV2 Matrix.....: SOLID
Date Sampled...: 05/06/99 14:55 Date Received..: 05/07/99
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	84.6	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-012 **Work Order #...:** CVHV5103 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 15:40 **Date Received..:** 05/07/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 0.87
% Moisture.....: 9.7 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	9.6	ug/kg
Bromomethane	ND	9.6	ug/kg
Vinyl chloride	ND	9.6	ug/kg
Chloroethane	ND	9.6	ug/kg
Methylene chloride	ND	4.8	ug/kg
Acetone	ND	19	ug/kg
Carbon disulfide	ND	4.8	ug/kg
1,1-Dichloroethene	ND	4.8	ug/kg
1,1-Dichloroethane	ND	4.8	ug/kg
1,2-Dichloroethene (total)	ND	4.8	ug/kg
Chloroform	ND	4.8	ug/kg
1,2-Dichloroethane	ND	4.8	ug/kg
2-Butanone	ND	19	ug/kg
1,1,1-Trichloroethane	ND	4.8	ug/kg
Carbon tetrachloride	ND	4.8	ug/kg
Bromodichloromethane	ND	4.8	ug/kg
1,2-Dichloropropane	ND	4.8	ug/kg
cis-1,3-Dichloropropene	ND	4.8	ug/kg
Trichloroethene	ND	4.8	ug/kg
Dibromochloromethane	ND	4.8	ug/kg
1,1,2-Trichloroethane	ND	4.8	ug/kg
Benzene	ND	4.8	ug/kg
trans-1,3-Dichloropropene	ND	4.8	ug/kg
Bromoform	ND	4.8	ug/kg
4-Methyl-2-pentanone	ND	19	ug/kg
2-Hexanone	ND	19	ug/kg
Tetrachloroethene	ND	4.8	ug/kg
1,1,2,2-Tetrachloroethane	ND	4.8	ug/kg
Toluene	ND	4.8	ug/kg
Chlorobenzene	ND	4.8	ug/kg
Ethylbenzene	ND	4.8	ug/kg
Styrene	ND	4.8	ug/kg
Xylenes (total)	ND	9.6	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	111	(75 - 117)
Toluene-d8	116	(86 - 122)
Bromofluorobenzene	134	(60 - 137)
Dibromofluoromethane	101	(70 - 135)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-012 Work Order #...: CVHV5103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-012 **Work Order #...:** CVHV5102 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 15:40 **Date Received..:** 05/07/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/21/99
Prep Batch #...: 9131122
Dilution Factor: 6.66
% Moisture.....: 9.7 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	2400	ug/kg
bis(2-Chloroethyl)-ether	ND	2400	ug/kg
2-Chlorophenol	ND	2400	ug/kg
1,3-Dichlorobenzene	ND	2400	ug/kg
1,4-Dichlorobenzene	ND	2400	ug/kg
1,2-Dichlorobenzene	ND	2400	ug/kg
2-Methylphenol	ND	2400	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	2400	ug/kg
4-Methylphenol	ND	2400	ug/kg
N-Nitrosodi-n-propyl-amine	ND	2400	ug/kg
Hexachloroethane	ND	2400	ug/kg
Nitrobenzene	ND	2400	ug/kg
Isophorone	ND	2400	ug/kg
2-Nitrophenol	ND	2400	ug/kg
2,4-Dimethylphenol	ND	2400	ug/kg
bis(2-Chloroethoxy) methane	ND	2400	ug/kg
2,4-Dichlorophenol	ND	2400	ug/kg
1,2,4-Trichlorobenzene	ND	2400	ug/kg
Naphthalene	ND	2400	ug/kg
4-Chloroaniline	ND	2400	ug/kg
Hexachlorobutadiene	ND	2400	ug/kg
4-Chloro-3-methylphenol	ND	2400	ug/kg
2-Methylnaphthalene	ND	2400	ug/kg
Hexachlorocyclopenta-diene	ND	12000	ug/kg
2,4,6-Trichlorophenol	ND	2400	ug/kg
2,4,5-Trichlorophenol	ND	2400	ug/kg
2-Chloronaphthalene	ND	2400	ug/kg
2-Nitroaniline	ND	12000	ug/kg
Dimethyl phthalate	ND	2400	ug/kg
Acenaphthylene	ND	2400	ug/kg
2,6-Dinitrotoluene	ND	2400	ug/kg
3-Nitroaniline	ND	12000	ug/kg
Acenaphthene	ND	2400	ug/kg

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-012 **Work Order #...:** CVHV5102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	12000	ug/kg
4-Nitrophenol	ND	12000	ug/kg
Dibenzofuran	ND	2400	ug/kg
2,4-Dinitrotoluene	ND	2400	ug/kg
Diethyl phthalate	ND	2400	ug/kg
4-Chlorophenyl phenyl ether	ND	2400	ug/kg
Fluorene	ND	2400	ug/kg
4-Nitroaniline	ND	12000	ug/kg
4,6-Dinitro-2-methylphenol	ND	12000	ug/kg
N-Nitrosodiphenylamine	ND	2400	ug/kg
4-Bromophenyl phenyl ether	ND	2400	ug/kg
Hexachlorobenzene	ND	2400	ug/kg
Pentachlorophenol	ND	2400	ug/kg
Phenanthrene	**3900**	**2400**	**ug/kg**
Anthracene	ND	2400	ug/kg
Carbazole	ND	2400	ug/kg
Di-n-butyl phthalate	ND	2400	ug/kg
Fluoranthene	**6200**	**2400**	**ug/kg**
Pyrene	**5000**	**2400**	**ug/kg**
Butyl benzyl phthalate	ND	2400	ug/kg
3,3'-Dichlorobenzidine	ND	12000	ug/kg
Benzo(a)anthracene	**2900**	**2400**	**ug/kg**
Chrysene	**3200**	**2400**	**ug/kg**
bis(2-Ethylhexyl) phthalate	ND	2400	ug/kg
Di-n-octyl phthalate	ND	2400	ug/kg
Benzo(b)fluoranthene	**3700**	**2400**	**ug/kg**
Benzo(k)fluoranthene	ND	2400	ug/kg
Benzo(a)pyrene	**2700**	**2400**	**ug/kg**
Indeno(1,2,3-cd)pyrene	ND	2400	ug/kg
Dibenz(a,h)anthracene	ND	2400	ug/kg
Benzo(ghi)perylene	ND	2400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67 DIL	(23 - 120)
2-Fluorobiphenyl	79 DIL	(30 - 115)
Terphenyl-d14	106 DIL	(18 - 137)
Phenol-d5	59 DIL	(24 - 113)
2-Fluorophenol	75 DIL	(25 - 121)
2,4,6-Tribromophenol	71 DIL	(19 - 122)

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-012 Work Order #...: CVHV5102 Matrix.....: SOLID

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC Semivolatiles

Lot-Sample #...:	A9E070141-012	**Work Order #...:**	CVHV5104	**Matrix.....:**	SOLID
Date Sampled...:	05/06/99 15:40	**Date Received..:**	05/07/99		
Prep Date.....:	05/11/99	**Analysis Date..:**	05/16/99		
Prep Batch #...:	9131114				
Dilution Factor:	1				
% Moisture.....:	9.7	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	**120**	**37**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(10 - 129)
Decachlorobiphenyl	132	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

GC Semivolatiles

Lot-Sample #...:	A9E070141-012	Work Order #...:	CVHV510W	Matrix.....:	SOLID
Date Sampled...:	05/06/99 15:40	Date Received..:	05/07/99		
Prep Date.....:	05/12/99	Analysis Date..:	05/13/99		
Prep Batch #...:	9131347				
Dilution Factor:	10				
% Moisture.....:	9.7	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (Extractables)	260	33	mg/kg

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-012 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 15:40 **Date Received..:** 05/07/99
% Moisture.....: 9.7

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**12200**	**22.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV5109**
Arsenic	**9.9**	**1.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHV5105**
Lead	**67.0**	**0.33** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHV5106**
Antimony	ND	6.6 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHV510A
Barium	**101**	**22.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV510C**
Selenium	ND	0.55 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHV5107
Beryllium	**1.5**	**0.55** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV510D**
Thallium	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVHV5108
Cadmium	**0.96**	**0.55** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHV510E**
Calcium	**67500**	**554** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV510F**
Chromium	**155**	**1.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVHV510G**
Cobalt	**9.0**	**5.5** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV510H**
Copper	**84.4**	**2.8** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV510J**
Iron	**61400**	**554** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVHV510K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-WOT-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-012 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	14700	554 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510L
Manganese	1670	1.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510M
Nickel	125	4.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510N
Potassium	748	554 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510P
Silver	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510Q
Sodium	ND	554 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510R
Vanadium	28.6	5.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510T
Mercury	0.27	0.11 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVHV510V
Zinc	706	2.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVHV510U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-DTK-SS01

GC/MS Volatiles

Lot-Sample #...: A9E070141-018 Work Order #...: CVKLP103 Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-DTK-SS01

GC Semivolatiles

Lot-Sample #...:	A9E070141-018	Work Order #...:	CVKLP10W	Matrix.....:	SOLID
Date Sampled...:	05/07/99 13:40	Date Received..:	05/08/99		
Prep Date.....:	05/12/99	Analysis Date..:	05/13/99		
Prep Batch #...:	9131347				
Dilution Factor:	1				
% Moisture.....:	12	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (Extractables)	4.6	3.4	mg/kg

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-DTK-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-018 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 13:40 **Date Received..:** 05/08/99
% Moisture.....: 12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**9190**	**22.6** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLP109**
Arsenic	**14.4**	**1.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLP105**
Lead	**16.9**	**0.34** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLP106**
Antimony	ND	6.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLP10A
Barium	**240**	**22.6** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLP10C**
Selenium	ND	0.57 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLP107
Beryllium	ND	0.57 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10D
Thallium	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLP108
Cadmium	ND	0.57 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLP10E
Calcium	**2120**	**566** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLP10F**
Chromium	**11.8**	**1.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLP10G**
Cobalt	**9.2**	**5.7** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLP10H**
Copper	**33.2**	**2.8** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLP10J**
Iron	**27300**	**11.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLP10K**

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IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-DTK-SS01

TOTAL Metals

Lot-Sample #...: A9E070141-018 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	3480	566 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10L
Manganese	1020	1.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10M
Nickel	30.1	4.5 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10N
Potassium	1180	566 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10P
Silver	ND	1.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10Q
Sodium	ND	566 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10R
Vanadium	14.2	5.7 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10T
Mercury	ND	0.11 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVKLP10V
Zinc	139	2.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLP10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-DTK-SS01

General Chemistry

Lot-Sample #...: A9E070141-018 Work Order #...: CVKLP Matrix.....: SOLID
Date Sampled...: 05/07/99 13:40 Date Received..: 05/08/99
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	88.3	0.10	%	MCAWW 160.3 MOD	05/18-05/19/99	9138134
	Dilution Factor: 1					
Total Recoverable Petroleum Hydrocarbons	19	11	mg/kg	MCAWW 418.1	05/19-05/20/99	9139119
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

GC/MS Volatiles

Lot-Sample #...: A9E070141-019 **Work Order #...:** CVKLQ103 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 15:45 **Date Received..:** 05/08/99
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 0.84
% Moisture.....: 18 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Chloromethane	ND	10	ug/kg
Bromomethane	ND	10	ug/kg
Vinyl chloride	ND	10	ug/kg
Chloroethane	ND	10	ug/kg
Methylene chloride	ND	5.1	ug/kg
Acetone	ND	20	ug/kg
Carbon disulfide	ND	5.1	ug/kg
1,1-Dichloroethene	ND	5.1	ug/kg
1,1-Dichloroethane	ND	5.1	ug/kg
1,2-Dichloroethene (total)	ND	5.1	ug/kg
Chloroform	ND	5.1	ug/kg
1,2-Dichloroethane	ND	5.1	ug/kg
2-Butanone	ND	20	ug/kg
1,1,1-Trichloroethane	ND	5.1	ug/kg
Carbon tetrachloride	ND	5.1	ug/kg
Bromodichloromethane	ND	5.1	ug/kg
1,2-Dichloropropane	ND	5.1	ug/kg
cis-1,3-Dichloropropene	ND	5.1	ug/kg
Trichloroethene	ND	5.1	ug/kg
Dibromochloromethane	ND	5.1	ug/kg
1,1,2-Trichloroethane	ND	5.1	ug/kg
Benzene	ND	5.1	ug/kg
trans-1,3-Dichloropropene	ND	5.1	ug/kg
Bromoform	ND	5.1	ug/kg
4-Methyl-2-pentanone	ND	20	ug/kg
2-Hexanone	ND	20	ug/kg
Tetrachloroethene	ND	5.1	ug/kg
1,1,2,2-Tetrachloroethane	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
Chlorobenzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Styrene	ND	5.1	ug/kg
Xylenes (total)	ND	10	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	108	(75 - 117)
Toluene-d8	134 *	(86 - 122)
Bromofluorobenzene	127	(60 - 137)
Dibromofluoromethane	105	(70 - 135)

