PARSONS ENGINEERING SCIENCE, INC.

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November 27, 1996
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Mr. Stephen Absolom
FFA Program Manager
Director of Engineering and Housing
ATTN: SDSSE-HE
Building 123
Seneca Army Depot Activity
Romulus, New York 14541-5001

SUBJECT: OB/OD Grounds Third Quarter 1996 Groundwater Monitoring
Seneca Army Depot Activity, Romulus, New York

Dear Mr. Absolom:

The attached report summarizes the groundwater monitoring results at the OB/OD Grounds for the Third Quarter 1996. The work for this quarter of groundwater monitoring was performed in accordance with Task No. 17 (Option 4) of Delivery Order 0029 for Contract DACA87-92-D-0022.

Field Activities

A round of groundwater elevations were obtained from 35 monitoring wells at the OB/OD Grounds Groundwater samples were collected from 6 wells using a peristaltic pump for TAL Metals analysis. The samples were not filtered in the field prior to collection. Four replicates samples were also collected at each well for TOC, TOX, pH and Specific Conductivity analyses in accordance with the requirements of 40 CFR 265 Subpart F.

Groundwater Elevation Data

Mean Sea Levels (MSL) elevations were obtained from the 35 wells on September 23, 1996. **Table 1** summarizes the results of the groundwater elevation measurements. Groundwater isocontours developed for the OB Grounds indicates a flow direction to the northeast with a hydraulic gradient of approximately 0.011. Groundwater isocontours developed for the OD grounds indicates a flow direction to the northeast. **Figures 1** and **2** show the groundwater isocontours developed for each area.

Analytical Results

Four replicate samples from each of the six monitoring wells were analyzed for the standard indicator parameters of pH, Specific Conductivity, Total Organic Carbon, and Total Organic Halides (TOX). One sample from each monitoring well was also analyzed for TAL metals. **Tables 2** and **3** summarize the analytical results for the indicator compounds. The validated TAL Metals analytical results are presented in **Table 4.** The analytical results were validated in accordance with the NYSDEC Data Validation SOPs. The validated analytical results indicate that all data is acceptable.

Student's t-Test Analysis

A statistical analysis was performed on the indicator parameter data from the OB/OD Grounds using the Student's t-Test. The analysis was performed in accordance with 40 CFR 265 Subpart F and U.S. EPA SW-963, revised 1983. The analysis results are shown in **Table 7**.

The Student's t Test results indicated that there were statistically significant increases at the OB Grounds for pH in MW-12 and MW-14; specific conductance in MW-14; and Total Organic Carbon (TOC) at MW12, MW-13, and MW-14. The significant increases in pH were observed in two of the downgradient wells (MW-12 and MW-14). Significant increases were observed at downgradient well MW-14 for Specific Conductance. TOC significant increases were at two downgradient wells (MW-12 and MW-14) and the background well (MW-13). At the OD Grounds, the Student's t-Test indicated that there was a significant increase of TOX at both the upgradient well (MW45-4) and the one downgradient well (MW45-3) that was sampled. A significant increase in specific conductance were also indicated at MW45-3.

A review of the data shows that the actual values measured for TOX were non-detect (0.02U) in all wells including the background wells for this quarter of sampling as well as previous quarterly sampling. It is reasonable to conclude that there was no actual increase in concentrations as compared to background, as measured by TOX. Similarly, the variations in actual pH data were relatively small as compared to previous sampling rounds. The historical indicator parameter data shown in **Table 5** and **Table 6** shows that these statistically significant changes are most likely due to natural variations in the groundwater quality and not from any releases to groundwater from either the OD or the OB Grounds. Also, the TAL metals data does not indicate any real increases in actual metals concentrations from previous sampling episodes. The close spatial distribution of the monitoring data around the mean (sample variance) and the associated errors in measurements (10-20%) may account for the statistical increases indicated by the Student's t-Test. Based upon professional judgment, these statistical increases do not indicate releases from the OB/OD Grounds.

In summary, the groundwater monitoring results for OB/OD Grounds for the Third Quarter 1996, continue to indicate no adverse impacts to groundwater in these areas.

If you have any questions, please call me at (617) 859-2492.

PARSONS ENGINEERING SCIENCE, INC.

Michael Duchesneau, P.E.
Project Manager

Enclosures (5)

cc: Ms. L. Percifield, CEMRD (1)
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GROUNDWATER MONITORING
VALIDATED ANALYTICAL RESULTS FOR THE THIRD QUARTER 1996
OB/OD GROUNDS, SENECA ARMY DEPOT

PREPARED FOR:
U.S. Army Corps of Engineers
Hunstville, Alabama

PREPARED BY:

Parsons Engineering Science, Inc.
Boston, Massachusetts

November 1996

TABLES

TABLE 1

SENECA ARMY DEPOT ACTIVITY
1995/1996 GROUNDWATER MONITORING PROGRAM
GROUNDWATER ELEVATION DATA
OB/OD GROUNDS

oring ell	Elevation at Top of Riser (MSL)	Fourth Quarter 1995			First Quarter 1996			Second Quarter 1996			Third Quarter 1996		
		Date	Depth from Top of Riser (ft.)	Elevation of Water Level (ft.)	Date	Depth from Top of Riser (ft.)	Elevation of Water Level (ft.)	Date	Depth from Top of Riser (ft.)	Elevation of Water Level (ft.)	Date	Depth from Top of Riser (ft.)	Elevation of Water Level (ft.)
ounds													
	634.22				03/18/96	6.24	627.98	06/24/96	9.43	624.79	09/23/96	9.49	624.73
	NA				03/18/96	6.74	NA	06/24/96	8.87	NA	09/23/96	8.84	NA
	637.99				03/18/96	Frozen	Frozen	06/24/96	4.47	633.52	09/23/96	5.73	632.26
	630.31				03/18/96	Not Measured	Not Measured	06/24/96	5.37	624.94	09/23/96	6.15	624.16
	622.94				03/18/96	Not Measured	Not Measured	06/24/96	6.51	616.43	09/23/96	5.42	617.52
	638.78				03/18/96	2.76	636.02	06/24/96	5.02	633.76	09/23/96	4.85	633.93
	634.95				03/18/96	Frozen	Frozen	06/24/96	3.38	631.57	09/23/96	3.18	631.77
0	638.62				03/18/96	Frozen	Frozen	06/24/96	4.38	634.24	09/23/96	3.96	634.66
	630.65				03/18/96	Frozen	Frozen	06/24/96	3.69	626.96	09/23/96	3.72	626.93
2	624.50	1/15/96	Frozen	NA	03/18/96	Frozen	Frozen	06/24/96	2.86	621.64	09/23/96	2.94	621.56
3	627.09	1/16/96	2.38	624.71	03/18/96	2.26	624.83	06/24/96	2.83	624.26	09/23/96	2.88	624.21
4	624.51	1/15/96	Frozen	NA	03/18/96	Frozen	Frozen	06/24/96	4.24	620.27	09/23/96	4.14	620.37
5	621.99				03/18/96	Frozen	Frozen	06/24/96	3.55	618.44	09/23/96	3.25	618.74
6	622.60				03/18/96	Frozen	Frozen	06/24/96	4.69	617.91	09/23/96	3.56	619.04
7	624.53				03/18/96	2.82	621.71	06/24/96	2.84	621.69	09/23/96	3.26	621.27
8	623.95				03/18/96	Frozen	Frozen	06/24/96	3.22	620.73	09/23/96	3.17	620.78
9	636.34				03/18/96	Frozen	Frozen	06/24/96	4.83	631.51	09/23/96	3.78	632.56
1	637.88				03/18/96	2.90	634.98	06/24/96	4.26	633.62	09/23/96	4.70	633.18
2	623.15				03/18/96	Frozen	Frozen	06/24/96	Lock Frozen	Lock Frozen	09/23/96	Lock Frozen	Lock Frozen
3	622.87				03/18/96	3.56	619.31	06/24/96	4.84	618.03	09/23/96	4.57	618.3
4	627.33				03/18/96	3.45	623.88	06/24/96	5.74	621.59	09/23/96	6.00	621.33
5	623.80				03/18/96	4.64	619.16	06/24/96	8.46	615.34	09/23/96	9.32	614.48
6	624.31				03/18/96	4.88	619.43	06/24/96	7.22	617.09	09/23/96	7.34	616.97
7	625.94	1/15/96	3.68	622.26	03/18/96	2.93	623.01	06/24/96	4.20	621.74	09/23/96	4.36	621.58
8	631.90				03/18/96	3.66	628.24	06/24/96	5.10	626.8	09/23/96	5.99	625.91
9	632.07				03/18/96	3.86	628.21	06/24/96	5.31	626.76	09/23/96	6.19	625.88
0	628.12				03/18/96	3.67	624.45	06/24/96	4.37	623.75	09/23/96	4.29	623.83
1	634.57				03/18/96	Not Measured	Not Measured	06/24/96	4.44	630.13	09/23/96	3.28	631.29
2	634.81				03/18/96	Frozen	Frozen	06/24/96	4.64	630.17	09/23/96	4.31	630.5
6	640.55				03/18/96	5.67	634.88	06/24/96	7.23	633.32	09/23/96	7.81	632.74
7	640.81				03/18/96	5.58	635.23	06/24/96	6.92	633.89	09/23/96	Not Measured	Not Measured
8	620.67				03/18/96	2.64	618.03	06/24/96	5.36	615.31	09/23/96	5.20	615.47
9	620.14				03/18/96	3.60	616.54	06/24/96	6.55	613.59	09/23/96	5.73	614.41
0	620.46				03/18/96	3.50	616.96	06/24/96	6.88	613.58	09/23/96	5.85	614.61
rounds - SEAD-45 wells													
5-1	625.08	1/15/96	8.00	617.08	03/18/96	7.95	617.13	06/24/96	7.95	617.13	09/23/96	7.99	617.09
5-2	626.76	1/15/96	11.98	614.78	03/18/96	11.51	615.25	06/24/96	11.14	615.62	09/23/96	11.58	615.18
5-3	626.45	1/15/96	9.24	617.21	03/18/96	7.83	618.62	06/24/96	8.41	618.04	09/23/96	10.49	615.96
5-4	633.04	1/15/96	7.28	625.76	03/18/96	5.34	627.7	06/24/96	7.65	625.39	09/23/96	7.58	625.46

TABLE 2

SENECA ARMY DEPOT ACTIVITY
OB GROUNDS THIRD QUARTER 1996 MONITORING PROGRAM
INDICATOR ANALYSIS RESULTS

	MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
	SITE	OB	OB	OB	OB	OB	OB	OB	OB
	DATE SAMPLED	09/25/96	09/25/96	09/25/96	09/25/96	06/25/96	09/25/96	09/25/96	09/25/96
	ES ID	OB040a	OB040b	OB040c	OB040d	OB038a	OB038b	OB038c	OB038d
	WELL ID	MW12A	MW12B	MW12C	MW12D	MW13A	MW13B	MW13C	MW13D
	LAB ID	61529	61529	61529	61529	61529	61529	61529	61529
AMETER	**UNITS**								
	standard units	7.37	7.37	7.36	7.35	7.03	7.02	7	7.01
ductivity	umhos/cm	868	890	878	880	860	879	841	888
l Organic Carbon	mg/L	1.6	1.6	1.6	1.5	1.9	2	1.8	1.8
l Organic Halides	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

quartsmp\obod\3qtr96\OBINDCTR.WK4

TABLE 2

SENECA ARMY DEPOT ACTIVITY
OB GROUNDS THIRD QUARTER 1996 MONITORING PROGRAM
INDICATOR ANALYSIS RESULTS

	MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WA
	SITE	OB	OB	OB	OB	OB	OB	OB	OB	O
	DATE SAMPLED	09/24/96	09/24/96	09/24/96	09/24/96	09/24/96	09/25/96	09/25/96	09/25/96	09/2
	ES ID	OB036a	OB036b	OB036c	OB036d	OBO35	OBO39a	OBO39b	OBO39c	OB
	WELL ID	MW14A	MW14B	MW14C	MW14D	MW14R	MW27A	MW27B	MW27C	MW
	LAB ID	61529	61529	61529	61529	61529	61529	61529	61529	61
	UNITS					Field Blank				
	standard units	7.21	7.2	7.16	7.17	6.54	7.02	7.23	7.23	7.
	umhos/cm	969	976	972	958	3.5	890	858	879	8
arbon	mg/L	2	2.1	2.2	2	<0.5	1.1	1.1	1.1	1
alides	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0

