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NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
Albany, New York

POST-CLOSURE QUARTERLY LANDFILL MONITORING

Fourth Quarter

Harrison Subresidency

D008873 P.I.N. 8806.51.301
Town of Harrison
Westchester County, New York

October 2001

Prepared By

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NEW YORK STATE DEPARTMENT OF TRANSPORTATION
ALBANY, NEW YORK

HARRISON SUBRESIDENCY
WESTCHESTER COUNTY
POST-CLOSURE MONITORING RESULTS

D008873, PIN 8806.51.301

FOURTH QUARTERLY REPORT
October 2001

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HARRISON SUBRESIDENCY
WESTCHESTER COUNTY
POST-CLOSURE QUARTERLY MONITORING RESULTS
FOURTH QUARTER

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1.0 INTRODUCTION

1.1 Background

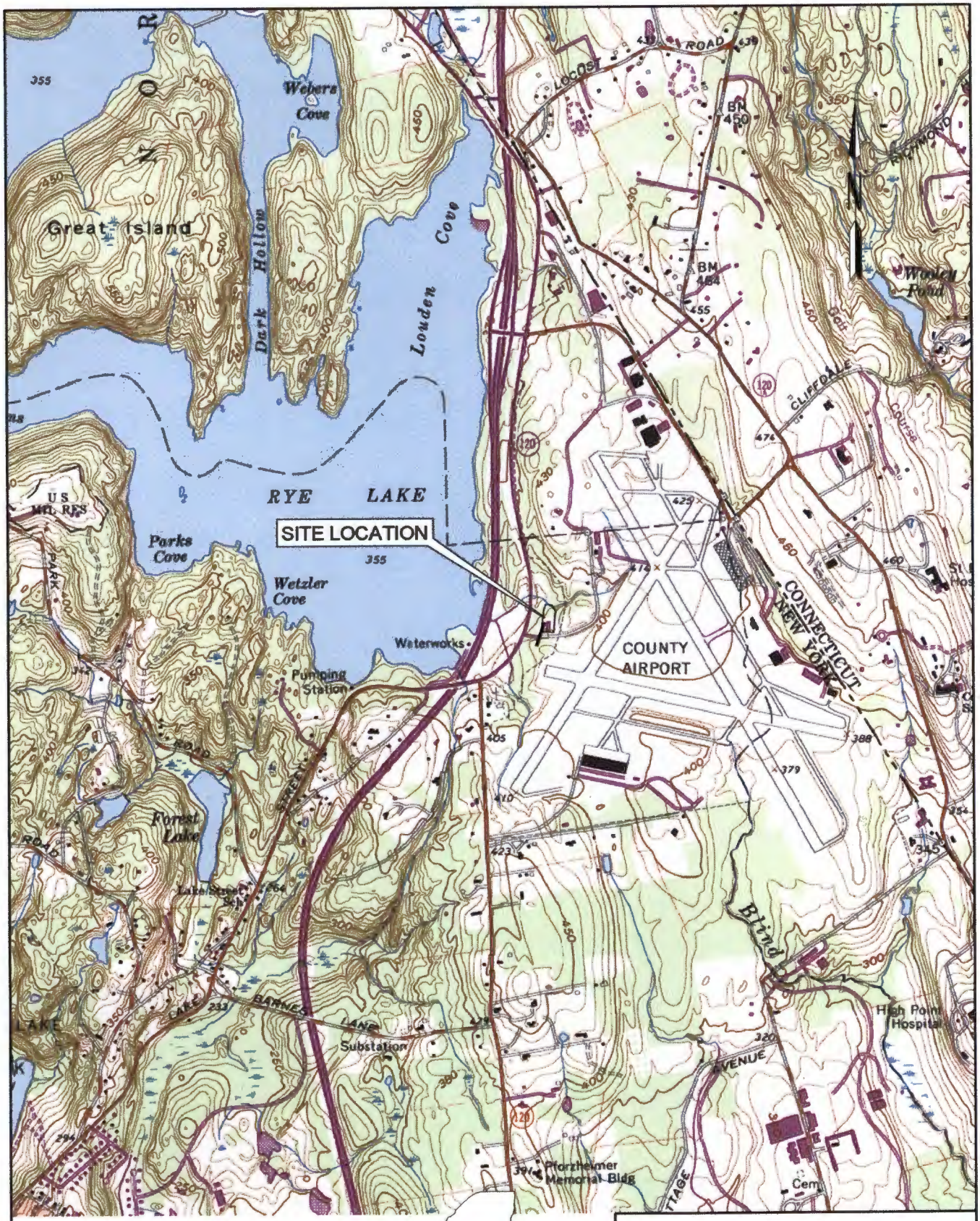
This report presents the results of the July 31/August 1 2001 post-closure sampling and monitoring conducted at the Harrison Subresidency site located in the town of Harrison, Westchester County, New York (Figure 1). The site, a seasonal highway maintenance support and salt storage facility operated by the New York State Department of Transportation (NYSDOT), includes approximately 2.6 acres of landfill area (Figure 2) that was closed in December 1998 in compliance with New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 360 regulations. The fourth quarter sampling and monitoring was conducted to evaluate the environmental impacts of landfill closure through groundwater, surface water and sediment sampling, gas monitoring and a landfill inspection. The quarterly sampling and monitoring program was established to conform to the requirements of 6 NYCRR Part 360 2.15 (K).

1.2 Monitoring Objectives

The objectives of the post-closure sampling and monitoring program are to; 1) evaluate the environmental impacts of the landfill; 2) meet the post-closure monitoring requirements of the NYSDEC and; 3) provide NYSDEC with data after one full year to evaluate and/or modify the existing sampling and monitoring program.

1.3 First Quarter Post-Closure Monitoring

In October 2000, LMS conducted the first quarterly post-closure monitoring of the groundwater, surface water and sediment at the landfill (LMS January 2000). Samples were collected from four on-site and two off-site monitoring wells (Figure 3), three on-site surface water locations and four corresponding sediment locations (Figure 4) and analyzed for TAL metals and chloride. Analytical results indicate that concentrations of several TAL metals (i.e. barium, beryllium, chromium, iron, magnesium, manganese, mercury, selenium and sodium) exceeded the Class GA



Map source: USGS 7.5 minute quadrangle map, Glenville Conn. NY, 1960
Photorevised 1971.

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Figure 1

Site Location

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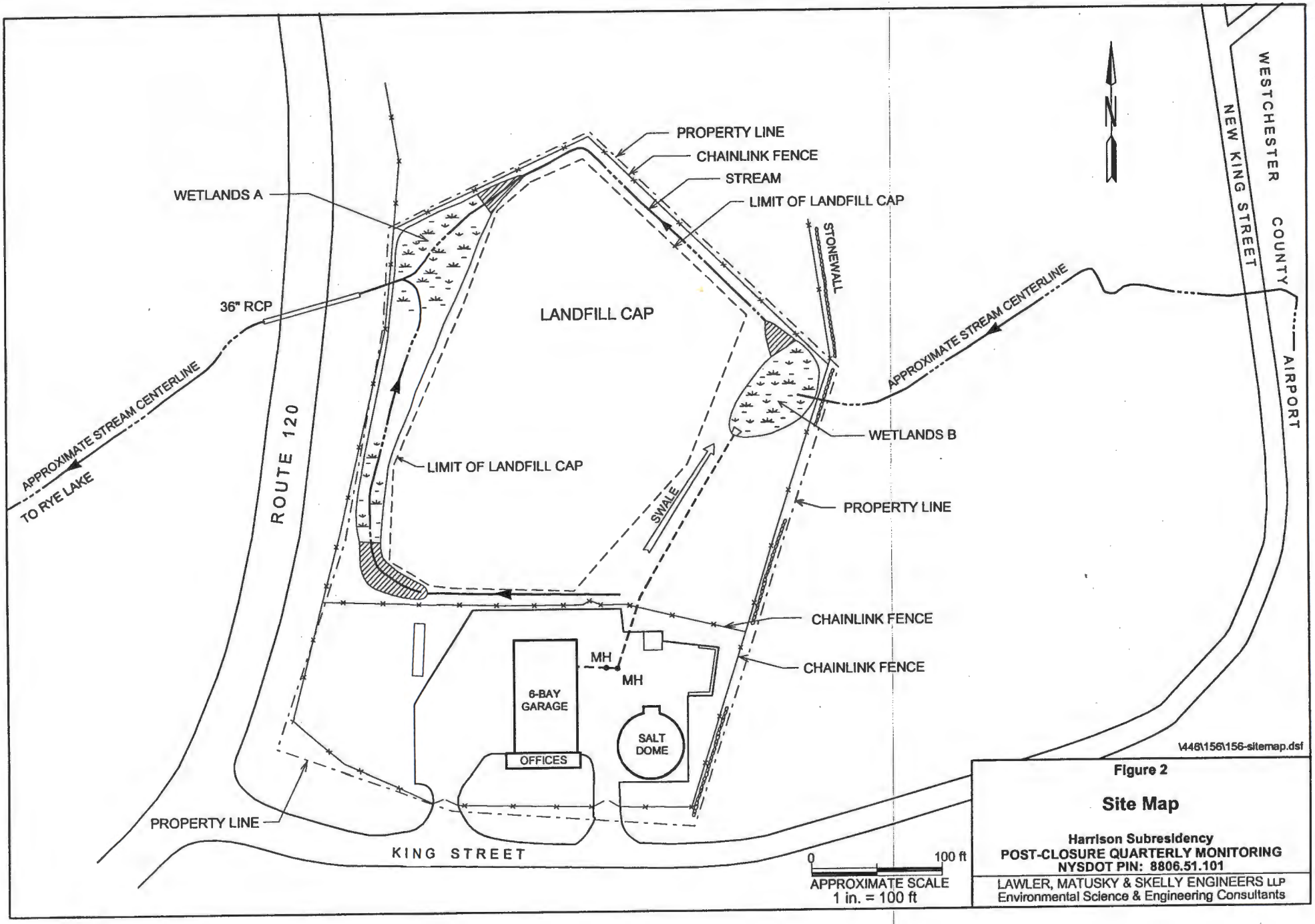

Figure 2

Site Map

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standards or guidance values in unfiltered groundwater and surface water samples. With the exception of selenium and the non-RCRA metals, iron, magnesium, manganese and sodium, no other metals were detected above the standards in the filtered groundwater and surface water samples. Elevated levels of magnesium and sodium were detected in a groundwater sample collected from the upgradient well LMW-2 in concentrations exceeding those detected in two on-site downgradient wells which suggests an additional off-site source. Chloride was detected, above the Class GA standard of 250 ppm, in a groundwater sample collected from the off-site well PC-3. This well is located close to Route 120 and the elevated levels of chloride detected in this well may be due to deicing activities in this area. Lead, manganese and silver were detected above the Lowest Effect Level (LEL) in three sediment samples collected on-site. The presence of metals above the LEL is considered a moderate impact. With the exception of selenium, the elevated concentrations of RCRA metals detected in the groundwater were associated with suspended particulates greater than 0.45 microns and were not in the dissolved phase of the groundwater.

1.4 Second Quarter Post-Closure Monitoring

In January 2001, LMS conducted the second quarterly post-closure monitoring of the groundwater, surface water and sediment at the landfill. Samples were collected from four on-site and two off-site monitoring wells (Figure 3), two downstream surface water locations and two corresponding sediment locations (Figure 4). All samples were analyzed for TAL metals and chloride. Analytical results indicated that chromium, iron, magnesium, manganese, selenium, sodium, and thallium were detected in the samples collected from groundwater and surface water. Elevated levels of iron, manganese, sodium and magnesium in the samples collected from the upgradient well LMW-2 suggest there may be a contributing external source to the concentrations detected in the downgradient wells. Elevated levels of sodium and chloride detected in an off-site well (PC-3), which is located close to Route 120, may be related to runoff from the highway. Of the TAL metals detected in the groundwater, only iron, manganese and sodium were detected above the standards and guidance values in the surface water and only manganese was detected in one sediment sample above its corresponding LEL. Manganese is not hazardous or a RCRA constituent and its presence in the sediment above the LEL is considered a minor impact. Analytical results indicate that, with the exception of thallium, there were no exceedances of RCRA metals in the filtered groundwater or surface water samples. The majority of the TAL metals, detected above the standards, was associated with suspended particulates greater than 0.45 microns and was not in the dissolved phase of the groundwater.

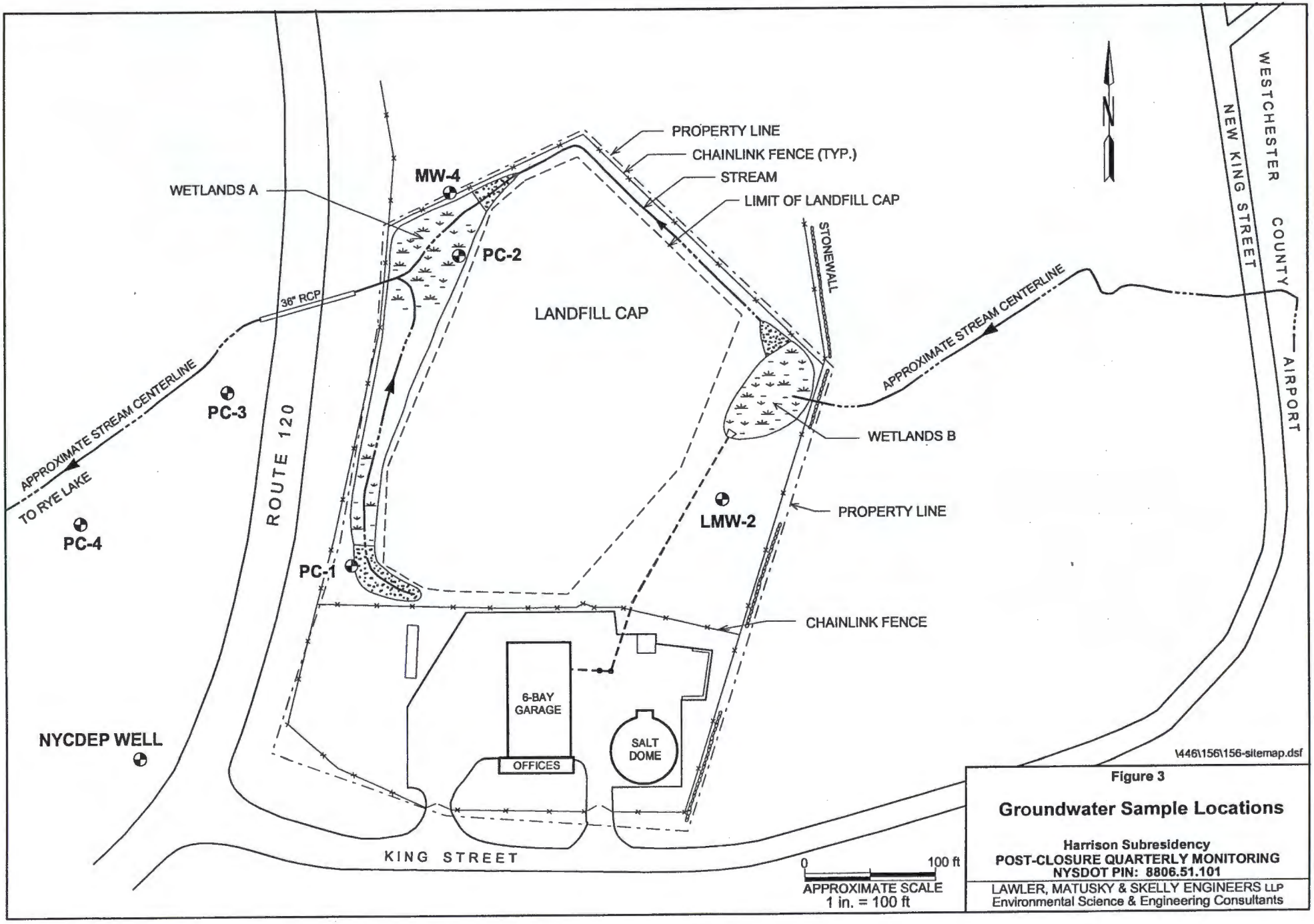

Figure 3

Groundwater Sample Locations

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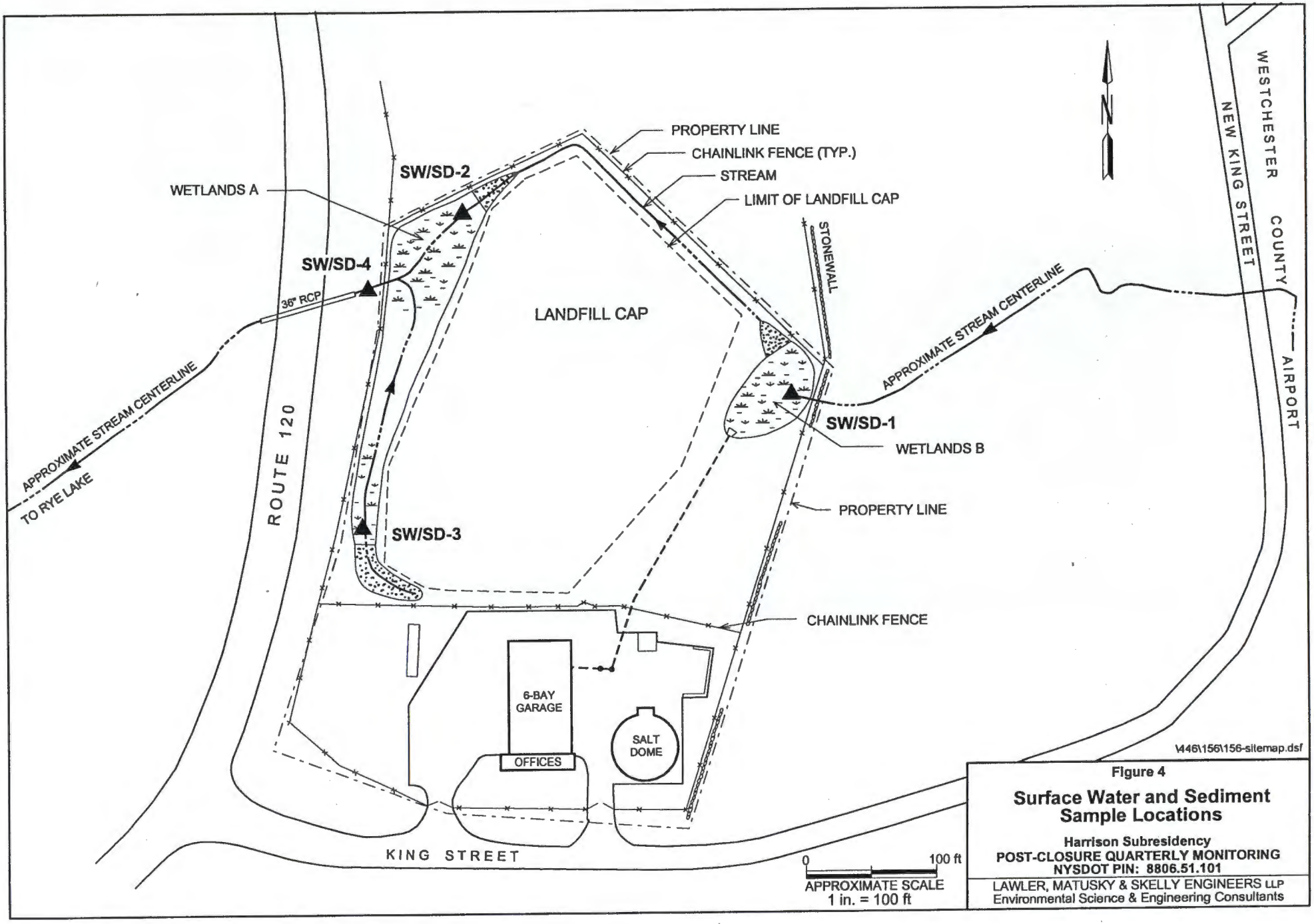

Figure 4

Surface Water and Sediment Sample Locations

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1.5 Third Quarter Post-Closure Monitoring

In June 2001, LMS conducted the third quarterly post-closure monitoring of the groundwater, surface water and sediment at the landfill. Samples were collected from four on-site and two off-site monitoring wells (Figure 3), one upstream and three downstream surface water locations and four corresponding sediment locations (Figure 4). All samples were analyzed for TAL metals and chloride. Analytical results indicated that antimony, chromium, iron, manganese, lead, magnesium, nickel, selenium, sodium and thallium were detected above the NYS standards and/or guidance values in the unfiltered samples collected from groundwater. With the exception of selenium, there were no exceedances of RCRA metals in the filtered groundwater samples. Elevated levels of iron, manganese, sodium and magnesium in the samples collected from the upgradient well LMW-2 suggest there may be a contributing external source to the concentrations detected in the downgradient wells. Results of the surface water analysis indicated that iron, manganese and sodium exceeded the NYS standards and/or guidance values in the unfiltered samples collected from the surface water. Of these, only the non-RCRA metal, sodium exceeded the standard in the filtered samples. The highest concentrations of sodium were detected in the unfiltered sample collected from the upstream location, which suggests a contributing off-site source. The majority of the TAL metals, detected above the standards in the groundwater and surface water, were associated with suspended particulates greater than 0.45 microns and were not present in the dissolved phase. Copper, lead, manganese, silver and zinc were detected, above the lowest effect levels (LELs) in both the upstream and downstream sediment samples. Copper and zinc were detected at higher concentrations in the upstream sample, which suggests a contributing off-site source. Chloride was detected at the NYS standard of 250 mg/l in the offsite well, PC-3. This well is located close to a highway and the elevated chloride level may be, in part, due to deicing activities in this area.