(Continued on next page)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

GC/MS Volatiles

Lot-Sample #...: A9E070141-019 Work Order #...: CVKLQ103 Matrix.....: SOLID

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Surrogates outside acceptance criteria due to demonstrated matrix effect.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-019 **Work Order #...:** CVKLQ102 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 15:45 **Date Received..:** 05/08/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/19/99
Prep Batch #...: 9131122
Dilution Factor: 1
% Moisture.....: 18 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	400	ug/kg
bis(2-Chloroethyl)-ether	ND	400	ug/kg
2-Chlorophenol	ND	400	ug/kg
1,3-Dichlorobenzene	ND	400	ug/kg
1,4-Dichlorobenzene	ND	400	ug/kg
1,2-Dichlorobenzene	ND	400	ug/kg
2-Methylphenol	ND	400	ug/kg
2,2'-oxybis(1-Chloro-propane)	ND	400	ug/kg
4-Methylphenol	ND	400	ug/kg
N-Nitrosodi-n-propyl-amine	ND	400	ug/kg
Hexachloroethane	ND	400	ug/kg
Nitrobenzene	ND	400	ug/kg
Isophorone	ND	400	ug/kg
2-Nitrophenol	ND	400	ug/kg
2,4-Dimethylphenol	ND	400	ug/kg
bis(2-Chloroethoxy) methane	ND	400	ug/kg
2,4-Dichlorophenol	ND	400	ug/kg
1,2,4-Trichlorobenzene	ND	400	ug/kg
Naphthalene	ND	400	ug/kg
4-Chloroaniline	ND	400	ug/kg
Hexachlorobutadiene	ND	400	ug/kg
4-Chloro-3-methylphenol	ND	400	ug/kg
2-Methylnaphthalene	ND	400	ug/kg
Hexachlorocyclopenta-diene	ND	1900	ug/kg
2,4,6-Trichlorophenol	ND	400	ug/kg
2,4,5-Trichlorophenol	ND	400	ug/kg
2-Chloronaphthalene	ND	400	ug/kg
2-Nitroaniline	ND	1900	ug/kg
Dimethyl phthalate	ND	400	ug/kg
Acenaphthylene	ND	400	ug/kg
2,6-Dinitrotoluene	ND	400	ug/kg
3-Nitroaniline	ND	1900	ug/kg
Acenaphthene	ND	400	ug/kg

(Continued on next page)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

GC/MS Semivolatiles

Lot-Sample #...: A9E070141-019 **Work Order #...:** CVKLQ102 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	1900	ug/kg
4-Nitrophenol	ND	1900	ug/kg
Dibenzofuran	ND	400	ug/kg
2,4-Dinitrotoluene	ND	400	ug/kg
Diethyl phthalate	ND	400	ug/kg
4-Chlorophenyl phenyl ether	ND	400	ug/kg
Fluorene	ND	400	ug/kg
4-Nitroaniline	ND	1900	ug/kg
4,6-Dinitro-2-methylphenol	ND	1900	ug/kg
N-Nitrosodiphenylamine	ND	400	ug/kg
4-Bromophenyl phenyl ether	ND	400	ug/kg
Hexachlorobenzene	ND	400	ug/kg
Pentachlorophenol	ND	400	ug/kg
Phenanthrene	ND	400	ug/kg
Anthracene	ND	400	ug/kg
Carbazole	ND	400	ug/kg
Di-n-butyl phthalate	ND	400	ug/kg
Fluoranthene	ND	400	ug/kg
Pyrene	ND	400	ug/kg
Butyl benzyl phthalate	ND	400	ug/kg
3,3'-Dichlorobenzidine	ND	1900	ug/kg
Benzo(a)anthracene	ND	400	ug/kg
Chrysene	ND	400	ug/kg
bis(2-Ethylhexyl) phthalate	ND	400	ug/kg
Di-n-octyl phthalate	ND	400	ug/kg
Benzo(b)fluoranthene	ND	400	ug/kg
Benzo(k)fluoranthene	ND	400	ug/kg
Benzo(a)pyrene	ND	400	ug/kg
Indeno(1,2,3-cd)pyrene	ND	400	ug/kg
Dibenz(a,h)anthracene	ND	400	ug/kg
Benzo(ghi)perylene	ND	400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(23 - 120)
2-Fluorobiphenyl	75	(30 - 115)
Terphenyl-d14	98	(18 - 137)
Phenol-d5	65	(24 - 113)
2-Fluorophenol	64	(25 - 121)
2,4,6-Tribromophenol	76	(19 - 122)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

GC Semivolatiles

Lot-Sample #...: A9E070141-019 Work Order #...: CVKLQ104 Matrix.....: SOLID
Date Sampled...: 05/07/99 15:45 Date Received..: 05/08/99
Prep Date.....: 05/11/99 Analysis Date..: 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1
% Moisture.....: 18 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	63	(10 - 129)
Decachlorobiphenyl	95	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

TOTAL Metals

Lot-Sample #...: A9E070141-019 **Matrix.....:** SOLID
Date Sampled...: 05/07/99 15:45 **Date Received..:** 05/08/99
% Moisture.....: 18

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9133259						
Aluminum	**10700**	**24.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLQ109**
Arsenic	**10.7**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLQ105**
Lead	**19.7**	**0.36** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLQ106**
Antimony	ND	7.3 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLQ10A
Barium	**149**	**24.3** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLQ10C**
Selenium	ND	0.61 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLQ107
Beryllium	ND	0.61 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10D
Thallium	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLQ108
Cadmium	ND	0.61 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/18/99	CVKLQ10E
Calcium	**15100**	**608** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLQ10F**
Chromium	**17.5**	**1.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLQ10G**
Cobalt	**11.9**	**6.1** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLQ10H**
Copper	**44.0**	**3.0** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/16/99**	**CVKLQ10J**
Iron	**24600**	**12.2** Dilution Factor: 1	**mg/kg**	**SW846 6010B**	**05/14-05/18/99**	**CVKLQ10K**

(Continued on next page)

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

TOTAL Metals

Lot-Sample #...: A9E070141-019 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	5610	608 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10L
Manganese	372	1.8 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10M
Nickel	33.4	4.9 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10N
Potassium	1660	608 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10P
Silver	ND	1.2 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10Q
Sodium	ND	608 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10R
Vanadium	18.7	6.1 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10T
Mercury	ND	0.12 Dilution Factor: 1	mg/kg	SW846 7471A	05/14-05/18/99	CVKLQ10V
Zinc	83.2	2.4 Dilution Factor: 1	mg/kg	SW846 6010B	05/14-05/16/99	CVKLQ10U

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

IT GROUP/ICF KAISER ENGINEERS, INC

Client Sample ID: ADNY-UT-SS03

General Chemistry

Lot-Sample #...: A9E070141-019 Work Order #...: CVKLQ Matrix.....: SOLID
Date Sampled...: 05/07/99 15:45 Date Received..: 05/08/99
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	82.2	0.10	%	MCAWW 160.3 MOD	05/18-05/19/99	9138134
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

Quanterra
Environmental Services

CASE NARRATIVE

Quanterra, North Canton
4101 Shuffel Drive, N.W.
North Canton, OH 44720

June 15, 1999

Attention: Gary Wood

Quanterra Project Number	: 614.20
Login/SDG Number	: 21329
Date Received	: May 11, 1999
Number of Samples	: One (1)
Sample Type	: Water
Lot Number	: A9E070141

I. Introduction

On May 11, 1999, one (1) water sample was received at Quanterra Environmental Services at St. Louis from Quanterra North Canton. The list of analytical tests performed, as well as receipt and analysis, can be found in the attached report. The sample was labeled as follows:

CLIENT SAMPLE ID	QUANTERRA SAMPLE ID
A9E070141-005	21329-001

II. Analytical Results/Methodology

The analytical results for this report are presented by analytical tests. Each set of data will include sample identification information, the analytical results, and the appropriate detection limits.

The analysis requested includes:

Gross Alpha Beta by EPA Method 9310
Gamma by EPA Method HASL 300

III. Quality Control

The QA/QC information can be found immediately following the analytical data. The QA/QC data is used to assess the laboratory's accuracy and precision during the analytical procedure.

Explanation of qualifiers and abbreviations:

NC	= No criteria at this time
NA	= Not applicable
ND	= Non - detect
PCI/L	= Picocuries per liter
PCI/G	= Picocuries per gram
MG/L	= Milligrams per liter
UG/L	= Micrograms per liter
MG/KG	= Milligrams per kilogram
UG/G	= Micrograms per gram
%REC	= Percent Recovery
QCBLK	= Method Blank
RPD	= Relative Percent Difference
IDL	= Instrument detection limit
DL	= PQL
J	= Estimated Value
D	= Diluted
U	= Non - Detect
MDA	= Minimal detectable activity
B	= Value greater than IDL but less than CRDL
E	= Exceeds calibration

IV. Comments/Nonconformances

The Condition Upon Receipt was faxed on 5-18-99.

Samples were received at 2° C.

Preliminary results were faxed on 6-10-99.

Gross Alpha Beta

QC for this analytical batch included a Blank, an LCS for alpha and beta, and an LCS duplicate for alpha and beta. The LCS for alpha and the LCS/LCS DUP for beta all have a low Percent Recovery.

The LCS for alpha is below the QC limit (72%) at 70%, and the LCS and LCS DUP for beta are below the QC limit (69%) at 64% and 69%, respectively.

Careful examination of the results indicate that if the sample results were bias in like fashion, the results would still be less than or equal to the achieved MDA. Nonconformance memo 5525 was generated to cover this.

This sample has an MDA greater than the CRDL due to high dissolved solid content of the sample requiring reduction of the sample volume analyzed to keep the residue mass within drinking water guidelines, and the self absorption curve for the detector. The data is accepted with MDA's achieved.

Gamma

There are no comments or nonconformances associated with this analysis.

I certify that this Case Narrative is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

Reviewed and approved:

Diane W. Mueller

Diane W. Mueller
Project Manager

Quanterra
10 June 1999

Category: Gamma Spec.

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Prep Date	Date Analyzed	Parameter	Result	Sigma Error (+/-)	MDA	Units
A9E070141-005	21329-001	Water	05/05/99	05/11/99	06/07/99	06/07/99	Cesium-137	ND	---	18.3	PCI/L
NA	QCBLK200609-1	Water	NA	NA	06/07/99	06/05/99	Cesium-137	ND	---	18.2	PCI/L
NA	QCLCS200609-1	Water	NA	NA	06/07/99	06/05/99	Americium-241	101	---	---	%REC
							Cesium-137	105	---	---	%REC
							Cobalt-60	105	---	---	%REC

Category: Gross Alpha/Beta

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Prep Date	Date Analyzed	Parameter	Result	Sigma Error (+/-)	MDA	Units
A9E070141-005	21329-001	Water	05/05/99	05/11/99	06/04/99	06/05/99	Gross Alpha	1.76	1.81	2.90	PCI/L
							Gross Beta	4.98	5.09	8.46	PCI/L
NA	QCBLK200457-1	Water	NA	NA	06/04/99	06/05/99	Gross Alpha	-0.008	0.29	0.60	PCI/L
							Gross Beta	-0.38	0.92	1.64	PCI/L
NA	QCLCS200457-1	Water	NA	NA	06/04/99	06/05/99	Gross Alpha	92	---	---	%REC
							Gross Beta	64	---	---	%REC

Did You Know?

Quanterra provides technical presentations on a number of topics that should be of interest.

An example is "Chemical Measurements of Environmental Samples: Key Concepts for Effective Data Generation". This presentation focuses on fundamental measurement concepts that will improve the quality of the laboratory effort and the effectiveness of the interaction with the laboratory. Major components of the presentation include planning laboratory analyses, selecting laboratory methods and QC samples, and evaluating laboratory data. Planning the laboratory analyses addresses analyte and parameter selection to meet various EPA regulations, selecting the right type of QC samples for analysis, and establishing measurement quality objectives.

Selecting the right method is perhaps the most critical part of a data generation method. The selection should address both the measurement quality objectives and the service needs of the project, balancing a multitude of factors. After the laboratory report is received, much remains to be done. EPA has published guidance on the expected level of quality needed for decision making (QA3). Data of this quality should be evaluated relative to the reliability of the analyte identification and quantitation and to determine the analytical error.

If you are interested in this presentation or a list of other presentation topics, please call Marty Cahill.

Quanterra® Environmental Services

Quanterra Environmental Services
13715 Rider Trail North
Earth City, Missouri 63045

Telephone: 314-298-8566
FAX: 314-298-8757

DATE: 6-10-99

TO: Gary Wood

COMPANY:

FAX NUMBER: 1330-497-0772

FROM: Diane Mueller

NUMBER OF PAGES: (INCLUDING COVER)

☐ Urgent ☐ Please Reply
☐ For review ☐ Please Comment

MESSAGE:

ABT + Gamma for HOT
AQE070141-005

FAX TRANSMISSION

Did You Know?

Quanterra provides technical presentations on a number of topics that should be of interest.

An example is "Chemical Measurements of Environmental Samples: Key Concepts for Effective Data Generation". This presentation focuses on fundamental measurement concepts that will improve the quality of the laboratory effort and the effectiveness of the interaction with the laboratory. Major components of the presentation include planning laboratory analyses, selecting laboratory methods and QC samples, and evaluating laboratory data. Planning the laboratory analyses addresses analyte and parameter selection to meet various EPA regulations, selecting the right type of QC samples for analysis, and establishing measurement quality objectives.