TABLE 3

SENECA ARMY DEPOT ACTIVITY
OD GROUNDS THIRD QUARTER 1996 MONITORING PROGRAM
INDICATOR ANALYSIS RESULTS

	MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WA
	SITE	OD	OD	OD	OD	OD	OD	OD	
	DATE SAMPLED	09/27/96	09/27/96	09/27/96	09/27/96	09/25/96	09/25/96	09/25/96	09/
	ES ID	OB042A	OB042B	OB042C	OB042D	OB041A	OB041B	OB041C	OB
	WELL ID	MW45-3A	MW45-3B	MW45-3C	MW45-3D	MW45-4A	MW45-4B	MW45-4C	MW
	LAB ID	314322	314299	314298	314297	314293	314294	314295	31
R	UNITS								
	standard units	7.36	7.28	7.3	7.18	7.13	7.16	7.14	7
	umhos/cm	1160	1230	1340	1370	905	884	986	7
c Carbon	mg/L	1.2	1.2	1.6	1.1	1.4	1.4	1.3	
c Halides	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<

Table 4

OB/OD 1996 Third Quarter Groundwater Monitoring
Validated TAL Metals Analytical Results

WELL ID		MW12	MW13	MW14	MW27	MW14(DU)	MW14(R)	MW45-3	MW45-4
ES ID		OB040	OB038	OB036	OB039	OB037	0B035	OB042	OB041
SITE		OB	OB	OB	OB	OB	OB	OD	OD
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
A SAMPLED		09/25/96	09/24/96	09/24/96	09/25/96	09/24/96	09/24/96	09/30/96	06/25/96
SDG No.		314287	314323	314086	314328	314091	314805	314891	314292
OUND	UNITS								
nimum	ug/l	131	36.1	443 J	36.1 U	342	36.1 U	392 J	36.1
ony	ug/l	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6
ic	ug/l	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4
m	ug/l	102	85.3	82	83	89.8	7.7 U	19.8	76
ium	ug/l	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	.3 U	0.3
ium	ug/l	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6
um	ug/l	85000	152000	151000	105000	163000	173 U	163000	149000
mium	ug/l	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1
lt	ug/l	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3
er	ug/l	1.8	1.8 U	2.3 U	1.8 U	2.8	5 U	1.8	2.3
	ug/l	117	59.6	192	22.3 U	173	22.3 U	565 J	40.1
	ug/l	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3
esium	ug/l	62200	28800	29000	48200	31200	176 U	61800	27900
ganese	ug/l	0.9	6	3.1	84.3	3.2	0.7	50.6	1.2
ury	ug/l	.1 U	.1 U	NR	.1 U	.1 U	.1 U	0.1 U	0.1
el	ug/l	2.6	2.6 U	2.6 U	3.4	3.1	3.4 U	4.1	3.9
ssium	ug/l	11000 J	2180	2150	8150 J	2500	283 U	8290	11000
ium	ug/l	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7
r	ug/l	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5
um	ug/l	18700	17800	36100	16600	39100	359 U	16500	14700
ium	ug/l	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1	4.1
adium	ug/l	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8
	ug/l	2.3	5.8	5.9	3.2	5.3	14.4	9.4	5.1
ide	ug/l	5 U	5	5 U	5 U	5 U	5 U	5 U	5

TABLE 5

SENECA ARMY DEPOT ACTIVITY
THIRD QUARTER 1996 GROUNDWATER MONITORING PROGRAM
HISTORICAL SUMMARY OF OB GROUNDS INDICATOR PARAMETER DATA

itoring Well		Dec 1994	June 1995	January 1996	March 1996	June 1996	September 19
radient Well:	MW-13	7.04	7.14	7.13	7.1	6.95	7
vngradient Wells:	MW-12	7.37	7.4	7.18	7.39	7.33	7.4
	MW-14	7.11	7.18	6.75	7.19	7.1	7.2
	MW-27	7.34	7.4	7.26	7.32	7.28	7.2
nductivity							
radient Well:	MW-13	886	838	894	920	943	867
vngradient Wells:	MW-12	911	892	869	844	854	879
	MW-14	1082	1090	1025	1047	1070	1070
	MW-27	953	912	944	889	877	877
al Organic Carbon							
radient Well:	MW-13	1.2	1.2	1.2	1.1	1.7	1.9
vngradient Wells:	MW-12	1.2	1.3	1.1	1.1	1.3	1.6
	MW-14	1	1.1	1.0	0.95	1.6	2.1
	MW-27	1	1.1	0.8	0.95	1.3	1.1
al Organic Halides							
radient Well:	MW-13	0.03	0.02U	0.02U	<0.02	<0.02	<0.02
vngradient Wells:	MW-12	0.04	0.02U	0.02U	<0.02	<0.02	<0.02
	MW-14	0.02U	0.02U	0.02U	<0.02	<0.02	<0.02
	MW-27	0.03	0.02U	0.02U	<0.02	<0.02	<0.02

TABLE 6

SENECA ARMY DEPOT ACTIVITY
THIRD QUARTER 1996 GROUNDWATER MONITORING PROGRAM
HISTORICAL SUMMARY OF OD GROUNDS INDICATOR PARAMETER DATA

toring Well		Dec 1994	June 1995	January 1996	March 1996	June 1996	September 199
radient Well:	MW45-4	7.1	7.24	7.16	7.18	7.2	7.2
ngradient Wells:	MW45-1	-	-	-	-	-	-
	MW45-2	-	-	-	-	-	-
	MW45-3	7.19	7.38	7.18	7.28	7.13	7.3
ductivity							
radient Well:	MW45-4	1030	829	891	836	793	892
ngradient Wells:	MW45-1	-	-	-	-	-	-
	MW45-2	-	-	-	-	-	-
	MW45-3	1430	1335	1325	1213	1350	1275
l Organic Carbon							
radient Well:	MW45-4	1	0.9	1.1	0.58	0.925	1.2
ngradient Wells:	MW45-1	-	-	-	-	-	-
	MW45-2	-	-	-	-	-	-
	MW45-3	0.8	0.9	0.65	0.78	1.1	1.3
l Organic Halides							
radient Well:	MW45-4	0.02U	0.02U	0.02U	<0.02	<0.02	<0.02
ngradient Wells:	MW45-1	-	-	-	-	-	-
	MW45-2	-	-	-	-	-	-
	MW45-3	0.02U	0.02U	0.02U	<0.02	<0.02	<0.02

Table 7

OB Grounds Second Quarter 1996 Monitoring Program
Students t-Test Statistical Analysis Results

nd Well MW-13	TOC	pH	Specific Cond.	TOX
n =	1.19	7.02	909.50	0.01
ance =	0.14	0.00	704.53	0.00
ze =	16.00	16.00	16.00	16.00

RGANIC CARBON (TOC)

ce Well MW -12		Background Well MW -13		Compliance Well MW -14		Compliance Well MW -27	
4.04	t*=	6.60	t*=	8.51	t*=	-0	
2.73	tc=	3.01	tc=	3.01	tc=	2	
Increase		**Increase**		**Increase**		**No Chang**	

ce Well MW -12		Background Well MW -13		Compliance Well MW -14		Compliance Well MW -27	
20.18	t*=	-0.25	t*=	8.20	t*=	2	
3.18	tc=	3.01	tc=	3.95	tc=	5	
Increase		**No Change**		**Increase**		**No Chang**	

C CONDUCTANCE

ce Well MW -12		Background Well MW -13		Compliance Well MW -14		Compliance Well MW -2	
-3.80	t*=	-3.43	t*=	7.48	t*=	-3	
3.21	tc=	3.98	tc=	4.36	tc=	3	
No Change		**No Change**		**Increase**		**No Chang**	

RGANIC HALIDES (TOX)

ce Well MW -12		Background Well MW -13		Compliance Well MW -14		Compliance Well MW -2	
-1.00	t*=	-1.00	t*=	-1.00	t*=	-	
2.60	tc=	2.60	tc=	2.60	tc=		
No Change		**No Change**		**No Change**		**No Chan**	

Indicates a statistically significant increase in the indicator parameter
Indicates no statistically significant change in the indicator parameter

rtsmp\obod\3q96\STAT396.WK4

Table 7

OD GroundsSecond Quarter 1996 Monitoring Program
Students t-Test Statistical Analysis Results

d Well MW45-4				
	TOC	pH	Spec Cond.	TOX
=	0.85	7.18	875.08	0.005
nce =	0.03	0.00	14375.90	0.000
e =	12.00	12.00	12.00	12

GANIC CARBON (TOC)

e Well MW 45-1		Compliance Well MW 45-2		Compliance Well MW 45-3		Background Well MW 45-	
0.00	t*=	0.00	t*=	3.49	t*=	2.	
0.00	tc=	0.00	tc=	4.23	tc=	4.	
Dry		Dry		No Change		No Change	

e Well MW 45-1		Compliance Well MW 45-2		Compliance Well MW 45-3		Background Well MW 45-	
0.00	t*=	0.00	t*=	2.47	t*=	-0	
0.00	tc=	0.00	tc=	5.25	tc=	4	
Dry		Dry		No Change		No Change	

CONDUCTANCE

e Well MW 45-1		Compliance Well MW 45-2		Compliance Well MW 45-3		Background Well MW 45-	
0.00	t*=	0.00	t*=	6.69	t*=	0	
0.00	tc=	0.00	tc=	3.93	tc=	3	
Dry		Dry		Increase		No Chang	