2.0 FIELD INVESTIGATION

2.1 Groundwater Investigation

Prior to landfill closure there were four wells on site; one upgradient well (LMW-2), and three downgradient wells (LMW-1, MW-3, and MW-4). Both LMW-1 and MW-3 were removed during the regrading of the landfill. Four new monitoring wells were installed in October 1998 to assist in the monitoring downgradient of the landfill. PC-1 and PC-2 were located in the wetlands area at the base of the western toe of the landfill slope while PC-3 and PC-4 were located on New York City Department of Environmental Protection (NYCDEP) property on the western side of Route 120 (Figure 3).

2.1.1 Monitoring Well Sampling

As part of the quarterly post-closure sampling and monitoring program, six monitoring wells (LMW-2, MW-4, PC-1, PC-2, PC-3 and PC-4) were purged and sampled for Target Analyte List (TAL) metals and chloride from 31 July 2001 to 1 August 2001.

The upgradient well LMW-2 and the downgradient wells MW-4, PC-2 and PC-4 were purged dry after 5, 6, <1, and 7.5 gallons respectively. The wells were allowed to recharge to more than 90% before sampling. PC-1 and PC-3 were each purged of three well volumes prior to sampling. Purging of each well was performed by using either a small submersible pump, a peristaltic pump or by hand using a dedicated bailer. PC-2 was purged with a peristaltic pump because of a damaged casing (the well casing at PC-2 had sheared sideways allowing only a gap of about 2 cm down the well). After purging, samples were collected using dedicated disposable bailers. The samples were preserved on ice to 4°C and sent, under chain of custody, to a New York State Department of Health (NYSDOH)-approved laboratory for TAL metals (filtered and total) and chloride analyses.

A round of static water level measurements was recorded for all wells prior to sampling activities. Groundwater chemistry measurements (temperature, pH, conductivity, and turbidity) were recorded before, during, and after purging, with a measurement recorded for approximately every well volume. An additional round of static water measurements was recorded for all wells after purging. Groundwater purging information is recorded on the groundwater well sampling logs included in Attachment A.

2.2 Surface Water Sampling

On 31 July 2001 one upstream and two downstream surface water sampling points, SW-1, SW-2, and SW-4 (Figure 4) were sampled. The stream at SW-3 was dry. All surface water samples were collected from approximately the same location staked out during the first quarterly sampling event.

SW-1 was collected from a point located at the eastern section of wetlands B. SW-2 was collected from a point located at the northern portion of wetlands A (western side of the landfill). SW-4 was collected from a point located approximately 17 ft. northeast of the 36-in. reinforced concrete pipe (RCP) culvert that diverts the stream southwest under Route 120 to Rye Lake. The flow at SW-1, SW-2 and SW-4 was very low, <1 cubic foot per second (cfs), and limited to a small channel approximately 3 to 4 inches deep.

The samples were collected by dipping a dedicated laboratory-cleaned stainless steel ladle into the water and transferring the sample to the appropriate pre-cleaned laboratory-supplied container. The containers were iced to 4°C and sent, under chain of custody, to a NYSDOH-approved laboratory for TAL metals and chloride analyses. Water chemistry measurements (temperature, pH, conductivity, and turbidity) were recorded during sample collection and are included in Attachment B.

2.3 Sediment Sampling

Three downstream sediment samples (SD-2, SD-3 and SD-4) and one upstream sediment sample (SD-1) were collected for TAL metals and chloride analyses. Each sediment sample was collected subsequent to, and at the same location as, its corresponding surface water sample (Figure 4). The samples were collected using a dedicated laboratory-cleaned stainless steel spoon and placed directly into the appropriate pre-cleaned laboratory-supplied sample container. Each sample container was iced to 4°C and sent, under chain of custody, to a NYSDOH-approved laboratory for analysis. The sample depth, texture, color and odor were noted and are included in Attachment B.

2.4 Gas Monitoring

In conformance with the June 2000 Post-Closure Operations and Maintenance Manual, a gas monitoring program was instituted to verify that any gases, produced as a result of the natural decomposition of waste, do not pose a hazard to health or safety. The program includes the measurement of concentrations of methane or other explosive gases, hydrogen sulfide and volatile organic compounds (VOCs) at each of four gas vents and around the perimeter of the landfill (Figure 5).

Methane and other explosive gases were measured with a combustible gas indicator (CGI) around the perimeter of landfill and gas vents. Gas vent readings were obtained by inserting the instrument detector probe into the vent. The CGI was set to sound an alarm if the readings exceeded 10 % of the lower explosive limit (LEL) of methane. In addition, alarms were set at 10% of the LEL of hydrogen sulfide, 25 parts per million (ppm) of carbon monoxide and 19.5% and 23.5% of oxygen. No readings were detected above the preset alarm levels at the gas vents or the perimeter of the site.

VOCs were measured with a photoionization detector (PID) and a flame ionization detector (FID) (with and without the methane filter) at the perimeter of the landfill and at each of the four gas vents. There were no readings, above background, at the vents or the perimeter of the landfill. An air monitoring field data sheet is included in Attachment C.

2.5 Inspections

All six groundwater monitoring wells were inspected and, with the exception of PC-2, were found to be good condition. As noted in Section 2.1.1 the well casing at PC-2 had sheared sideways allowing only a gap of about 2 cm down the well. The landfill was inspected and, with the exception of a few areas devoid of vegetation (western side of the landfill), was found to be in good condition. The drainage swales were inspected and found to be in good condition. All four gas vents were also inspected and were found to be in good condition. No vermin or vector were noted on the landfill.

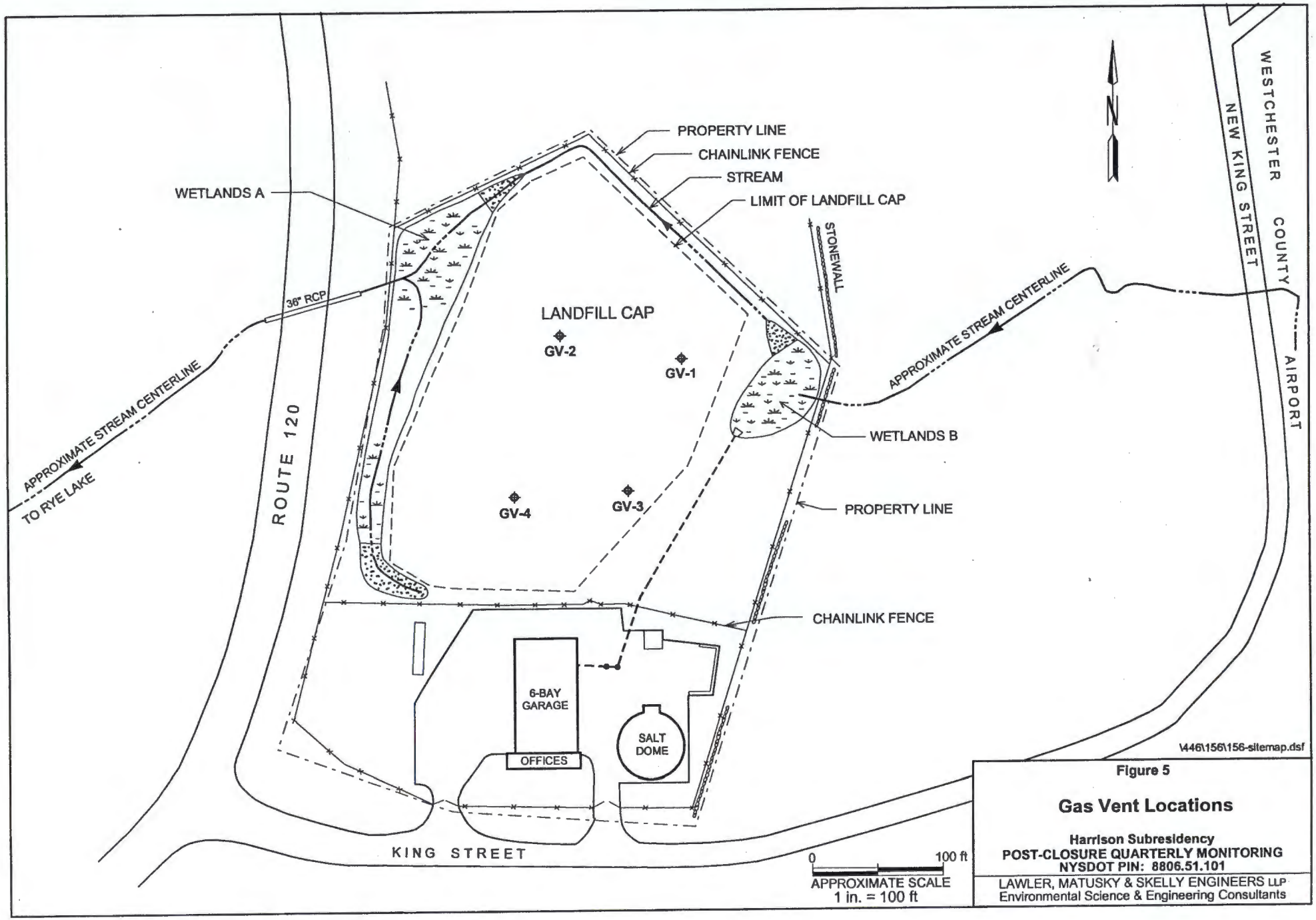

Figure 5

Gas Vent Locations

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3.0 ANALYTICAL RESULTS

3.1 Groundwater Results

Filtered and unfiltered groundwater samples were collected on 31 July 2001 and 1 August 2001 from four on-site (LMW-2, MW-4, PC-1 and PC-2) and two off-site (PC-3 and PC-4) monitoring wells and were analyzed for TAL metals and chloride. Groundwater samples were analyzed according to NYSDEC Analytical Services Protocol (ASP). Analytical results for the filtered and unfiltered groundwater samples are presented in Table 1 and a copy of the analytical laboratory report is presented in Attachment D. Field parameters for temperature, pH, specific conductance, and turbidity are provided on the groundwater well sampling logs included in Attachment A. Results of the analyses indicate that nineteen TAL metals were detected in the groundwater samples.

Aluminum was detected in the unfiltered groundwater samples collected from each well. Aluminum concentrations range from 110 parts per billion (ppb) in the on-site well PC-2 to 21,000 ppb in PC-1. With the exception of PC-1, aluminum was not detected in the filtered samples.

Antimony was detected in the unfiltered sample collected from MW-4 at 2.5 ppb.

Arsenic was detected at 3.1 ppb in the unfiltered sample collected from PC-2.

Barium was detected in both the filtered and unfiltered samples collected from all six wells. Barium concentrations range from 99 ppb (PC-4) to 420 ppb (PC-3) in the unfiltered samples and from 46 ppb (PC-1) to 370 ppb (PC-3) in the filtered samples. The concentrations of barium detected in the filtered samples were lower than those detected in the unfiltered samples.

Beryllium was detected at 1.8 ppb in the unfiltered sample collected from MW-4.

Calcium was detected in all the unfiltered and filtered samples. Calcium concentrations range from 33,000 ppb (PC-1) to 220,000 ppb (PC-3) in the unfiltered samples and from 30,000 ppb (PC-1) to 190,000 ppb (PC-3) in the filtered samples.

Chromium was detected in the unfiltered samples collected from LMW-2 (34 ppb), MW-4 (18 ppb) and PC-1 (47 ppb). Chromium was not detected in the filtered samples.

TABLE 1

GROUNDWATER DATA SUMMARY

Fourth Quarter (July/August 2001)

Harrison Subresidency

NYSDOT

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PARAMETER	LMW-2	FIL LMW-2	MW-4	FIL MW-4	PC-1	FIL PC-1	PC-2	FIL PC-2	PC-3	FIL PC-3	PC-4	FIL PC-4	NATURAL AMBIENT GROUNDWATER RANGES (n)	NYSDEC CLASS GA STANDARDS (a)
TAL METALS (ug/L)														
Aluminum	11000	ND	4100	ND	21000	170	110	ND	2800	ND	1600	ND	<5.0 - 1000	NS
Antimony	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	3
Arsenic	ND	ND	ND	ND	3.1	ND	ND	ND	ND	ND	ND	ND	<1.0 - 30	25
Barium	290	150	220	130	370	46	170	120	420	370	99	84	10 - 500	1000
Beryllium	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	3.0 GV
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	5
Calcium	90000	92000	68000	69000	33000	30000	65000	70000	220000	190000	40000	40000	1000 - 150000	NS
Chromium	34	ND	18	ND	47	ND	ND	ND	ND	ND	ND	ND	<1.0 - 5.0	50
Cobalt	15	ND	21	25	17	ND	5.1	4.7	3.1	ND	2.2	ND	<10	NS
Copper	28	4.1	7.4	ND	46	ND	ND	ND	7.8	ND	ND	ND	<1.0 - 3	200
Iron	21000	ND	98000	39000	35000	210	68000	40000	6500	130	5100	ND	10 - 10000	300 (m)
Lead	6.6	ND	9.8	3.6	9.7	ND	ND	ND	ND	ND	ND	ND	<15	25
Magnesium	37000	33000	21000	21000	14000	5500	20000	22000	58000	50000	11000	11000	1000 - 50000	35000 GV
Manganese	1700	600	32000	33000	6100	910	15000	16000	620	640	150	120	<1.0 - 1000	300 (m)
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	0.7
Nickel	33	8.8	8.1	ND	38	ND	ND	ND	ND	ND	11	7.4	<10 - 50	100
Potassium	9600	5100	4100	3700	10000	3000	3200	3100	10000	9500	5100	4900	1000 - 10000	NS
Selenium	ND	ND	8.4	4.7	4.9	ND	6.6	ND	ND	ND	ND	ND	<1.0 - 10	10
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5	50
Sodium	49000	49000	36000	38000	130000	120000	67000	68000	130000	130000	45000	46000	500 - 120000	20000
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	0.5 GV
Vanadium	32	6.5	22	7.2	74	3.9	8.9	5.2	15	8	10	4.6	<1.0 - 10	NS
Zinc	59	29	39	31	120	5.9	16	7.7	24	10	22	15	<10 - 2000	2000 GV
Chloride (mg/L)	27	*	55	*	48	*	79	*	580	*	81	*	N/A	250

(a) - NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1). June 1998, revised April 2000.
GV - Guidance value.
(m) - Sum of Iron and Manganese not to exceed 500 ug/L.
NS - No standard.
(n) - Dragun, J., The Soil Chemistry of Hazardous Materials.
* - Not analyzed.
N/A - Not applicable.
ND - Not detected at analytical detection limit.

Cobalt was detected in all unfiltered samples and two filtered samples. Cobalt concentrations range from 2.2 ppb in the unfiltered sample collected from PC-4 to 25 ppb in the filtered sample collected from MW-4.

Copper was detected in four unfiltered samples (7.4 ppb to 46 ppb) and one filtered sample (4.1 ppb).

Iron was detected in all the unfiltered samples and four of the filtered samples. Iron concentrations range from 130 ppb in the filtered sample collected from PC-3 to 98,000 ppb in the unfiltered sample collected from MW-4. Iron concentrations detected in the filtered samples were lower than those detected in the unfiltered samples.

Lead was detected in three unfiltered samples and one filtered sample. The highest lead concentration was detected in the unfiltered sample collected from MW-4 at 9.8 ppb. The concentration detected in the corresponding filtered sample was 3.6 ppb.

Magnesium was detected in both the filtered and unfiltered samples collected from all six wells. Magnesium concentrations range from 5,500 ppb in the filtered sample collected from PC-1 to 58,000 ppb in the unfiltered sample collected from the off-site well PC-3.

Manganese was detected in both filtered and unfiltered samples. The lowest manganese concentration was detected in the filtered sample collected from PC-4 at 120 ppb. The highest concentration, 33,000 ppb, was detected in the filtered sample collected from MW-4.

Nickel concentrations, detected in the filtered and unfiltered samples, range from 7.4 ppb in the filtered sample collected from PC-4 to 38 ppb in the unfiltered sample collected from PC-1. The concentrations of nickel detected in the filtered samples were lower than the concentrations detected in the unfiltered samples.

Potassium was detected in both the filtered and unfiltered samples collected from all six wells. The concentrations range from 3,000 ppb in the filtered sample collected from PC-1 to 10,000 ppb in the unfiltered samples collected from PC-1 and PC-3.

Concentrations of selenium were detected in three unfiltered samples and one filtered sample. The highest selenium concentration, 8.4 ppb, was detected in MW-4. The concentration detected in the corresponding filtered sample was 4.7 ppb.

Sodium was detected in both the filtered and unfiltered samples collected from all six wells. Sodium concentrations range from 36,000 ppb in the unfiltered sample collected from MW-4 to 130,000 ppb in the unfiltered sample collected from PC-1 and both the unfiltered and filtered samples collected from the off-site well PC-3.

Vanadium was detected in the filtered and unfiltered samples collected from all the wells. The concentrations range from 3.9 ppb in the filtered sample collected from PC-1 to 74 ppb in the unfiltered sample collected from PC-1. Vanadium concentrations detected in the filtered samples were lower than the concentrations detected in the unfiltered samples.

Zinc was detected in the filtered and unfiltered samples collected from all six wells. Zinc concentrations range from 5.9 ppb in the filtered sample collected from PC-1 to 120 ppb in the unfiltered sample collected from PC-1. The concentrations of zinc detected in the filtered samples were lower than those detected in the unfiltered samples.

Chloride was detected in all six unfiltered groundwater samples. Chloride concentrations range from 27 ppm in the upgradient well LMW-2 to 580 ppm in the off-site well PC-3.

The filtered and unfiltered analytical results suggest that a large number of the TAL metals, detected in the samples, are associated with the suspended solids portion, which typically do not migrate with the groundwater. Field-measured groundwater turbidities were greater than 200 nephelometric turbidity units (NTUs) in most of the wells. Turbidity data is included in the well sampling logs located in Attachment A.

3.2 Surface Water Results

Three surface water samples were collected on 31 July 2001 and analyzed for TAL metals (filtered and unfiltered) and chloride. Surface water samples were analyzed according to NYSDEC ASP. Analytical results are presented in Table 2 and a copy of the analytical laboratory report is presented in Attachment D. Field parameters for temperature, pH, specific conductance, and turbidity are provided on the surface water sampling logs included in Attachment B. Results of the TAL metals analyses indicate that twelve metals were detected in the surface water samples.