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Quanterra® Environmental Services

Quanterra Environmental Services
13715 Rider Trail North
Earth City, Missouri 63045

Telephone: 314-298-8566
FAX: 314-298-8757

■ DATE: 5-18-99

■ TO: Gary J. Vondt

■ COMPANY: Quanterra, North Canton

■ FAX NUMBER: 330-497-0772

● FROM: Jennifer Smith

● NUMBER OF PAGES: (INCLUDING COVER) 4

☐ Urgent ☐ Please Reply
☐ For review ☐ Please Comment

MESSAGE:

Condition Upon Receipt

Project # 614.20

Login 21329

FAXED

FAX TRANSMISSION ■

Quanterra May 17, 1999 12:08 pm
Account: 11092 Project: 614.20 Quanterra North Canton QAS No. 614.2 Rev. 5
Master Sample Login: 21329

Project Manager: D. Mueller

Reviewed by and Date: Dawn Mueller

Sample Header Template:

Sample No.	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
Comments								
# Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)	
Data:								
21329-001	A9E070141-005	Water	05-MAY-99 00:00	11-MAY-99 07:45	25-MAY-99	AIRBORNE	1	Screening not Required
3 PN - Plastic-1L	ABT/9310/Q4	S	HNO3	23-MAY-99	07-NOV-99	S6C	(443330:99 443331:98 443332:97)	
3	RAD/GAMMA/Q4	S	HNO3	23-MAY-99	03-NOV-99	S6C	(443330:99 443331:98 443332:97)	

1**Sample has not been rad screened.

Quanterra Incorporated
SAMPLE ANALYSIS REQUISITION

NEED ANALYTICAL REPORT BY 5/19/99

LABORATORY: Quanterra Inc - St Louis MO
13715 Rider Trail North
Earth City MO 63045-1205,E

temp 2° cur 018682

ATTN:

LAB PURCHASE ORDER: SR016036

CLIENT CODE: 406511 PROJECT MANAGER: Gary L. Wood

NUMBER OF SAMPLES IN LOT: 0000 Project Name: ALCO ALUMAX/ DUNKIRK Site

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
A9E070141-005 CVHT9-1-0V	5/05/99	Gross Alpha (9310) (RGAB) METHOD: 9310
A9E070141-005 CVHT9-1-0W	5/05/99	Gross Beta (9310) (RGAB) METHOD: 9310
A9E070141-005 CVHT9-1-0X	5/05/99	Gamma Spec. ( ) METHOD: 901.1

100% full 3x1LP pH=1
Gamma
Alpha
Beta

Call Gary Wood in questions

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: AIRBORNE DATE: 5/07/99

SEND REPORT TO: GARY WOOD

SAMPLE RECEIVED BY: _____ DATE: _____

330-497-9396
TAT — 14 days
PRICE — ABT $100.00 Gamma 140.00
Analysis — ABT & Gamma
Project Name — none
Health & Safety
Batch QC - yes
Am COA only no penalties

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

Quanterra - North Canton
INT: [illegible] 5/07/99 11:10:52
Quanterra Inc - St Louis MO
13715 Rider Trail North
Earth City MO 63045-1205,E

RELINQUISHED BY: [signature] DATE/TIME: 5-10-99 900

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: Susan Katie Sattel DATE/TIME: 5-11-99 0745

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

Quanterra
Environmental Services

018682

Login No.:_____

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: NORTH CANTON
Date: 05-11-99 Time: 0745
Project No: 614.20
Initiated by: Bethel
Shipper/No: AIRBORNE 5456195-242-20
RFA/COC Numbers:

Condition/Variance (Check all that apply):

1. ☐ Sample received broken/leaking.
2. ☐ Sample received without proper preservative.
   - ☐ Cooler temperature not within 4-C ± 2-C
     Record temperature:_____
   - ☐ pH_____
   - ☐ other:_____
3. ☐ Sample received in improper container.
4. ☐ Sample received without proper paperwork. Explain:
5. ☐ Paperwork received without sample.
6. ☐ No sample ID on sample container.
7. ☐ Custody tape disturbed/broken/missing/not tamper evident (circle all that apply).
8. ☐ Sample ID on container does not match sample ID on paperwork. Explain:
9. ☐ All coolers on airbill not received with shipment.
10. ☐ Other (explain below):

☑ No variances were noted during sample receipt. Cooler Temperature Upon Receipt: 2°

Temperature Variance Does Not Affect the Following Analyses:

Notes:

Corrective Action:

☐ Client's Name: _____ Informed verbally on: _____ By: _____

☐ Client's Name: _____ Informed in writing on: _____ By: _____

☐ Sample(s) processed "as is".

☐ Sample(s) on hold until: _____ If released, notify: _____

Comments:

Sample Control Supervisor Review: [signature] Date: 5-11-99

Project Management Review: Diane W Mueller Date: 5-17-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. If the dilution is more than 5X, the recoveries will be reported as diluted out. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVM6L102 **Matrix.....:** SOLID
LCS Lot-Sample#: A9E110000-221
Prep Date.....: 05/06/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9131221
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Trichloroethene	**96**	**(73 - 113)**	**SW846 8260B**
Benzene	**95**	**(64 - 122)**	**SW846 8260B**
Toluene	**89**	**(76 - 116)**	**SW846 8260B**
Chlorobenzene	**91**	**(81 - 113)**	**SW846 8260B**
1,1-Dichloroethene	**89**	**(33 - 137)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(49 - 119)
1,2-Dichloroethane-d4	104	(51 - 124)
Toluene-d8	95	(58 - 116)
Bromofluorobenzene	100	(53 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVWEC102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A9E180000-240 CVWEC103-LCSD
Prep Date.....: 05/14/99 **Analysis Date..:** 05/14/99
Prep Batch #...: 9138240
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**109**	**(76 - 128)**			**SW846 8260B**
	105	**(76 - 128)**	**3.5**	**(0-17)**	**SW846 8260B**
Trichloroethene	**100**	**(86 - 116)**			**SW846 8260B**
	99	**(86 - 116)**	**1.3**	**(0-17)**	**SW846 8260B**
Benzene	**109**	**(85 - 120)**			**SW846 8260B**
	103	**(85 - 120)**	**5.3**	**(0-13)**	**SW846 8260B**
Toluene	**102**	**(86 - 118)**			**SW846 8260B**
	101	**(86 - 118)**	**0.61**	**(0-23)**	**SW846 8260B**
Chlorobenzene	**101**	**(88 - 119)**			**SW846 8260B**
	98	**(88 - 119)**	**3.1**	**(0-22)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	109	(75 - 117)
	104	(75 - 117)
Toluene-d8	112	(86 - 122)
	109	(86 - 122)
Bromofluorobenzene	114	(60 - 137)
	110	(60 - 137)
Dibromofluoromethane	106	(70 - 135)
	101	(70 - 135)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVM7E102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A9E110000-225 CVM7E103-LCSD
Prep Date.....: 05/07/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131225
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**78**	**(33 - 137)**			**SW846 8260B**
	83	**(33 - 137)**	**6.3**	**(0-14)**	**SW846 8260B**
Trichloroethene	**83**	**(73 - 113)**			**SW846 8260B**
	89	**(73 - 113)**	**6.3**	**(0-11)**	**SW846 8260B**
Benzene	**93**	**(64 - 122)**			**SW846 8260B**
	90	**(64 - 122)**	**2.6**	**(0-10)**	**SW846 8260B**
Toluene	**102**	**(76 - 116)**			**SW846 8260B**
	100	**(76 - 116)**	**1.7**	**(0-10)**	**SW846 8260B**
Chlorobenzene	**94**	**(81 - 113)**			**SW846 8260B**
	94	**(81 - 113)**	**0.090**	**(0-11)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	90	(51 - 124)
	88	(51 - 124)
Toluene-d8	89	(58 - 116)
	93	(58 - 116)
Bromofluorobenzene	96	(53 - 122)
	94	(53 - 122)
Dibromofluoromethane	88	(49 - 119)
	91	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVW9P102 **Matrix.....:** WATER
LCS Lot-Sample#: A9E180000-218
Prep Date.....: 05/17/99 **Analysis Date..:** 05/17/99
Prep Batch #...: 9138218
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	**98**	**(70 - 122)**	**SW846 8260B**
Trichloroethene	**99**	**(82 - 112)**	**SW846 8260B**
Benzene	**103**	**(83 - 110)**	**SW846 8260B**
Toluene	**100**	**(86 - 119)**	**SW846 8260B**
Chlorobenzene	**102**	**(85 - 115)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	99	(80 - 120)
Toluene-d8	95	(88 - 110)
Bromofluorobenzene	104	(86 - 115)
Dibromofluoromethane	94	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 Work Order #...: CVWL1102 Matrix.....: WATER
LCS Lot-Sample#: A9E180000-132
Prep Date.....: 05/17/99 Analysis Date..: 05/17/99
Prep Batch #...: 9138132
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	110	(70 - 122)	SW846 8260B
Trichloroethene	98	(82 - 112)	SW846 8260B
Benzene	99	(83 - 110)	SW846 8260B
Toluene	103	(86 - 119)	SW846 8260B
Chlorobenzene	101	(85 - 115)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	103	(80 - 120)
Toluene-d8	105	(88 - 110)
Bromofluorobenzene	92	(86 - 115)
Dibromofluoromethane	102	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVX7X102 **Matrix.....:** WATER
LCS Lot-Sample#: A9E190000-168
Prep Date.....: 05/18/99 **Analysis Date..:** 05/18/99
Prep Batch #...: 9139168
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	**93**	**(70 - 122)**	**SW846 8260B**
Trichloroethene	**97**	**(82 - 112)**	**SW846 8260B**
Benzene	**99**	**(83 - 110)**	**SW846 8260B**
Toluene	**98**	**(86 - 119)**	**SW846 8260B**
Chlorobenzene	**95**	**(85 - 115)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	90	(80 - 120)
Toluene-d8	99	(88 - 110)
Bromofluorobenzene	97	(86 - 115)
Dibromofluoromethane	100	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVM86102-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A9E110000-235 CVM86103-LCSD
Prep Date.....: 05/08/99 **Analysis Date..:** 05/18/99
Prep Batch #...: 9131235
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**94**	**(33 - 137)**			**SW846 8260B**
	94	**(33 - 137)**	**0.16**	**(0-14)**	**SW846 8260B**
Trichloroethene	**97**	**(73 - 113)**			**SW846 8260B**
	94	**(73 - 113)**	**3.7**	**(0-11)**	**SW846 8260B**
Benzene	**109**	**(64 - 122)**			**SW846 8260B**
	106	**(64 - 122)**	**3.2**	**(0-10)**	**SW846 8260B**
Toluene	**107**	**(76 - 116)**			**SW846 8260B**
	100	**(76 - 116)**	**6.8**	**(0-10)**	**SW846 8260B**
Chlorobenzene	**105**	**(81 - 113)**			**SW846 8260B**
	98	**(81 - 113)**	**6.9**	**(0-11)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	111	(51 - 124)
	102	(51 - 124)
Toluene-d8	105	(58 - 116)
	102	(58 - 116)
Bromofluorobenzene	122	(53 - 122)
	115	(53 - 122)
Dibromofluoromethane	101	(49 - 119)
	96	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVKT0102 **Matrix.....:** WATER
LCS Lot-Sample#: A9E100000-114
Prep Date.....: 05/10/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9130114
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichlorobenzene	**51**	**(44 - 142)**	**SW846 8270C**
Acenaphthene	**56**	**(47 - 145)**	**SW846 8270C**
1,4-Dichlorobenzene	**47**	**(20 - 124)**	**SW846 8270C**
Pentachlorophenol	**54**	**(14 - 176)**	**SW846 8270C**
2,4-Dinitrotoluene	**72**	**(60 - 134)**	**SW846 8270C**
Pyrene	**72**	**(68 - 131)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**53**	**(10 - 230)**	**SW846 8270C**
Phenol	**45**	**(10 - 112)**	**SW846 8270C**
2-Chlorophenol	**53**	**(23 - 134)**	**SW846 8270C**
4-Chloro-3-methylphenol	**57**	**(22 - 147)**	**SW846 8270C**
4-Nitrophenol	**63**	**(30 - 162)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(40 - 114)
2-Fluorobiphenyl	55	(45 - 118)
Terphenyl-d14	78	(33 - 141)
Phenol-d5	53	(17 - 101)
2-Fluorophenol	52	(21 - 100)
2,4,6-Tribromophenol	67	(16 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVLPF102 **Matrix.....:** SOLID
LCS Lot-Sample#: A9E110000-122
Prep Date.....: 05/11/99 **Analysis Date..:** 05/18/99
Prep Batch #...: 9131122
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichlorobenzene	**72**	**(51 - 101)**	**SW846 8270C**
Acenaphthene	**70**	**(53 - 101)**	**SW846 8270C**
2,4-Dinitrotoluene	**89**	**(54 - 129)**	**SW846 8270C**
Pyrene	**71**	**(46 - 147)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**70**	**(39 - 95)**	**SW846 8270C**
1,4-Dichlorobenzene	**68**	**(51 - 95)**	**SW846 8270C**
Pentachlorophenol	**60**	**(24 - 115)**	**SW846 8270C**
Phenol	**68**	**(36 - 103)**	**SW846 8270C**
2-Chlorophenol	**67**	**(44 - 103)**	**SW846 8270C**
4-Chloro-3-methylphenol	**73**	**(46 - 106)**	**SW846 8270C**
4-Nitrophenol	**75**	**(16 - 192)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(23 - 120)
2-Fluorobiphenyl	73	(30 - 115)
Terphenyl-d14	87	(18 - 137)
Phenol-d5	69	(24 - 113)
2-Fluorophenol	67	(25 - 121)
2,4,6-Tribromophenol	79	(19 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVLP3102 **Matrix.....:** SOLID
LCS Lot-Sample#: A9E110000-114
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**82**	**(60 - 133)**	**SW846 8082**
Aroclor 1260	**103**	**(59 - 129)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 129)
Decachlorobiphenyl	115	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVKRC102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A9E100000-104 CVKRC103-LCSD
Prep Date.....: 05/10/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9130104
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**75**	**(66 - 111)**			**SW846 8082**
	83	**(66 - 111)**	**9.5**	**(0-23)**	**SW846 8082**
Aroclor 1260	**91**	**(65 - 111)**			**SW846 8082**
	89	**(65 - 111)**	**2.1**	**(0-23)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(10 - 130)
	84	(10 - 130)
Decachlorobiphenyl	95	(10 - 116)
	50	(10 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVMT6102 **Matrix.....:** SOLID
LCS Lot-Sample#: A9E110000-347
Prep Date.....: 05/12/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9131347
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Total Petroleum Hydrocarbons-Extractable	**57**	**(38 - 120)**	**SW846 8015B**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A9E100000-113 **Prep Batch #...:** 9130113					
Mercury	90	(80 - 120)	SW846 7470A	05/10-05/13/99	CVKRX11H
		Dilution Factor: 1			
Barium	94	(87 - 110)	SW846 6010B	05/10-05/12/99	CVKRX13L
		Dilution Factor: 1			
Beryllium	98	(85 - 110)	SW846 6010B	05/10-05/12/99	CVKRX13M
		Dilution Factor: 1			
Cadmium	97	(89 - 115)	SW846 6010B	05/10-05/12/99	CVKRX13N
		Dilution Factor: 1			
Calcium	95	(86 - 109)	SW846 6010B	05/10-05/12/99	CVKRX13P
		Dilution Factor: 1			
Chromium	99	(86 - 112)	SW846 6010B	05/10-05/12/99	CVKRX13Q
		Dilution Factor: 1			
Cobalt	95	(83 - 107)	SW846 6010B	05/10-05/12/99	CVKRX13R
		Dilution Factor: 1			
Iron	105	(80 - 120)	SW846 6010B	05/10-05/12/99	CVKRX13T
		Dilution Factor: 1			
Magnesium	91	(88 - 112)	SW846 6010B	05/10-05/12/99	CVKRX13U
		Dilution Factor: 1			
Manganese	100	(88 - 117)	SW846 6010B	05/10-05/12/99	CVKRX13V
		Dilution Factor: 1			
Nickel	95	(85 - 116)	SW846 6010B	05/10-05/12/99	CVKRX13W
		Dilution Factor: 1			
Potassium	92	(87 - 106)	SW846 6010B	05/10-05/13/99	CVKRX13X
		Dilution Factor: 1			
Copper	97	(84 - 112)	SW846 6010B	05/10-05/12/99	CVKRX132
		Dilution Factor: 1			
Silver	106	(93 - 120)	SW846 6010B	05/10-05/12/99	CVKRX140
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	100	(88 - 107)	SW846 6010B	05/10-05/13/99	CVKRX141
		Dilution Factor: 1			
Vanadium	96	(86 - 111)	SW846 6010B	05/10-05/12/99	CVKRX142
		Dilution Factor: 1			
Zinc	103	(83 - 120)	SW846 6010B	05/10-05/12/99	CVKRX143
		Dilution Factor: 1			
Arsenic	99	(80 - 120)	SW846 6010B	05/10-05/12/99	CVKRX144
		Dilution Factor: 1			
Lead	96	(80 - 120)	SW846 6010B	05/10-05/12/99	CVKRX145
		Dilution Factor: 1			
Selenium	97	(80 - 120)	SW846 6010B	05/10-05/12/99	CVKRX146
		Dilution Factor: 1			
Thallium	101	(80 - 120)	SW846 6010B	05/10-05/12/99	CVKRX147
		Dilution Factor: 1			
Aluminum	97	(87 - 115)	SW846 6010B	05/10-05/12/99	CVKRX148
		Dilution Factor: 1			
Antimony	98	(87 - 108)	SW846 6010B	05/10-05/12/99	CVKRX149
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A9E130000-259 **Prep Batch #...:** 9133259					
Antimony	96	(80 - 104)	SW846 6010B	05/14-05/18/99	CVQ9510R
		Dilution Factor: 1			
Barium	94	(80 - 109)	SW846 6010B	05/14-05/16/99	CVQ9510T
		Dilution Factor: 1			
Beryllium	83	(80 - 105)	SW846 6010B	05/14-05/16/99	CVQ9510U
		Dilution Factor: 1			
Cadmium	99	(80 - 112)	SW846 6010B	05/14-05/18/99	CVQ9510V
		Dilution Factor: 1			
Calcium	92	(80 - 109)	SW846 6010B	05/14-05/16/99	CVQ9510W
		Dilution Factor: 1			
Chromium	101	(81 - 116)	SW846 6010B	05/14-05/18/99	CVQ9510X
		Dilution Factor: 1			
Zinc	90	(80 - 120)	SW846 6010B	05/14-05/16/99	CVQ9511A
		Dilution Factor: 1			
Mercury	84	(70 - 130)	SW846 7471A	05/14-05/18/99	CVQ9511C
		Dilution Factor: 1			
Arsenic	97	(80 - 120)	SW846 6010B	05/14-05/18/99	CVQ9511D
		Dilution Factor: 1			
Lead	97	(80 - 120)	SW846 6010B	05/14-05/18/99	CVQ9511E
		Dilution Factor: 1			
Selenium	92	(80 - 120)	SW846 6010B	05/14-05/18/99	CVQ9511F
		Dilution Factor: 1			
Thallium	98	(80 - 120)	SW846 6010B	05/14-05/18/99	CVQ9511G
		Dilution Factor: 1			
Aluminum	93	(80 - 113)	SW846 6010B	05/14-05/16/99	CVQ9511H
		Dilution Factor: 1			
Cobalt	94	(80 - 104)	SW846 6010B	05/14-05/18/99	CVQ95110
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	94	(80 - 113)	SW846 6010B	05/14-05/16/99	CVQ95111
		Dilution Factor: 1			
Iron	87	(80 - 120)	SW846 6010B	05/14-05/16/99	CVQ95112
		Dilution Factor: 1			
Magnesium	97	(80 - 109)	SW846 6010B	05/14-05/16/99	CVQ95113
		Dilution Factor: 1			
Manganese	92	(80 - 114)	SW846 6010B	05/14-05/16/99	CVQ95114
		Dilution Factor: 1			
Nickel	91	(80 - 112)	SW846 6010B	05/14-05/16/99	CVQ95115
		Dilution Factor: 1			
Potassium	92	(80 - 103)	SW846 6010B	05/14-05/16/99	CVQ95116
		Dilution Factor: 1			
Silver	152 N	(81 - 120)	SW846 6010B	05/14-05/18/99	CVQ95117
		Dilution Factor: 1			
Sodium	97	(80 - 107)	SW846 6010B	05/14-05/16/99	CVQ95118
		Dilution Factor: 1			
Vanadium	99	(80 - 111)	SW846 6010B	05/14-05/18/99	CVQ95119
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9E070141 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Recoverable Petroleum Hydrocarbons		Work Order #: CVX4R102	LCS Lot-Sample#: A9E190000-119		
	110	(75 - 125)	MCAWW 418.1	05/19-05/20/99	9139119
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVM6L101 **Matrix.....:** SOLID
MB Lot-Sample #: A9E110000-221