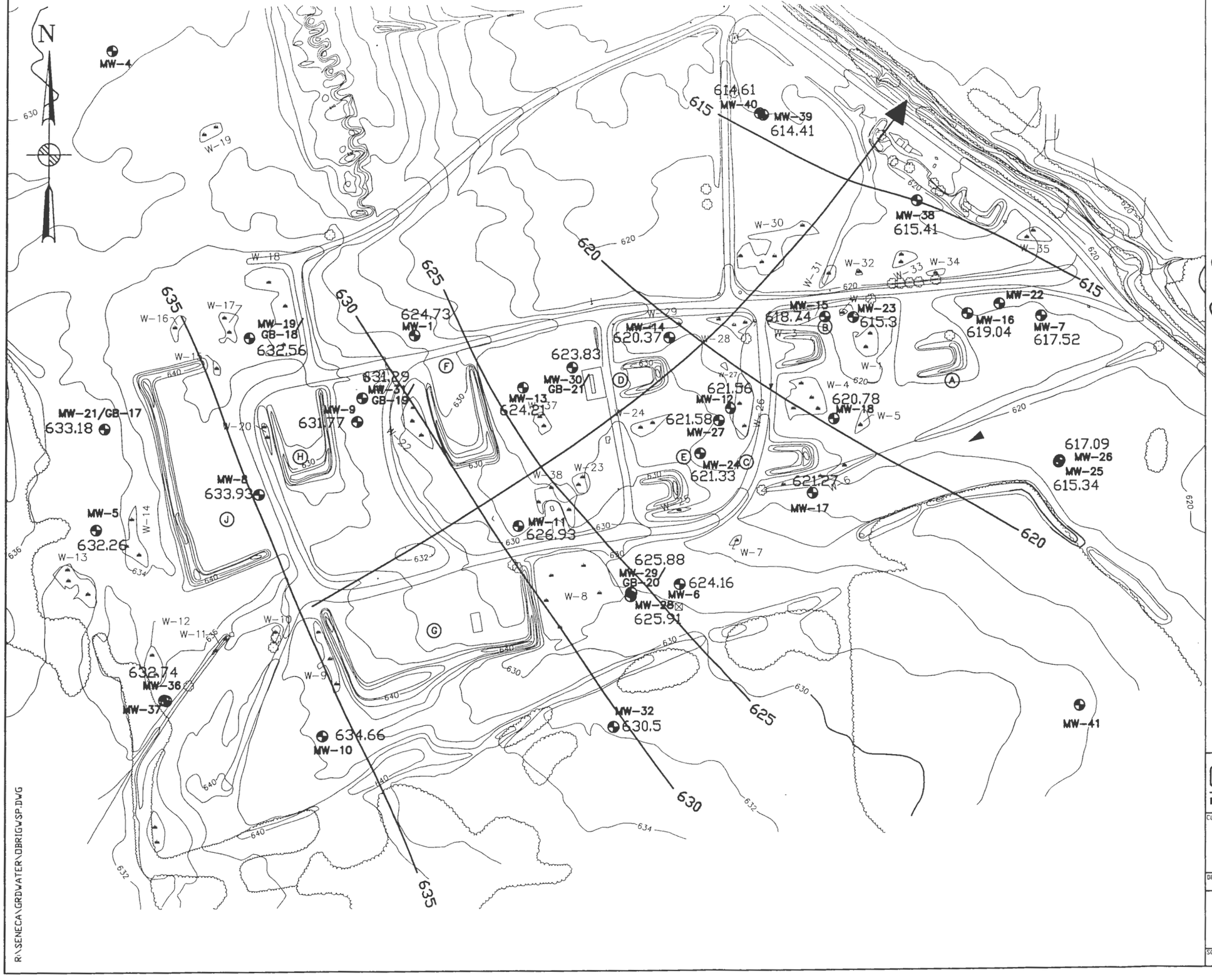
RGANIC HALIDES (TOX)

e Well MW 45-1		Compliance Well MW 45-2		Compliance Well MW 45-3		Background Well MW 45-	
0.00	t*=	0.00	t*=	3.32	t*=	3	
0.00	tc=	0.00	tc=	2.72	tc=	2	
Dry		Dry		Increase		Increase	

Indicates a statistically significant increase in the indicator parameter
Indicates no statistically significant change in the indicator parameter

:smp\obod\3q96\STAT396.WK4

FIGURES



LEGEND:

- BURNING PAD DESIGNATION
- PAD OR GRID BORING
- GROUND CONTOUR AND ELEVATION
- W-1 WETLAND & DESIGNATION
- UTILITY POLE
- TREE
- BRUSH
- MW-14 620.27 MONITORING WELL & DESIGNATION AND MSL ELEVATION DATUM
- 635 GROUNDWATER CONTOUR LINE (DASHED WHERE INFERRED) MSL DATUM
- ARROW INDICATES PREDOMINANT GROUNDWATER FLOW DIRECTION

100 0 100 200
(feet)

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

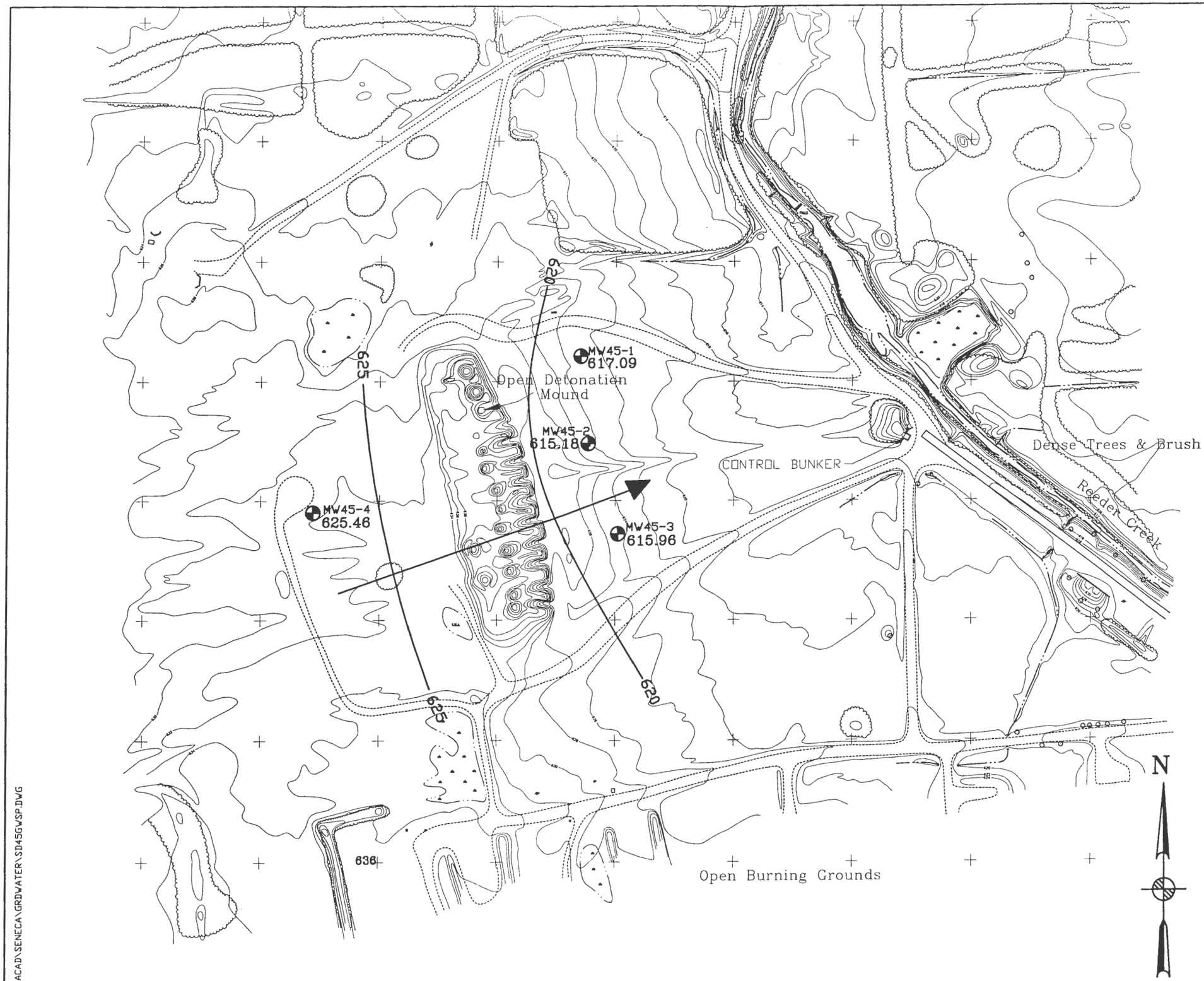
CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY
OB GROUNDS
GROUNDWATER MONITORING PROGRAM

DEPT.	Dwg. No.
ENVIRONMENTAL ENGINEERING	725960-01010

FIGURE 1
GROUNDWATER ELEVATION PLAN
SEPTEMBER 23, 1996

SCALE	DATE	REV
1" = 200'	NOVEMBER 1996	A



LEGEND

- MINOR WATERWAY
- MAJOR WATERWAY
- FENCE
- UNPAVED ROAD
- BRUSH LINE
- LANDFILL EXTENTS
- RAILROAD
- 760 — GROUND SURFACE ELEVATION CONTOUR
- ROAD SIGN
- DECIDUOUS TREE
- GUIDE POST
- FIRE HYDRANT
- MANHOLE
- COORDINATE GRID (250' GRID)
- POLE
- UTILITY BOX
- MAILBOX/RR SIGNAL
- OVERHEAD UTILITY POLE
- SURVEY MONUMENT
- MW45-1 617.08 MONITORING WELL & DESIGNATION AND MSL ELEVATION DATUM
- 625 GROUNDWATER CONTOUR LINE (DASHED WHERE INFERRED)
- ARROW INDICATES PREDOMINANT GROUNDWATER FLOW DIRECTION

100 0 100 200
(feet)

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE
SENECA ARMY DEPOT ACTIVITY
OD GROUNDS
GROUNDWATER MONITORING PROGRAM

DEPT. ENVIRONMENTAL ENGINEERING | Dwg. No. 725980-01010

FIGURE 2
GROUNDWATER ELEVATION PLAN
SEPTEMBER 23, 1996

SCALE 1" = 200' | DATE NOVEMBER 1996 | REV A

ACAD\SENECA\GRDWATER\SD45GWSP.DWG

APPENDIX A

FIELD DATA

OB/OD Third Quarter 1996 Groundwater Monitoring Program

1. Groundwater Sampling Field Notes

2. Chain-of-Custody Forms

1. Groundwater Sampling Field Data

MPLE DESCRIPTION

ct/General Data: OB/OD 3rd Quarter Monitoring

ments:

Rules:
1- The LOC ID must be entered as the location identification, and not with a sampling technique prefix.
e.g.: A soil boring sample that is collected from a monitoring well installation is given the LOC ID of that well.
2- Each sample ID must be used only once.
3 - Maximum SAMP_ID Characters: 5
4 - Available QC Codes: SA=Sample, DU=Duplicate, TB=Trip Blank, FB=Field Blank (rinsate)
5- Available Matrix entries: SOIL, SURFACE SOIL, SEDIMENT, SURFACE WATER, WATER
6 - Maximum SAMPLE_DESCRIPTION Characters: 50
7 - Maximum SAMPLE_COMMENTS Characters: 50

Notes:

UDY_ID	LOC ID (1)	SAMP ID (2,3)	QC CODES (4)	MATRIX (5)	SAMPLE DESCRIPTION (6)	SAMPLED BY	SAMP DATE	SHIP DATE	SAMPLE COMMENTS (7)	Samp Depth Top	Samp Dept Botto
DDQ396	MW-12	OBQ40	SA	water					Metals + CN only		
"	MW-12	OBQ40a	SA	"					TOX TOC S.C + PH		
"	MW-12	OBQ40b	SA	"					rep 1		
"	MW-12	OBQ40c	SA	"					rep 2		
"	MW-12	OBQ40d	SA	"					rep 3		
"	MW-13	OBQ38	SA	"					Metals + CN only		
"	MW-13	OBQ38a	SA	"					TOX TOC S.C. + PH		
"	MW-13	OBQ38b	SA	"					rep 1		
"	MW-13	OBQ38c	SA	"					rep 2		
"	MW-13	OBQ38d	SA	"					rep 3		
"	MW-14	OBQ36	SA	"					metals + CN only [MRD MS/MSD]		
"	MW-14	OBQ36a	SA	"					TOX TOC S.C. + PH		
"	MW-14	OBQ36b	SA	"					rep 1		
"	MW-14	OBQ36c	SA	"					rep 2		
"	MW-14	OBQ36d	SA	"					rep 3		
"	MW-27	OBQ39	SA	"					Metals + CN only		
"	MW-27	OBQ39a	SA	"					TOX TOC S.C. PH		
"	MW-27	OBQ39b	SA	"					rep 1		
"	MW-27	OBQ39c	SA	"					rep 2		
"	MW-27	OBQ39d	SA	"					rep 3		