Aluminum was detected in all three unfiltered surface water samples. Aluminum concentrations ranged from 450 ppb in SW-1 to 1100 ppb in SW-4. There were no concentrations of aluminum detected in any of the filtered samples.

TABLE 2

SURFACE WATER DATA SUMMARY

Fourth Quarter (July/August 2001)

Harrison Subresidency

NYSDOT

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PARAMETER	SW-1	FIL SW-1	SW-2	FIL SW-2	SW-4	FIL SW-4	NATURAL AMBIENT GROUNDWATER RANGES (n)	NYSDEC CLASS GA STANDARDS (a)
TAL METALS (ug/L)								
Aluminum	450	ND	540	ND	1100	ND	<5.0 - 1000	NS
Antimony	ND	ND	ND	ND	ND	ND	N/A	3
Arsenic	ND	ND	ND	ND	ND	ND	<1.0 - 30	25
Barium	52	37	30	21	47	25	10 - 500	1000
Beryllium	ND	ND	ND	ND	ND	ND	<10	3.0 GV
Cadmium	ND	ND	ND	ND	ND	ND	<1.0	5
Calcium	33000	29000	48000	48000	50000	48000	1000 - 150000	NS
Chromium	ND	ND	ND	ND	ND	ND	<1.0 - 5.0	50
Cobalt	ND	ND	ND	ND	ND	ND	<10	NS
Copper	6.4	ND	ND	ND	4.5	ND	<1.0 - 3	200
Iron	1000	ND	960	ND	4100	ND	10 - 10000	300 (m)
Lead	ND	ND	ND	ND	6.5	ND	<15	25
Magnesium	17000	16000	15000	15000	15000	15000	1000 - 50000	35000 GV
Manganese	400	95	390	30	620	61	<1.0 - 1000	300 (m)
Mercury	ND	ND	ND	ND	ND	ND	<1.0	0.7
Nickel	ND	ND	ND	ND	ND	ND	<10 - 50	100
Potassium	4000	3800	2000	2000	2100	1900	1000 - 10000	NS
Selenium	ND	ND	ND	ND	ND	ND	<1.0 - 10	10
Silver	ND	ND	ND	ND	ND	ND	<5	50
Sodium	210000	210000	23000	24000	24000	24000	500 - 120000	20000
Thallium	ND	ND	ND	ND	ND	ND	N/A	0.5 GV
Vanadium	8.3	6.8	6.7	5.6	8.6	5.4	<1.0 - 10	NS
Zinc	78	17	26	18	35	11	<10 - 2000	2000 GV
Chloride (mg/L)	290	*	25	*	27	*	N/A	250

* - Not analyzed.

(a) - NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1). June 1998, revised April 2000.

GV - Guidance value.

(n) - Dragun, J., The Soil Chemistry of Hazardous Materials.

N/A - Not applicable.

Barium was detected in both the unfiltered and filtered samples collected from all three sampling locations. Barium concentrations range from 21 ppb in the filtered sample collected from SW-2 to 52 ppb in the unfiltered upstream sample SW-1. The concentrations detected in the filtered samples are lower than those detected in the unfiltered samples.

Calcium was detected in both the unfiltered and filtered samples collected from all three surface water locations at concentrations ranging from 29,000 ppb in the filtered sample collected from SW-1 to 50,000 ppb in the unfiltered sample SW-4.

Copper was detected in two unfiltered samples at 4.5 ppb in the downstream sample collected from SW-4 and at 6.4 ppb in the upstream sample SW-1.

Iron was detected in all three unfiltered samples at 960 ppb (SW-2), 1,000 ppb (SW-1) and 4,100 ppb (SW-4). Iron was not detected in the filtered samples.

Lead was detected in the unfiltered sample, SW-4 at 6.5 ppb.

Magnesium was detected in all unfiltered and filtered samples. Magnesium concentrations range from 15,000 ppb in the filtered and unfiltered samples collected from SW-2 and SW-4 to 17,000 ppb in the unfiltered sample collected from the upstream sampling point SW-1.

Manganese was detected in all unfiltered and filtered samples. Manganese concentrations range from 30 ppb in the filtered sample collected from SW-2 to 620 ppb in the unfiltered sample collected from SW-4. The concentrations of manganese detected in the filtered samples were lower than those detected in the unfiltered samples.

Potassium was detected in all unfiltered and filtered samples. Potassium concentrations range from 1,900 ppb in the filtered sample collected from SW-4 to 4,000 ppb in the unfiltered sample collected from the upstream location, SW-1.

Sodium was detected in all unfiltered and filtered samples. Sodium concentrations range from 23,000 ppb in the unfiltered sample collected from SW-2 to 210,000 ppb in both the unfiltered and filtered sample collected from the upstream location (SW-1).

Vanadium was detected in all filtered and unfiltered samples. Vanadium concentrations range from 5.4 ppb in the filtered sample collected from SW-4 to 8.6 ppb in the unfiltered sample

collected from SW-4. The concentrations detected in the filtered samples are lower than those detected in the unfiltered samples.

Concentrations of zinc were detected in the filtered and unfiltered samples and range from 11 ppb in the filtered sample collected from SW-4 to 78 ppb in the unfiltered sample collected from the upstream location, SW-1. The concentrations detected in the filtered samples are lower than those detected in the unfiltered samples.

Chloride was detected in all three unfiltered surface water samples. The highest zinc concentration, 290 ppm, was detected in the sample collected from the upstream location, SW-1.

3.3 Sediment Data Results

Four sediment samples (one upstream and three downstream) were collected on 31 July 2001 to and were analyzed for TAL metals and chloride. Sediment samples were analyzed according to NYSDEC ASP. Analytical results are presented in Table 3 and a copy of the analytical laboratory report is presented in Attachment D. Sample depths and field observations are provided on the sediment sampling logs included in Attachment B.

Twenty-one TAL metals were detected in the sediment samples. Aluminum (5,000 to 12,000 ppm), antimony (12 ppm), arsenic (1.5 to 8.4 ppm), barium (26 to 97 ppm), beryllium (0.35 to 0.42 ppm), cadmium (0.38 to 0.39 ppm), calcium (1,900 to 72,000 ppm), chromium (9.3 to 46 ppm), cobalt (4.8 to 20 ppm), copper (12 to 980 ppm), iron (14,000 to 85,000 ppm), lead (8.9 to 370 ppm), magnesium (3,400 to 36,000 ppm), manganese (220 to 540 ppm), nickel (11 to 36 ppm), potassium (530 to 2,100 ppm), selenium (1.8 ppm), silver (0.63 to 0.9 ppm), sodium (350 ppm), vanadium (15 to 38 ppm) and zinc (38 to 220 ppm) were detected in the sediment samples. In general the highest concentrations of TAL metals were detected in samples collected from SD-3 and SD-4.

Chloride was detected in the sample collected from the upstream location SD-1 at 99 ppm.

TABLE 3

SEDIMENT DATA SUMMARY

Fourth Quarter (July/August 2001)

Harrison Subresidency

NYSDOT

D008873, PIN 8806.51.101

PARAMETER	SD-1	SD-2	SD-3	SD-4	Sediment Criteria (a) LEL[1]	Sediment Criteria (a) SEL[2]
TAL METALS (mg/kg)						
Aluminum	9300	12000	6700	5000		
Antimony	ND	ND	ND	12	2	25
Arsenic	1.8	5	1.5	8.4	6	33
Barium	59	97	26	45		
Beryllium	0.42	ND	0.35	ND		
Cadmium	ND	0.38	ND	0.39	0.6	9
Calcium	1900	26000	72000	5300		
Chromium	17	28	9.3	46	26	110
Cobalt	6.5	8.9	4.8	20		
Copper	17	29	12	980	16	110
Iron	16000	27000	14000	85000	20000	40000
Lead	8.9	160	62	370	31.0	110
Magnesium	3400	17000	36000	3600		
Manganese	220	450	340	540	460	1100
Mercury	ND	ND	ND	ND	0.15	1.3
Nickel	12	36	11	36	16	50
Potassium	1400	2100	1600	530		
Selenium	1.8	ND	ND	ND		
Silver	0.63	0.69	0.9	ND	1	2.2
Sodium	ND	ND	ND	350		
Thallium	ND	ND	ND	ND		
Vanadium	27	38	15	20		
Zinc	46	150	38	220	120	270
Chloride (mg/kg)	99	ND	ND	ND		

(a) - NYSDEC Technical Guidance for Screening Contaminated Sediments. November 1993, revised January 1999.
1 - Lowest Effect Level
2 - Severe Effect Level
ND - Not detected at analytical detection limit.

4.0 COMPARISON TO APPLICABLE CRITERIA

4.1 Groundwater

The results of the groundwater TAL metals and chloride analyses were compared to current NYSDEC Ambient Water Quality Class GA Standards and Guidance Values (April 2000 Revision).

The results of the TAL metals analyses indicate that four non-RCRA metals, detected in the unfiltered and filtered samples, occurred at concentrations exceeding their respective groundwater criteria (Table 1). As stated in section 3.1, a large number of the TAL metals, detected in the samples, are associated with the suspended solids portion of the groundwater. Groundwater turbidity, measured during sample collection, exceeded 200 NTUs in most of the wells.

Iron and manganese exceeded their combined Class GA standard of 500 ppb in all but one sample (filtered PC-4). The highest combined concentration of iron and manganese was detected in the unfiltered sample collected from MW-4. However, all the combined concentrations of iron and manganese detected in the filtered samples were lower than those detected in the unfiltered samples.

Magnesium exceeded the Class GA guidance value of 35,000 ppb in the unfiltered upgradient sample, LMW-2 and both samples collected from the off-site well, PC-3. The highest concentration (58,000 ppb) was detected in PC-3. The associated filtered sample concentration was lower than the unfiltered concentration but still exceeded the guidance value.

Sodium exceeded the standard of 20,000 ppb in all filtered and unfiltered samples. The highest concentration (130,000 ppb) was detected in the unfiltered sample collected from PC-1 and both unfiltered and filtered samples collected from the off-site well PC-3.

All four TAL metals were detected above the standards and/or guidance values in the upgradient well, LMW-2 which suggests a contributing off-site source.

Chloride was detected above the Class GA standard of 250 ppm in the off-site well PC-3 (580 ppm). The elevated levels of both sodium and chloride detected in PC-3 suggest a contributing off-site source. PC-3 is located near a highway and the elevated levels of sodium and chloride detected in this well may be related to road deicing activities in this area.

4.2 Surface Water

The results of the surface water analyses were compared to current NYSDEC Ambient Water Quality Class GA Standards and Guidance Values (April 2000 Revision).

The results of the TAL metals analyses indicate that three non-RCRA metals, iron, manganese and sodium were detected in the surface water samples at concentrations exceeding their respective criteria (Table 2). Iron and manganese exceeded the combined Class GA standard of 500 ppb in the unfiltered samples collected from the upstream location, SW-1 and both downstream locations, SW-2 and SW-4. The highest combined iron and manganese concentration was detected in SW-4 (4,720 ppb). Iron and manganese were not detected above the combined standard in the filtered samples.

Sodium exceeded the Class GA standard of 20,000 ppb in both the unfiltered and filtered samples collected from the upstream and downstream locations. The highest sodium concentration was detected in the unfiltered and filtered samples collected from the upstream location (SW-1) at 210,000 ppb, which suggests a contributing off-site source.

Chloride was detected above the Class GA standard of 250 ppm in the surface water sample collected from the upstream location, SW-1 (290 ppm), which suggests a contributing off-site source.

4.3 Sediment

The results of the sediment analyses (Table 3) were compared to the current NYSDEC Technical Guidance for Screening Contaminated Sediment (January 1999 Revision).

The results of the TAL metals analyses indicate that concentrations of antimony, arsenic, chromium, copper, iron, lead, manganese, nickel and zinc exceeded the lowest effect level (LEL) and/or the severe effect level (SEL) sediment criteria. Antimony, arsenic, chromium, manganese, nickel and zinc were detected in the three downstream samples (SD-2, SD-3 and SD-4) at concentrations exceeding their respective LEL criteria of (2 ppm, 6 ppm, 26 ppm, 460 ppm, 16 ppm and 120 ppm respectively). According to the NYSDEC Technical Guidance for Screening Contaminated Sediment if only the LEL criterion is exceeded, the impact to the sediment is considered moderate. Antimony, arsenic, chromium, nickel and zinc were not detected above their respective NYS standards in the surface water or groundwater samples.

Copper was detected above the SEL of 110 ppm in the downstream sample collected from SD-4. Copper was also detected (above the LEL of 26 ppm) in the upstream sample SD-1 and the downstream sample, SD-2. The non-RCRA metal, iron, was detected above the SEL of 40,000 ppm in SD-4 and above the LEL of 20,000 ppm in SD-2. Lead was detected above the SEL of 110 ppm in both SD-2 and SD-4 and above the LEL of 31 ppm in SD-3. According to the NYSDEC Technical Guidance for Screening Contaminated Sediments, sediment that exceeds the SEL is considered to be severely impacted. However, only the non-RCRA metal, iron, was detected above the NYS standard in the surface water and groundwater samples.

There is no recommended sediment criterion for chloride.

5.0 COMPARISON WITH PREVIOUS STUDIES

5.1 Groundwater

Results of the fourth quarter groundwater sampling event (July/August 2001) indicate that the concentrations of TAL metals of concern (i.e., those metals exceeding NYSDEC standards or guidance values) show a decrease in the concentrations of RCRA metals (no exceedances), iron, magnesium and manganese. However, the concentrations of sodium, detected in July/August 2001, were higher than detected in the previous sampling event (April 2001). The highest concentration of sodium was detected in the off-site well PC-3, which is located near a highway. In addition, the concentration of chloride detected in this well in July/August 2001 was higher than it was in the April 2001 sampling event. Sodium and chloride are associated with highway deicing activities and these elevated levels may be due, in part, to the proximity of the well to the highway.

5.2 Surface Water

Between April 2001 and July/August 2001 there has been an increase in the concentrations of the non-RCRA metals, iron and manganese in the surface water samples. However, there has been a decrease in the concentrations of RCRA metals (no exceedances) in all samples collected in July/August 2001. The concentrations of sodium, in excess of the NYSDEC standard of 20,000 ppb, have increased in July/August 2001. The largest increase was detected in the sample collected from the upstream location SW-1, from 99,000 ppb (April 2001) to 210,000 ppb (July/August 2001). In addition, there has been an increase in the chloride concentration detected in this upstream sample. This suggests a contributing off-site source.

5.3 Surface Sediments

Between April 2001 and July/August 2001 the concentrations of the TAL metals of concern (antimony, arsenic, chromium, copper, iron, lead, nickel and zinc) have increased in the samples collected from the sediment on the site. However, manganese and silver concentrations have decreased. The highest concentrations were generally detected in the downstream samples, SD-3 and SD-4.

6.0 CONCLUSIONS

Groundwater analytical results indicate that concentrations of iron, manganese, magnesium and sodium (which are not hazardous or RCRA constituents) have been detected in excess of the NYS standards in samples collected from four on-site and two off-site wells. Elevated levels of sodium and chloride were detected in an off-site well that is located near a highway and may be, in part, due to deicing activities in this area. Elevated levels of iron, manganese, sodium and magnesium, in the samples collected from the upgradient well LMW-2, suggest there may be a contributing external source to the concentrations detected in the downgradient wells. The Harrison Subresidency landfill is located approximately 508 ft. downgradient of a local landfill and approximately 574 ft. downgradient of the Westchester County Airport (Figure 6). There are no RCRA metals, in concentrations exceeding the standards, in the groundwater.

In addition, the filtered and unfiltered analytical results suggest that a large portion of the TAL metals, detected in the groundwater samples, is associated with the suspended solids faction (which typically do not migrate with the groundwater) and were not detected in the dissolved phase or were detected at lower concentrations.

Surface water analytical results indicate that concentrations of the non-RCRA metals, iron, manganese and sodium were detected at levels that exceed the NYS standards. There were no exceedances of RCRA metal concentrations detected in the surface water. In addition, the filtered and unfiltered analytical results suggest that a large portion of the TAL metals, detected in the surface water samples, is associated with the suspended solids faction (suspended particulates greater than 0.45 μm in size) and were not detected in the dissolved phase of the surface water or were detected at lower concentrations.

Copper, iron and lead were detected in the downstream sediment samples above their respective SELs. Antimony, arsenic, chromium, manganese, nickel and zinc were detected in the sediment samples above their respective LELs. Copper was also detected, above the LEL, in the sample collected from the upstream location SD-1, which suggests a contributing external source. Antimony, arsenic, chromium, copper, nickel and zinc were not detected above the NYS standards and/or guidance values in the groundwater or surface water samples which indicates there has been no off-site migration of these constituents.

The groundwater, surface water and sediment analytical results indicate there has been no off-site migration of hazardous RCRA metals from the landfill.

Figure 6

Site and Vicinity Location

Harrison Subresidency
POST-CLOSURE QUARTERLY MONITORING
NYSDOT PIN 8806.51.301
Map Source: New York State Department of Transportation
Albany, New York

ATTACHMENT A

LMS Well Sampling Log

Date:	7/31/01
Crew:	MP/JT
Job No:	446-156
Project:	NYSDOT
Project Site:	Harrison SR Landfill

METERS USED

Temp.:	*TLC # 560*
pH:	99-06
Cond.:	*TLC # 560*
Turb.:	Monitek 21 PE

Well ID No.:	LMW-2
Well Condition:	Good
Well Depth/Diameter:	23.95/2"
Well Casing Type:	SS Stickup/PVC
Screened Interval:	Unknown
Casing Ht./Lock No.:	2246
Reference Pt.:	Top of PVC
Depth to Water (DTW)	11.9
Water Column Ht./Vol.	12.05/6.98
Purge Est.:	21 gal.
Purge Method(s):	Ded. Poly Bailer
Purge Date/Time(s):	-
Depth(s):	All
Rates (gpm):	< 1 gpm
Purged Volume:	4 gal.
DTW After Purging:	Well dry
Yield Rate:	L - M - H
Purge Observations:	Water clear then turbid Well dry at 5 gals.

DTW Before Sampling:	13.16
Sample Date/Time:	7/31/01@1300
Sampling Method:	Ded. Poly Bailer
Sampling Depth(s):	All
DTW After Sampling:	-
Chain-of-Custody No.(s):	-
Analytical Lab(s):	Veritech
Sampling Observations:	Water turbid

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	15.7	6.9	0.832	>200
End				

SAMPLE ANALYSES

Parameters	Pres. Meth.	Filter
TAL Metals - Total	HNO3	No
TAL Metals - Filtered	*Ice @ 4°C	Yes
Chloride	Ice @ 4°C	No

* Preserved at Lab.

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	12.6	7.5	0.857	17
2.5	12.0	7.3	0.873	175
5	13.9	6.7	0.842	>200

Comments: HNU - At background

Air Temp: 70

Weather Conditions: Sunny

Crew Chief Signature: [signature] Date: 7/31/01

LMS Well Sampling Log

Date:	7/31/01
Crew:	MP/JT
Job No:	446-156
Project:	NYSDOT
Project Site:	Harrison SR Landfill

METERS USED

Temp.:	TLC # 560
pH:	99-06
Cond.:	TLC # 560
Turb.:	Monitek 21 P E

Well ID No.:	MW-4
Well Condition:	Good
Well Depth/Diameter:	15.05/2"
Well Casing Type:	SS Stickup/PVC
Screened Interval:	Unknown
Casing Ht./Lock No.:	2246
Reference Pt.:	Top of PVC
Depth to Water (DTW)	5.1
Water Column Ht./Vol.	9.95/5.77
Purge Est.:	17.3 gal.
Purge Method(s):	Ded. Poly Bailer
Purge Date/Time(s):	-
Depth(s):	All
Rates (gpm):	< 1
Purged Volume:	6 gal.
DTW After Purging:	Well dry @ 6 gals.
Yield Rate:	L - M - H
Purge Observations:	Water turbid

DTW Before Sampling:	5.55
Sample Date/Time:	7/31/01@1315
Sampling Method:	Ded. Poly Bailer
Sampling Depth(s):	All
DTW After Sampling:	-
Chain-of-Custody No.(s):	-
Analytical Lab(s):	Veritech
Sampling Observations:	Water turbid

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	17.4	7.4	0.834	>200
End				

SAMPLE ANALYSES

Parameters	Pres. Meth.	Filter
TAL Metals - Total	HNO3	No
TAL Metals - Filtered	*Ice @ 4°C	Yes
Chloride	Ice @ 4°C	No

* Preserved at Lab.