Prep Date.....: 05/06/99
Analysis Date..: 05/13/99 **Prep Batch #...:** 9131221
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	1000	ug/kg	SW846 8260B
Benzene	ND	250	ug/kg	SW846 8260B
Bromodichloromethane	ND	250	ug/kg	SW846 8260B
Bromoform	ND	250	ug/kg	SW846 8260B
Bromomethane	ND	500	ug/kg	SW846 8260B
2-Butanone	ND	1000	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	250	ug/kg	SW846 8260B
Chlorobenzene	ND	250	ug/kg	SW846 8260B
Dibromochloromethane	ND	250	ug/kg	SW846 8260B
Chloroethane	ND	500	ug/kg	SW846 8260B
Chloroform	ND	250	ug/kg	SW846 8260B
Chloromethane	ND	500	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethene (total)	ND	250	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	250	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
Ethylbenzene	ND	250	ug/kg	SW846 8260B
2-Hexanone	ND	1000	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	1000	ug/kg	SW846 8260B
Styrene	ND	250	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	250	ug/kg	SW846 8260B
Tetrachloroethene	ND	250	ug/kg	SW846 8260B
Toluene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	250	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	250	ug/kg	SW846 8260B
Trichloroethene	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	500	ug/kg	SW846 8260B
Xylenes (total)	ND	500	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(51 - 124)
Toluene-d8	89	(58 - 116)
Bromofluorobenzene	95	(53 - 122)
Dibromofluoromethane	95	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVM7E101 **Matrix.....:** SOLID
MB Lot-Sample #: A9E110000-225

Prep Date.....: 05/07/99
Analysis Date..: 05/16/99 **Prep Batch #...:** 9131225
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	1000	ug/kg	SW846 8260B
Benzene	ND	250	ug/kg	SW846 8260B
Bromodichloromethane	ND	250	ug/kg	SW846 8260B
Bromoform	ND	250	ug/kg	SW846 8260B
Bromomethane	ND	500	ug/kg	SW846 8260B
2-Butanone	ND	1000	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	250	ug/kg	SW846 8260B
Chlorobenzene	ND	250	ug/kg	SW846 8260B
Dibromochloromethane	ND	250	ug/kg	SW846 8260B
Chloroethane	ND	500	ug/kg	SW846 8260B
Chloroform	ND	250	ug/kg	SW846 8260B
Chloromethane	ND	500	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethene (total)	ND	250	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	250	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
Ethylbenzene	ND	250	ug/kg	SW846 8260B
2-Hexanone	ND	1000	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	1000	ug/kg	SW846 8260B
Styrene	ND	250	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	250	ug/kg	SW846 8260B
Tetrachloroethene	ND	250	ug/kg	SW846 8260B
Toluene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	250	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	250	ug/kg	SW846 8260B
Trichloroethene	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	500	ug/kg	SW846 8260B
Xylenes (total)	ND	500	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	81	(51 - 124)
Toluene-d8	89	(58 - 116)
Bromofluorobenzene	90	(53 - 122)
Dibromofluoromethane	87	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVM86101 **Matrix.....:** SOLID
MB Lot-Sample #: A9E110000-235

Prep Date.....: 05/08/99
Analysis Date..: 05/18/99 **Prep Batch #...:** 9131235
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	1000	ug/kg	SW846 8260B
Benzene	ND	250	ug/kg	SW846 8260B
Bromodichloromethane	ND	250	ug/kg	SW846 8260B
Bromoform	ND	250	ug/kg	SW846 8260B
Bromomethane	ND	500	ug/kg	SW846 8260B
2-Butanone	ND	1000	ug/kg	SW846 8260B
Carbon disulfide	ND	250	ug/kg	SW846 8260B
Carbon tetrachloride	ND	250	ug/kg	SW846 8260B
Chlorobenzene	ND	250	ug/kg	SW846 8260B
Dibromochloromethane	ND	250	ug/kg	SW846 8260B
Chloroethane	ND	500	ug/kg	SW846 8260B
Chloroform	ND	250	ug/kg	SW846 8260B
Chloromethane	ND	500	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	250	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	250	ug/kg	SW846 8260B
1,2-Dichloroethene (total)	ND	250	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	250	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	250	ug/kg	SW846 8260B
Ethylbenzene	ND	250	ug/kg	SW846 8260B
2-Hexanone	ND	1000	ug/kg	SW846 8260B
Methylene chloride	ND	250	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	1000	ug/kg	SW846 8260B
Styrene	ND	250	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	250	ug/kg	SW846 8260B
Tetrachloroethene	ND	250	ug/kg	SW846 8260B
Toluene	ND	250	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	250	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	250	ug/kg	SW846 8260B
Trichloroethene	ND	250	ug/kg	SW846 8260B
Vinyl chloride	ND	500	ug/kg	SW846 8260B
Xylenes (total)	ND	500	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	108	(51 - 124)
Toluene-d8	110	(58 - 116)
Bromofluorobenzene	120	(53 - 122)
Dibromofluoromethane	100	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVWEC101 **Matrix.....:** SOLID
MB Lot-Sample #: A9E180000-240

Prep Date.....: 05/14/99
Analysis Date..: 05/14/99 **Prep Batch #...:** 9138240
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/kg	SW846 8260B
Bromomethane	ND	10	ug/kg	SW846 8260B
Vinyl chloride	ND	10	ug/kg	SW846 8260B
Chloroethane	ND	10	ug/kg	SW846 8260B
Methylene chloride	ND	5.0	ug/kg	SW846 8260B
Acetone	ND	20	ug/kg	SW846 8260B
Carbon disulfide	ND	5.0	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloroethene (total)	ND	5.0	ug/kg	SW846 8260B
Chloroform	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
2-Butanone	ND	20	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/kg	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260B
Bromodichloromethane	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
Trichloroethene	ND	5.0	ug/kg	SW846 8260B
Dibromochloromethane	ND	5.0	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/kg	SW846 8260B
Benzene	ND	5.0	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
Bromoform	ND	5.0	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/kg	SW846 8260B
2-Hexanone	ND	20	ug/kg	SW846 8260B
Tetrachloroethene	ND	5.0	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
Chlorobenzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Styrene	ND	5.0	ug/kg	SW846 8260B
Xylenes (total)	ND	10	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	105	(75 - 117)
Toluene-d8	114	(86 - 122)
Bromofluorobenzene	124	(60 - 137)
Dibromofluoromethane	105	(70 - 135)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVWL1101 **Matrix.....:** WATER
MB Lot-Sample #: A9E180000-132