2 of 4

PLE DESCRIPTION

General Data: OB/OD 3rd Quarter Monitoring

ts:

s: 1- The LOC ID must be entered as the location identification, and not with a sampling technique prefix. Notes:
e.g.: A soil boring sample that is collected from a monitoring well installation is given the LOC ID of that well.
2- Each sample ID must be used only once.
3 - Maximum SAMP_ID Characters: 5
4 - Available QC Codes: SA=Sample, DU=Duplicate, TB=Trip Blank, FB=Field Blank (rinsate)
5- Available Matrix entries: SOIL, SURFACE SOIL, SEDIMENT, SURFACE WATER, WATER
6 - Maximum SAMPLE_DESCRIPTION Characters: 50
7 - Maximum SAMPLE_COMMENTS Characters: 50

Y ID	LOC ID (1)	SAMP ID (2,3)	QC CODES (4)	MATRIX (5)	SAMPLE DESCRIPTION (6)	SAMPLED BY	SAMP DATE	SHIP DATE	SAMPLE COMMENTS (7)	Samp Depth Top	Samp Depth Bottom
3-96	MW45-1								Dry well - not sampled		
	MW45-2								Dry well - not sampled		
	MW-45-3	OB0942	SA	water					metals + CN only		
	MW45-3	OB0942a	SA	"					TOX TOC S.C. + pH		
	MW45-3	OB0942b	SA	"					rep 1		
	MW45-3	OB0942c	SA	"					rep 2		
	MW45-3	OB0942d	SA	"					rep 3		
	MW45-4	OB0941	SA	"					metals + CN only		
	MW45-4	OB0941a	SA	"					TOX TOC S.C. + pH		
	MW45-4	OB0941b	SA	"					rep 1		
	MW45-4	OB0941c	SA	"					rep 2		
	MW45-4	OB0941d	SA	"					rep 3		
	MW-14	OB0937	DU	"					duplicate of MW-14 (met + CN only)		
	MW-14	OB0935	FB	-1					rinsate (Aqueous + MW) for MW-14		

MONITORING WELL FIELD DATA SUMMARY

ect:

eral Info.

s: **Use this form only for groundwater sampling events or groundwater elevation surveys.**

tudy ID	Location ID	Field Activity	Parameter Measured	Value	Units	Date	Comments
DD Q3 96	MW-12	Well Sampling	Temperature	15.7	C	9.25.96	
			Specific Conductivity	0.887	mS/cm	"	
			pH	6.97		"	
			Eh	174	mV	"	
			Dissolved Oxygen	2.3	mg/L	"	
			Turbidity	7.12	NTU	"	
DD Q3 96	MW-13	Well Sampling	Temperature	15.9	C	9.25.96	
			Specific Conductivity	0.894	mS/cm	"	
			pH	6.58		"	
			Eh	92	mV	"	
			Dissolved Oxygen	2.4	mg/L	"	
			Turbidity	0.96	NTU	"	
DD Q3 96	MW-14	Well Sampling	Temperature	15.5	C	9.24.96	
			Specific Conductivity	0.757	mS/cm	"	
			pH	6.77		"	
			Eh	249	mV	"	
			Dissolved Oxygen	1.90	mg/L	"	
			Turbidity	3.56	NTU	"	
DD Q3 96	MW-27	Well Sampling	Temperature	15.3	C	9.25.96	
			Specific Conductivity	0.887	mS/cm	"	
			pH	6.85		"	
			Eh	136	mV	"	
			Dissolved Oxygen	1.2	mg/L	"	
			Turbidity	0.29	NTU	"	
DD Q3 96	MW45-1	Well Sampling	Temperature		C		
			Specific Conductivity		mS/cm		
			pH	Dry			
			Eh		mV		
			Dissolved Oxygen		mg/L		
			Turbidity		NTU		

Dry well - Not Sampled

ORTANT: **Each combination of Loc ID, Study ID, and Parameter can be entered only once.**

ES: 1- Currently availabe PARAMETERS: Depth to Groundwater, Dissolved Oxygen, Eh, pH, Specific Conductivity, Temperature, Turbidity. Add parameter names as needed.

2- Currently available FIELD_ACTIVITIES: Well Sampling, Water Level Measurements

3- Verify that the listed parameter UNITS are correct.

ments:

MONITORING WELL FIELD DATA SUMMARY

Project:

General Info.

Rules: Use this form only for groundwater sampling events or groundwater elevation surveys.

Study ID	Location ID	Field Activity	Parameter Measured	Value	Units	Date	Comments
DB/OD Q3 96	MW45-2	Well Sampling	Temperature		C		
			Specific Conductivity		mS/cm		
		Dry Well - Not Sampled	pH	Dry			
			Eh		mV		
			Dissolved Oxygen		mg/L		
			Turbidity		NTU		
DB/OD Q3 96	MW45-3	Well Sampling	Temperature	16.3	C	9.25.96	
			Specific Conductivity	1.456	mS/cm	"	
			pH	6.79		"	
			Eh	101	mV	"	
			Dissolved Oxygen	1.9	mg/L	"	
			Turbidity	1.41	NTU	"	
DB/OD Q3 96	MW45-4	Well Sampling	Temperature	15.8	C	9.25.96	
			Specific Conductivity	0.865	mS/cm	"	
			pH	6.79		"	
			Eh	201	mV	"	
			Dissolved Oxygen	2.9	mg/L	"	
			Turbidity	2.0	NTU	"	

IMPORTANT: Each combination of Loc ID, Study ID, and Parameter can be entered only once.

NOTES:
1- Currently availabe PARAMETERS: Depth to Groundwater, Dissolved Oxygen, Eh, pH, Specific Conductivity, Temperature, Turbidity. Add parameter names as needed.
2- Currently available FIELD_ACTIVITIES: Well Sampling, Water Level Measurements
3- Verify that the listed parameter UNITS are correct.

Comments:

9/23/96 Arrive : 6:00 AM

0600 - Paul Feshbach-Merney
- weather: dark, clear, 50s
looks like rel. clear day.

0600 straighten up + gather equipment for water levels @ Ash landfill.

0650 leave for Ash site
*-> wait at Post 5 for security to open gate.!
meet Andy S. + Scott S. at trailer.
(their doing geophysics at SEAD-12)

0730 Arrive @ Ash Landfill site
lock key 2508

Ash

Well	DTW	Time	OVM
MW42D	4.79'	0740	ϕ
MW41D	7.82'	0750	ϕ
PT-10	6.62'	0800	ϕ
MW-59	2.69'	0817	ϕ
MW-60	2.46'	0821	ϕ
PT-11	6.15'	0810	(no lock) ϕ
MW-34	4.99'	0835	ϕ
PT-15	8.04'	0842	ϕ
MW-33	7.40'	0849	ϕ
PT-25	6.16'	0853	ϕ

PFM

Well	DTW	TIME	OVM
MW-31	5.26'	0856	ϕ
MW-32	7.42'	0903	ϕ
MW-30	7.17	0907	ϕ
PT-17	4.99'	0912	ϕ
MW-37	4.34'	0921	ϕ
PT-16	3.62'	0927	ϕ
MW-38D	4.26'	0931	ϕ
PT-23	5.11'	0936	ϕ
MW-27	5.54'	0940	ϕ
MW-28	5.35'	0944	ϕ
PT-24	4.80'	0950	ϕ
MW-29	6.34'	1000	ϕ
MW-55D	6.78'	1004	ϕ
MW-54D	6.92'	1006	ϕ
MW-53	7.02'	1008	ϕ
MW-48	3.72'	1017	ϕ
MW-45	3.23'	1022	ϕ
PT-19	6.34'	1032	ϕ
PT-20	5.92'	1037	ϕ
MW-40	4.78'	1042	ϕ
MW-43	3.16'	1045	ϕ
MW-39	2.16	1057	ϕ
MW-46	5.94'	1100	ϕ
MW-49D	5.90'	1102	ϕ

PFM

WELL	DTW	TIME	OVM
MW-50D	5.71'	1104	ϕ
PT-21	7.02'	1110	ϕ (no lock)
PT-22		(Later) Huge Hornet Nest!!	
PT-12	7.31'	1114	ϕ (no lock)
PT-18	7.44'	1120	11 ppm
MW-44	9.66'	1117	ϕ (no lock)

1130 Finish water levels return to trailer to make phone calls + get supplies.

1140 trailer call:
Jim Jones
Mr. Mrs Slate

1155 Leave for OB/OD Grounds to do water levels

1210 Let Jim Jones partner know that I will in the Addo Area

OB/OD

Well	DTW	TIME	OVM
MW-39	5.73'	1225	ϕ
MW-40	5.85'	1230	ϕ
MW-38	5.20'	1236	ϕ
MW45-3	10.49'	1246	ϕ
MW45-2	11.58'	1300	ϕ
MW45-1	7.99'	1255	ϕ

Well	DTW	TIME	OVM
MW-2	7.17'	1305	ϕ

Well is pretty much destroyed leaning over 50° when I got to well – no surface completion – pretty much useless!

MW-3	8.91'	1310	ϕ
MW-1	9.49'	1318	ϕ
MW-4	8.84'	1327	ϕ
MW45-4	7.58'	1325	ϕ
MW-19	3.78'	1337	ϕ
MW-21	4.70'	1343	ϕ
→	4.64'	(next well adjacent)	
MW-8	4.85'	1349	ϕ
MW-35	6.96'	1354	ϕ
MW-36	7.81'	1359	ϕ
MW-5	5.73'	1401	ϕ
MW-10	3.96'	1405	ϕ
MW-9	3.18'	1409	ϕ
MW-31	3.28'	1413	ϕ
MW-13	2.88'	1417	ϕ
MW-30	4.29'	1420	ϕ
MW-11	3.72'	1425	ϕ
MW-28	5.99'	1429	ϕ

WELL	DTW	TIME	DUM
MW-29	6.19'	1431	ϕ
MW-6	6.15'	1435	ϕ
MW-32	4.31'	1525	ϕ
MW-17	3.26'	1439	ϕ
MW-24	6.00'	1443	ϕ
MW-12	2.94'	1445	ϕ
MW-27	4.36'	1448	ϕ
MW-18	3.17'	1451	ϕ
MW-14	4.14'	1456	ϕ
MW-15	3.25'	1459	ϕ
MW-23	4.57'	1500	ϕ
MW-16	3.56'	1505	ϕ
MW-22	—	—	
MW-7	5.42'	1510	ϕ
MW-25	9.32'	1514	ϕ
MW-26	7.34'	1512	ϕ

Bees!

lock totally rusted!