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	14.3	6.8	0.959	>200
2	15.3	6.5	0.965	>200
4	13.8	6.5	0.933	>200
6	17.1	6.9	0.891	>200

Comments: HNU - At background

Air Temp:

Weather Conditions:

Crew Chief Signature: T. Schneider Date: 7/31/01

LMS Well Sampling Log

Date:	7/31/01	**METERS USED**	
Crew:	MP/JT	Temp.:	TLC # 11
Job No:	446-156	pH:	98-16
Project:	NYSDOT	Cond.:	TLC # 11
Project Site:	Harrison SR Landfill	Turb.:	LMS # 001

Well ID No.:	PC-1	DTW Before Sampling:	9.1
Well Condition:	Good	Sample Date/Time:	7/31/01@1220
Well Depth/Diameter:	12.0/2"	Sampling Method:	Ded. Poly Bailer
Well Casing Type:	SS Stickup/PVC	Sampling Depth(s):	All
Screened Interval:	2-12'	DTW After Sampling:	-
Casing Ht./Lock No.:	2402	Chain-of-Custody No.(s):	-
Reference Pt.:	Top of PVC	Analytical Lab(s):	Veritech
Depth to Water (DTW)	8.43	Sampling Observations:	Water turbid
Water Column Ht./Vol.	3.57/2.0		
Purge Est.:	6 Gal.		
Purge Method(s):	Ded. Poly Bailer		
Purge Date/Time(s):	-		

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	19.8	7.1	0.717	>200
End				

Depth(s):	All
Rates (gpm):	< 1
Purged Volume:	10 Gal.
DTW After Purging:	
Yield Rate:	L - M - H
Purge Observations:	Water turbid

SAMPLE ANALYSES

Parameters	Pres. Meth.	Filter
TAL Metals - Total	HNO3	No
TAL Metals - Filtered	*Ice @ 4°C	Yes
Chloride	Ice @ 4°C	No

* Preserved at Lab.

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0 #	19.2	7.1	0.887	>200
5 9	18.5	7.3	0.72	90
10	19.4	7.1	0.701	>200

Comments: HNU - At background

Air Temp:

Weather Conditions:

Crew Chief Signature [signature] Date: 7/31/01

LMS Well Sampling Log

Date:	8/1/01
Crew:	MP/JT
Job No:	446-156
Project:	NYSDOT
Project Site:	Harrison SR Landfill

METERS USED

Temp.:	TLC # 560
pH:	99-06
Cond.:	TLC # 560
Turb.:	Monitek 21 PE

Well ID No.:	PC-2
Well Condition:	Casing Damaged
Well Depth/Diameter:	15.05/2"
Well Casing Type:	SS Stickup/PVC
Screened Interval:	5.05-15.05
Casing Ht./Lock No.:	2402
Reference Pt.:	Top of PVC
Depth to Water (DTW)	4.95
Water Column Ht./Vol.	10.1/5.86
Purge Est.:	18 Gal.
Purge Method(s):	Pump w/ded. tubing
Purge Date/Time(s):	-
Depth(s):	All
Rates (gpm):	0.5 gpm
Purged Volume:	<1 Gal. Well dry
DTW After Purging:	
Yield Rate:	L - M - H
Purge Observations:	Water tubid

DTW Before Sampling:	5.25
Sample Date/Time:	8/1/01@1115
Sampling Method:	Ded. Poly tubing.
Sampling Depth(s):	All
DTW After Sampling:	-
Chain-of-Custody No.(s):	-
Analytical Lab(s):	Veritech
Sampling Observations:	

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	19.8	6.9	1.65	47
End				

SAMPLE ANALYSES

Parameters	Pres. Meth.	Filter
TAL Metals - Total	HNO3	No
TAL Metals - Filtered	*Ice @ 4°C	Yes
Chloride	Ice @ 4°C	No

* Preserved at Lab.

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	19.1	6.6	0.968	114

Comments: HNU - At background
*Well is damaged.
Used 0.5 " diam. dedicated tubing to collect samples.

Air Temp:
Weather Conditions:

Crew Chief Signature: F. Schneider Date: 8/1/01

LMS Well Sampling Log

Date:	8/1/01
Crew:	MP/JT
Job No:	446-156
Project:	NYSDOT
Project Site:	Harrison SR Landfill

METERS USED

Temp.:	TLC # 560
pH:	99-06
Cond.:	TLC # 560
Turb.:	Monitek 21 PE

Well ID No.:	PC-3
Well Condition:	Good/New
Well Depth/Diameter:	18.82/2"
Well Casing Type:	SS Stickup/PVC
Screened Interval:	8.82 - 18.82
Casing Ht./Lock No.:	2402
Reference Pt.:	Top of PVC
Depth to Water (DTW)	11.1
Water Column Ht./Vol.	7.72
Purge Est.:	7 Gal.
Purge Method(s):	Whale Pump
Purge Date/Time(s):	-

Depth(s):	All
Rates (gpm):	<1
Purged Volume:	8 Gals.
DTW After Purging:	
Yield Rate:	L - M - H
Purge Observations:	Water turbid

DTW Before Sampling:	10.8
Sample Date/Time:	8/1/01@1045
Sampling Method:	Ded. Poly Bailer
Sampling Depth(s):	All
DTW After Sampling:	-
Chain-of-Custody No.(s):	-
Analytical Lab(s):	Veritech
Sampling Observations:	
	Water turbid

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	14.6	7.1	2.16	>200
End				

SAMPLE ANALYSES

Parameters	Pres. Meth.	Filter
TAL Metals - Total	HNO3	No
TAL Metals - Filtered	*Ice @ 4°C	Yes
Chloride	Ice @ 4°C	No

* Preserved at Lab.

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	15.7	7.7	2.580	>200
4	13.5	7.2	2.62	>200
8	13.8	7.3	2.54	200

Comments: HNU - At background

Air Temp:

Weather Conditions:

Crew Chief Signature: T. Shriver Date: 8/1/01

LMS Well Sampling Log

Date:	8/1/01
Crew:	MP/JT
Job No:	446-156
Project:	NYSDOT
Project Site:	Harrison SR Landfill

METERS USED

Temp.:	TLC # 560
pH:	99-06
Cond.:	TLC # 560
Turb.:	Monitek 21 PE

Well ID No.:	PC-4
Well Condition:	Good/New
Well Depth/Diameter:	16.94/2"
Well Casing Type:	SS Stickup/PVC
Screened Interval:	6.94-16.94
Casing Ht./Lock No.:	2402
Reference Pt.:	Top of PVC
Depth to Water (DTW)	10.14
Water Column Ht./Vol.	6.80/3.94
Purge Est.:	12 Gals.
Purge Method(s):	Ded. Poly Bailer
Purge Date/Time(s):	-
Depth(s):	All
Rates (gpm):	< 1 gpm
Purged Volume:	7.5 Gals. Well dry
DTW After Purging:	
Yield Rate:	L - M - H
Purge Observations:	Water turbid then clear

DTW Before Sampling:	10.3
Sample Date/Time:	8/1/01@1000
Sampling Method:	Ded. Poly Bailer.
Sampling Depth(s):	All
DTW After Sampling:	-
Chain-of-Custody No.(s):	-
Analytical Lab(s):	Veritech
Sampling Observations:	

SAMPLE CHEMISTRIES

	Temp. (°C)	pH	Sp. Cond.	Turb.
Start	15.3	7.2	0.535	17
End				

SAMPLE ANALYSES

Parameters	Pres. Meth.	Filter
TAL Metals - Total	HNO3	No
TAL Metals - Filtered	*Ice @ 4°C	Yes
Chloride	Ice @ 4°C	No

* Preserved at Lab.

PURGE CHEMISTRIES

Vol.	Temp. (°C)	pH	Sp. Cond.	Turb.
0	14.6	7.3	0.250	>200
3	13.9	7.1	0.56	107
4.5	13.5	7.1	0.513	17
7.5	14.0	6.9	0.515	31

Comments: HNU - At background

Air Temp:

Weather Conditions:

Crew Chief Signature: T Schneider Date: 8/1/01

ATTACHMENT B

Date: 7/31/01
Crew: MP/JT
Site: Harrison L.F.
Operation:

FIELD DATA SHEET FOR SURFACE WATER

pH No: 99-06
Therm. No: TLC #560
Turbidity Meter No: MONITEK 21PE
Velocity Meter No: -
Cond. Meter No. TLC #560

STATION No.	SAMPLE DEPTH (ft)	TOTAL DEPTH (ft)	TIME (HHMM)	TEMP (°C)	pH	COND. (µmhos/cm)	TURB. (NTUs)	FLOW MEAS.	SAMPLE BOTTLES				COMMENTS
									SAMPLE PARAMETERS	BOT. Nos.	SAMPLE PARAMETERS	BOT. Nos.	
SW-1	≈3"	3"	0845	16.9	8.0	1.296	16	<1 cfs	TAL METALS unfilt + filt. + Cl⁻				—
SW-2	≈3"	3"	0930	18.4	7.5	0.442	40	"	↓				—
SW-3	—	—	—	—	—	—	—	—	/				DRY
SW-4	≈3"	3"	1330	21.5	7.1	0.449	15	<1 cfs	TAL metals unfilt + filt. + Cl⁻				—

FIGURE 5-4

Date: 7/31/01
Crew: MPJT
Site: Harrison LF

FIELD DATA SHEET FOR SOIL/SEDIMENT SAMPLES

Oper:
Thermometer No:

STA. NO.	TIME	SMPL DPTH	METHOD	TEXT.	CLR.	ODOR	SAMPLE BOTTLES: SAMPLE PARAMETERS	SAMPLE BOTTLES: BOT. Nos.	SAMPLE BOTTLES: SAMPLE PARAMETERS	SAMPLE BOTTLES: BOT. Nos.	COMMENTS
SD-1		~3"	D.E.D. SPOON	Loose/ Gran.	Br	None	TAL METALS + Cl-	(1)			
SD-2		~3"	↓	↓	Br/ Drk Gray	↓	↓	(1)			
SD-3		~3"	↓	↓	Drk Br	↓	↓	(1)			Stream Dry
SD-4		~3"	↓	↓	Br/ gray	↓	↓	(1)			

ATTACHMENT C

AIR MONITORING FIELD DATA SHEET

Site Location: Harrison LF Date: 8/17/01

SAMPLE POINT	TIME (24 hr clock)	INITIALS	% LEL CGI	ppm PID	ppm FID		OBSERVATIONS
GV-1		Jms	< 10%	1.0	< 1.0		All PID & FID
GV-2		Jms	< 10%	< 1.0	< 1.0		readings below
GV-3		Jms	< 10%	< 1.0	< 1.0		or @ site
GV-4		Jms	< 10%	< 1.0	< 1.0		background
SPL		Jms	< 10%	1.0	< 1.0		No readings above
EPL		Jms	< 10%	< 1.0	< 1.0		pre-set alarms
NPL		Jms	< 10%	< 1.0	< 1.0		of CGI.
WPL		Jms	< 10%	< 1.0	< 1.0		

Instrumentation:

CGI Gas Tech - Genesis

PID HNU

FID Foxboro OVA 128

Notes:

NM = Not measured.

ppm = parts per million.

mg/m³ = milligrams per cubic meter.

LEL Lower Explosive Limit

PL = Property line

E = Compass direction

ATTACHMENT D

Hampton-Clarke, Inc.
veritech laboratories

175 Route 46 West, Unit D
Fairfield, NJ 07004
(973) 244-9770
Federal ID: 222679402

Lawler, Metusky & Skelly Engineers

Format: NYDOH-CatA

Project: Harrison Landfill
PO Number:

Samples submitted on: 8/1/01

AB39197
AB39198
AB39199
AB39200
AB39201
AB39202
AB39203
AB39204
AB39205
AB39206
AB39207
AB39208
AB39209
AB39210
AB39211
AB39212

Date: 8/29/01
HCI Project: 08011917

SDG Narrative

Project: NYSDOT Harrison LF
Job: 446-156

Hampton-Clarke, Inc. (HCI) received the following Lawler, Metusky & Skelly Engineers samples on August 1, 2001:

LMS #	HCI #	Type	Analysis
LMW-2 (w) unfiltered	AB39197	Aqueous	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
LMW-2 (w) filtered	AB39198	Aqueous	TAL-METALS (6010B), HG (7470A)
MW-4 (w) unfiltered	AB39199	Aqueous	TAL-METALS (6010B), HG (7471A), CHLORIDE (EPA 325)
MW-4 (w) filtered	AB39200	Aqueous	TAL-METALS (6010B), HG (7470A)
PC-1 (w) unfiltered	AB39201	Aqueous	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
PC-1 (w) filtered	AB39202	Aqueous	TAL-METALS (6010B), HG (7470A)
SW-1 (w) unfiltered	AB39203	Aqueous	TAL-METALS (6010B), HG (7471A), CHLORIDE (EPA 325)
SW-1 (w) filtered	AB39204	Aqueous	TAL-METALS (6010B), HG (7470A)
SW-2 (w) unfiltered	AB39205	Aqueous	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
SW-2 (w) filtered	AB39206	Aqueous	TAL-METALS (6010B), HG (7470A)
SW-4 (w) unfiltered	AB39207	Aqueous	TAL-METALS (6010B), HG (7471A), CHLORIDE (EPA 325)
SW-4 (w) filtered	AB39208	Aqueous	TAL-METALS (6010B), HG (7470A)
SD-1 (s)	AB39209	Soil	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
SD-2 (s)	AB39210	Soil	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
SD-3 (s)	AB39211	Soil	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
SD-4 (s)	AB39212	Soil	TAL-METALS (6010B), HG (7471A), CHLORIDE (EPA 325)

To meet the necessary detection limits for the Aqueous samples, the samples were concentrated during the digestion step (200ml to 100 ml). This step is evident on the result page, were the dilution factor is indicated as 0.5

All metals sample results have been reported to the MDL, as requested by the client, to achieve the detection limits as listed in the ASP Standards. The Method blanks and continuing calibration blanks are based upon the PQL criteria.

Problems associated with these analyses are as follows:

Metals

For Batch 3497 (Aqueous)

The Method Blank for this batch contained 0.008 mg/L of Zinc. This concentration is below our reporting limit, but above the MDL, which the samples have been reported to. The zinc contamination may be related to contamination from the glassware during sample prep.

All Form 1's for metals results show a dilution of 0.5, this is due to the concentrations step during sample preparation.

Sample AB39199 and AB39200 were analyzed at a 2.5 times dilution for Manganese.
Sample AB39203 was analyzed at a 1 times dilution for Sodium.

The following compounds exceeded the MS and MSD criteria:

Element	MS	MSD
Aluminum	194	143
Iron	---	61

The concentration of Aluminum and Iron in the sample exceeded the spike amount added by a factor of 4, therefore the spike criteria does not apply.

The serial dilution exceeded the RPD criteria for vanadium. This suggests that there may be some matrix interference occurring in the sample.

No other problems were encountered in the analysis of these samples.

For batch 3498 (Soil):

The serial dilution exceeded the RPD criteria for Chromium. This suggests that there may be some matrix interference occurring in the sample.

The MS and MSD fell outside the QC limit for the following elements:

Aluminum**	MS-162%	MSD-12%
Antimony	MS-70%	MSD-69%
Calcium**	MS-0%	MSD-0%
Iron**	MS-141%	MSD-0%
Lead	MS-41%	MSD-61%
Magnesium**	---	MSD-12%
Manganese**	MS-0%	MSD-0%

** The sample concentration exceeded the spike amount added by a factor of four, therefore the spike recovery criteria does not apply. The poor spike recovery for the other elements may be related to matrix interference, since the LCS and LCSD recoveries for those elements were within the QC limits.

Wet Chemistry

No problems were encountered in the analysis of these samples.

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

Stan Gilewicz, Laboratory Director

9/5/01
Date

Veritech, 175 Route 46 West, Fairfield, NJ 07004
A Division of HAMPTON-CLARKE, INC. NJDEPE # 14622

CHAIN OF CUSTODY RECORD

PHONE (800) 426-9992
FAX (973) 439-1458

CUSTOMER INFORMATION

CUSTOMER: LMS ENGINEERS
ADDRESS: One Blue HILL PLAZA
TELEPHONE: 845 735 8300
FAX: 845 735 7466
PROJECT: HARRISON LANDFILL
PROJECT MANAGER: B. Williams
PROJECT LOCATION: HARRISON
STATE: NY
PO NUMBER:

REPORT INFORMATION

SEND REPORT TO: MARIA HEINCZ
One Blue HILL PLAZA
Pearl River, NY 10965

SEND INVOICE TO: Finance
Same

PROJECT INFORMATION

TURNAROUND
(CONFIRM RUSH TAT'S WITH LAB)

- [x] STANDARD
- [ ] RUSH
  - [ ] 24 HOURS 100%
  - [ ] 48 HOURS 75%
  - [ ] 72 HOURS 50%
  - [ ] 1 WEEK 25%
  - [ ] 10 DAYS 10%

DELIVERABLES
(PLEASE CHECK BOX)

- [ ] STANDARD
- [ ] WASTE
- [ ] NJ REDUCED
- [ ] HAZSITE
- [ ] ELECTRONIC DELIVERABLE
- [ ] OTHER (SPECIFY)
- [ ] FULL
- [ ] BUST
- [ ] EXCEL
- [ ] CUSTOM

ANALYTICAL REQUESTS

LAB SAMPLE NUMBER (LAB USE ONLY)	SAMPLE IDENTIFICATION	METHANOL BOTTLE #	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE (C)	SAMPLE TYPE: GRAB (G)	SAMPLE MATRIX	No. of Bottles: H2SO4	HNO3	HCL	NaOH	Zinc + NaOH	Ascorbic	NONE	Methanol	Other	ANALYSIS
AB 39197	LMW-2 U		7/31/01	1300		X	W									3	Total & Filtered TAL Metals, Chloride
39198	LMW-2 F																
39199	MW-4 U			1315													
39200	MW-4 F																
39201	PC-1 U			1220													
39202	PC-1 F																
39203	SW-1 U			0845													
39204	SW-1 F																
39205	SW-2 U			0930													
39206	SW-2 F																
39207	SW-4 U			1330													
39208	SW-4 F																
39209	SD-1			0845		X	S									1	TAL Metals & Chloride
39210	SD-2			0930													
39211	SD-3			1210													
39212	SD-4			1330													

SAMPLER CERTIFIES THAT EACH SAMPLE RECEIVED PROPER FIELD PRESERVATION (IF REQUIRED) (INITIALS)

SAMPLE HAZARDS: FLAMMABLE [ ] SKIN IRRITANT [ ] NON-HAZARD [ ] UNKNOWN [ ] NOXIOUS FUMES [ ]

SPECIAL INSTRUCTIONS: Received via fedex

TEMPERATURE UPON RECEIPT: 2.2°C

RELINQUISHED BY: / AGENT OF:	DATE / TIME	RECEIVED BY: / AGENT OF:	DATE / TIME
[signature]	7/31/01 1500	[signature] HCT	8/1/01 915
RELINQUISHED BY: / AGENT OF:	DATE / TIME	RECEIVED BY: / AGENT OF:	DATE / TIME

CONDITION UPON RECEIPT FORM

Veritech

Date Received: 8/1/01 Filed By: [signature]

Client: LMS Project/Account: Harrison Landfill

Veritech Project #: _____

YES	NO	INITIAL CONDITIONS	
✓		[1]	Is there a corresponding Chain of Custody included with the samples?
✓		[2]	Are the samples in a container such as a cooler or ice chest?
✓		[3]	Are the custody seals intact? IF NO, please circle one of the following: missing broken N.A.
2.2 °C		[4]	Please specify the temperature inside the container.