Prep Date.....: 05/17/99
Analysis Date..: 05/17/99 **Prep Batch #...:** 9138132
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
Vinyl chloride	ND	10	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Acetone	ND	20	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
2-Butanone	ND	20	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Dibromochloromethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Benzene	ND	5.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/L	SW846 8260B
2-Hexanone	ND	20	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	103	(80 - 120)
Toluene-d8	103	(88 - 110)
Bromofluorobenzene	96	(86 - 115)
Dibromofluoromethane	104	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVW9P101 **Matrix.....:** WATER
MB Lot-Sample #: A9E180000-218

Prep Date.....: 05/17/99
Analysis Date..: 05/17/99 **Prep Batch #...:** 9138218
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
Vinyl chloride	ND	10	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Acetone	ND	20	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
2-Butanone	ND	20	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Dibromochloromethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Benzene	ND	5.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/L	SW846 8260B
2-Hexanone	ND	20	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	104	(80 - 120)
Toluene-d8	97	(88 - 110)
Bromofluorobenzene	107	(86 - 115)
Dibromofluoromethane	94	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVX7X101 **Matrix.....:** WATER
MB Lot-Sample #: A9E190000-168

Prep Date.....: 05/18/99
Analysis Date..: 05/18/99 **Prep Batch #...:** 9139168
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	10	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
Vinyl chloride	ND	10	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Acetone	ND	20	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
2-Butanone	ND	20	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Dibromochloromethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Benzene	ND	5.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/L	SW846 8260B
2-Hexanone	ND	20	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
Xylenes (total)	ND	5.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	102	(80 - 120)
Toluene-d8	96	(88 - 110)
Bromofluorobenzene	99	(86 - 115)
Dibromofluoromethane	100	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVKT0101 **Matrix.....:** WATER
MB Lot-Sample #: A9E100000-114

Prep Date.....: 05/10/99
Analysis Date..: 05/13/99 **Prep Batch #...:** 9130114
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichlorobenzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichlorophenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichlorophenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVKT0101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(40 - 114)
2-Fluorobiphenyl	58	(45 - 118)
Terphenyl-d14	75	(33 - 141)
Phenol-d5	56	(17 - 101)
2-Fluorophenol	54	(21 - 100)
2,4,6-Tribromophenol	59	(16 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVLPF101 **Matrix.....:** SOLID
MB Lot-Sample #: A9E110000-122

Prep Date.....: 05/11/99
Analysis Date..: 05/18/99 **Prep Batch #...:** 9131122
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethyl)-ether	ND	330	ug/kg	SW846 8270C
2-Chlorophenol	ND	330	ug/kg	SW846 8270C
1,3-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,4-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,2-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
2-Methylphenol	ND	330	ug/kg	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	330	ug/kg	SW846 8270C
4-Methylphenol	ND	330	ug/kg	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	330	ug/kg	SW846 8270C
Hexachloroethane	ND	330	ug/kg	SW846 8270C
Nitrobenzene	ND	330	ug/kg	SW846 8270C
Isophorone	ND	330	ug/kg	SW846 8270C
2-Nitrophenol	ND	330	ug/kg	SW846 8270C
2,4-Dimethylphenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethoxy) methane	ND	330	ug/kg	SW846 8270C
2,4-Dichlorophenol	ND	330	ug/kg	SW846 8270C
1,2,4-Trichlorobenzene	ND	330	ug/kg	SW846 8270C
Naphthalene	ND	330	ug/kg	SW846 8270C
4-Chloroaniline	ND	330	ug/kg	SW846 8270C
Hexachlorobutadiene	ND	330	ug/kg	SW846 8270C
4-Chloro-3-methylphenol	ND	330	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	330	ug/kg	SW846 8270C
Hexachlorocyclopenta-diene	ND	1600	ug/kg	SW846 8270C
2,4,6-Trichlorophenol	ND	330	ug/kg	SW846 8270C
2,4,5-Trichlorophenol	ND	330	ug/kg	SW846 8270C
2-Chloronaphthalene	ND	330	ug/kg	SW846 8270C
2-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Dimethyl phthalate	ND	330	ug/kg	SW846 8270C
Acenaphthylene	ND	330	ug/kg	SW846 8270C
2,6-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
3-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Acenaphthene	ND	330	ug/kg	SW846 8270C
2,4-Dinitrophenol	ND	1600	ug/kg	SW846 8270C
4-Nitrophenol	ND	1600	ug/kg	SW846 8270C
Dibenzofuran	ND	330	ug/kg	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVLPF101 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
Diethyl phthalate	ND	330	ug/kg	SW846 8270C
4-Chlorophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Fluorene	ND	330	ug/kg	SW846 8270C
4-Nitroaniline	ND	1600	ug/kg	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	SW846 8270C
N-Nitrosodiphenylamine	ND	330	ug/kg	SW846 8270C
4-Bromophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Hexachlorobenzene	ND	330	ug/kg	SW846 8270C
Pentachlorophenol	ND	330	ug/kg	SW846 8270C
Phenanthrene	ND	330	ug/kg	SW846 8270C
Anthracene	ND	330	ug/kg	SW846 8270C
Carbazole	ND	330	ug/kg	SW846 8270C
Di-n-butyl phthalate	ND	330	ug/kg	SW846 8270C
Fluoranthene	ND	330	ug/kg	SW846 8270C
Pyrene	ND	330	ug/kg	SW846 8270C
Butyl benzyl phthalate	ND	330	ug/kg	SW846 8270C
3,3'-Dichlorobenzidine	ND	1600	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	330	ug/kg	SW846 8270C
Chrysene	ND	330	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	330	ug/kg	SW846 8270C
Di-n-octyl phthalate	ND	330	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	330	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	330	ug/kg	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(23 - 120)
2-Fluorobiphenyl	58	(30 - 115)
Terphenyl-d14	91	(18 - 137)
Phenol-d5	54	(24 - 113)
2-Fluorophenol	54	(25 - 121)
2,4,6-Tribromophenol	56	(19 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVLP3101 **Matrix.....:** SOLID
MB Lot-Sample #: A9E110000-114

Prep Date.....: 05/11/99
Analysis Date..: 05/16/99 **Prep Batch #...:** 9131114
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 129)
Decachlorobiphenyl	113	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVKRC101 **Matrix.....:** WATER
MB Lot-Sample #: A9E100000-104

Prep Date.....: 05/10/99
Analysis Date..: 05/16/99 **Prep Batch #...:** 9130104
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(10 - 130)
Decachlorobiphenyl	85	(10 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9E070141 Work Order #...: CVMT6101 Matrix.....: SOLID
MB Lot-Sample #: A9E110000-347

Prep Date.....: 05/12/99
Analysis Date..: 05/13/99 Prep Batch #...: 9131347
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
TPH (Extractables)	ND	3.0	mg/kg	SW846 8015B