1515 return to trailer to make ASH phone calls

MW-35	3.08'	1617	ϕ
MW-36	3.30'	1615	ϕ
MW-56	3.20'	1626	ϕ
MW-57D	2.29'	1625	ϕ
MW-58D	2.06'	1622	ϕ
MW-47	4.34'	1642	ϕ
MW-51D	4.42'	1641	ϕ
MW-52D	4.03'	1640	ϕ

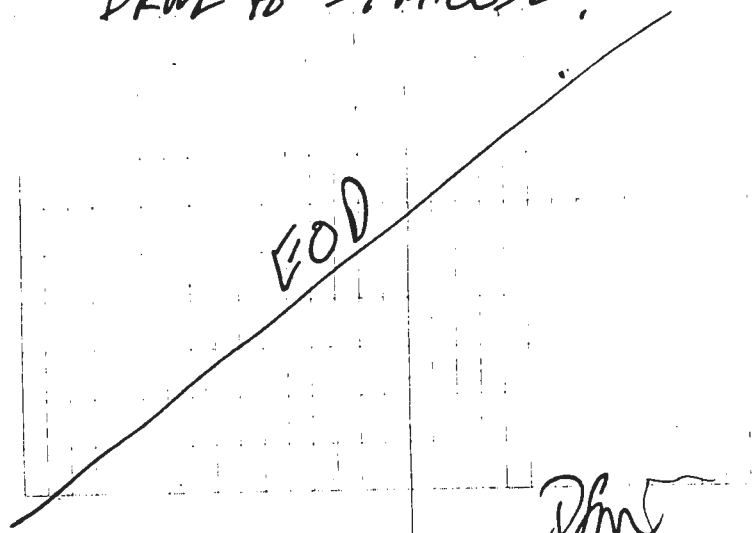
Get:
Drill, Teflon TAPE, bits, high press. hose connectors, duct tape, strapping tape, nylone rope, bubble, wrap.

OB

MW-41	7.52'	1535
MW-34	4.58'	1542
MW-35	5.9'	1544

Meet Andy S. + Scott S. we all drive to Syracuse, + pick up compressor @ Taylor Rental 1659 End of DAY Arthur Lake at Site

DRIVE to SYRACUSE!



(34)

Arrive 0730 | 9/24/96

- weather partly cloudy, 50s
- A.S. + Prm.
- Quarterly sampling equipment prep + calibration

Tally of ft of water in each well:

~~MW-12~~ Rm

OB/OD Grounds

MW-12	9.11' - 2.94' =	6.17'
MW-13	10.14 - 2.88' =	7.26'
MW-14	10.58' - 4.14' =	6.44'
MW-27	15.46' - 4.36' =	11.10
MW-45-1	8.49' - 7.99 =	0.5' *
MW45-2	12.46' - 11.58 =	0.88' *
MW45-3	14.09' - 10.49' =	3.60'
MW45-4	9.57' - 7.58' =	1.99'

* not enough water to sample.

ASH LANDFILL

PT-11	19.54' - 6.15' =	13.39'
PT-19	11.70' - 6.34' =	5.35'
PT-24	11.85' - 4.80' =	7.08'
MW-27	10.52' - 5.54' =	4.98'
MW-29	10.54 - 6.34' =	4.20'

pfm

JC. x2443

(35)

MW-30	10.52' - 7.17' =	3.35'
MW-36	16.58' - 3.30 =	13.28'
MW-40	14.71' - 4.78' =	9.93'
MW-47	8.56' - 4.34' =	4.22'
MW-55	6.88 - 3.20' =	3.68'
MW-59	9.99 - 2.69 -	7.30'
MW-60	10.29 - 2.45 -	7.83'
FH-S	-	
FH-D	-	
BN-S	-	

→ Calibration YSI 3560 prob. wouldn't =!

Cond.: .866 mmohs/cm for 1000 mmohs/cm STD.

Corr. Sample Val = $\frac{\text{Cal. Value}}{\text{Display Val.}}$ x Sample Val.

@ 2 Display Value = 0.867 mmhos/cm

@ 2 ATC Display Value = 1.027 mmhos/cm

PH

Display Value = 7.00 w/ temp of 18.4 in 7.00 PH Buffer Solution

Display Val. = 4.00 w/slop Adj @ 3.92 w/ no slope Adjustment

pfm

Again, Buffer 7 solution reads 6.99 on the meter ∴ ok!

ORP (mV)

Display Value in Zobell Solution: ~~240 mV~~ 239 mV

Temp Display: 19.0 °C

DO Meter calibration

Cal.

Sodium Sulfite value on the meter = 0.06 ppm ngle

Cal. to 17° C

Cal. complete

Calc value for Zobell Solution (cont.)

$= 239\ mV + [(19.0°C - 25°C) \times 1.3 mV]$

$= 239\ mV + [-7.8\ mV]$

$= 239\ mV - 7.8\ mV$

$= 231.2\ mV$

Calc value should be 231 mV

Calculation shows not to be calibrated!

John

1220 lunch

1300 trailer -

- decon pumps + get sample sets organized (bottles) take rinsate; pack car to go to OB Grounds

---

Rinsate: OB0035

Loc_ID: MW-14

NOTE: MRD Samp_ID: OB0035

Time: 1350

Study ID: OB/OD Q3 96

QC code: FB

Sample ID: OB0036

Loc_ID: MW-14

NOTE: MRD Samp_ID: OB0036

Duplicate Samp_ID: OB0037

Loc ID: MW-14

1500 leave for OB/Grounds to sample

* dial: 41448 Security for calls to get into out of [redacted] Area

John

1600 Set up on MW-14

set pump @ 8.5' intake

10.58 − 4.14 = 6.44' water

= 1.01 gal = 1 well volume

[* sec enhanced Fill 3 pump 6 sec total time]

	Temp (°C)	Cond (mmohs/cm)	PH	ORP (mV)	DO (PPM) (mg/L)	Turb (NTU)	RATe (ml)
1610	start pump						
1621	15.2	.633	6.92	224	5.85	40	60
1625	14.8	.638 40	6.89	235	5.20	25	60
1634	15.4	.672	6.82	244	3.50	>50	200
1640	15.5	.693	6.81	246	2.70	>50	200
1646	15.7	.730	6.79	248	2.60	>50	200
1650	15.6	.745	6.78	248	2.00	>50	200
1655	15.6	.759	6.78	249	1.90	30	200
1700	15.5	.757	6.77	249	1.90	30	200

→ 2.7 GAL tot. Begin sampling and going down

1700 → Begin sampling well MW-14

It has been running for about an hour and will continue likely

- Sample (Aquatec) OBϕ36: TOX, TOC, Spec Cond. + pH, Metals, CN

Breakdown as follows:

pfm

OBϕ36: Metals, CN

OBϕ36a TOX/TOC/Spec Cond. & pH

OBϕ36b " " " "

OBϕ36c " " " "

OBϕ36d " " " "

pfm

- Sample (MRD) OBϕ35: TOX, TOC, Spec Cond + pH, Metals, CN

pfm

- Sample (duplicate) OBϕ37: Metals, CN

pfm

→ Turbidity of Metals sample collected:

Calibration:

STD 4.48 NTU → reading 4.45 NTU

STD 422 NTU → reading 426 NTU

Sample from MW-14: 3.56 NTU

1815 Done sampling and return to trailer.

pfm

1630 unpack for the day and charge meters, put samples on ice, paperwork.

Reminders:

1) sample labels a, b, c, d
2) pack + ship samples
   Agritec
   MED
3) decon. pump
4) Note startup on 13 @ OR and then pack + ship coolers.

1720 finish for the day

* Also calibrate instruments!
* sample labels!
* Get GAS!

EOD

PFM

Arrive: 0635 9.25.96

weather: partly cloudy, cool 50's damp from rain prev. day.

Paul Feshbach-Hennig
Eliza Schmidt

TO DO

- sample labels - a, b, c, d
- pack + ship coolers
- decon. pump
- cal. instruments
- get gas for compressor (tomorrow)
- labels for 3 wells to be sampled this AM.
- Bottle sets for the three wells
- LIMS # for 3rd QUARTER:
  LIMS # _____

0640 pack car + gas (got)
0655 decon pump
0710 cal. instruments

YSI

pH STD PH 7 reading 7.00
STD PH 4 reading 4.1 slope Adj. to 4.00

Spec Cond

Spec Cond.
STD 1000 reading 1040 mmohs/cm @ 2 ATC

PFM

ORP

Zobell Solution reading: 252 mV
@ ~~12°C~~ 13.2°C / Temp
= 252 mV + [(13.2°C - 25°C] x 1.3 mV)]
= 252 mV + [-11.8°C) x 1.3 mV]
= 252 mV - 15.34 mV
= 236 mV
* Acceptable 231 ±10 mV
∴ Ok
↑ Note: needs temp Correction and this was done

DO

Cal. to zero ppm with Sodium Sulfite
0745 SAT. w/ elevation +

Pack coolers w/ samples
→ 3rd Quarter job # 725980-01011
→ Fed Ex # 0021-1475-5
0845 leave for 323 to ship Coolers + get ice
0900 leave for 03/OD side
0915 set up at MW-13

Pfm

Pfm

MW-13

10.14 - 2.88 = 7.26' water
(PT) (DTW)
7.26' x 0.163 = 1.2 gal
equals one well volume
well pt = 10.14
set screen @ 8.00'
start pumping 0945

~~Time Rate °C Cond pH ORP DO TURB~~ Pfm
*Cal. turb → 4.48/4.41 ✓ 48.6/49.8 ok!

Time	Rate	Temp	Cond	pH	ORP	DO	TURB
0955	200	14.9	.901	6.54	141	4.8	—
1000	200	15.3	.899	6.58	113	4.0	2.26
—	Water level stable @ 3.06'						—
1005	200	15.6	.894	6.58	98	3.3	1.56
1011	325	15.7	.896	6.57	99	3.0	1.32
1018	325	15.8	.896	6.58	94	2.6	0.97
1020	325	15.9	.894	6.58	92	2.4	0.96
—	Done w/ purge						—

we are at 1.3 gallons total volume purged.
Sample ID: OB038
Sample time: 1025

Pfm

Pfm

OBØ38: Metals
Cyanide
Spec. Cond./pH } OBØ38a
TOX } OBØ38b
TOC } OBØ38c
OBØ38d

NTUs at Metals collection: 0.69
finished sampling 1045
Move to MW-27

MW-27

15.46' - 4.36' = 11.10' water col.
11.10' x .163 = 1.8
Well pt 15.45'
set pump screen = 9.5' TOC
Start pumping @ 1115

PFM

Time	RATE	Temp	Cond	pH	ORP	DO	TURB
1125	250	15.6	.847	6.98	176	4.6	1.19
1133	350	15.6	.870	6.86	165	2.9	0.53
— water stable at 4.90' —							
1140	350	15.5	.880	6.85	152	2.0	— its low
1145	350	15.4	.882	6.85	152	1.5	— "
1149	400	15.3	.887	6.85	142	1.3	0.40
1155	400	15.3	.887	6.85	136	1.2	0.29

PFM

total gallons after purge
1.90 gallons water
— Stop purge —
Sample ID: OBØ39
Sample time: 1200
OBØ39: Metals
CN
Spec Cond/pH } OBØ39a
TOX } OBØ39b
TOC } OBØ39c
OBØ39d

NTUs at Metals Collection:
1215 Eliza goes to dock
2 pumps, get tape,
drop off samples at trailer
and pick up lunch.
1220 set up on MW-12

MW-12

9.11' - 2.94' = 6.17'
6.17 x .163 = 1.0 gal well vol.
well pt = 9.11'
set pump screen = 7.0' TOC
Start pumping: 1250

PFM

PFM

Time	Rate	Temp	Cond	pH	ORP	DO	TURB
1300	300	15.2	.887	7.11	194	5.6	12.2
— water level stable @ 3.31' TOC —							
1305	300	15.5	.888	7.02	191	3.5	14.9
1310	300	15.7	.888	7.00	187	3.1	13.0
1315	300	15.8	.887	6.98	178	2.4	8.97
1320	300	15.7	.889	6.97	174	2.3	7.12

Parameters look good
its starting to RAIN!