YES	NO	SAMPLE INFORMATION	
✓		[5]	Are the samples properly refrigerated (where required), have they arrived on ice?
✓		[6]	Are the samples within holding times for the parameters listed on the COC? If NO, list parameters and associated samples: _____
✓		[7]	Are all of the sample bottles intact? If NO, specify sample numbers below: broken: _____ leaking: _____
✓		[8]	Are all of the sample labels or numbers legible? If NO, specify: _____
✓		[9]	Do the contents of the container match the COC? If NO, specify: _____
✓		[10]	Is there enough sample sent for the analyses listed on the COC? If NO, specify: _____
✓		[11]	Are the samples preserved correctly (see Preservation Form for actual pH readings)?
		[12]	Are all soil VO(NJ) samples properly preserved in methanol with the correct soil weights (8g - 12g) and accompanied by dry soil? _____

OTHER

[13] Specify: _____

NO.	ACTION	CORRECTIVE ACTIONS

PRESERVATION DOCUMENTATION

Date Received: 8/1/01
Client: LMS
Veritech Project #:
Filed By: AQ
Project: Harrison Landfill

SAMPLE ID:	CONTAINER SIZE	CONTAINER TYPE (PG)	PARAMETER	PRESERVATIVE	pH
MW-2	1 Liter	Plastic	Tal Metals	HNO_3	1
MW-4	↓	↓	↓	↓	1
PC-1					1
SW-1					1
SW-2					1
SW-4	↓	↓	↓	↓	1

337

000

FedEx Express® *USA Airbill*

FedEx Tracking Number 8257 4014 5875

1 From This portion can be removed for Recipient's records.

Date 7/31 FedEx Tracking Number 825740145875

Sender's Name [illegible] Phone 845 735-6300

Company LAWLER MATUSKY & SKELLY ENGINE

Address 1 BLUE HILL PLZ

Dept./Floor/Suite/Room

City PEARL RIVER State NY ZIP 10965

RECIPIENT: PEEL HERE

2 Your Internal Billing Reference [illegible]

3 To

Recipient's Name [illegible] Phone [illegible]

Company

Address

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

[illegible]

Dept./Floor/Suite/Room

City [illegible] State NJ ZIP 07004

8257 4014 5875

0165364384

[illegible] 0235 Recipient's C

PRIORITY OVERNIGHT WED

FedEx.

emp# 326366 31JUL01

Deliver By: 01AUG01 A1

TRK# 8257 4014 5875 FORM 0215

EWR

07004 -NJ-US Z3 NELA

To select locations

One box must be checked.

☐ No ☐ Yes As per attached Shipper's Declaration ☐ Yes Shipper's Declaration not required ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods cannot be shipped in FedEx packaging. ☐ Cargo Aircraft Only

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below. 2.20

☐ Sender Acct. No. in Section 1 will be billed ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check ☐ Obtain Recip Acct. No

Total Packages 1 Total Weight [illegible] Total Charges

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402

INTERN.. CHAIN OF CUSTODY RECORD - REFRIGERATOR #12 ..tech

Client ID: LMS

Location: B5

COMMENTS

2 Boxes

		REMOVED:				RETURNED:			
TEST	SAMPLE No.	DATE	TIME	SIGNATURE	ALTERNATE	DATE	TIME	SIGNATURE	ALTERNATE
TDWI/TDWHg/MeF Filt	39197-208	8/2/01	12:00	RAM		8/2/01	17:30	RAM	
TD-SI/HG	39209-212	8/2/01	1321	PPD		8/2/01	1700	PPD	
%S	39209-12	8/3/01	9:30	Burham		8/3/01	13:00	Burham	
Chloride	(add #'s 39197-207)	8.6.01	12:00	JW		8.6.01	1500	JW	
Chloride	JW ~~39209~~ 39210-12, 39209	8.13.01	8:50	JW		8.13.01	18:00	JW	
Re extract Chloride	39209-12	8.14.01	8:30	JW		8.14.01	17:15	JW	

FOR LOGIN BATCH

DA 39197-212

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39197
Client ID: LMW-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	11000	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	290	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	90000	P
7440473	Chromium	10	34	P
7440484	Cobalt	1.5	15	P
7440508	Copper	3.7	28	P
7439896	Iron	120	21000	P
7439921	Lead	3.6	6.6	P
7439954	Magnesium	160	37000	P
7439965	Manganese	9.0	1700	P
7440020	Nickel	5.7	33	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	32	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497Z

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39197
Client ID: LMW-2 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	9600	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497V

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39197
Client ID: LMW-2 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	49000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39197
Client ID: LMW-2 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	59	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39197
Client ID: LMW-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

MF 9/4

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39198
Client ID: LMW-2 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	150	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	92000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	4.1	P
7439896	Iron	120	U	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	33000	P
7439965	Manganese	9.0	600	P
7440020	Nickel	5.7	8.8	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	6.5	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39198
Client ID: LMW-2 Filtered

Level: low/med

Dilution: 0.5

Batch: 3497

% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	5100	P
7440235	Sodium	110	49000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39198
Client ID: LMW-2 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	29	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39198
Client ID: LMW-2 Filtered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39199
Client ID: MW-4 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	4100	P
7440360	Antimony	2.3	2.5	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	220	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	68000	P
7440473	Chromium	10	18	P
7440484	Cobalt	1.5	21	P
7440508	Copper	3.7	7.4	P
7439896	Iron	120	98000	P
7439921	Lead	3.6	9.8	P
7439954	Magnesium	160	21000	P
7440020	Nickel	5.7	8.1	P
7782492	Selenium	4.2	8.4	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	22	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497Y

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39199
Client ID: MW-4 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	4100	P
7440235	Sodium	110	36000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39199
Client ID: MW-4 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	1.8	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	39	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: T3490A

Lab Code: 14622

Analysis Date: 08/07/2001

Matrix: Water

Lab Sample ID: AB39199
Client ID: MW-4 Unfiltered

Level: low/med
Batch: 3497

Dilution: 2.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7439965	Manganese	45	32000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39199
Client ID: MW-4 Unfiltered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39200
Client ID: MW-4 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	130	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	69000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	25	P
7440508	Copper	3.7	U	P
7439896	Iron	120	39000	P
7439921	Lead	3.6	3.6	P
7439954	Magnesium	160	21000	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	4.7	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	7.2	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497Y

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39200
Client ID: MW-4 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	3700	P
7440235	Sodium	110	38000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39200
Client ID: MW-4 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	31	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med

Batch: 3497

Data File Name: T3490A

Analysis Date: 08/07/2001

Lab Sample ID: AB39200

Client ID: MW-4 Filtered

Dilution: 2.5

% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7439965	Manganese	45	33000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3497SW

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39200
Client ID: MW-4 Filtered

Level: low/med
Dilution: 1

Batch: 3497
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39201
Client ID: PC-1 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	21000	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	3.1	P
7440393	Barium	10	370	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	33000	P
7440473	Chromium	10	47	P
7440484	Cobalt	1.5	17	P
7440508	Copper	3.7	46	P
7439896	Iron	120	35000	P
7439921	Lead	3.6	9.7	P
7439954	Magnesium	160	14000	P
7439965	Manganese	9.0	6100	P
7440020	Nickel	5.7	38	P
7782492	Selenium	4.2	4.9	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	74	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39201
Client ID: PC-1 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	10000	P
7440235	Sodium	110	130000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39201
Client ID: PC-1 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	120	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3497SW

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39201
Client ID: PC-1 Unfiltered

Level: low/med
Dilution: 1

Batch: 3497
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39202
Client ID: PC-1 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	170	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	46	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	30000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	210	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	5500	P
7439965	Manganese	9.0	910	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	3.9	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39202
Client ID: PC-1 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	3000	P
7440235	Sodium	110	120000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39202
Client ID: PC-1 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	5.9	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39202
Client ID: PC-1 Filtered

Level: low/med

Dilution: 1

Batch: 3497

% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39203
Client ID: SW-1 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	450	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	52	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	33000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	6.4	P
7439896	Iron	120	1000	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	17000	P
7439965	Manganese	9.0	400	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	8.3	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497Y

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39203
Client ID: SW-1 Unfiltered

Level: low/med
Dilution: 1

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	210	210000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39203
Client ID: SW-1 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	4000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39203
Client ID: SW-1 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	78	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39203
Client ID: SW-1 Unfiltered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39204
Client ID: SW-1 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	37	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	29000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	U	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	16000	P
7439965	Manganese	9.0	95	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	6.8	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39204
Client ID: SW-1 Filtered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	210	210000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39204
Client ID: SW-1 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	3800	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: W3497B

Analysis Date: 08/06/2001

Lab Sample ID: AB39204
Client ID: SW-1 Filtered
Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	17	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: H3497SW

Analysis Date: 08/06/2001

Lab Sample ID: AB39204
Client ID: SW-1 Filtered
Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39205
Client ID: SW-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	540	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	30	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	48000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	960	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	15000	P
7439965	Manganese	9.0	390	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	6.7	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497Y

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39205
Client ID: SW-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	2000	P
7440235	Sodium	110	23000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39205
Client ID: SW-2 Unfiltered
Dilution: 0.5
% Solid: 0

Level: low/med
Batch: 3497

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	26	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: H3497SW

Analysis Date: 08/06/2001

Lab Sample ID: AB39205
Client ID: SW-2 Unfiltered
Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39206
Client ID: SW-2 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	21	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	48000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	U	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	15000	P
7439965	Manganese	9.0	30	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	5.6	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: W3497Y

Analysis Date: 8/ 6/01

Lab Sample ID: AB39206
Client ID: SW-2 Filtered
Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	2000	P
7440235	Sodium	110	24000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39206
Client ID: SW-2 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	18	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: H3497SW

Analysis Date: 08/06/2001

Lab Sample ID: AB39206
Client ID: SW-2 Filtered
Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39207
Client ID: SW-4 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	1100	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	47	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	50000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	4.5	P
7439896	Iron	120	4100	P
7439921	Lead	3.6	6.5	P
7439954	Magnesium	160	15000	P
7439965	Manganese	9.0	620	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	8.6	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497X

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39207
Client ID: SW-4 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	24000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497W

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39207
Client ID: SW-4 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	2100	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39207
Client ID: SW-4 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	35	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med

Batch: 3497

Data File Name: H3497SW

Analysis Date: 08/06/2001

Lab Sample ID: AB39207

Client ID: SW-4 Unfiltered

Dilution: 1

% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39208
Client ID: SW-4 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	25	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	48000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	U	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	15000	P
7439965	Manganese	9.0	61	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	5.4	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497X

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39208
Client ID: SW-4 Filtered

Level: low/med

Dilution: 0.5

Batch: 3497

% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	24000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497W

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39208
Client ID: SW-4 Filtered

Level: low/med

Dilution: 0.5

Batch: 3497

% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	1900	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39208
Client ID: SW-4 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	11	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3497SW

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39208
Client ID: SW-4 Filtered

Level: low/med
Dilution: 1

Batch: 3497
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: A3489A

Lab Code: 14622

Analysis Date: 08/02/2001

Matrix: Soil

Lab Sample ID: AB39209
Client ID: SD-1

Level: low/med
Batch: 3498

Dilution: 100
% Solid: 79

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440360	Antimony	0.88	U	P
7440382	Arsenic	1.3	1.8	P
7440417	Beryllium	0.35	0.42	P
7440439	Cadmium	0.32	U	P
7440484	Cobalt	0.47	6.5	P
7440508	Copper	0.90	17	P
7439921	Lead	2.4	8.9	P
7439965	Manganese	2.4	220	P
7782492	Selenium	1.3	1.8	P
7440224	Silver	0.47	0.63	P
7440280	Thallium	1.3	U	P
7440622	Vanadium	4.4	27	P
7440666	Zinc	8.5	46	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498Z

Lab Code: 14622
Analysis Date: 8/ 3/01

Matrix: Soil
Lab Sample ID: AB39209
Client ID: SD-1

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 79

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	61	9300	P
7440702	Calcium	170	1900	P
7439896	Iron	82	16000	P
7439954	Magnesium	46	3400	P
7440097	Potassium	38	1400	P
7440235	Sodium	260	U	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Soil
Lab Sample ID: AB39209
Client ID: SD-1

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 79

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440393	Barium	3.4	59	P
7440473	Chromium	1.4	17	P
7440020	Nickel	0.82	12	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3498S

Lab Code: 14622

Analysis Date: 08/07/2001

Matrix: Soil

Lab Sample ID: AB39209
Client ID: SD-1

Level: low/med
Batch: 3498

Dilution: 167
% Solid: 79

Concentration Units: mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.047	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: A3489A

Lab Code: 14622

Analysis Date: 08/02/2001

Matrix: Soil

Lab Sample ID: AB39210
Client ID: SD-2

Level: low/med
Batch: 3498

Dilution: 100
% Solid: 74

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440360	Antimony	0.94	U	P
7440382	Arsenic	1.4	5.0	P
7440417	Beryllium	0.37	U	P
7440439	Cadmium	0.35	0.38	P
7440484	Cobalt	0.50	8.9	P
7440508	Copper	0.96	29	P
7439921	Lead	2.5	160	P
7439965	Manganese	2.6	450	P
7782492	Selenium	1.4	U	P
7440224	Silver	0.51	0.69	P
7440280	Thallium	1.4	U	P
7440622	Vanadium	4.7	38	P
7440666	Zinc	9.1	150	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498Z

Lab Code: 14622
Analysis Date: 8/ 3/01

Matrix: Soil
Lab Sample ID: AB39210
Client ID: SD-2

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 74

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	65	12000	P
7440702	Calcium	180	26000	P
7439896	Iron	87	27000	P
7439954	Magnesium	49	17000	P
7440097	Potassium	40	2100	P
7440235	Sodium	280	U	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Soil
Lab Sample ID: AB39210
Client ID: SD-2

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 74

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440393	Barium	3.6	97	P
7440473	Chromium	1.5	28	P
7440020	Nickel	0.87	36	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3498S

Lab Code: 14622
Analysis Date: 08/07/2001

Matrix: Soil
Lab Sample ID: AB39210
Client ID: SD-2

Level: low/med
Dilution: 167

Batch: 3498
% Solid: 74

Concentration Units: mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.050	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: A3489A

Lab Code: 14622
Analysis Date: 08/02/2001

Matrix: Soil
Lab Sample ID: AB39211
Client ID: SD-3

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 93

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440360	Antimony	0.75	U	P
7440382	Arsenic	1.1	1.5	P
7440417	Beryllium	0.29	0.35	P
7440439	Cadmium	0.28	U	P
7440484	Cobalt	0.40	4.8	P
7440508	Copper	0.77	12	P
7439921	Lead	2.0	62	P
7439965	Manganese	2.1	340	P
7782492	Selenium	1.1	U	P
7440224	Silver	0.40	0.90	P
7440280	Thallium	1.1	U	P
7440622	Vanadium	3.7	15	P
7440666	Zinc	7.2	38	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498Z

Lab Code: 14622
Analysis Date: 8/ 3/01

Matrix: Soil
Lab Sample ID: AB39211
Client ID: SD-3

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 93

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	52	6700	P
7440702	Calcium	140	72000	P
7439896	Iron	70	14000	P
7439954	Magnesium	39	36000	P
7440097	Potassium	32	1600	P
7440235	Sodium	220	U	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Soil
Lab Sample ID: AB39211
Client ID: SD-3

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 93

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440393	Barium	2.9	26	P
7440473	Chromium	1.2	9.3	P
7440020	Nickel	0.69	11	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3498S

Lab Code: 14622
Analysis Date: 08/07/2001

Matrix: Soil
Lab Sample ID: AB39211
Client ID: SD-3

Level: low/med
Dilution: 167

Batch: 3498
% Solid: 93

Concentration Units: mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.040	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: A3489A

Lab Code: 14622

Analysis Date: 08/02/2001

Matrix: Soil

Lab Sample ID: AB39212
Client ID: SD-4

Level: low/med
Batch: 3498

Dilution: 100
% Solid: 79

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440360	Antimony	0.88	12	P
7440382	Arsenic	1.3	8.4	P
7440417	Beryllium	0.35	U	P
7440439	Cadmium	0.32	0.39	P
7440484	Cobalt	0.47	20	P
7440508	Copper	0.90	980	P
7439921	Lead	2.4	370	P
7439965	Manganese	2.4	540	P
7782492	Selenium	1.3	U	P
7440224	Silver	0.47	U	P
7440280	Thallium	1.3	U	P
7440622	Vanadium	4.4	20	P
7440666	Zinc	8.5	220	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498Z

Lab Code: 14622
Analysis Date: 8/ 3/01

Matrix: Soil
Lab Sample ID: AB39212
Client ID: SD-4

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 79

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	61	5000	P
7440702	Calcium	170	5300	P
7439896	Iron	82	85000	P
7439954	Magnesium	46	3600	P
7440097	Potassium	38	530	P
7440235	Sodium	260	350	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: S3498B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Soil
Lab Sample ID: AB39212
Client ID: SD-4

Level: low/med
Dilution: 100

Batch: 3498
% Solid: 79

Concentration Units: Mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7440393	Barium	3.4	45	P
7440473	Chromium	1.4	46	P
7440020	Nickel	0.82	36	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3498S

Lab Code: 14622

Analysis Date: 08/07/2001

Matrix: Soil

Lab Sample ID: AB39212
Client ID: SD-4

Level: low/med
Batch: 3498

Dilution: 167
% Solid: 79

Concentration Units: mg/Kg

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.047	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

3
BLANKS

Name: Veritech

Code: 14622

Data File Name: W3497A

Analysis Date: 08/03/2001

Batch: 3497

Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-BL	CCB	CCB	CCB				M
Aluminum	0.0900000 U	0.1800000 U	0.1800000 U	0.1800000 U	0.1800000 U				P
Antimony	0.0075000 U	0.0150000 U	0.0150000 U	0.0150000 U	0.0150000 U				P
Arsenic	0.0037500 U	0.0075000 U	0.0075000 U	0.0075000 U	0.0075000 U				P
Barium	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Cadmium	0.0017500 U	0.0035000 U	0.0035000 U	0.0035000 U	0.0035000 U				P
Calcium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U				P
Chromium	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Cobalt	0.0100000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
Copper	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Iron	0.1375000 U	0.2750000 U	0.2750000 U	0.2750000 U	0.2750000 U				P
Lead	0.0040000 U	0.0080000 U	0.0080000 U	0.0080000 U	0.0080000 U				P
Magnesium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U				P
Manganese	0.0200000 U	0.0400000 U	0.0400000 U	0.0400000 U	0.0400000 U				P
Nickel	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Selenium	0.0200000 U	0.0400000 U	0.0400000 U	0.0400000 U	0.0400000 U				P
Thallium	0.0050000 U	0.0100000 U	0.0100000 U	0.0100000 U	0.0100000 U				P
Vanadium	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P

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BLANKS

Lab Name: Veritech

Data File Name: W3497W

Lab Code: 14622

Analysis Date: 8/ 6/01

Batch: 3497

Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB						M
[redacted]assium	2.0000000 U	2.0000000 U	2.0000000 U						P

FORM III - IN ILM02.0

3
BLANKS

Lab Name: Veritech Data File Name: W3497Y

Code: 14622 Analysis Date: 8/ 6/01

Batch: 3497

l Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB					M
otassium	2.0000000 U	2.0000000 U	2.0000000 U					P
odium	2.0000000 U	2.0000000 U	2.0000000 U					P