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A9E100000-113 **Prep Batch #...:** 9130113						
Aluminum	ND	0.20	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12U
		Dilution Factor: 1				
Arsenic	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12P
		Dilution Factor: 1				
Antimony	ND	0.060	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12V
		Dilution Factor: 1				
Lead	ND	0.0030	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12Q
		Dilution Factor: 1				
Barium	ND	0.20	mg/L	SW846 6010B	05/10-05/12/99	CVKRX127
		Dilution Factor: 1				
Selenium	ND	0.0050	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12R
		Dilution Factor: 1				
Beryllium	ND	0.0050	mg/L	SW846 6010B	05/10-05/12/99	CVKRX128
		Dilution Factor: 1				
Thallium	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12T
		Dilution Factor: 1				
Cadmium	ND	0.0050	mg/L	SW846 6010B	05/10-05/12/99	CVKRX129
		Dilution Factor: 1				
Calcium	ND	5.0	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12A
		Dilution Factor: 1				
Chromium	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12C
		Dilution Factor: 1				
Cobalt	ND	0.050	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12D
		Dilution Factor: 1				
Copper	ND	0.025	mg/L	SW846 6010B	05/10-05/12/99	CVKRX11J
		Dilution Factor: 1				
Iron	ND	0.10	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12E
		Dilution Factor: 1				
Magnesium	ND	5.0	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12F
		Dilution Factor: 1				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	0.015	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12G
		Dilution Factor: 1				
Nickel	ND	0.040	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12H
		Dilution Factor: 1				
Potassium	ND	5.0	mg/L	SW846 6010B	05/10-05/13/99	CVKRX12J
		Dilution Factor: 1				
Silver	ND	0.010	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12K
		Dilution Factor: 1				
Sodium	ND	5.0	mg/L	SW846 6010B	05/10-05/13/99	CVKRX12L
		Dilution Factor: 1				
Vanadium	ND	0.050	mg/L	SW846 6010B	05/10-05/12/99	CVKRX12M
		Dilution Factor: 1				
Mercury	ND	0.00020	mg/L	SW846 7470A	05/10-05/13/99	CVKRX10Q
		Dilution Factor: 1				
Zinc	**0.034**	**0.020**	**mg/L**	**SW846 6010B**	**05/10-05/12/99**	**CVKRX12N**
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A9E130000-259 **Prep Batch #...:** 9133259						
Aluminum	ND	20.0	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510Q
		Dilution Factor: 1				
Arsenic	ND	1.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ9510L
		Dilution Factor: 1				
Antimony	ND	3.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ95101
		Dilution Factor: 1				
Lead	ND	0.30	mg/kg	SW846 6010B	05/14-05/18/99	CVQ9510M
		Dilution Factor: 1				
Barium	ND	20.0	mg/kg	SW846 6010B	05/14-05/16/99	CVQ95102
		Dilution Factor: 1				
Selenium	ND	0.50	mg/kg	SW846 6010B	05/14-05/18/99	CVQ9510N
		Dilution Factor: 1				
Beryllium	ND	0.50	mg/kg	SW846 6010B	05/14-05/16/99	CVQ95103
		Dilution Factor: 1				
Thallium	ND	1.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ9510P
		Dilution Factor: 1				
Cadmium	ND	0.25	mg/kg	SW846 6010B	05/14-05/18/99	CVQ95104
		Dilution Factor: 1				
Calcium	ND	500	mg/kg	SW846 6010B	05/14-05/16/99	CVQ95105
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ95106
		Dilution Factor: 1				
Cobalt	ND	5.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ95107
		Dilution Factor: 1				
Copper	ND	2.5	mg/kg	SW846 6010B	05/14-05/16/99	CVQ95108
		Dilution Factor: 1				
Iron	ND	10.0	mg/kg	SW846 6010B	05/14-05/16/99	CVQ95109
		Dilution Factor: 1				
Magnesium	ND	500	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510A
		Dilution Factor: 1				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	1.5	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510C
		Dilution Factor: 1				
Nickel	ND	4.0	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510D
		Dilution Factor: 1				
Potassium	ND	500	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510E
		Dilution Factor: 1				
Silver	ND	1.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ9510F
		Dilution Factor: 1				
Sodium	ND	500	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510G
		Dilution Factor: 1				
Vanadium	ND	5.0	mg/kg	SW846 6010B	05/14-05/18/99	CVQ9510H
		Dilution Factor: 1				
Mercury	ND	0.10	mg/kg	SW846 7471A	05/14-05/18/99	CVQ9510K
		Dilution Factor: 1				
Zinc	ND	2.0	mg/kg	SW846 6010B	05/14-05/16/99	CVQ9510J
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A9E070141 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: CVVGJ101		MB Lot-Sample #: A9E170000-276		
	ND	0.10	%	MCAWW 160.3 MOD	05/17-05/18/99	9137276
		Dilution Factor: 1				
Percent Solids		Work Order #: CVVWV101		MB Lot-Sample #: A9E180000-134		
	ND	0.10	%	MCAWW 160.3 MOD	05/18-05/19/99	9138134
		Dilution Factor: 1				
Total Recoverable Petroleum Hydrocarbons		Work Order #: CVX4R101		MB Lot-Sample #: A9E190000-119		
	ND	10	mg/kg	MCAWW 418.1	05/19-05/20/99	9139119
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A9E070141	**Work Order #...:**	CVGEQ103-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A9E060162-015		CVGEQ104-MSD		
Date Sampled...:	05/04/99	**Date Received..:**	05/06/99		
Prep Date.....:	05/17/99	**Analysis Date..:**	05/17/99		
Prep Batch #...:	9138132				
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**118 a**	**(75 - 113)**			**SW846 8260B**
	127 a	**(75 - 113)**	**7.0**	**(0-20)**	**SW846 8260B**
Trichloroethene	**120 a**	**(71 - 110)**			**SW846 8260B**
	98	**(71 - 110)**	**20**	**(0-22)**	**SW846 8260B**
Chlorobenzene	**102**	**(81 - 115)**			**SW846 8260B**
	102	**(81 - 115)**	**0.07**	**(0-18)**	**SW846 8260B**
Toluene	**104**	**(78 - 126)**			**SW846 8260B**
	104	**(78 - 126)**	**0.08**	**(0-24)**	**SW846 8260B**
Benzene	**99**	**(78 - 117)**			**SW846 8260B**
	99	**(78 - 117)**	**0.37**	**(0-17)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	111	(80 - 120)
	102	(80 - 120)
Toluene-d8	106	(88 - 110)
	106	(88 - 110)
Bromofluorobenzene	88	(86 - 115)
	91	(86 - 115)
Dibromofluoromethane	86	(86 - 118)
	103	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E070141 **Work Order #...:** CVHMP10V-MS **Matrix.....:** WATER
MS Lot-Sample #: A9E070125-005 CVHMP10W-MSD
Date Sampled...: 05/05/99 15:30 **Date Received..:** 05/07/99
Prep Date.....: 05/18/99 **Analysis Date..:** 05/18/99
Prep Batch #...: 9139168
Dilution Factor: 2.5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	91	(75 - 113)			SW846 8260B
	84	(75 - 113)	8.1	(0-20)	SW846 8260B
Trichloroethene	114 a	(71 - 110)			SW846 8260B
	98	(71 - 110)	14	(0-22)	SW846 8260B
Benzene	100	(78 - 117)			SW846 8260B
	98	(78 - 117)	2.0	(0-17)	SW846 8260B
Toluene	96	(78 - 126)			SW846 8260B
	93	(78 - 126)	3.3	(0-24)	SW846 8260B
Chlorobenzene	94	(81 - 115)			SW846 8260B
	93	(81 - 115)	1.0	(0-18)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(86 - 118)
	93	(86 - 118)
1,2-Dichloroethane-d4	97	(80 - 120)
	82	(80 - 120)
Toluene-d8	98	(88 - 110)
	95	(88 - 110)
Bromofluorobenzene	105	(86 - 115)
	109	(86 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A9E070141	**Work Order #...:**	CVK4F10F-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	A9E080101-020		CVK4F10G-MSD		
Date Sampled...:	05/07/99 11:50	**Date Received..:**	05/08/99		
Prep Date.....:	05/08/99	**Analysis Date..:**	05/18/99		
Prep Batch #...:	9131235				
Dilution Factor:	0.8	**% Moisture.....:**	12		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**79**	**(33 - 137)**			**SW846 8260B**
	79	**(33 - 137)**	**0.59**	**(0-14)**	**SW846 8260B**
Trichloroethene	**87**	**(73 - 113)**			**SW846 8260B**
	86	**(73 - 113)**	**1.0**	**(0-11)**	**SW846 8260B**
Chlorobenzene	**78 a**	**(81 - 113)**			**SW846 8260B**
	79 a	**(81 - 113)**	**0.48**	**(0-11)**	**SW846 8260B**
Toluene	**78**	**(76 - 116)**			**SW846 8260B**
	78	**(76 - 116)**	**0.83**	**(0-10)**	**SW846 8260B**
Benzene	**81**	**(64 - 122)**			**SW846 8260B**
	82	**(64 - 122)**	**1.3**	**(0-10)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	72	(51 - 124)
	74	(51 - 124)
Toluene-d8	80	(58 - 116)
	80	(58 - 116)
Bromofluorobenzene	79	(53 - 122)
	83	(53 - 122)
Dibromofluoromethane	81	(49 - 119)
	83	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A9E070141	**Work Order #...:**	CVK5T12L-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	A9E080106-003		CVK5T12M-MSD		
Date Sampled...:	05/07/99 09:00	**Date Received..:**	05/08/99		
Prep Date.....:	05/08/99	**Analysis Date..:**	05/19/99		
Prep Batch #...:	9131235				
Dilution Factor:	0.88	**% Moisture.....:**	24		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**72**	**(33 - 137)**			**SW846 8260B**
	72	**(33 - 137)**	**0.91**	**(0-14)**	**SW846 8260B**
Trichloroethene	**82**	**(73 - 113)**			**SW846 8260B**
	84	**(73 - 113)**	**2.6**	**(0-11)**	**SW846 8260B**
Benzene	**88**	**(64 - 122)**			**SW846 8260B**
	85	**(64 - 122)**	**2.8**	**(0-10)**	**SW846 8260B**
Toluene	**85**	**(76 - 116)**			**SW846 8260B**
	87	**(76 - 116)**	**2.4**	**(0-10)**	**SW846 8260B**
Chlorobenzene	**86**	**(81 - 113)**			**SW846 8260B**
	83	**(81 - 113)**	**3.5**	**(0-11)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	77	(51 - 124)
	70	(51 - 124)
Toluene-d8	87	(58 - 116)
	92	(58 - 116)
Bromofluorobenzene	87	(53 - 122)
	85	(53 - 122)
Dibromofluoromethane	75	(49 - 119)
	77	(49 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	A9E070141	**Work Order #...:**	CVMAJ102-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	A9E110161-001		CVMAJ103-MSD		
Date Sampled...:	05/07/99 11:30	**Date Received..:**	05/11/99		
Prep Date.....:	05/17/99	**Analysis Date..:**	05/17/99		
Prep Batch #...:	9138218				
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**82**	**(75 - 113)**			**SW846 8260B**
	87	**(75 - 113)**	**5.7**	**(0-20)**	**SW846 8260B**
Trichloroethene	**86**	**(71 - 110)**			**SW846 8260B**
	92	**(71 - 110)**	**7.0**	**(0-22)**	**SW846 8260B**
Benzene	**93**	**(78 - 117)**			**SW846 8260B**
	99	**(78 - 117)**	**6.2**	**(0-17)**	**SW846 8260B**
Toluene	**87**	**(78 - 126)**			**SW846 8260B**
	92	**(78 - 126)**	**5.1**	**(0-24)**	**SW846 8260B**
Chlorobenzene	**89**	**(81 - 115)**			**SW846 8260B**
	96	**(81 - 115)**	**6.6**	**(0-18)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(86 - 118)
	94	(86 - 118)
1,2-Dichloroethane-d4	106	(80 - 120)
	107	(80 - 120)
Toluene-d8	92	(88 - 110)
	92	(88 - 110)
Bromofluorobenzene	103	(86 - 115)
	101	(86 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVHT210D-MS **Matrix.....:** WATER
MS Lot-Sample #: A9E070140-001 CVHT210E-MSD
Date Sampled...: 05/06/99 08:30 **Date Received..:** 05/07/99
Prep Date.....: 05/10/99 **Analysis Date..:** 05/13/99
Prep Batch #...: 9130114
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichlorobenzene	55	(44 - 142)			SW846 8270C
	53	(44 - 142)	2.2	(0-28)	SW846 8270C
Acenaphthene	57	(47 - 145)			SW846 8270C
	57	(47 - 145)	1.1	(0-28)	SW846 8270C
2,4-Dinitrotoluene	68	(39 - 139)			SW846 8270C
	70	(39 - 139)	1.8	(0-22)	SW846 8270C
Pyrene	77	(52 - 115)			SW846 8270C
	79	(52 - 115)	2.1	(0-25)	SW846 8270C
N-Nitrosodi-n-propyl-amine	52	(10 - 230)			SW846 8270C
	51	(10 - 230)	2.1	(0-55)	SW846 8270C
1,4-Dichlorobenzene	51	(20 - 124)			SW846 8270C
	50	(20 - 124)	2.3	(0-32)	SW846 8270C
Pentachlorophenol	66	(14 - 176)			SW846 8270C
	64	(14 - 176)	3.5	(0-49)	SW846 8270C
Phenol	46	(10 - 112)			SW846 8270C
	45	(10 - 112)	1.3	(0-23)	SW846 8270C
2-Chlorophenol	54	(23 - 134)			SW846 8270C
	53	(23 - 134)	1.9	(0-29)	SW846 8270C
4-Chloro-3-methylphenol	59	(22 - 147)			SW846 8270C
	58	(22 - 147)	2.7	(0-37)	SW846 8270C
4-Nitrophenol	65	(10 - 132)			SW846 8270C
	65	(10 - 132)	0.22	(0-47)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(40 - 114)
	58	(40 - 114)
2-Fluorobiphenyl	59	(45 - 118)
	54	(45 - 118)
Terphenyl-d14	85	(33 - 141)
	85	(33 - 141)
Phenol-d5	53	(17 - 101)
	51	(17 - 101)
2-Fluorophenol	51	(21 - 100)
	49	(21 - 100)
2,4,6-Tribromophenol	68	(16 - 129)
	66	(16 - 129)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 Work Order #...: CVHT510E-MS Matrix.....: SOLID
MS Lot-Sample #: A9E070140-002 CVHT510F-MSD
Date Sampled...: 05/06/99 09:45 Date Received..: 05/07/99
Prep Date.....: 05/11/99 Analysis Date..: 05/18/99
Prep Batch #...: 9131122
Dilution Factor: 1 % Moisture.....: 15

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichlorobenzene	51	(44 - 142)			SW846 8270C
	55	(44 - 142)	7.6	(0-28)	SW846 8270C
Acenaphthene	54	(47 - 145)			SW846 8270C
	58	(47 - 145)	7.5	(0-28)	SW846 8270C
2,4-Dinitrotoluene	65	(39 - 139)			SW846 8270C
	68	(39 - 139)	4.3	(0-22)	SW846 8270C
Pyrene	53	(52 - 115)			SW846 8270C
	56	(52 - 115)	6.3	(0-25)	SW846 8270C
N-Nitrosodi-n-propyl-amine	52	(10 - 230)			SW846 8270C
	56	(10 - 230)	7.4	(0-55)	SW846 8270C
1,4-Dichlorobenzene	44	(20 - 124)			SW846 8270C
	52	(20 - 124)	18	(0-32)	SW846 8270C
Pentachlorophenol	42	(14 - 176)			SW846 8270C
	33	(14 - 176)	22	(0-49)	SW846 8270C
Phenol	51	(10 - 112)			SW846 8270C
	55	(10 - 112)	6.0	(0-23)	SW846 8270C
2-Chlorophenol	51	(23 - 134)			SW846 8270C
	54	(23 - 134)	6.1	(0-29)	SW846 8270C
4-Chloro-3-methylphenol	56	(22 - 147)			SW846 8270C
	60	(22 - 147)	6.8	(0-37)	SW846 8270C
4-Nitrophenol	57	(10 - 132)			SW846 8270C
	52	(10 - 132)	8.6	(0-47)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	49	(23 - 120)
	53	(23 - 120)
2-Fluorobiphenyl	54	(30 - 115)
	59	(30 - 115)
Terphenyl-d14	60	(18 - 137)
	67	(18 - 137)
Phenol-d5	51	(24 - 113)
	54	(24 - 113)
2-Fluorophenol	48	(25 - 121)
	52	(25 - 121)
2,4,6-Tribromophenol	60	(19 - 122)
	61	(19 - 122)

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVHT510E-MS **Matrix.....:** SOLID
MS Lot-Sample #: A9E070140-002 CVHT510F-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9E070141 **Work Order #...:** CVHT110W-MS **Matrix.....:** SOLID
MS Lot-Sample #: A9E070141-001 CVHT110X-MSD
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99
Prep Date.....: 05/11/99 **Analysis Date..:** 05/16/99
Prep Batch #...: 9131114
Dilution Factor: 20 **% Moisture.....:** 53

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**88 DIL**	**(44 - 139)**			**SW846 8082**
	87 DIL	**(44 - 139)**	**1.4**	**(0-28)**	**SW846 8082**
Aroclor 1260	**0.0 DIL,a**	**(44 - 139)**			**SW846 8082**
	0.0 DIL,a	**(44 - 139)**	**0.0**	**(0-28)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86 DIL	(10 - 129)
	80 DIL	(10 - 129)
Decachlorobiphenyl	147	(10 - 138)
	Qualifiers: DIL,*	
	145	(10 - 138)
	Qualifiers: DIL,*	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	A9E070141	**Work Order #...:**	CVHV5110-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	A9E070141-012		CVHV5111-MSD		
Date Sampled...:	05/06/99 15:40	**Date Received..:**	05/07/99		
Prep Date.....:	05/12/99	**Analysis Date..:**	05/13/99		
Prep Batch #...:	9131347				
Dilution Factor:	10	**% Moisture.....:**	9.7		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Total Petroleum Hydrocarbons-Extractable	**0.0 DIL,a**	**(10 - 114)**			**SW846 8015B**
	0.0 DIL,a	**(10 - 114)**	**0.0**	**(0-49)**	**SW846 8015B**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9E070141-001 **Prep Batch #...:** 9133259							
Aluminum	NC,MSB	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT112F
	NC,MSB	(80 - 120)		(0-20)	SW846 6010B	05/14-05/16/99	CVHT112G
		Dilution Factor: 1					
Arsenic	92	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT1126
	90	(80 - 120)	2.0	(0-20)	SW846 6010B	05/14-05/18/99	CVHT1127
		Dilution Factor: 1					
Antimony	73 N	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT1110
	72 N	(80 - 120)	1.7	(0-20)	SW846 6010B	05/14-05/18/99	CVHT1111
		Dilution Factor: 1					
Lead	13 N	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT1128
	0.0 N,*	(80 - 120)	200	(0-20)	SW846 6010B	05/14-05/18/99	CVHT1129
		Dilution Factor: 1					
Barium	90	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT1112
	95	(80 - 120)	3.9	(0-20)	SW846 6010B	05/14-05/16/99	CVHT1113
		Dilution Factor: 1					
Selenium	89	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT112A
	87	(80 - 120)	1.2	(0-20)	SW846 6010B	05/14-05/18/99	CVHT112C
		Dilution Factor: 1					
Beryllium	84	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT1114
	89	(80 - 120)	5.6	(0-20)	SW846 6010B	05/14-05/16/99	CVHT1115
		Dilution Factor: 1					
Thallium	90	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT112D
	90	(80 - 120)	0.71	(0-20)	SW846 6010B	05/14-05/18/99	CVHT112E
		Dilution Factor: 1					
Cadmium	95	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT1116
	95	(80 - 120)	0.40	(0-20)	SW846 6010B	05/14-05/18/99	CVHT1117
		Dilution Factor: 1					
Calcium	48 N	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT1118
	86	(80 - 120)	18	(0-20)	SW846 6010B	05/14-05/16/99	CVHT1119
		Dilution Factor: 1					
Chromium	140 N	(80 - 120)			SW846 6010B	05/14-05/18/99	CVHT111A
	86 *	(80 - 120)	28	(0-20)	SW846 6010B	05/14-05/18/99	CVHT111C
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	87	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111D
	87	(80 - 120)	0.75	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111E
		Dilution Factor: 1					
Copper	85	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111F
	456 N,*	(80 - 120)	75	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111G
		Dilution Factor: 1					
Iron	NC,MSB	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111H
	NC,MSB	(80 - 120)		(0-20)	SW846 6010B	05/14-05/16/99	CVHT111J
		Dilution Factor: 1					
Magnesium	87	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111K
	93	(80 - 120)	4.5	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111L
		Dilution Factor: 1					
Manganese	NC,MSB	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111M
	NC,MSB	(80 - 120)		(0-20)	SW846 6010B	05/14-05/16/99	CVHT111N
		Dilution Factor: 1					
Nickel	81	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111P
	88	(80 - 120)	3.6	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111Q
		Dilution Factor: 1					
Potassium	88	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111R
	90	(80 - 120)	2.2	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111T
		Dilution Factor: 1					
Silver	100	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111U
	101	(80 - 120)	0.79	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111V
		Dilution Factor: 1					
Sodium	95	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT111W
	95	(80 - 120)	0.46	(0-20)	SW846 6010B	05/14-05/16/99	CVHT111X
		Dilution Factor: 1					
Vanadium	93	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT1120
	89	(80 - 120)	3.2	(0-20)	SW846 6010B	05/14-05/16/99	CVHT1121
		Dilution Factor: 1					
Mercury	108	(70 - 130)			SW846 7471A	05/14-05/18/99	CVHT1124
	96	(70 - 130)	6.0	(0-20)	SW846 7471A	05/14-05/18/99	CVHT1125
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** SOLID
Date Sampled...: 05/05/99 10:00 **Date Received..:** 05/06/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	147 N	(80 - 120)			SW846 6010B	05/14-05/16/99	CVHT1122
	101	(80 - 120)	7.6	(0-20)	SW846 6010B	05/14-05/16/99	CVHT1123