1330: total volume 2.0 gallons purged
Sample ID OBΦ40
Sample time 1335
Sample OBΦ40: METALS
CN
Spec Cond/pH } OBΦ40a, OBΦ40b
TOX
TOC } OBΦ40c, OBΦ40d

NTU (at metals) = 4.82
1410 leave mw-12
MW45-4

1420 set up on well
9.57' - 7.58' = 1.99'
1.99 x .163 = 0.32 gallons
well pT: 9.57
pump screen @ 8.5' TOC

→ pump on at 1435
Note: pump sticks above the water table so we can't get water levels during purge.

Time	Rate	Temp	Cond	pH	ORP	DO	Turb
1450	150	15.9	.865	6.92	204	5.8	3.72
1455	150	16.0	.883	6.80	199	4.8	- (low)
1500	150	16.1	.895	6.78	196	4.1	- (low)
1505	150	15.9	.838	6.76	203	2.9	-
1510	150	15.8	.868	6.79	209	2.9	2.0

— stop purge —
Begin sampling 1520
~~Sample ID~~ OBΦ41
OBΦ41 MET
CN
Spec Cond/pH } OBΦ41a, OBΦ41b
TOX
TOC } OBΦ41c, OBΦ41d

NTUs @ Metals sample: 2.0
1545 done sampling + mob to MW45-3

1550 set up at MW 45-3

MW 45-3 weather update: clearing!

14.09' - 10.49' = 3.60' water

3.60 x .163 = gallons

well pt 14.09'

pump intake set at 13.2

→ bot pump 13.7'

Begin pumping @ 1610

— pfm —

Time	Rate	Temp	Cond	pH	ORP	DO	TURB
1625	150	16.1	1.427	6.96	144	4.4	1.25
1630	130	15.9	1.429	6.87	123	3.7	(low)
1635	120	15.8	1.436	6.86	123	3.44	(low) 0.86
1640	120	15.8	1.443	6.84	115	3.0	(low)
1645	120	16.2	1.458	6.83	107	2.5	1.31
1650	110	16.3	1.447	6.81	107	2.4	(low)
1655	110	16.2	1.458	6.80	106	2.0	(low)
1700	110	16.3	1.456	6.79	101	1.9	1.41

— Stop purge —

total volume 1.1 gallons removed

Begin Sampling 1700

Sample OBΦ42

sample time 1700

1710 well went dry!

Pfm

1715 resume sampling

1720 well went dry stop

Eliza back to trailer to pick sample & decon pumps.

1725 resume sampling

1730 well went dry ← I will return to trailer to help Eliza then on our way out we will sample as much as possible.

OBΦ42: METALS

CN

Spec Cond/pH } OBΦ42a, OBΦ42b

TOK } OBΦ42c

TOC } OBΦ42d

→ weather by 1730 mostly sunny! & calm, 60s

1745 resume sampling but no water to be had!

1810 leave site for trailer

Demo Gate key 2508

they did not leave lock so that it could be locked!!

Pfm

2. Chain-of-Custody Forms

CHAIN-OF-CUSTODY RECORD

PAGE 2 OF 2

-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. 725960-01011
PROJECT Quarterly
CONTACT M. Dickinson

LABORATORY Aquatec
ADDRESS Colchester VT
CONTACT Polly Makk

LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	Sp. Cond pH			NO. OF CONTAINERS	COMMENTS (Special instructions, caution
—	9/27/96	1000	—	water	2										2	
—	9/27/96	1000	—	water	2										2	
—	9/27/96	1000	—	water	2										2	
—	9/27/96	1000	—	water	2										2	
—	9/25/96	1700	—	water								1			1	

	VOA	Glass Bottle	Plastic Bottle	Preservative	Container Volume
VOA Vial	X				
Glass Bottle					
Plastic Bottle			X		
Preservative	A E		A		
Container Volume	40 ml		L		

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

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☐ No ☐ Yes

remarks.

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Cooler #: 347

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CHAIN-OF-CUSTODY RECORD

...ONS
...G-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. 725980 -0011
PROJECT Quarterly Sampling
CONTACT M. Duchesneau

LABORATORY Aquatec
ADDRESS Colchester, VT
CONTACT Polly Mulik

LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA TOC	SVOC	METALS	PEST/PCB	CN	HERB	TPH	TOX	TOC	Sp. Cond.	NO. OF CONTAINERS	COMMENTS (Special instructions, caut...)
—	9/25/96	1025	—	water			1		1						2	
—	9/25/96	1025	—	water	2							1		1	4	
—	9/25/96	1025	—	water	2							1		1	4	
—	9/25/96	1025	—	water	2							1		1	4	
—	9/25/96	1025	—	water	2							1		1	4	
—	9/25/96	1200	—	water			1		1						2	
—	9/25/96	1200	—	water	2							1		1	4	
—	9/25/96	1200	—	water	2							1		1	4	
—	9/25/96	1200	—	water	2							1		1	4	
—	9/25/96	1200	—	water	2							1		1	4	

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	VOA TOC	SVOC	METALS	PEST/PCB	CN	HERB	TPH	TOX	TOC	Sp. Cond.
VOA Vial	X									
Glass Bottle								X		
Plastic Bottle			X		X					X
Preservative	A E		A D		A F			A E		A
Container Volume	40 ml		1 L		1 L			250 ml		1 L

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

REMARKS: (Sample s... nonstandard sample b...)

...les tampered with? ☐ No ☐ Yes
...in remarks.

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...SONS
...ING-SCIENCE, INC.
Phone: 617-859-2000
...99 Fax: 617-859-2043

CHAIN-OF-CUSTODY RECORD

JOB NO. 725980 - 01011
PROJECT Quarterly Monitoring
CONTACT N Duchesneau

LABORATORY Aquatec
ADDRESS Colchester VT
CONTACT Polly Mable

...NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA/TOC	SVOC	METALS	PEST/PCB	CN	HERB	TPH	TOX	Sp. Cond pH		NO. OF CONTAINERS	COMMENT... (Special Instructions, ca...)
[illegible]	—	9/25/96	1335	—	water			1		1						2	
[illegible]	—	9/25/96	1335	—	water	2							1	1		4	
[illegible]	—	9/25/96	1335	—	water	2							1	1		4	
[illegible]	—	9/25/96	1335	—	water	2							1	1		4	
[illegible]	—	9/25/96	1335	—	water	2							1	1		4	
	—	9/25/96	1520	—	Water			1		1						2	
a	—	9/25/96	1520	—	water	2							1	1		4	
b	—	9/25/96	1520	—	water	2							1	1		4	
c	—	9/25/96	1520	—	water	2							1	1		4	
d	—	9/25/96	1520	—	water	2							1	1		4	

	VOA/TOC	SVOC	METALS	PEST/PCB	CN	HERB	TPH	TOX	Sp. Cond pH
VOA Vial	X								
Glass Bottle								X	
Plastic Bottle			X		X				X
Preservative	A E		A D		A F			A E	A
Container Volume	40 ml		1 L		1 L			250 ml	1 L

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

REMARKS: (Sample... nonstandard sample...

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...mples tampered with? ☐ No ☐ Yes
...in in remarks.

Cooler #: 91

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CHAIN-OF-CUSTODY RECORD

ONS
NG-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. 725980-01011
PROJECT 3rd Quarter
CONTACT M. Duchesneau

LABORATORY Aquatec
ADDRESS Colchester, Vt.
CONTACT Polly Malk

O.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	Sp Cond	TOX		NO. OF CONTAINERS	COMMENTS (Special Instructions, cau
/	—	9/25/96	1700	—	water								1	1		2	
	—	9/25/96	1700	—	water								1	1		2	
b	—	9/25/96	1700	—	water									1		1	
a	—	9/25/96	1700	—	water									1		1	

LD

	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	Sp Cond	TOX	
VOA Vial										
Glass Bottle									X	
Plastic Bottle								X		
Preservative								A	A E	
Container Volume								1 L	250 ml	

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ples tampered with? ☐ No ☐ Yes
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PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

REMARKS: (Sample
nonstandard sample

Cooler #: M16

White - return with data Yellow - lab copy Pink - Sampler copy

CHAIN-OF-CUSTODY RECORD

...NS
...-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. 725980 - 01011
PROJECT 3rd Quarter Monitoring
CONTACT M. Duchesneau

LABORATORY Aquatec
ADDRESS Colchester, VT
CONTACT Polly Malik

LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	pH, cond	tox.		NO. OF CONTAINERS	COMMENTS (Special instructions, cautio...)
—	9/24/96	1350	—	water	2		1		1			1	1		6	Rinsate
—	9/24/96	1700	—	water			1		1						2	
—	9/24/96	1700	—	water	2							1	1		4	
—	9/24/96	1700	—	water	2							1	1		4	
—	9/24/96	1700	—	water	2							1	1		4	
—	9/24/96	1700	—	water	2							1	1		4	
—	9/24/96	1700	—	water			1		1						2	

	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	pH, cond	tox.	
VOA Vial	X									
Glass Bottle									X	
Plastic Bottle			X		X			X		
Preservative	A E		A D		A F			A	E	
Container Volume	40 ml		1 L		1 L			1 L	250 ml	

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PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

REMARKS: (Sample st... nonstandard sample bo...)

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CHAIN-OF-CUSTODY RECORD

SONS
NG-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. 725980-01011
PROJECT 3rd Quarter Monitoring
CONTACT M. Duchesneau

LABORATORY MRD
ADDRESS 420 South 18th Street Om
CONTACT Laura Perelfield

NO.	LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	pH, cond	toxicity	NO. OF CONTAINERS	COMMENT (Special Instructions, ca
6	—	9/24/96	1700	—	water	2		1		1			1	1	6	
	—	9/24/96	1350	—	water	2		1		1			1	1	6	Rinsate

	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	pH, cond	toxicity
VOA Vial	X								
Glass Bottle									X
Plastic Bottle			X		X			X	
Preservative	A E		A D		A F			A	E
Container Volume	40 ml		1 L		1 L			1 L	250 ml

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[...]mples tampered with? ☐ No ☐ Yes
[...]n in remarks.

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

REMARKS: (Sample nonstandard sample

Cooler #: 600

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CHAIN-OF-CUSTODY RECORD

...NS
...-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. 725980-01011
PROJECT Quarterly Monitoring
CONTACT M. Duchesneau

LABORATORY Aquatec
ADDRESS Colchester, Vt.
CONTACT Polly Mahk

LABORATORY SAMPLE NO.	SAMPLING DATE	SAMPLING TIME	SAMPLE DEPTH	SAMPLE MATRIX	VOA	SVOC	METALS	PEST/PCB	CN	HERB	TPH	Sp.Cond pH			NO. OF CONTAINERS	COMMENTS (Special Instructions, cautio...)
—	9/30/96	0825	—	Water								1			1	
—	9/30/96	0825	—	Water			1		1						2	
VOA Vial																
Glass Bottle																
Plastic Bottle							X		X			X				
Preservative							A D		A F			A				
Container Volume							1 L		1 L			1 L				

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PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with HNO_3
E - Acidified with H_2SO_4
F - NaOH + Ascorbic
G - Other

REMARKS: (Sample st... nonstandard sample bo...)