FORM III - IN ILM02.0

3
BLANKS

Lab Name: Veritech Data File Name: W3497Z

Lab Code: 14622 Analysis Date: 8/ 6/01

Batch: 3497

Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-BL	CCB	CCB				M
Potassium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U				P

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3
BLANKS

Lab Name: Veritech Data File Name: W3497V

Lab Code: 14622 Analysis Date: 8/ 6/01

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-EL	CCB	CCB					M
Sodium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U					P

b Name: Veritech Data File Name: W3497X

b Code: 14622 Analysis Date: 8/ 6/01

Batch: 3497

l Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB						M
odium	2.0000000 U	2.0000000 U	2.0000000 U						P

3
BLANKS

Lab Name: Veritech Data File Name: W3497B

Lab Code: 14622 Analysis Date: 08/06/2001

Batch: 3497

Matrix Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-BL	CCB	CCB	CCB				M
Beryllium	0.0075000 U	0.0150000 U	0.0150000 U	0.0150000 U	0.0150000 U				P
Silver	0.0100000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
Zinc	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P

3
BLANKS

Lab Name: Veritech Data File Name: T3490A

Lab Code: 14622 Analysis Date: 08/07/2001

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB					M
Manganese	0.0400000 U	0.0400000 U	0.0400000 U					P

3
BLANKS

Lab Name: Veritech

Data File Name: M3497SW.TXT

Lab Code: 14622

Analysis Date: 08/06/2001

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497 (1)	ICB	CCB	CCB	CCB				M
Mercury	0.7000000 U	0.7000000 U	0.7000000 U	0.7000000 U	0.7000000 U				C

Spike Sample Recovery

Lab Name: Veritech Data File Name: W3497A

Lab Code: 14622 Analysis Date: 08/03/2001

ICP sample ID: 39197 Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		M
Aluminum	5.000	75 - 125	21.9743392	31.6846492	29.1395686	194*	143*		P
Antimony	0.5000	75 - 125	0.0045500 U	0.4708769	0.4702742	94	94		P
Arsenic	0.5000	75 - 125	0.0056100 U	0.4732092	0.4716783	95	94		P
Barium	0.5000	75 - 125	0.5836215	1.0558144	1.0396004	94	91		P
Cadmium	0.5000	75 - 125	0.0029300 U	0.4602249	0.4599140	92	92		P
Calcium	50.000	75 - 125	180.2907320	225.0682890	227.1559200	90	94		P
Chromium	0.5000	75 - 125	0.0689126	0.5454186	0.5394024	95	94		P
Cobalt	0.5000	75 - 125	0.0295648	0.4996877	0.5024761	94	95		P
Copper	0.5000	75 - 125	0.0567432	0.5397991	0.5388842	97	96		P
Iron	5.000	75 - 125	42.7378839	48.6637416	45.7867918	119	61*		P
Lead	0.5000	75 - 125	0.0132403	0.4681138	0.4718824	91	92		P
Magnesium	50.000	75 - 125	73.3503851	119.2524690	119.6940390	92	93		P
Manganese	0.5000	75 - 125	3.3361863	3.7693879	3.7793460	87	89		P
Nickel	0.5000	75 - 125	0.0659542	0.5393998	0.5345900	95	94		P
Selenium	0.5000	75 - 125	0.0083300 U	0.4659996	0.4720057	93	94		P
Thallium	0.5000	75 - 125	0.0090500 U	0.4502536	0.4553621	90	91		P
Vanadium	0.5000	75 - 125	0.0637108	0.5326261	0.5246887	94	92		P

* - Indicates the analyte failed the control limit criteria

U - Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: W3497Z

Lab Code: 14622

Analysis Date: 8/ 6/01

ICP sample ID: 39197

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		M
Potassium	50.000	75 - 125	19.2140000	68.5270000	67.4880000	99	97		P

Indicates the analyte failed the control limit criteria

Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech Data File Name: W3497V

Lab Code: 14622 Analysis Date: 8/ 6/01

ICP sample ID: 39197 Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		
Sodium	50.000	75 - 125	97.3430000	147.4360000	147.7450000	100	101		P

* Indicates the analyte failed the control limit criteria

J Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech Data File Name: W3497B

Lab Code: 14622 Analysis Date: 08/06/2001

ICP sample ID: 39197 Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		M
Beryllium	0.5000	75 - 125	0.0028800 U	0.4760896	0.4762545	95	95		P
Silver	0.5000	75 - 125	0.0044500 U	0.4642498	0.4640428	93	93		P
Zinc	0.5000	75 - 125	0.1177190	0.6051444	0.6382612	97	104		P

* - Indicates the analyte failed the control limit criteria
J - Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

ICP sample ID: 39199

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39199 Non Spike	39199 MS 1 Matrix Spike 1	39199 MS 2 Matrix Spike 2	Rec1	Rec2		M
Mercury	10.000	75 - 125	0.7000000 U	8.6870073	8.9114560	87	89		C

* - Indicates the analyte failed the control limit criteria

U - Indicates the analyte was not detected

8/7/01

Laboratory Control Sample

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec	M
Aluminum	5.000	75-125	4.8594983	97	P
Antimony	0.5000	75-125	0.4874140	97	P
Arsenic	0.5000	75-125	0.4853094	97	P
Barium	0.5000	75-125	0.4993948	100	P
Cadmium	0.5000	75-125	0.4898332	98	P
Calcium	50.000	75-125	49.3856573	99	P
Chromium	0.5000	75-125	0.4969817	99	P
Cobalt	0.5000	75-125	0.5020382	100	P
Copper	0.5000	75-125	0.4854043	97	P
Iron	5.000	75-125	5.0828805	102	P
Lead	0.5000	75-125	0.4900595	98	P
Magnesium	50.000	75-125	47.5087095	95	P
Manganese	0.5000	75-125	0.5011859	100	P
Nickel	0.5000	75-125	0.5008836	100	P
Selenium	0.5000	75-125	0.4631102	93	P
Thallium	0.5000	75-125	0.4897770	98	P
Vanadium	0.5000	75-125	0.4863418	97	P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: W3497Z

Lab Code: 14622 Analysis Date: 8/ 6/01

ICP sample ID: LCSW Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		
Potassium	50.000	75-125	47.5490000	95		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: W3497V

Lab Code: 14622 Analysis Date: 8/ 6/01

ICP sample ID: LCSW Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		
Sodium	50.000	75-125	49.6630000	99		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: W3497B

Lab Code: 14622 Analysis Date: 08/06/2001

ICP sample ID: LCSW Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		M
Beryllium	0.5000	75-125	0.4738409	95		P
Silver	0.5000	75-125	0.4588310	92		P
Zinc	0.5000	75-125	0.5234692	105		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		
Mercury	10.000	75-125	9.9944593	100	M	C

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

BLANKS

Lab Name: Veritech

Data File Name: A3489A

Code: 14622

Analysis Date: 08/02/2001

Batch: 3498

Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB	CCB	CCB	CCB	CCB	CCB	M
Antimony	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	P
Arsenic	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	P
Barium	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	P
Beryllium	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	P
Cadmium	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U	P
Cobalt	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	P
Copper	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	P
Lead	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U	P
Manganese	0.1600000 U	0.1600000 U	0.1600000 U	0.1600000 U	0.1600000 U	0.1600000 U	0.1600000 U	0.1600000 U	P
Selenium	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U	P
Silver	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U	P
Thallium	0.0120000 U	0.0120000 U	0.0120000 U	0.0120000 U	0.0120000 U	0.0120000 U	0.0120000 U	0.0120000 U	P
Vanadium	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	P
Zinc	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U	P

3
BLANKS

Lab Name: Veritech

Data File Name: A3489A

Code: 14622

Analysis Date: 08/02/2001

Batch: 3498

Concentration Units in PPM except Mercury in PPB

Analyte	MB3498mg/kg	CCB	CCB	CCB	CCB				M
ntimony	2.0000000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
rsenic	2.0000000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
eryllium	0.6000000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U				P
Cadmium	0.6000000 U	0.0060000 U	0.0060000 U	0.0060000 U	0.0060000 U				P
Cobalt	2.5000000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U				P
opper	5.0000000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
ead	5.0000000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
anganese	16.000000 U	0.1600000 U	0.1600000 U	0.1600000 U	0.1600000 U				P
Selenium	2.0000000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
Silver	2.5000000 U	0.0250000 U	0.0250000 U	0.0250000 U	0.0250000 U				P
allium	1.2000000 U	0.0120000 U	0.0120000 U	0.0120000 U	0.0120000 U				P
anadium	10.000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U				P
inc	10.000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U				P

3
BLANKS

Lab Name: Veritech Data File Name: S3498Z

Lab Code: 14622 Analysis Date: 8/ 3/01

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	MB3498mg/kg	ICB M-01-BL	CCB	CCB					M	
Aluminum	300.00000 U	3.0000000 U	3.0000000 U	3.0000000 U						P
Calcium	500.00000 U	5.0000000 U	5.0000000 U	5.0000000 U						P
Iron	300.00000 U	3.0000000 U	3.0000000 U	3.0000000 U						P
Magnesium	500.00000 U	5.0000000 U	5.0000000 U	5.0000000 U						P
Potassium	250.00000 U	2.5000000 U	2.5000000 U	2.5000000 U						P
Sodium	500.00000 U	5.0000000 U	5.0000000 U	5.0000000 U						P

BLANKS

Lab Name: Veritech

Data File Name: S3498B

Lab Code: 14622

Analysis Date: 08/06/2001

Batch: 3498

Concentration Units in PPM except Mercury in PPB

Analyte	MB3498mg/kg	ICB M-01-BL	CCB	CCB	CCB				M
Barium	10.000000 U	0.1000000 U	0.1000000 U	0.1000000 U	0.1000000 U				P
Chromium	5.0000000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Nickel	5.0000000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P

3
BLANKS

Lab Name: Veritech Data File Name: M3498S

Lab Code: 14622 Analysis Date: 08/07/2001

Batch: 3498

Concentration Units in PPM except Mercury in PPB

Analyte	MB 3498 Mg/Kg	ICB	CCB	CCB					M
Mercury	0.1419500 U	0.0500000 U	0.0500000 U	0.0500000 U					C

Spike Sample Recovery

Lab Name: Veritech

Data File Name: A3489A

Lab Code: 14622

Analysis Date: 08/02/2001

ICP sample ID: 39211

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39211 Non Spike	39211 MS 1 Matrix Spike 1	39211 MS 2 Matrix Spike 2	Rec1	Rec2		M
ntimony	0.5000	75 - 125	0.0200000 U	0.3477414	0.3439145	70*	69*		P
Arsenic	0.5000	75 - 125	0.0200000 U	0.4993955	0.4955921	100	99		P
Beryllium	0.5000	75 - 125	0.0060000 U	0.4871137	0.4806861	97	96		P
admium	0.5000	75 - 125	0.0060000 U	0.4540812	0.4499730	91	90		P
obalt	0.5000	75 - 125	0.0449763	0.5098993	0.5019216	93	91		P
Copper	0.5000	75 - 125	0.1088496	0.6509255	0.5753253	108	93		P
Lead	0.5000	75 - 125	0.5770848	0.7809562	0.8836466	41*	61*		P
anganese	0.5000	75 - 125	3.1910435	2.9669302	3.1542403	< 0*	< 0*		P
elenium	0.5000	75 - 125	0.0200000 U	0.4840651	0.4769180	97	95		P
Silver	0.5000	75 - 125	0.0250000 U	0.4800555	0.4711102	96	94		P
hallium	0.5000	75 - 125	0.0120000 U	0.4355760	0.4432139	87	89		P
anadium	0.5000	75 - 125	0.1365660	0.5861222	0.5830269	90	89		P
inc	0.5000	75 - 125	0.3534768	0.7876234	0.7922798	87	88		P

* - Indicates the analyte failed the control limit criteria

U - Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech Data File Name: S3498Z

Lab Code: 14622 Analysis Date: 8/ 3/01

ICP sample ID: 39211 Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39211 Non Spike	39211 MS 1 Matrix Spike 1	39211 MS 2 Matrix Spike 2	Rec1	Rec2		M
Aluminum	5.000	75 - 125	62.2700000	70.3880000	62.8600000	162*	12*		P
Calcium	50.000	75 - 125	672.8520000	672.5560000	596.6590000	< 0*	< 0*		P
Iron	5.000	75 - 125	128.5940000	135.6530000	127.7160000	141*	< 0*		P
Magnesium	50.000	75 - 125	336.3740000	375.3450000	342.4240000	78	12*		P
Potassium	50.000	75 - 125	15.2180000	68.7660000	58.6980000	107	87		P
Sodium	50.000	75 - 125	5.0000000 U	46.8950000	45.3270000	94	91		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: S3498B

Lab Code: 14622

Analysis Date: 08/06/2001

ICP sample ID: 39211

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39211 Non Spike	39211 MS 1 Matrix Spike 1	39211 MS 2 Matrix Spike 2	Rec1	Rec2		M
Barium	0.5000	75 - 125	0.2372242	0.7000811	0.6814669	93	89		P
Chromium	0.5000	75 - 125	0.0868616	0.5380062	0.5670406	90	96		P
Nickel	0.5000	75 - 125	0.0994030	0.5425461	0.5361258	89	87		P

* - Indicates the analyte failed the control limit criteria
- Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: H3498S

Lab Code: 14622

Analysis Date: 08/07/2001

ICP sample ID: 39211

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39211 Non Spike	39211 MS 1 Matrix Spike 1	39211 MS 2 Matrix Spike 2	Rec1	Rec2	M
Mercury	10.000	75 - 125	0.8500000 U	7.6780364	8.3635597	77	84	C

* - Indicates the analyte failed the control limit criteria

U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: A3489A

Lab Code: 14622

Analysis Date: 08/02/2001

ICP sample ID: LCS 100

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits		Found	Rec		M
Antimony	90.9	24.8-	157	122.7409690	135		P
Arsenic	51.1	38.0-	64.3	55.3485290	108		P
Beryllium	150	118-	184	155.1756800	103		P
Cadmium	56.2	43.3-	69.1	60.7762100	108		P
Cobalt	43.1	34.2-	51.7	46.3829910	108		P
Copper	133	109-	156	135.5739660	102		P
Lead	67.1	51.1-	83.2	71.0931230	106		P
Manganese	307	248-	365	342.7238980	112		P
Selenium	52.7	39.0-	66.3	59.6124800	113		P
Silver	54.5	40.6-	68.6	58.2889790	107		P
Thallium	106	60.5-	151	117.4891910	111		P
Vanadium	56.1	38.2-	74.0	70.5347040	126		P
Zinc	85.3	66.0-	105	94.8458010	111		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: A3489A

Lab Code: 14622

Analysis Date: 08/02/2001

ICP sample ID: LCS 100 MR

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec	M
Antimony	90.9	24.8- 157	121.6677040	134	P
Arsenic	51.1	38.0- 64.3	57.9189720	113	P
Beryllium	150	118- 184	160.2151780	107	P
Cadmium	56.2	43.3- 69.1	62.1843590	111	P
Cobalt	43.1	34.2- 51.7	47.0414020	109	P
Copper	133	109- 156	139.8797970	105	P
Lead	67.1	51.1- 83.2	72.2667900	108	P
Manganese	307	248- 365	351.8442600	115	P
Selenium	52.7	39.0- 66.3	60.9872990	116	P
Silver	54.5	40.6- 68.6	60.5421750	111	P
Thallium	106	60.5- 151	121.7829590	115	P
Vanadium	56.1	38.2- 74.0	72.9333390	130	P
Zinc	85.3	66.0- 105	99.3093140	116	P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: S3498Z

Lab Code: 14622 Analysis Date: 8/ 3/01

ICP sample ID: LCS 100 Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec	M
Aluminum	8420	3370- 13400	10366.0000000	123	P
Calcium	10500	7840- 13100	10601.9000000	101	P
Iron	13000	7900- 18100	16375.1000000	126	P
Magnesium	2810	2270- 3350	3007.8000000	107	P
Potassium	3280	2560- 4000	3379.6000000	103	P
Sodium	779	528- 1030	733.2000000	94	P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: S3498Z

Lab Code: 14622 Analysis Date: 8/ 3/01

ICP sample ID: LCS 100 MR Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		M
Aluminum	8420	3370- 13400	10842.7000000	129		P
Calcium	10500	7840- 13100	10584.8000000	101		P
Iron	13000	7900- 18100	16656.2000000	128		P
Magnesium	2810	2270- 3350	3116.2000000	111		P
Potassium	3280	2560- 4000	3509.7000000	107		P
Sodium	779	528- 1030	761.6000000	98		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: S3498B

Lab Code: 14622 Analysis Date: 08/06/2001

ICP sample ID: LCS 100 Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		M
Barium	264	203- 324	256.2076140	97		P
Chromium	31.4	25.1- 37.7	34.3785470	109		P
Nickel	99.5	77.9- 121	104.3864310	105		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech Data File Name: S3498B

Lab Code: 14622 Analysis Date: 08/06/2001

ICP sample ID: LCS 100 MR Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits		Found	Rec		
Barium	264	203-	324	264.2025350	100		P
Chromium	31.4	25.1-	37.7	34.8596820	111		P
Nickel	99.5	77.9-	121	105.0980350	106		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: H3498S

Lab Code: 14622

Analysis Date: 08/07/2001

ICP sample ID: LCS

Batch: 3498

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		
Mercury	3940	2690- 5210	4140.4379806	105		C

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Veritech Wet Chem Form 1 Summary

Lab #: AB39197

Lab #: AB39197 | Sample Matrix: Aqueous
Sample ID: LMW-2 Unfiltered | Date Received: 8/1/01

Test Group Name: Chloride EPA 325 | Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	27	mg/l	0.96	1	8/6/01

Lab #: AB39199 | Sample Matrix: Aqueous
Sample ID: MW-4 Unfiltered | Date Received: 8/1/01

Test Group Name: Chloride EPA 325 | Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	55	mg/l	0.96	1	8/6/01

Lab #: AB39201 | Sample Matrix: Aqueous
Sample ID: PC-1 Unfiltered | Date Received: 8/1/01

Test Group Name: Chloride EPA 325 | Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	48	mg/l	0.96	1	8/6/01

Lab #: AB39203 | Sample Matrix: Aqueous
Sample ID: SW-1 Unfiltered | Date Received: 8/1/01

Test Group Name: Chloride EPA 325 | Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	290	mg/l	0.96	1	8/6/01

Lab #: AB39205 | Sample Matrix: Aqueous
Sample ID: SW-2 Unfiltered | Date Received: 8/1/01

Test Group Name: Chloride EPA 325 | Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	25	mg/l	0.96	1	8/6/01

Lab #: AB39207 | Sample Matrix: Aqueous
Sample ID: SW-4 Unfiltered | Date Received: 8/1/01

Test Group Name: Chloride EPA 325 | Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	27	mg/l	0.96	1	8/6/01

Lab #: AB39209 | Sample Matrix: Soil
Sample ID: SD-1 | Date Received: 8/1/01

Test Group Name: % Solids SM2540G | Date Prepared:

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
% Solids	79	Percen		1	8/3/01

Test Group Name: Chloride 9250 | Date Prepared: 8/14/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	99	mg/kg	63	1	8/14/01

Veritech Wet Chem Form 1 Summary

Lab #: AB39210

Lab #: AB39210 | Sample Matrix: Soil

Sample ID: SD-2 | Date Received: 8/1/01

Test Group Name: % Solids SM2540G | Date Prepared:

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
% Solids	74	Percen		1	8/3/01

Test Group Name: Chloride 9250 | Date Prepared: 8/14/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	ND	mg/kg	68	1	8/14/01

Lab #: AB39211 | Sample Matrix: Soil

Sample ID: SD-3 | Date Received: 8/1/01

Test Group Name: % Solids SM2540G | Date Prepared:

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
% Solids	93	Percen		1	8/3/01