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

* Relative percent difference (RPD) is outside stated control limits.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** WATER
Date Sampled...: 05/03/99 15:02 **Date Received..:** 05/05/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A9E070186-004 **Prep Batch #...:** 9130113							
Aluminum	103	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7815K
	113	(80 - 120)	6.3	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7815L
		Dilution Factor: 1					
Antimony	94	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7815N
	101	(80 - 120)	6.6	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7815P
		Dilution Factor: 1					
Beryllium	92	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7814D
	98	(80 - 120)	6.6	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7814E
		Dilution Factor: 1					
Calcium	68 N	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7814G
	94	(80 - 120)	7.7	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7814H
		Dilution Factor: 1					
Cobalt	88	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7814K
	94	(80 - 120)	6.6	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7814L
		Dilution Factor: 1					
Copper	93	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7812G
	99	(80 - 120)	6.0	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7812H
		Dilution Factor: 1					
Iron	90	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7814N
	106	(80 - 120)	7.0	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7814P
		Dilution Factor: 1					
Magnesium	84	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7814R
	93	(80 - 120)	7.1	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7814T
		Dilution Factor: 1					
Manganese	89	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7814V
	99	(80 - 120)	6.9	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7814W
		Dilution Factor: 1					
Mercury	95	(80 - 120)			SW846 7470A	05/10-05/13/99	CVJ78128
	87	(80 - 120)	8.3	(0-20)	SW846 7470A	05/10-05/13/99	CVJ78129
		Dilution Factor: 1					
Nickel	89	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ78150
	94	(80 - 120)	6.2	(0-20)	SW846 6010B	05/10-05/12/99	CVJ78151
		Dilution Factor: 1					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A9E070141 **Matrix.....:** WATER
Date Sampled...: 05/03/99 15:02 **Date Received..:** 05/05/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium	87	(80 - 120)			SW846 6010B	05/10-05/13/99	CVJ78153
	96	(80 - 120)	9.7	(0-20)	SW846 6010B	05/10-05/13/99	CVJ78154
		Dilution Factor: 1					
Sodium	86	(80 - 120)			SW846 6010B	05/10-05/13/99	CVJ78156
	96	(80 - 120)	6.0	(0-20)	SW846 6010B	05/10-05/13/99	CVJ78157
		Dilution Factor: 1					
Thallium	94	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7815G
	101	(80 - 120)	7.1	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7815H
		Dilution Factor: 1					
Vanadium	91	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ78159
	97	(80 - 120)	6.4	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7815A
		Dilution Factor: 1					
Zinc	94	(80 - 120)			SW846 6010B	05/10-05/12/99	CVJ7815D
	101	(80 - 120)	7.5	(0-20)	SW846 6010B	05/10-05/12/99	CVJ7815E
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A9E070141 **Matrix.....:** SOLID
Date Sampled...: 05/06/99 15:40 **Date Received..:** 05/07/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Recoverable Petroleum Hydrocarbons	WO#: CVHV5112-MS/CVHV5113-MSD					MS Lot-Sample #: A9E070141-012	
	7.5 N	(75 - 125)			MCAWW 418.1	05/19-05/20/99	9139119
	16 N	(75 - 125)	7.8	(0-20)	MCAWW 418.1	05/19-05/20/99	9139119

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9E070141 **Work Order #...:** CVFNN-SMP CVFNN-DUP **Matrix.....:** SOLID

Date Sampled...: 05/04/99 14:15 **Date Received..:** 05/05/99

% Moisture.....: 24

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A9E060101-001		
	76.2	75.5	%	0.89	(0-20)	MCAWW 160.3 MOD	05/17-05/18/99	9137276
		Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9E070141 **Work Order #...:** CVFP8-SMP CVFP8-DUP **Matrix.....:** SOLID

Date Sampled...: 05/04/99 16:50 **Date Received..:** 05/06/99

% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A9E060102-001		
	79.6	79.0	%	0.71	(0-20)	MCAWW 160.3 MOD	05/18-05/19/99	9138134

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9E070141 **Work Order #...:** CVHV2-SMP **Matrix.....:** SOLID
CVHV2-DUP

Date Sampled...: 05/06/99 14:55 **Date Received..:** 05/07/99

% Moisture.....: 15

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A9E070141-011		
	84.6	84.5	%	0.11	(0-20)	MCAWW 160.3 MOD	05/17-05/18/99	9137276

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
IT Corporation	Larry Martin	5-5-99	62114

Address: 1600 W. Carson Street
Telephone Number (Area Code)/Fax Number: 412-497-2000
Lab Number:
Page 1 of 1

City: Pittsburgh   State: PA   Zip Code:
Site Contact: Bill Randall (412) 497-2403
Project Name: ADNY / 792745
Carrier/Waybill Number:
Contract/Purchase Order/Quote No.

Analysis

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	TCL SVOC	TCL VOC (Low)	TCL VOC (High)	TAL Metals	PCBs	Gamma/Alpha/Beta	TCL VOC water	Total Solids
ADNY – Surface – SS01	5-5-99	10:00	Soil	—	3 encore, 3 glass	6	None		X	X	X	X	X			X
Trip Blank TB01	5-5-99	—	water	40	1 glass	1									X	
ADNY – DEMO – SS01	5-5-99	11:10	Soil	120	glass	1	None						X			X
ADNY – WALL – SS01	5-5-99	12:30	Soil	—	3 encore, 4 glass				X	X		X	X			X
ADNY – PW1	5-5-99	15:20	Water	[illegible], 3 [illegible]	3 [illegible], 3 plastic, 4 glass	12	see bottles		X			X	X	X	X	
ADNY – NS – SD01A	5-5-99	17:50	Soil/Sed	—	3 encore, 3 glass	6			X		X	X	X			X

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Turn Around Time Required: ☒ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify): Alcoa

	Date	Time		Date	Time
1. Relinquished By: W. H. Randall	5-5-99	19:30	1. Received By: Jenny Girard	990506	1210
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
IT	Larry Martin	5-6-99	62115

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
1600 W. Carson St	412 497-2000		

City	State	Zip Code	Site Contact
Pittsburgh	PA		Bill Randall

Project Name	Carrier/Waybill Number
Alcmay, Dunkirk NY (ADNY)	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	TCL VOCs	TCL SVOCs	TAL Metals	PCBs	TPH (DRO)	TPH (418.1)	T. Solids					
ADNY-SS-SD001	5-6-99	9:40	Soil	480 ml + encore	3 encore, 7 glass 1pint	7	none		X	X	X	X			X					
ADNY-SDA-SS01	5-6-99	12:50	Soil	" "	" "	7			X	X	X	X			X					
ADNY-SDA-SS02	5-6-99	13:35	Soil	" "	" "	7			X	X	X	X			X					
ADNY-PTO-SS1	5-6-99	14:25	Soil	120 ml	1 glass	1		wi	~~X~~	~~X~~	~~X~~	X			X		PCB only			
ADNY-TI-SS01	5-6-99	14:55	Soil	120 ml	1 glass	1						X			X					
ADNY-WOT-SS01	5-6-99	15:40	Soil	720 + encore	3 encore, 5 glass, 1 plastic	9			X	X	X	X	X	X	X					
ADNY-WOT-SS02	5-6-99	17:15	Soil	" "	" "	9			X	X	X	X	X	X	X					

Special Instructions

Possible Hazard Identification
- [ ] Non-Hazard
- [ ] Flammable
- [ ] Skin Irritant
- [ ] Poison B
- [x] Unknown

Sample Disposal
- [ ] Return To Client
- [ ] Disposal By Lab
- [ ] Archive For ______ Months

Turn Around Time Required
- [x] Normal
- [ ] Rush

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific (Specify): Alcoa Contract

	Date	Time		Date	Time
1. Relinquished By: [signature]	5-6-99	19:00	1. Received By: [signature] Stephen	5-7-99	10:30
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124

Client	Project Manager	Date	Chain Of Custody Number
IT Corporation	Larry Martin	5-7-99	62116
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
1600 W. Carson St	412-497-2000		
City / **State** / **Zip Code**	**Site Contact**		
Pittsburgh / PA	Bill Randall (412) 497-2403		
Project Name	**Carrier/Waybill Number**		
ADNY			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	Analysis: TCL VOC	TCL SVOC	TAL Metals	PCBs	Total Solids	TPH (DRO)	TPH (418.1)
EB-1 (Equipment Blank)	5-7-99	7:45	Water	380 ml	3 glass 1 plast.	4	as noted		X	X	X	X			
ADNY-FM-SS01	5-7-99	9:10	Soil	600 ml terra	3 glass terra	6	None		X	X	X	X	X		
ADNY-UT-SS01	5-7-99	9:50	Soil	600 ml terra	" "	6			X	X	X	X	X		
ADNY-UT-SS02	5-7-99	10:45	Soil	600 ml terra	" "	6			X	X	X	X	X		
ADNY-DTK-SS01	5-7-99	13:40	Soil	1000 ml terra	3 glass terra	8			X	X	X	X	X	X	X
ADNY-UT-SS03	5-7-99	15:45	Soil	600 ml terra	3 glass terra	6									

Special Instructions

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required
☒ Normal ☐ Rush

QC Level
☐ I. ☐ II. ☐ III.

Project Specific (Specify)
Alcoa

	Date	Time		Date	Time
1. Relinquished By: W. A. [illegible]	5-7-99	6:30	1. Received By: [signature]	990508	11:30
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: IT Corporation
Gateway Plaza,1600 W.Carson St
Pittsburgh PA 15219-1031

Report Date: 05/27/1999
Report Number: 909188
Project: ALUMAX, Dunkirk, NY, 11-5-98
Project Number: 05166

LEAD PAINT SAMPLE ANALYSIS SUMMARY

Lab No.	Client #	Description / Location	Concentration Lead By Weight (%)
909188	001	Green Paint Chips Tracking#:782745-001 Date Received: 05-20-99 Date Analyzed: 05-21-99 Analyst: Napolitan	1.5000
909189	002	White Paint Chips Tracking#:782745-001 Date Received: 05-20-99 Date Analyzed: 05-21-99 Analyst: Napolitan	2.6000
909190	013	Blue Paint Chips Tracking#:782745-001 Paint Room Date Received: 05-20-99 Date Analyzed: 05-21-99 Analyst: Napolitan	0.3100
909191	014	Yellow Paint Chips Tracking#:782745-001 Paint Room Date Received: 05-20-99 Date Analyzed: 05-21-99 Analyst: Napolitan	1.9000

NATIONAL LEAD LABORATORY ACCREDITATION PROGRAM (NLLAP)

AIHA-ELPAT-NIOSH No. 7008 / NYSDOH-ELAP No. 11021

Analysis Methods: ASTM D335-85A "Standard Method To Test For Low Concentrations Of Lead In Paint By Atomic Absorption Spectrophotometry"
EPA SW846-(7420/7421) "Standard Method To Test For Low Concentrations Of Lead In Soils, Sludges and Sediments By AAS"

Comments: Regulatory limit by EPA/HUD guidelines is 0.5% lead by weight in paint. Limit of detection based upon 0.01 mg lead.
Recommend multiple sampling for all samples less than regulatory limit for confirmation.
* Insufficient sample provided to perform QC reanalysis (< 200mg)
** Not enough sample provided to analyze (< 50mg) *** Matrix / substrate interference possible.