...es tampered with? ☐ No ☐ Yes
...n remarks.

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APPENDIX B

Laboratory Analytical Packages with QA/QC Data

1. Sample Delivery Group No. 61529

   A. Indicator Analysis Results
   B. TAL Metals Analysis

1. Sample Delivery Group No. 61529

ITS Environmental
Laboratories

55 South Park Drive
Colchester, VT 05446

75 Green Mountain Drive
South Burlington, VT 05403

Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61529
Project No.: 93206
No. Samples: 7
Arrived : 09/26/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314085	OB035:09/24/96 (Water)	
9050	Conductivity (umhos/cm)	3.4
9020	Total Organic Halides	<0.02
9040	pH (std. units)	6.55
9060	Total Organic Carbon	0.6
314087	OB036a:09/24/96 (Water)	
9050	Conductivity (umhos/cm)	969
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.21
9060	Total Organic Carbon	2.0
314088	OB036b:09/24/96 (Water)	
9050	Conductivity (umhos/cm)	976
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.18
9060	Total Organic Carbon	2.1
314089	OB036c:09/24/96 (Water)	
9050	Conductivity (umhos/cm)	972
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.16
9060	Total Organic Carbon	2.2
314090	OB036d:09/24/96 (Water)	
9050	Conductivity (umhos/cm)	958
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.17
9060	Total Organic Carbon	2.0

< Last Page > Submitted By : Aquatec Inc.

ITS Environmental Laboratories

55 South Park Drive
Colchester, VT 05446

75 Green Mountain Drive
South Burlington, VT 05403

Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61561
Project No.: 93206
No. Samples: 13
Arrived : 09/27/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314288	OB040a:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	868
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.37
9060	Total Organic Carbon	1.6
314289	OB040b:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	890
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.37
9060	Total Organic Carbon	1.6
314290	OB040c:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	878
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.36
9060	Total Organic Carbon	1.6
314291	OB040d:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	880
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.35
9060	Total Organic Carbon	1.5
314293	OB041a:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	905
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.13
9060	Total Organic Carbon	1.4

< Cont. Next Page >

ITS Environmental Laboratories

55 South Park Drive
Colchester, VT 05446

75 Green Mountain Drive
South Burlington, VT 05403

Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61561
Project No.: 93206
No. Samples: 13
Arrived : 09/27/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314294	OB041b:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	884
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.16
9060	Total Organic Carbon	1.4
314295	OB041c:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	986
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.14
9060	Total Organic Carbon	1.3
314296	OB041d:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	1000
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.14
9060	Total Organic Carbon	1.3
314297	OB042d:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	1370
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.18
314298	OB042c:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	1340
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.30

< Cont. Next Page >

ITS Environmental Laboratories

55 South Park Drive
Colchester, VT 05446

75 Green Mountain Drive
South Burlington, VT 05403

Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61561
Project No.: 93206
No. Samples: 13
Arrived : 09/27/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314299	OB042b:09/25/96 (Water)	
9020	Total Organic Halides	<0.02

< Last Page > Submitted By : Aquatec Inc.

ITS Environmental Laboratories

55 South Park Drive
Colchester, VT 05446

75 Green Mountain Drive
South Burlington, VT 05403

Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61563
Project No.: 93206
No. Samples: 11
Arrived : 09/27/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314322	OB042a:09/25/96 (Water)	
9020	Total Organic Halides	<0.02
314324	OB038a:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	860
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.03
9060	Total Organic Carbon	1.9
314325	OB038b:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	879
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.02
9060	Total Organic Carbon	2.0
314326	OB038c:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	841
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.00
9060	Total Organic Carbon	1.8
314327	OB038d:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	888
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.01
9060	Total Organic Carbon	1.8
314329	OB039a:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	890
9020	Total Organic Halides	<0.02

< Cont. Next Page >

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South Burlington, VT 05403

Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61563
Project No.: 93206
No. Samples: 11
Arrived : 09/27/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314329	OB039a:09/25/96 (Water)	
9040	pH (std. units)	7.02
9060	Total Organic Carbon	1.1
314330	OB039b:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	858
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.23
9060	Total Organic Carbon	1.1
314331	OB039c:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	879
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.23
9060	Total Organic Carbon	1.1
314332	OB039d:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	883
9020	Total Organic Halides	<0.02
9040	pH (std. units)	7.24
9060	Total Organic Carbon	1.2

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Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Date : 10/18/96
ETR Number : 61590
Project No.: 93206
No. Samples: 5
Arrived : 09/28/96
P.O. Number: *

Attention : Mike Duchesneau

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314469	OB042c:09/27/96 (Water)	
9060	Total Organic Carbon	1.6
314470	OB042b:09/27/96 (Water)	
9060	Total Organic Carbon	1.2
314471	OB042a:09/27/96 (Water)	
9060	Total Organic Carbon	1.2
314472	OB042d:09/27/96 (Water)	
9060	Total Organic Carbon	1.1
314473	OB042b:09/25/96 (Water)	
9050	Conductivity (umhos/cm)	1230
9040	pH (std. units)	7.28

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Analytical Report

Parsons Engineering Science
Prudential Center
Boston, MA 02199

Attention : Mike Duchesneau

Date : 10/18/96
ETR Number : 61679
Project No.: 93206
No. Samples: 14
Arrived : 10/02/96
P.O. Number: *

Case:OBASH SDG:61529

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Lab No./ Method No.	Sample Description/ Parameter	Result
314890	OB042a:09/30/96 (Water)	
9050	Conductivity (umhos/cm)	1160
9040	pH (std. units)	7.36

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Inchcape Testing Services
Environmental Laboratories

Quality Control Summary

Project No: 93206
SDG No: 61529
Units: mg/L

Parameter	Date Analyzed	Method Preparation Blank	Laboratory Control Sample		
			Reported Value	True Value	Percent Recovery
Conductivity (umhos/cm)	10/14/96	NA	1418	1413	100.4
Conductivity (umhos/cm)	10/14/96	NA	1407	1413	99.6
Conductivity (umhos/cm)	10/14/96	NA	1410	1413	99.8
pH (Std Units)	09/26/96	NA	6.00	6.00	100.0
pH (Std Units)	09/27/96	NA	5.99	6.00	99.8
pH (Std Units)	09/27/96	NA	6.00	6.00	100.0
pH (Std Units)	09/30/96	NA	6.00	6.00	100.0
pH (Std Units)	10/02/96	NA	5.99	6.00	99.8
Total Organic Carbon	10/11/96	< 0.5	57.5	58.4	98.5
Total Organic Carbon	10/11/96	< 0.5	59.2	58.4	101.4
Total Organic Carbon	10/15/96	< 0.5	62.9	58.4	107.7
Total Organic Carbon	10/16/96	< 0.5	60.4	58.4	103.4
Total Organic Halides	10/09/96	< 0.02	0.096	0.100	96.0
Total Organic Halides	10/10/96	< 0.02	0.096	0.100	96.0
Total Organic Halides	10/10/96	< 0.02	0.099	0.100	99.0

Reviewed By: K. Chung
Date: 10/23/96

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH SAS No.: _____ SDG No.:61529_

SOW No.: ILM02.1

EPA Sample No.	Lab Sample ID
_OB035_____	_314085_____
_OB036_____	_314086_____
_OB037_____	_314091_____
_OB038_____	_314323_____
_OB039_____	_314328_____
_OB040_____	_314287_____
_OB041_____	_314292_____
_OB042_____	_314891_____
_____	_____
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_____	_____

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

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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 the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB035

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314085

Level (low/med): LOW__ Date Received: 09/26/96

% Solids: __0.0

Concentration Units (~~ug/L or mg/kg dry~~ weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36.1	U		P
7440-36-0	Antimony	3.6	U		P
7440-38-2	Arsenic	4.4	U		P
7440-39-3	Barium	7.7	U		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	173	U		P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	5.0	B		P
7439-89-6	Iron	22.3	U		P
7439-92-1	Lead	2.3	U		P
7439-95-4	Magnesium	176	U		P
7439-96-5	Manganese	0.70	U	E	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	3.4	B		P
7440-09-7	Potassium	283	B		P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	359	B		P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	14.4	B		P
	Cyanide	5.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB036

ab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

atrix (soil/water): WATER Lab Sample ID: 314086

evel (low/med): LOW__ Date Received: 09/26/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	443			P
7440-36-0	Antimony	3.6	U		P
7440-38-2	Arsenic	4.4	U		P
7440-39-3	Barium	82.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	151000			P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.3	B		P
7439-89-6	Iron	192			P
7439-92-1	Lead	2.3	U		P
7439-95-4	Magnesium	29000			P
7439-96-5	Manganese	3.1	B	E	P
7439-97-6	Mercury				NR
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	2150	B		P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	36100			P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	5.9	B		P
	Cyanide	5.0	U		AS

olor Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB037

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314091

Level (low/med): LOW__ Date Received: 09/26/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	342			P_
7440-36-0	Antimony_	3.6	U		P_
7440-38-2	Arsenic__	4.4	U		P_
7440-39-3	Barium___	89.8	B		P_
7440-41-7	Beryllium	0.30	U		P_
7440-43-9	Cadmium__	0.60	U		P_
7440-70-2	Calcium__	163000			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	2.3	U		P_
7440-50-8	Copper___	2.8	B		P_
7439-89-6	Iron_____	173			P_
7439-92-1	Lead_____	2.3	U		P_
7439-95-4	Magnesium	31200			P_
7439-96-5	Manganese	3.2	B	E	P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	3.1	B		P_
7440-09-7	Potassium	2500	B		P_
7782-49-2	Selenium_	4.7	U		P_
7440-22-4	Silver___	1.5	U		P_
7440-23-5	Sodium___	39100			P_
7440-28-0	Thallium_	4.1	U		P_
7440-62-2	Vanadium_	1.8	U		P_
7440-66-6	Zinc_____	5.3	B		P_
_____	Cyanide__	5.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB038

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314323

Level (low/med): LOW__ Date Received: 09/27/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	36.1	U		P_
7440-36-0	Antimony_	3.6	U		P_
7440-38-2	Arsenic__	4.4	U		P_
7440-39-3	Barium___	85.3	B		P_
7440-41-7	Beryllium	0.30	U		P_
7440-43-9	Cadmium__	0.60	U		P_
7440-70-2	Calcium__	152000			P_
7440-47-3	Chromium_	1.0	U		P_
7440-48-4	Cobalt___	2.3	U		P_
7440-50-8	Copper___	1.8	U		P_
7439-89-6	Iron_____	59.6	B		P_
7439-92-1	Lead_____	2.3	U		P_
7439-95-4	Magnesium	28800			P_
7439-96-5	Manganese	6.0	B	E	P_
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	2.6	U		P_
7440-09-7	Potassium	2180	B		P_
7782-49-2	Selenium_	4.7	U		P_
7440-22-4	Silver___	1.5	U		P_
7440-23-5	Sodium___	17800			P_
7440-28-0	Thallium_	4.1	U		P_
7440-62-2	Vanadium_	1.8	U		P_
7440-66-6	Zinc_____	5.8	B		P_
_____	Cyanide__	5.0	U		AS
_____	_____	_____	_	_____	__

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB039

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314328

Level (low/med): LOW__ Date Received: 09/27/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36.1	U		P
7440-36-0	Antimony	3.6	U		P
7440-38-2	Arsenic	4.4	U		P
7440-39-3	Barium	83.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	105000			P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	22.3	U		P
7439-92-1	Lead	2.3	U		P
7439-95-4	Magnesium	48200			P
7439-96-5	Manganese	84.3		E	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	3.4	B		P
7440-09-7	Potassium	8150			P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	16600			P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	3.2	B		P
	Cyanide	5.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB040