Test Group Name: Chloride 9250 | Date Prepared: 8/14/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	ND	mg/kg	54	1	8/14/01

Lab #: AB39212 | Sample Matrix: Soil

Sample ID: SD-4 | Date Received: 8/1/01

Test Group Name: % Solids SM2540G | Date Prepared:

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
% Solids	79	Percen		1	8/3/01

Test Group Name: Chloride 9250 | Date Prepared: 8/14/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	ND	mg/kg	63	1	8/14/01

Calibration Curve Information

Analysis Type: CL-S

Batch Number: CL-S-2

Cal Curve Date:

Units: mg/kg

Qc Summary Results

Qc Type	Qc Name	SpkAmt	Rec Lim	Rpd Lim	Raw Result	Recov	Rpd	Flags
CAL-01	CAL-01-08/14/01	50	90-110	NA	55.025	110	NA	
CAL-01	CAL-01-08/13/01	50	90-110	NA	52.54	105	NA	
DUP	AB39389	NA	90-110	20	45.80645	NA	NC	
MBS	MBS	500	75-125	NA	521.85	104	NA	
MS	AB39389	537.6344	75-125	NA	538.2258	100	NA	
MSD	AB39389	537.6344	75-125	20	519.1398	97	4	

Sam #	Type	MB	Result	Mdl	Per Sol	Spk Amt	% Rec	Rpd	Qc Flag	Rec Lim	Rpd Lim	Raw Result	Titr Vol1	Titr Vol2	DF	Smp Vol	Smp Wt	Fin Vol	NofT	Prep Date	Prep By	Anal Date	Anal By
CAL-01-08/13/01	CAL-01		53		100	50	105			10	NA	52.54	3.08	1.60	1	50	100	100	.025			08/13/01	JW
MB-1-08/13/01	MB	MB-1-08/13/01	ND	50	100							24.85	0.23	0.16	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
AB39389	Sample	MB-1-08/13/01	ND	54	93							26.72	0.18	0.11	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
AB39389	DUP	MB-1-08/13/01	ND	54	93			NC		NA	20	45.806	0.27	0.15	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
AB39389	MS	MB-1-08/13/01	540	54	93	537.6	100			25	NA	538.23	2.99	1.58	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
AB39389	MSD	MB-1-08/13/01	520	54	93	537.6	97	4		25	20	519.14	3.14	1.78	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
MBS	MBS	MB-1-08/13/01	520	50	100	500	104			25	NA	521.85	3.03	1.56	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
AB39390	SAMPLE	MB-1-08/13/01	ND	56	89							7.9775	0.14	0.12	1	50	10	100	.025	08/13/01	JW	08/13/01	JW
CAL-01-08/14/01	CAL-01		55		100	50	110			10	NA	55.025	3.19	1.64	1	50	100	100	.025		JW	08/14/01	jw
MB-1-08/14/01	MB	MB-1-08/14/01	ND	50	100							10.65	0.19	0.16	1	50	10	100	.025	08/14/01	jw	08/14/01	jw
AB39209	Sample	MB-1-08/14/01	99	63	79							98.861	0.57	0.35	1	50	10	100	.025	08/14/01	jw	08/14/01	jw
AB39210	Sample	MB-1-08/14/01	ND	68	74							52.77	0.23	0.12	1	50	10	100	.025	08/14/01	jw	08/14/01	jw
AB39211	Sample	MB-1-08/14/01	ND	54	93							41.989	0.26	0.15	1	50	10	100	.025	08/14/01	jw	08/14/01	jw
AB39212	Sample	MB-1-08/14/01	ND	63	79							0	0.13	0.13	1	50	10	100	.025	08/14/01	jw	08/14/01	jw

Flag Codes: C* - Calibration Failed Criteria M* - Matrix Spike Failed Criteria M# - Matrix Rpd Failed Criteria D# -Duplicate Rpd Failed Criteria NA - Not Applicable NC - Cannot be calculated

Calibration Curve Information

Analysis Type: CL-W

Batch Number: CL-W-3

Cal Curve Date:

Units: mg/l

Qc [illegible] mary [illegible] sult

Qc Type	Qc Name	SpkAmt	Rec Lim	Rpd Lim	Raw Result	Recov	Rpd	Flags
CAL-01	CAL-01-08/06/01	50	90-110	NA	49.69665	99	NA	
CAL-01	CAL-01-07/19/01	50	90-110	NA	51.17278	102	NA	
CAL-01	CAL-01-07/16/01	50	90-110	NA	52.28875	105	NA	
DUP	AB37894	NA	90-110	20	18.61125	NA	5	
MBS	MBS	50	75-125	NA	52.28875	105	NA	
MS	AB37894	50	75-125	NA	62.92375	90	NA	
MSD	AB37894	50	75-125	20	64.69625	94	3	

Sam #	Type	MB	Result	Mdl	Per Sol	Spk Amt	% Rec	Rpd	Qc Flag	Rec Lim	Rpd Lim	Raw Result	Titr Vol	Smp Vol	DF	NofT	Tit Blk	Prep Date	Prep By	Anal Date	Anal By
CAL-01-07/16/01	CAL-01		52		100	50	105			10	NA	52.289	3	50	1	.025	.05			07/16/01	bu
MB-1-07/16/01	MB	MB-1-07/16/01	ND	1.8	100							0	.05	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	Sample	MB-1-07/16/01	18	1.8	100							17.725	1.05	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	DUP	MB-1-07/16/01	19	1.8	100			5		NA	20	18.611	1.10	50	1	.025	.05	07/16/01	bu	07/16/01	bu
MBS	MBS	MB-1-07/16/01	52	1.8	100	50	105			25	NA	52.289	3	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	MS	MB-1-07/16/01	63	1.8	100	50	90			25	NA	62.924	3.6	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	MSD	MB-1-07/16/01	65	1.8	100	50	94	3		25	20	64.696	3.7	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37895	Sample	MB-1-07/16/01	15	1.8	100							15.066	0.90	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37896	Sample	MB-1-07/16/01	22	1.8	100							22.156	1.3	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37897	SAMPLE	MB-1-07/16/01	12	1.8	100							11.521	0.7	50	1	.025	.05	07/16/01	bu	07/16/01	bu
CAL-01-07/19/01	CAL-01		51		100	50	102			10	NA	51.173	5.25	50	1	.01388	.05		bu	07/19/01	bu
MB-1-07/19/01	MB	MB-1-07/19/01	ND	0.98	100							0	.05	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38000	Sample	MB-1-07/19/01	150	0.98	100							154.01	15.7	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38001	Sample	MB-1-07/19/01	130	0.98	100							131.38	13.4	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38002	Sample	MB-1-07/19/01	22	0.98	100							22.142	2.30	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38003	Sample	MB-1-07/19/01	270	0.98	100							266.69	27.15	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38004	Sample	MB-1-07/19/01	170	0.98	100							172.22	17.55	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38005	Sample	MB-1-07/19/01	410	0.98	100							414.3	42.15	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38006	Sample	MB-1-07/19/01	170	0.98	100							170.25	17.35	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB37965	Sample	MB-1-07/19/01	5.4	0.98	100							5.4125	0.60	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB37969	Sample	MB-1-07/19/01	6.4	0.98	100							6.3966	0.70	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
CAL-01-08/06/01	CAL-01		50		100	50	99			10	NA	49.697	5.1	50	1	.01388	.05			08/06/01	jw
MB-1-08/06/01	MB	MB-1-08/06/01	ND	0.98	100							0.49205	0.1	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39197	Sample	MB-1-08/06/01	27	0.98	100							27.063	2.8	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39199	Sample	MB-1-08/06/01	55	0.98	100							54.617	5.6	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39201	Sample	MB-1-08/06/01	48	0.98	100							47.728	4.9	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39203	Sample	MB-1-08/06/01	290	0.98	100							293.75	29.9	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39205	Sample	MB-1-08/06/01	25	0.98	100							25.094	2.6	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39207	Sample	MB-1-08/06/01	27	0.98	100							26.57	2.75	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39267	Sample	MB-1-08/06/01	79	0.98	100							78.727	8.05	50	1	.01388	.05	08/06/01	jw	08/06/01	jw

Flag Codes: C* - Calibration Failed Criteria M* - Matrix Spike Failed Criteria M# - Matrix Rpd Failed Criteria D# -Duplicate Rpd Failed Criteria NA - Not Applicable NC - Cannot be calculated

Hampton-Clarke, Inc.
veritech laboratories

175 Route 46 West, Unit D
Fairfield, NJ 07004
(973) 244-9770
Federal ID: 222679402

Lawler, Metusky & Skelly Engineers

Format: NYDOH-CatANYDOH-

Project: Harrison Landfill
PO Number: 446-156

Samples submitted on: 8/2/01

AB39267
AB39268
AB39269
AB39270
AB39271
AB39272

Environmental Chemistry Section

SEP 0 6 2001

Date: 9/5/01
HCl Project: 08021429

SDG Narrative

Project: NYSDOT Harrison LF
Job: 446-156

Hampton-Clarke, Inc. (HCI) received the following Lawler, Metusky & Skelly Engineers samples on April 19, 2001:

LMS #	HCI #	Type	Analysis
PC-2 (w) unfiltered	AB39267	Aqueous	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
PC-2 (w) filtered	AB39268	Aqueous	TAL-METALS (6010B), HG (7470A)
PC-3 (w) unfiltered	AB39269	Aqueous	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
PC-3 (w) filtered	AB39270	Aqueous	TAL-METALS (6010B), HG (7470A)
PC-4 (w) unfiltered	AB39271	Aqueous	TAL-METALS (6010B), HG (7470A), CHLORIDE (EPA 325)
PC-4 (w) filtered	AB39272	Aqueous	TAL-METALS (6010B), HG (7470A)

To meet the necessary detection limits for the Aqueous samples, the samples were concentrated during the digestion step (200ml to 100 ml). This step is evident on the result page, were the dilution factor is indicated as 0.5

All metals sample results have been reported to the MDL, as requested by the client, to achieve the detection limits as listed in the ASP Standards. The Method blanks and continuing calibration blanks are based upon the RL criteria.

Problems associated with these analyses are as follows:

Metals

For Batch 3497 (Aqueous):

The Method Blank for this batch contained 0.008 mg/L of Zinc. This concentration is below our reporting limit, but above the MDL which the samples have been reported to. The zinc contamination may be related to contamination in the glassware during sample prep.

The following compounds exceeded the MS and MSD criteria:

Element	MS	MSD
Aluminum	194	143
Iron	---	61

The concentration of Aluminum and Iron in the sample exceeded the spike amount added by a factor of 4, therefore the spike criteria does not apply.

The serial dilution exceeded the RPD criteria for vanadium. This suggests that there may be some matrix interference occurring in the sample.

No other problems were encountered in the analysis of these samples.

Wet Chemistry

No problems were encountered in the analysis of these samples.

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

Stan Gilewicz, Laboratory Director

9/5/01
Date

[redacted] 8/2 [redacted]

Veritech, 175 Route 46 West, Fairfield, NJ 07004
A Division of HAMPTON-CLARKE, INC. NJDEPE # 14622

CHAIN OF CUSTODY RECORD

PHONE (800) 426-9992
FAX (973) 439-1458

CUSTOMER INFORMATION

CUSTOMER: LMS ENGINEERS
ADDRESS: PEARL RIVER, NY 10965
TELEPHONE: 845 735 8350
FAX: 845 735 7466
PROJECT: UHS DST
PROJECT MANAGER: B Williams
PROJECT LOCATION: Harrisburg Land Fill
STATE: NY
PO NUMBER: 446-156

REPORT INFORMATION

SEND REPORT TO: MARIA HEINCZ
One Blue Hill Plaza
PEARL RIVER, NY 10965

SEND INVOICE TO: Finance
SAME

PROJECT INFORMATION

TURNAROUND (CONFIRM RUSH TAT'S WITH LAB)

- [x] STANDARD
- [ ] RUSH
  - [ ] 24 HOURS 100%
  - [ ] 48 HOURS 75%
  - [ ] 72 HOURS 50%
  - [ ] 1 WEEK 25%
  - [ ] 10 DAYS 10%

DELIVERABLES (PLEASE CHECK BOX)

- [ ] STANDARD
- [ ] WASTE
- [ ] NJ REDUCED
- [ ] HAZSITE
- [ ] ELECTRONIC DELIVERABLE
- [ ] OTHER (SPECIFY)
- [ ] FULL
- [ ] BUST
- [ ] EXCEL
- [ ] CUSTOM

ANALYTICAL REQUESTS

LAB SAMPLE NUMBER (LAB USE ONLY)	SAMPLE IDENTIFICATION		METHANOL BOTTLE #	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE(C)	SAMPLE TYPE: GRAB (G)	SAMPLE MATRIX	No. of Bottles: H2SO4	HNO3	HCL	NaOH	ZnAc + NaOH	Ascorbic	NONE	Methanol	Other	ANALYSIS
AB39267	PC-2	U	AB39267	8/1/01	1115		X	W									3	TOTAL & F. Iron TAL Metals, Chlor. Ion
39268		F	39268															
39269	PC-3	U	39269		1045													
39270		F	39270															
39271	PC-4	U	39271		1000													
39272		F	39272															

SAMPLER CERTIFIES THAT EACH SAMPLE RECEIVED PROPER FIELD PRESERVATION (IF REQUIRED) (INITIALS)

SAMPLE HAZARDS: FLAMMABLE [ ] SKIN IRRITANT [ ] NON-HAZARD [ ] UNKNOWN [ ] NOXIOUS FUMES [ ]

SPECIAL INSTRUCTIONS:

TEMPERATURE UPON RECEIPT: 4.0°C

RELINQUISHED BY: / AGENT OF:	DATE / TIME	RECEIVED BY: / AGENT OF:	DATE / TIME
	8/1/01 1330	HCI	8/2/01 9:40
RELINQUISHED BY: / AGENT OF:	DATE / TIME	RECEIVED BY: / AGENT OF:	DATE / TIME

CONDITION UPON RECEIPT FORM

Veritech

Date Received: 8/2/01
Client: LMS
Veritech Project #

Filed By: [illegible]
Project/Account: NYS DOT

INITIAL CONDITIONS

YES	NO		
✓		[1]	Is there a corresponding Chain of Custody included with the samples?
✓		[2]	Are the samples in a container such as a cooler or ice chest?
✓		[3]	Are the custody seals intact? IF NO, please circle one of the following: missing broken N.A.
4.0 °C		[4]	Please specify the temperature inside the container.

SAMPLE INFORMATION

YES	NO		
✓		[5]	Are the samples properly refrigerated (where required), have they arrived on ice?
✓		[6]	Are the samples within holding times for the parameters listed on the COC? If NO, list parameters and associated samples:
✓		[7]	Are all of the sample bottles intact? If NO, specify sample numbers below: broken: leaking:
✓		[8]	Are all of the sample labels or numbers legible? If NO, specify:
✓		[9]	Do the contents of the container match the COC? If NO, specify:
✓		[10]	Is there enough sample sent for the analyses listed on the COC? If NO, specify:
✓		[11]	Are the samples preserved correctly (see Preservation Form for actual pH readings)?
		[12]	Are all soil VO(NJ) samples properly preserved in methanol with the correct soil weights (8g - 12g) and accompanied by dry soil?

OTHER

		[13]	Specify:

CORRECTIVE ACTIONS

NO.	ACTION

\CUR9.DOC

PRESERVATION DOCUMENTATION

Date Received: 8/2/01
Client: LMS
Veritech Project #:
Filed By: F.b. D
Project: VNS dot

SAMPLE ID:	CONTAINER SIZE	CONTAINER TYPE (PG)	PARAMETER	PRESERVATIVE	pH
PC-2	1L	P	Metals	HNO_3	1
PC-3	1L	"	"	"	"
PC-4	1L	"	"	"	"

INTERN.. CHAIN OF CUSTODY RECORD · REFRIGERATO.. #12 ve..tech

Client ID: LMS Location: B-2

COMMENTS

		REMOVED:				RETURNED:			
TEST	SAMPLE No.	DATE	TIME	SIGNATURE	ALTERNATE	DATE	TIME	SIGNATURE	ALTERNATE
TDWI/Hg/Met Filt	39267-72	8/2/01	16:15	RAM	Rec	8/2/01	17:30	RAM	Rec
chloride	39267, 69, 71	8.6.01	12:00	JW		8-6-01	15:00	JW	

FOR LOGIN BATCH

39267-72

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39267
Client ID: PC-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	110	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	170	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	65000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	5.1	P
7440508	Copper	3.7	U	P
7439896	Iron	120	68000	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	20000	P
7439965	Manganese	9.0	15000	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	6.6	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	8.9	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497X

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39267
Client ID: PC-2 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	67000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497W

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39267
Client ID: PC-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	3200	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39267
Client ID: PC-2 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	16	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3497SW

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39267
Client ID: PC-2 Unfiltered

Level: low/med
Dilution: 1

Batch: 3497
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39268
Client ID: PC-2 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	120	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	70000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	4.7	P
7440508	Copper	3.7	U	P
7439896	Iron	120	40000	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	22000	P
7439965	Manganese	9.0	16000	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	5.2	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497X

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39268
Client ID: PC-2 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	68000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497W

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39268
Client ID: PC-2 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	3100	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39268
Client ID: PC-2 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	7.7	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39268
Client ID: PC-2 Filtered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39269
Client ID: PC-3 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	2800	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	420	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	220000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	3.1	P
7440508	Copper	3.7	7.8	P
7439896	Iron	120	6500	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	58000	P
7439965	Manganese	9.0	620	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	15	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497X

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39269
Client ID: PC-3 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	130000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497W

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39269
Client ID: PC-3 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	10000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39269
Client ID: PC-3 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	24	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: H3497SW

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39269
Client ID: PC-3 Unfiltered

Level: low/med
Dilution: 1

Batch: 3497
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497A

Lab Code: 14622
Analysis Date: 08/03/2001

Matrix: Water
Lab Sample ID: AB39270
Client ID: PC-3 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	370	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	190000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	130	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	50000	P
7439965	Manganese	9.0	640	P
7440020	Nickel	5.7	U	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	8.0	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497X

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39270
Client ID: PC-3 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	130000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497W

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39270
Client ID: PC-3 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	9500	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497B

Lab Code: 14622
Analysis Date: 08/06/2001

Matrix: Water
Lab Sample ID: AB39270
Client ID: PC-3 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	10	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med

Batch: 3497

Data File Name: H3497SW

Analysis Date: 08/06/2001

Lab Sample ID: AB39270

Client ID: PC-3 Filtered

Dilution: 1

% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39271
Client ID: PC-4 Unfiltered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	1600	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	99	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	40000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	2.2	P
7440508	Copper	3.7	U	P
7439896	Iron	120	5100	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	11000	P
7439965	Manganese	9.0	150	P
7440020	Nickel	5.7	11	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	10	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497X

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39271
Client ID: PC-4 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	45000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497W

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39271
Client ID: PC-4 Unfiltered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	5100	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: W3497B

Analysis Date: 08/06/2001

Lab Sample ID: AB39271
Client ID: PC-4 Unfiltered
Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	22	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Lab Code: 14622

Matrix: Water

Level: low/med
Batch: 3497

Data File Name: H3497SW

Analysis Date: 08/06/2001

Lab Sample ID: AB39271
Client ID: PC-4 Unfiltered
Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Matrix: Water

Lab Sample ID: AB39272
Client ID: PC-4 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7429905	Aluminum	89	U	P
7440360	Antimony	2.3	U	P
7440382	Arsenic	2.8	U	P
7440393	Barium	10	84	P
7440439	Cadmium	1.5	U	P
7440702	Calcium	370	40000	P
7440473	Chromium	10	U	P
7440484	Cobalt	1.5	U	P
7440508	Copper	3.7	U	P
7439896	Iron	120	U	P
7439921	Lead	3.6	U	P
7439954	Magnesium	160	11000	P
7439965	Manganese	9.0	120	P
7440020	Nickel	5.7	7.4	P
7782492	Selenium	4.2	U	P
7440280	Thallium	4.5	U	P
7440622	Vanadium	1.5	4.6	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech
Data File Name: W3497X