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 0805
Telephone: 609-231-9449 Fax: 609-231-981

DAILY QUALITY CONTROL DATA

LEAD SAMPLE ANALYSIS

05-21-99

Run Number	Standard *	Total Lead (mg)	Percent Recovery **
QC990521	Reagent Blank	0.000	N/A
	Blank Spike	0.50	98.0
	LCS Std * 1579	1.380	103.0
	Matrix Spike - LBP	1.520	99.0
	Matrix Spike - Wipe	1.270	102.0
	Matrix Spike - Soil	0.254	108.0
	Matrix Spike - Air	0.050	100.0
	2.5 ppm Standard	0.25	96.0
	10.0 ppm Standard	1.0	99.0
	40.0 ppm Standard	4.0	100.0

ELPAT No. 07008 AIHA Lab No. 444 NIOSH PAT No. 07008 NYS-DOH No. 11021

Analysis Method: ASTM D335-85A "Standard Method To Test For Low Concentrations Of Lead In Paint By Atomic Absorption Spectrophotometry"
EPA SW846 3050 7420/21

Comments:

IATL assumes that all of the sampling methods and data upon which these results are based have been supplied by the client.
Detection limit based upon sample size. Limit of quantitation is 0.01 mg total lead.
Regulatory limit by EPA/HUD guidelines is 0.5% lead by weight in paint.
Recommend multiple sampling for all samples less than regulatory limit for confirmation.
* NIST Traceable
** 80-120% acceptable limits

Analysis Performed By: John A. Napolitan

Date: MAY 2 1 1999

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

ICF KAISER ENGINEERS
IT Corporation

ITC 6.23

CHAIN OF CUSTODY RECORD

№ 5148

PROJ. NO.: 05166
PROJECT NAME: ALLUMAX, Dunkirk, NY
SAMPLERS: (Signature) Steve Sproull

Tracking No: 782745-001
Project #: 782745-0010000

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION ; Results: % Pb		NO. OF CONTAINERS	Bulk Asbestos (PLM)	Lead Paint Analyses					REMARKS
001	11/5/99	11:55		X	999188	1.5 mc	1		X					Green Paint Chips
002		11:56		X	999189	2.6 mc	1		X					White Paint Chips
003		12:02		X			1	X						Siding (Corrugated)
004		12:45		X			1	X						Floor Tile (Beige)
005		12:47		X			1	X						Kick Plate w/ Mastic
006		12:49		X			1	X						Floor Tile (Beige, mottled)
007		12:55		X			1	X						Floor Tile (Beige)
008		13:00		X			1	X						Brown rolled flooring
009		13:20		X			1	X						White, Cellulosic CT
010		14:41		X			1	X						Rolled Flooring, lunchroom, Mosaic
011		14:42		X			1	X						Kick Plate, lunchroom
012		15:30		X	999190	0.31	1	X	X					Paint Room, Blue
013		14:54		X			1	X						Heat Board
014		15:34		X	999191	1.9 mc	1		X					Yellow Paint, Paint Room
015	↓	15:36		X			1	X						Fireproofing, Paint Room

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
W. Randall	5/19/99 17:05				
Relinquished by: (Signature) MAY 20 1999	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature) 3 Day TAT
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

Remarks: Fax Send results to:
→ Bill Randall, IT Corporation
Gateway View Plaza, 1600 W. Carson St.
Pittsburgh PA. 15219-1031

fax: 412-497-2212

820-5 Logs 5/20 950 Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

Analyzed, JMW 5/21/99

RBR 5/28/99

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: IT Corporation
Gateway Plaza,1600 W.Carson St
Pittsburgh PA 15219-1031

Report Date: 05/28/1999
Project: Alumax,Dunkirk,NY,TN782745-001
Project No.: 05166

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 909229
Client No.: 003
Material Description: Gray Transite
Location: Siding (Corrugated)

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Chrysotile	None Detected	None Detected	80

Lab No. 909230
Client No.: 004
Material Description: Tan Floor Tile
Location: w/Yellow Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 909230
Client No.: 004
Material Description: Tan Floor Tile
Location: w/Yellow Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Yellow Mastic				
From Above				

Lab No. 909231
Client No.: 005
Material Description: Brown Rubber
Location: Kick Plate w/Tan/Brown Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: John Hanley
John Hanley

Date: MAY 25 1999

Approved By: Frank E. Ehrenfeld

Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: IT Corporation
Gateway Plaza, 1600 W.Carson St
Pittsburgh PA 15219-1031

Report Date: 05/28/1999
Project: Alumax,Dunkirk,NY,TN782745-001
Project No.: 05166

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 909231 **Material Description:** Brown Rubber
Client No.: 005 **Location:** Kick Plate w/Tan/Brown Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected Tan/Brown Mastic From Above	None Detected	None Detected	None Detected	100

Lab No. 909232 **Material Description:** Tan/Brown Floor Tile
Client No.: 006 **Location:** Mottled w/Tan/Yellow Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC Trace	Chrysotile	None Detected	None Detected	100

Lab No. 909232 **Material Description:** Tan/Brown Floor Tile
Client No.: 006 **Location:** Mottled w/Tan/Yellow Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected Tan/Yellow Mastic From Above	None Detected	None Detected	None Detected	100

Lab No. 909233 **Material Description:** Brown Floor Tile
Client No.: 007 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected (No Mastic)	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: John [illegible]

Date: [illegible] 1999

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: IT Corporation
Gateway Plaza, 1600 W.Carson St
Pittsburgh PA 15219-1031

Report Date: 05/28/1999
Project: Alumax,Dunkirk,NY,TN782745-001
Project No.: 05166

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 909234
Client No.: 008
Material Description: Brown/Gray Linoleum
Location: Rolled Flooring

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Chrysotile	10	Cellulose	70

Lab No. 909235
Client No.: 009
Material Description: Tan/White
Location: Ceiling Tile Cellulosic CT

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	25	Mineral Wool	35
		40	Cellulose	

Lab No. 909236
Client No.: 010
Material Description: Tan/Brown Linoleum
Location: Rolled Flooring Lunch Rm

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	3	Wollastonite	70
		2	Synthetic	
		25	Cellulose	

Lab No. 909237
Client No.: 011
Material Description: Brown Rubber
Location: Kick Plate;Lunch Rm w/Tan/Brown Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: [signature] John [illegible]

Date: [illegible]

Approved By: [signature]
Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: IT Corporation
Gateway Plaza,1600 W.Carson St
Pittsburgh PA 15219-1031

Report Date: 05/28/1999
Project: Alumax,Dunkirk,NY,TN782745-001
Project No.: 05166

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 909237
Client No.: 011
Material Description: Brown Rubber
Location: Kick Plate;Lunch Rm w/Tan/Brown Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Tan/Brown Mastic				
From Above				

Lab No. 909238
Client No.: 012
Material Description: White Insulation
Location: Heat Board

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	20	Cellulose	70
		10	Wollastonite	

Lab No. 909239
Client No.: 015
Material Description: White Insulation
Location: Fireproofing Paint Room

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	85	Mineral Wool	15

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: John Harenza
John Harenza

Date: [illegible] 1999

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

ICF KAISER ENGINEERS
IT Corporation

CHAIN OF CUSTODY RECORD

№ 5148

5/25/99

PROJ. NO.	PROJECT NAME
C5766	ALUMAX, Dunkirk, NY

MAY 20 1999

SAMPLERS: *(Signature)* Steve Spinelli

Tracking No: 782745-001
Project #: 782745-0010000

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	[illegible]	[illegible]	REMARKS
001	11/5/99	11:55		X		1		X	Green Paint Chips
002		11:56		X		1		X	White Paint Chips
003		12:02		X	909229	1	X		Siding (Corrugated)
004		12:45		X	909230	1	X		Floor Tile (Beige)
005		12:47		X	909231	1	X		Kick Plate w/ Mastic
006		12:49		X	909232	1	X		Floor Tile (Beige mottled)
007		12:55		X	909233	1	X		Floor Tile (Beige)
008		13:00		X	909234	1	X		Brown rolled flooring
009		13:20		X	909235	1	X		White, Cellulosic CT
010		14:41		X	909236	1	X		Rolled Flooring, lunchroom, mosaic
011		14:42		X	909237	1	X		Kick Plate, lunchroom
012		15:30		X		1	X	X	Paint Room, Floor
013		14:54		X	909238	1	X		Heat Board
014		15:34		X		1		X	Yellow Paint, Paint Room
015		15:36		X	909239	1	X		Fire Proofing, Paint Room

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
W. Randall	5/19/99 17:05				
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
					[signature]
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	
				Fax Send results to: Bill Randall, IT Corporation, ... 1055 W. Carson St., Pittsburgh PA 15219-1931	

(412) 497-2000

820-5 Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

STATE OF NEW YORK - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
License and Certificate Unit
BUILDING 12, STATE CAMPUS
ALBANY, NY 12240

ASBESTOS HANDLING LICENSE

LICENSE NUMBER: 98-0715
DATE OF ISSUE: 11/25/98
EXPIRATION DATE: 6/30/99

Contractor: IT Corporation
Address: 2200 Cottontail Lane
Somerset NJ 08873-1248

Duly Authorized Representative: Gary E. Wyrwa

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. The licensee verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Richard Cucolo, Director
FOR THE COMMISSIONER OF LABOR

DOSH 432 (1-98)

APPENDIX C

DESCRIPTION OF BORINGS

APPENDIX C

Boring and Sample Descriptions

Swale A/Sample ADNY-SWALE-SS01

Depth	
0-10 inches	Dark brown (organic) mixed clay and silt with 30-40% gravel
10-14 inches	Light brown sand (40%), clay (30%), and gravel (30%), water encountered.
14-18 inches	rounded gravelly (20%), clayey (20%) sand (60%).
18 inches	Refusal (black shale fragments)

HNU=0

Sample ADNY-SWALE-SS01 taken from 0-10 inch interval

Swale B/ No Sample

Depth	
0-8 inches	Dark brown organic clay with dark shale fragments
8 inches	Refusal, dark gray shale

Swale C/ No Sample

Depth	
0-3 inches	Gray shale fragments
3 inches	Refusal – gray shale

Niagara Mohawk/Sample ADNY-NIMO-SS01

(Composite)

Depth	
0-7 inches	Light Brown gravelly (40%), clayey (20%) sand (40%)
7-8 inches	Dark gray shale
8-38 inches	Medium brown clay with orange and gray mottles
38 inches	Refusal – dark gray shale

HNU (PID) = 0 PPM

Railroad Retaining Wall Fill/ADNY-WALL-SS01

ADNY-WALL-SS01 taken at a depth of 2-2.5 feet.
From approximate center of pile
Boring drilled perpendicular to slope.

0-2.5 feet	Medium brown organic clay (40%) with shale (60%)

HNU = 0 ppm
Radmeter = Background 20 uR/hr

Southern Disturbed Area/ADNY-SDA-SS01

Depth (inches)
0-2 Macadam
2-8 light brown clay (30%), sand (30%), and gravel (30%)
8-13 clay (15%), sand (30%), and gravel (55%) with slag and coal.
13-19 medium brown clay
19 Refusal – Shale
HNU = 0 ppm
Radmeter = Background
Sample collected from 8-13 inch interval

Southern Disturbed Area/ADNY-SDA-SS02

Depth (inches)
0-2 Macadam
2-13 Light brown clay (25%), sand (35%) and gravel (40%)
13-20 Gray clay with shale fragments
20 Gray shale
HNU = 0 ppm
Radmeter = Background

Southern Disturbed Area/Boring SDA-A/No Sample

Depth (inches)
0-12 light brown clay (20%), sand (30%), and gavel (50%)
12 Refusal, Shale
HNU = 0 ppm
Radmeter = Background

Southern Disturbed Area/Boring SDA-B

Depth (inches)
0-15 medium brown sand (45%), clay (15%), and gravel (40%)
15 Refusal, gray shale
HNU = 0
Radmeter = Background

Former Transformer/ADNY-T1-SS01

Depth (inches)
0-5 concrete
5-11 slag
11-12 sandy loam (25%) and gravel (75%)
HNU = 0 PPM
Radmeter = Background
Sample taken from 11-12 inch interval
Staining Not Noted

Potential Transformer Oil/ADNY-PTO-SS01

Depth (inches)
0-6 Brick
6-12 Slightly discolored, dark brown sand with some gravel
HNU = 0 PPM
Radmeter = Background

Waste Oil Tank/ADNY-WOT-SS01

Depth (inches)
0-12 Dark brown loam with gravel
No apparent staining
HNU = 0 PPM
Radmeter = Background <20 uR/hr

Waste Oil Tank/ADNY-WOT-SS02

Depth (inches)
0-6 Dark brown loam
No apparent staining
HNU = 0 PPM
Radmeter = Background

Fill Material/ADNY-FM-SS01

Depth (inches)
0-15 yellow brown sand
15-36 medium brown loam with coal and shale fragments
36 Refusal
HNU = 0 PPM
Radmeter = Background
Sample collected from 15 to 36 interval

Former Utility Location/ADNY-UT-SS01

Depth (inches)
0-6 Concrete
6-18 Black crushed slag
18-66 gray clay with orange and yellow mottles
66 Refusal, shale bedrock
HNU = 0 PPM
Radmeter = Background
Sample from 60 to 66 inches

Former Utility Location/ADNY-UT-SS02

Depth (inches)
0-6 Concrete
6-18 Black crushed slag and cinders
18-26 gray clay
26 Refusal, shale bedrock
HNU = 0 PPM
Radmeter = Background
VOC from top of clay
All other parameters are a composite of 6-26 depth interval

Former Utility Location/ADNY-UT-SS03

Depth (inches)
0-36 medium brown clay with <10% gravel
36 Refusal
VOC from bottom 6 inches
Other parameters are a composite of the whole boring

Removed Diesel Tank/ADNY-DTK-SS01

Depth (inches)
0-4 Concrete
4-80 clay with cobbles
80 refusal, shale bedrock
HNU = 0 PPM
Radmeter = Background
Sample from 74-80 inch depth interval