Lab Code: 14622
Analysis Date: 8/ 6/01

Matrix: Water
Lab Sample ID: AB39272
Client ID: PC-4 Filtered

Level: low/med
Dilution: 0.5

Batch: 3497
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440235	Sodium	110	46000	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497W

Lab Code: 14622

Analysis Date: 8/ 6/01

Matrix: Water

Lab Sample ID: AB39272
Client ID: PC-4 Filtered

Level: low/med

Dilution: 0.5

Batch: 3497

% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440097	Potassium	48	4900	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(ARL 3560)
CV - Indicates analyzed by Cold Vapor

Comments:_____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39272
Client ID: PC-4 Filtered

Level: low/med
Batch: 3497

Dilution: 0.5
% Solid: 0

Concentration Units: ug/L

Cas No.	Analyte	MDL	Concentration	M
7440417	Beryllium	1.4	U	P
7440224	Silver	2.2	U	P
7440666	Zinc	4.0	15	P

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

INORGANIC ANALYSIS DATA SHEET

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

Matrix: Water

Lab Sample ID: AB39272
Client ID: PC-4 Filtered

Level: low/med
Batch: 3497

Dilution: 1
% Solid: 0

Concentration Units: Ug/L

Cas No.	Analyte	MDL	Concentration	M
7439976	Mercury	0.14	U	CV

U - Indicates compound not found above detection/reporting limit
* - Indicates compound above calibration range
P - Indicates analyzed by ICP(OPTIMA 3000DV)
CV - Indicates analyzed by Cold Vapor

Comments: _____

3
BLANKS

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-BL	CCB	CCB	CCB				M
Aluminum	0.0900000 U	0.1800000 U	0.1800000 U	0.1800000 U	0.1800000 U				P
Antimony	0.0075000 U	0.0150000 U	0.0150000 U	0.0150000 U	0.0150000 U				P
Arsenic	0.0037500 U	0.0075000 U	0.0075000 U	0.0075000 U	0.0075000 U				P
Barium	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Cadmium	0.0017500 U	0.0035000 U	0.0035000 U	0.0035000 U	0.0035000 U				P
Calcium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U				P
Chromium	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Cobalt	0.0100000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
Copper	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Iron	0.1375000 U	0.2750000 U	0.2750000 U	0.2750000 U	0.2750000 U				P
Lead	0.0040000 U	0.0080000 U	0.0080000 U	0.0080000 U	0.0080000 U				P
Magnesium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U				P
Manganese	0.0200000 U	0.0400000 U	0.0400000 U	0.0400000 U	0.0400000 U				P
Nickel	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P
Selenium	0.0200000 U	0.0400000 U	0.0400000 U	0.0400000 U	0.0400000 U				P
Thallium	0.0050000 U	0.0100000 U	0.0100000 U	0.0100000 U	0.0100000 U				P
Vanadium	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P

9/5

BLANKS

Lab Name: Veritech

Data File Name: W3497X

Code: 14622

Analysis Date: 8/ 6/01

Batch: 3497

Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB					M
dium	2.0000000 U	2.0000000 U	2.0000000 U					P

BLANKS

Lab Name: Veritech

Data File Name: W3497V

Code: 14622

Analysis Date: 8/ 6/01

Batch: 3497

Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-BL	CCB	CCB					M
dium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U					P

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BLANKS

Lab Name: Veritech Data File Name: W3497W

Job Code: 14622 Analysis Date: 8/ 6/01

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	ICB M-01-BL	CCB	CCB						M
Potassium	2.0000000 U	2.0000000 U	2.0000000 U						P

FORM III - IN ILM02.0

BLANKS

Lab Name: Veritech Data File Name: W3497Z

[redacted] Code: 14622 Analysis Date: 8/ 6/01

Batch: 3497

[redacted] Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-EL	CCB	CCB					M
[redacted]tassium	1.0000000 U	2.0000000 U	2.0000000 U	2.0000000 U					P

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BLANKS

Lab Name: Veritech Data File Name: W3497B

[redacted] Code: 14622 Analysis Date: 08/06/2001

Batch: 3497

[redacted] Concentration Units in PPM except Mercury in PPB

Analyte	MB 3497(.5)	ICB M-01-BL	CCB	CCB	CCB				M
[redacted]eryllium	0.0075000 U	0.0150000 U	0.0150000 U	0.0150000 U	0.0150000 U				P
[redacted]lver	0.0100000 U	0.0200000 U	0.0200000 U	0.0200000 U	0.0200000 U				P
[redacted]nc	0.0250000 U	0.0500000 U	0.0500000 U	0.0500000 U	0.0500000 U				P

MLG 9/5

BLANKS

Lab Name: Veritech Data File Name: M3497SW.TXT

I[illegible] Code: 14622 Analysis Date: 08/06/2001

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

[illegible]alyte	MB 3497 (1)	ICB	CCB	CCB	CCB					M
Mercury	0.7000000 U	0.7000000 U	0.7000000 U	0.7000000 U	0.7000000 U					C

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Spike Sample Recovery

Lab Name: Veritech Data File Name: W3497A

Lab Code: 14622 Analysis Date: 08/03/2001

ICP sample ID: 39197 Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		M
[illegible]luminum	5.000	75 - 125	21.9743392	31.6846492	29.1395686	194*	143*		P
[illegible]timony	0.5000	75 - 125	0.0045500 U	0.4708769	0.4702742	94	94		P
Arsenic	0.5000	75 - 125	0.0056100 U	0.4732092	0.4716783	95	94		P
Barium	0.5000	75 - 125	0.5836215	1.0558144	1.0396004	94	91		P
[illegible]dmium	0.5000	75 - 125	0.0029300 U	0.4602249	0.4599140	92	92		P
[illegible]lcium	50.000	75 - 125	180.2907320	225.0682890	227.1559200	90	94		P
Chromium	0.5000	75 - 125	0.0689126	0.5454186	0.5394024	95	94		P
[illegible]obalt	0.5000	75 - 125	0.0295648	0.4996877	0.5024761	94	95		P
[illegible]pper	0.5000	75 - 125	0.0567432	0.5397991	0.5388842	97	96		P
Iron	5.000	75 - 125	42.7378839	48.6637416	45.7867918	119	61*		P
Lead	0.5000	75 - 125	0.0132403	0.4681138	0.4718824	91	92		P
[illegible]gnesium	50.000	75 - 125	73.3503851	119.2524690	119.6940390	92	93		P
[illegible]nganese	0.5000	75 - 125	3.3361863	3.7693879	3.7793460	87	89		P
Nickel	0.5000	75 - 125	0.0659542	0.5393998	0.5345900	95	94		P
Selenium	0.5000	75 - 125	0.0083300 U	0.4659996	0.4720057	93	94		P
[illegible]allium	0.5000	75 - 125	0.0090500 U	0.4502536	0.4553621	90	91		P
[illegible]nadium	0.5000	75 - 125	0.0637108	0.5326261	0.5246887	94	92		P

*[illegible] - Indicates the analyte failed the control limit criteria

U - Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: W3497V

Lab Code: 14622

Analysis Date: 8/ 6/01

ICP sample ID: 39197

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		
Sodium	50.000	75 - 125	97.3430000	147.4360000	147.7450000	100	101		M P

Indicates the analyte failed the control limit criteria
Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: W3497Z

Lab Code: 14622

Analysis Date: 8/ 6/01

ICP sample ID: 39197

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39197 Non Spike	39197 MS 1 Matrix Spike 1	39197 MS 2 Matrix Spike 2	Rec1	Rec2		
Potassium	50.000	75 - 125	19.2140000	68.5270000	67.4880000	99	97	M	P

Indicates the analyte failed the control limit criteria
Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech Data File Name: W3497B

Lab Code: 14622 Analysis Date: 08/06/2001

ICP sample ID: 39197 Batch: 3497

All Concentration Units in PPM except Mercury in PPB

[illegible]	Amt		39197	39197 MS 1	39197 MS 2				
[illegible]alyte	Added	QC Limits	Non Spike	Matrix Spike 1	Matrix Spike 2	Rec1	Rec2		M
Beryllium	0.5000	75 - 125	0.0028800 U	0.4760896	0.4762545	95	95		P
[illegible]lver	0.5000	75 - 125	0.0044500 U	0.4642498	0.4640428	93	93		P
[illegible]nc	0.5000	75 - 125	0.1177190	0.6051444	0.6382612	97	104		P

* - Indicates the analyte failed the control limit criteria
J - Indicates the analyte was not detected

Spike Sample Recovery

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

ICP sample ID: 39199

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Amt Added	QC Limits	39199 Non Spike	39199 MS 1 Matrix Spike 1	39199 MS 2 Matrix Spike 2	Rec1	Rec2		
Mercury	10.000	75 - 125	0.7000000 U	8.6870073	8.9114560	87	89		C

* Indicates the analyte failed the control limit criteria

U Indicates the analyte was not detected

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Laboratory Control Sample

Lab Name: Veritech

Data File Name: W3497A

Lab Code: 14622

Analysis Date: 08/03/2001

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec	M
Aluminum	5.000	75-125	4.8594983	97	P
Antimony	0.5000	75-125	0.4874140	97	P
Arsenic	0.5000	75-125	0.4853094	97	P
Barium	0.5000	75-125	0.4993948	100	P
Cadmium	0.5000	75-125	0.4898332	98	P
Calcium	50.000	75-125	49.3856573	99	P
Chromium	0.5000	75-125	0.4969817	99	P
Cobalt	0.5000	75-125	0.5020382	100	P
Copper	0.5000	75-125	0.4854043	97	P
Iron	5.000	75-125	5.0828805	102	P
Lead	0.5000	75-125	0.4900595	98	P
Magnesium	50.000	75-125	47.5087095	95	P
Manganese	0.5000	75-125	0.5011859	100	P
Nickel	0.5000	75-125	0.5008836	100	P
Selenium	0.5000	75-125	0.4631102	93	P
Thallium	0.5000	75-125	0.4897770	98	P
Vanadium	0.5000	75-125	0.4863418	97	P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: W3497V

Lab Code: 14622

Analysis Date: 8/ 6/01

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec	M
Sodium	50.000	75-125	49.6630000	99	P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: W3497Z

Lab Code: 14622

Analysis Date: 8/ 6/01

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		
Potassium	50.000	75-125	47.5490000	95		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: W3497B

Lab Code: 14622

Analysis Date: 08/06/2001

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		M
Beryllium	0.5000	75-125	0.4738409	95		P
Silver	0.5000	75-125	0.4588310	92		P
Zinc	0.5000	75-125	0.5234692	105		P

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Laboratory Control Sample

Lab Name: Veritech

Data File Name: H3497SW

Lab Code: 14622

Analysis Date: 08/06/2001

ICP sample ID: LCSW

Batch: 3497

All Concentration Units in PPM except Mercury in PPB

Analyte	Spike Amount	QC Limits	Found	Rec		
Mercury	10.000	75-125	9.9944593	100		M C

* - Indicates the analyte failed the control limit criteria
U - Indicates the analyte was not detected

Veritech Wet Chem Form 1 Summary

Lab #: AB39267

Lab #: AB39267
Sample ID: PC-2 Unfiltered
Sample Matrix: Aqueous
Date Received: 8/2/01

Test Group Name: Chloride EPA 325
Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	79	mg/l	0.96	1	8/6/01

Lab #: AB39269
Sample ID: PC-3 Unfiltered
Sample Matrix: Aqueous
Date Received: 8/2/01

Test Group Name: Chloride EPA 325
Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	580	mg/l	4.9	5	8/6/01

Lab #: AB39271
Sample ID: PC-4 Unfiltered
Sample Matrix: Aqueous
Date Received: 8/2/01

Test Group Name: Chloride EPA 325
Date Prepared: 8/6/01

Analyte	Concentration	Units	MDL/PQL	DF	Date Analyzed
Chloride	81	mg/l	0.96	1	8/6/01

Calibration Curve Information

Analysis Type: CL-W

Batch Number: CL-W-3

Cal Curve Date:

Units: mg/l

Qc Summary Result

Qc Type	Qc Name	SpkAmt	Rec Lim	Rpd Lim	Raw Result	Recov	Rpd	Flags
CAL-01	CAL-01-08/06/01	50	90-110	NA	49.69665	99	NA	
CAL-01	CAL-01-07/19/01	50	90-110	NA	51.17278	102	NA	
CAL-01	CAL-01-07/16/01	50	90-110	NA	52.28875	105	NA	
DUP	AB37894	NA	90-110	20	18.61125	NA	5	
MBS	MBS	50	75-125	NA	52.28875	105	NA	
MS	AB37894	50	75-125	NA	62.92375	90	NA	
MSD	AB37894	50	75-125	20	64.69625	94	3	

Sam #	Type	MB	Result	Mdl	Per Sol	Spk Amt	% Rec	Rpd	Qc Flag	Rec Lim	Rpd Lim	Raw Result	Tltr Vol	Smp Vol	DF	NofT	Tlt Blk	Prep Date	Prep By	Anal Date	Anal By
CAL-01-07/16/01	CAL-01		52		100	50	105			10	NA	52.289	3	50	1	.025	.05			07/16/01	bu
MB-1-07/16/01	MB	MB-1-07/16/01	ND	1.8	100							0	.05	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	Sample	MB-1-07/16/01	18	1.8	100							17.725	1.05	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	DUP	MB-1-07/16/01	19	1.8	100			5		NA	20	18.611	1.10	50	1	.025	.05	07/16/01	bu	07/16/01	bu
MBS	MBS	MB-1-07/16/01	52	1.8	100	50	105			25	NA	52.289	3	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	MS	MB-1-07/16/01	63	1.8	100	50	90			25	NA	62.924	3.6	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37894	MSD	MB-1-07/16/01	65	1.8	100	50	94	3		25	20	64.696	3.7	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37895	Sample	MB-1-07/16/01	15	1.8	100							15.066	0.90	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37896	Sample	MB-1-07/16/01	22	1.8	100							22.156	1.3	50	1	.025	.05	07/16/01	bu	07/16/01	bu
AB37897	SAMPLE	MB-1-07/16/01	12	1.8	100							11.521	0.7	50	1	.025	.05	07/16/01	bu	07/16/01	bu
CAL-01-07/19/01	CAL-01		51		100	50	102			10	NA	51.173	5.25	50	1	.01388	.05			07/19/01	bu
MB-1-07/19/01	MB	MB-1-07/19/01	ND	0.98	100							0	.05	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38000	Sample	MB-1-07/19/01	150	0.98	100							154.01	15.7	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38001	Sample	MB-1-07/19/01	130	0.98	100							131.38	13.4	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38002	Sample	MB-1-07/19/01	22	0.98	100							22.142	2.30	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38003	Sample	MB-1-07/19/01	270	0.98	100							266.69	27.15	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38004	Sample	MB-1-07/19/01	170	0.98	100							172.22	17.55	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38005	Sample	MB-1-07/19/01	410	0.98	100							414.3	42.15	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB38006	Sample	MB-1-07/19/01	170	0.98	100							170.25	17.35	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB37965	Sample	MB-1-07/19/01	5.4	0.98	100							5.4125	0.60	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
AB37969	Sample	MB-1-07/19/01	6.4	0.98	100							6.3966	0.70	50	1	.01388	.05	07/19/01	bu	07/19/01	bu
CAL-01-08/06/01	CAL-01		50		100	50	99			10	NA	49.697	5.1	50	1	.01388	.05			08/06/01	jw
MB-1-08/06/01	MB	MB-1-08/06/01	ND	0.98	100							0.49205	0.1	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39197	Sample	MB-1-08/06/01	27	0.98	100							27.063	2.8	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39199	Sample	MB-1-08/06/01	55	0.98	100							54.617	5.6	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39201	Sample	MB-1-08/06/01	48	0.98	100							47.728	4.9	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39203	Sample	MB-1-08/06/01	290	0.98	100							293.75	29.9	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39205	Sample	MB-1-08/06/01	25	0.98	100							25.094	2.6	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39207	Sample	MB-1-08/06/01	27	0.98	100							26.57	2.75	50	1	.01388	.05	08/06/01	jw	08/06/01	jw
AB39267	Sample	MB-1-08/06/01	79	0.98	100							78.727	8.05	50	1	.01388	.05	08/06/01	jw	08/06/01	jw

Flag Codes: C* - Calibration Failed Criteria M* - Matrix Spike Failed Criteria M# - Matrix Rpd Failed Criteria D# -Duplicate Rpd Failed Criteria NA - Not Applicable NC - Cannot be calculated

Calibration Curve Information

Analysis Type: CL-W

Batch Number: CL-W-4

Cal Curve Date:

Units: mg/l

QC Summary Results

Qc Type	Qc Name	SpkAmt	Rec Lim	Rpd Lim	Raw Result	Recov	Rpd	Flags
CAL-01	CAL-01-08/21/01	50	90-110	NA	46.74437	95	NA	
CAL-01	CAL-01-08/06/01	50	90-110		49.69865	99	NA	
DUP	AB39271	NA	90-110	20	80.69554	NA	0.6	
MBS	MBS	50	75-125	NA	49.69865	99	NA	
MS	AB39271	50	75-125	NA	130.3922	98	NA	
MSD	AB39271	50	75-125	20	129.4081	96	0.8	

Sam #	Type	MB	Result	Mdl	Per Sol	Spk Amt	% Rec	Rpd	Qc Flag	Rec Lim	Rpd Lim	Raw Result	Titr	Vol	Smp Vol	DF	NofT	Tit Blk	Prep Date	Prep By	Anal Date	Anal By
CAL-01-08/06/01	CAL-01		50		100	50	99					49.697	5.1	50	1	.01388	.05				08/06/01	jw
MB-1-08/06/01	MB	MB-1-08/06/01	ND	0.98	100							0.49205	0.1	50	1	.01388	.05		08/06/01	jw	08/06/01	jw
AB39271	Sample	MB-1-08/06/01	81	0.98	100							81.188	8.3	50	1	0.01388	.05		08/06/01	jw	08/06/01	jw
AB39271	DUP	MB-1-08/06/01	81	0.98	100			0.6		NA	20	80.696	8.25	50	1	0.01388	.05		08/06/01	jw	08/06/01	jw
MBS	MBS	MB-1-08/06/01	50	0.98	100	50	99			25	NA	49.697	5.1	50	1	0.01388	.05		08/06/01	jw	08/06/01	jw
AB39271	MS	MB-1-08/06/01	130	0.98	100	50	98			25	NA	130.39	13.3	50	1	0.01388	.05		08/06/01	jw	08/06/01	jw
AB39271	MSD	MB-1-08/06/01	130	0.98	100	50	96	0.8		25	20	129.41	13.2	50	1	0.01388	.05		08/06/01	jw	08/06/01	jw
AB39269	Sample	MB-1-08/06/01	580	4.9	100							578.15	11.8	50	5	0.01388	.05		08/06/01	jw	08/06/01	jw
CAL-01-08/21/01	CAL-01		47		100	50	95			10	NA	46.744	4.8	50	1	0.01388	.05				08/21/01	GES
MB-1-08/21/01	MB		ND	0.98	100							0.49205	0.1	50	1	0.01388	.05			GES	08/21/01	GES
AB39733	Sample	MB-1-08/21/01	ND	0.98	100							0.49205	0.10	50	1	0.01388	.05		08/21/01	GES	08/21/01	GES
AB39078	Sample	MB-1-08/21/01	64	0.98	100							63.966	6.55	50	1	0.01388	.05		08/21/01	GES	08/21/01	GES

Flag Codes: C* - Calibration Failed Criteria M* - Matrix Spike Failed Criteria M# - Matrix Rpd Failed Criteria D# -Duplicate Rpd Failed Criteria NA - Not Applicable NC - Cannot be calculated