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314287

Level (low/med): LOW__ Date Received: 09/27/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	131	B		P
7440-36-0	Antimony	3.6	U		P
7440-38-2	Arsenic	4.4	U		P
7440-39-3	Barium	102	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	85000			P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	117			P
7439-92-1	Lead	2.3	U		P
7439-95-4	Magnesium	62200			P
7439-96-5	Manganese	0.90	B	E	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	2.6	U		P
7440-09-7	Potassium	11000			P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	18700			P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	2.3	U		P
	Cyanide	5.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB041

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314292

Level (low/med): LOW__ Date Received: 09/27/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36.1	U		P
7440-36-0	Antimony	3.6	U		P
7440-38-2	Arsenic	4.4	U		P
7440-39-3	Barium	76.0	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	149000			P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	2.3	B		P
7439-89-6	Iron	40.1	B		P
7439-92-1	Lead	2.3	U		P
7439-95-4	Magnesium	27900			P
7439-96-5	Manganese	1.2	B	E	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	3.9	B		P
7440-09-7	Potassium	11000			P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	14700			P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	5.1	B		P
	Cyanide	5.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

OB042

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Lab Sample ID: 314891

Level (low/med): LOW__ Date Received: 10/02/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	392			P
7440-36-0	Antimony	3.6	U		P
7440-38-2	Arsenic	4.4	U		P
7440-39-3	Barium	19.8	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	163000			P
7440-47-3	Chromium	1.0	U		P
7440-48-4	Cobalt	2.3	U		P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	565			P
7439-92-1	Lead	2.3	U		P
7439-95-4	Magnesium	61800			P
7439-96-5	Manganese	50.6		E	P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	4.1	B		P
7440-09-7	Potassium	8290			P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	16500			P
7440-28-0	Thallium	4.1	B		P
7440-62-2	Vanadium	1.8	U		P
7440-66-6	Zinc	9.4	B		P
	Cyanide	5.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Initial Calibration Source: VENTURES____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum	26000.0	25600.00	98.5	30200.0	30890.00	102.3	30780.00	101.9	P
Antimony	250.0	225.00	90.0	300.0	290.20	96.7	295.20	98.4	P
Arsenic	250.0	239.00	95.6	100.0	99.30	99.3	96.72	96.7	P
Barium	500.0	486.20	97.2	200.0	197.10	98.6	197.40	98.7	P
Beryllium	500.0	500.20	100.0	100.0	97.86	97.9	98.50	98.5	P
Cadmium	500.0	487.80	97.6	100.0	96.31	96.3	96.92	96.9	P
Calcium	25000.0	24370.00	97.5	30200.0	30790.00	102.0	30880.00	102.3	P
Chromium	500.0	497.30	99.5	200.0	196.50	98.2	197.00	98.5	P
Cobalt	500.0	487.30	97.5	200.0	195.00	97.5	194.80	97.4	P
Copper	500.0	502.50	100.5	200.0	198.60	99.3	199.70	99.8	P
Iron	25500.0	25010.00	98.1	30200.0	30570.00	101.2	30700.00	101.7	P
Lead	1000.0	972.20	97.2	400.0	390.00	97.5	392.80	98.2	P
Magnesium	25000.0	24190.00	96.8	30200.0	30300.00	100.3	30410.00	100.7	P
Manganese	500.0	491.00	98.2	200.0	194.60	97.3	195.30	97.6	P
Mercury	1.8	1.83	101.7	5.0	5.02	100.4	5.42	108.4	CV
Nickel	500.0	488.30	97.7	200.0	196.90	98.4	197.60	98.8	P
Potassium	25000.0	25240.00	101.0	30200.0	31580.00	104.6	31570.00	104.5	P
Selenium	250.0	233.70	93.5	100.0	97.65	97.6	98.19	98.2	P
Silver	500.0	491.20	98.2	100.0	100.40	100.4	101.00	101.0	P
Sodium	25000.0	23860.00	95.4	30200.0	30250.00	100.2	30270.00	100.2	P
Thallium	250.0	230.90	92.4	100.0	96.09	96.1	101.00	101.0	P
Vanadium	500.0	502.50	100.5	200.0	196.70	98.4	196.60	98.3	P
Zinc	500.0	498.70	99.7	200.0	201.10	100.6	202.20	101.1	P
Cyanide	120.0	116.50	97.1	150.0	142.00	94.7	144.00	96.0	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Initial Calibration Source: VENTURES____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum				30200.0	30480.00	100.9	30690.00	101.6	P
Antimony				300.0	292.20	97.4	292.20	97.4	P
Arsenic				100.0	97.20	97.2	99.71	99.7	P
Barium				200.0	196.50	98.2	197.00	98.5	P
Beryllium				100.0	98.23	98.2	98.34	98.3	P
Cadmium				100.0	96.26	96.3	96.90	96.9	P
Calcium				30200.0	30710.00	101.7	30810.00	102.0	P
Chromium				200.0	196.60	98.3	196.40	98.2	P
Cobalt				200.0	194.60	97.3	194.70	97.4	P
Copper				200.0	197.90	99.0	198.40	99.2	P
Iron				30200.0	30530.00	101.1	30610.00	101.4	P
Lead				400.0	391.10	97.8	391.10	97.8	P
Magnesium				30200.0	30260.00	100.2	30320.00	100.4	P
Manganese				200.0	194.60	97.3	195.10	97.6	P
Mercury				5.0	5.32	106.4	5.40	108.0	CV
Nickel				200.0	196.60	98.3	196.30	98.2	P
Potassium				30200.0	31240.00	103.4	31170.00	103.2	P
Selenium				100.0	94.79	94.8	97.41	97.4	P
Silver				100.0	100.60	100.6	100.40	100.4	P
Sodium				30200.0	29740.00	98.5	29970.00	99.2	P
Thallium				100.0	97.98	98.0	97.87	97.9	P
Vanadium				200.0	197.00	98.5	197.00	98.5	P
Zinc				200.0	200.80	100.4	201.20	100.6	P
Cyanide				150.0	147.00	98.0			AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Initial Calibration Source: VENTURES____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum	26000.0	25610.00	98.5	30200.0	29850.00	98.8	30870.00	102.2	P
Antimony	250.0	251.00	100.4	300.0	289.20	96.4	301.40	100.5	P
Arsenic	250.0	242.20	96.9	100.0	91.12	91.1	97.71	97.7	P
Barium	500.0	503.40	100.7	200.0	194.70	97.4	202.60	101.3	P
Beryllium	500.0	518.40	103.7	100.0	97.64	97.6	100.80	100.8	P
Cadmium	500.0	499.80	100.0	100.0	95.22	95.2	98.13	98.1	P
Calcium	25000.0	24590.00	98.4	30200.0	29680.00	98.3	30650.00	101.5	P
Chromium	500.0	512.20	102.4	200.0	193.40	96.7	199.60	99.8	P
Cobalt	500.0	501.80	100.4	200.0	193.00	96.5	198.60	99.3	P
Copper	500.0	522.60	104.5	200.0	197.40	98.7	204.20	102.1	P
Iron	25500.0	25330.00	99.3	30200.0	30060.00	99.5	31060.00	102.8	P
Lead	1000.0	1015.00	101.5	400.0	391.80	98.0	404.60	101.2	P
Magnesium	25000.0	24380.00	97.5	30200.0	29830.00	98.8	30780.00	101.9	P
Manganese	500.0	505.70	101.1	200.0	192.50	96.2	198.90	99.4	P
Mercury	1.8	1.67	92.8	5.0	4.81	96.2	4.90	98.0	CV
Nickel	500.0	504.90	101.0	200.0	192.00	96.0	198.50	99.2	P
Potassium	25000.0	26780.00	107.1	30200.0	31580.00	104.6	32510.00	107.6	P
Selenium	250.0	244.97	98.0	100.0	97.44	97.4	99.40	99.4	P
Silver	500.0	529.40	105.9	100.0	97.51	97.5	101.20	101.2	P
Sodium	25000.0	23570.00	94.3	30200.0	29150.00	96.5	30210.00	100.0	P
Thallium	250.0	239.50	95.8	100.0	97.25	97.2	98.48	98.5	P
Vanadium	500.0	517.60	103.5	200.0	193.90	97.0	201.20	100.6	P
Zinc	500.0	510.20	102.0	200.0	198.40	99.2	205.10	102.6	P
Cyanide	120.0	113.50	94.6	150.0	149.00	99.3	147.00	98.0	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Initial Calibration Source: VENTURES____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum				30200.0	29470.00	97.6			P
Antimony				300.0	285.40	95.1			P
Arsenic				100.0	89.43	89.4			P
Barium				200.0	193.00	96.5			P
Beryllium				100.0	96.88	96.9			P
Cadmium				100.0	94.74	94.7			P
Calcium				30200.0	29470.00	97.6			P
Chromium				200.0	191.90	96.0			P
Cobalt				200.0	191.60	95.8			P
Copper				200.0	195.20	97.6			P
Iron				30200.0	29870.00	98.9			P
Lead				400.0	389.40	97.4			P
Magnesium				30200.0	29640.00	98.1			P
Manganese				200.0	191.00	95.5			P
Mercury									NR
Nickel				200.0	190.90	95.4			P
Potassium				30200.0	31210.00	103.3			P
Selenium				100.0	98.44	98.4			P
Silver				100.0	96.76	96.8			P
Sodium				30200.0	29080.00	96.3			P
Thallium				100.0	95.27	95.3			P
Vanadium				200.0	193.10	96.6			P
Zinc				200.0	196.80	98.4			P
Cyanide	120.0	115.00	95.8	150.0	150.00	100.0	149.00	99.3	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

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2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Initial Calibration Source: VENTURES____

Continuing Calibration Source: SPEX_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide	120.0	106.50	88.8	150.0	150.00	100.0	151.00	100.7	AS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

AA CRDL Standard Source: VENTURES____

ICP CRDL Standard Source: VENTURES____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum				4000.0	4269.00	106.7	4257.00	106.4
Antimony				120.0	116.90	97.4	116.70	97.2
Arsenic				20.0	19.87	99.4	22.33	111.6
Barium				400.0	397.70	99.4	399.70	99.9
Beryllium				10.0	9.81	98.1	9.76	97.6
Cadmium				10.0	9.83	98.3	9.72	97.2
Calcium				10000.0	10730.00	107.3	10690.00	106.9
Chromium				20.0	26.85	134.2	27.17	135.8
Cobalt				100.0	96.44	96.4	96.01	96.0
Copper				50.0	49.40	98.8	49.38	98.8
Iron				200.0	257.10	128.6	259.50	129.8
Lead				6.0	6.84	114.0	6.53	108.8
Magnesium				10000.0	10420.00	104.2	10370.00	103.7
Manganese				30.0	29.11	97.0	29.02	96.7
Mercury	0.2	0.11	55.0					
Nickel				80.0	79.01	98.8	78.63	98.3
Potassium				10000.0	11170.00	111.7	11080.00	110.8
Selenium				10.0	12.34	123.4	9.61	96.1
Silver				20.0	20.42	102.1	20.92	104.6
Sodium				10000.0	10010.00	100.1	10020.00	100.2
Thallium				20.0	18.79	94.0	16.58	82.9
Vanadium				100.0	101.10	101.1	100.80	100.8
Zinc				40.0	40.66	101.6	40.32	100.8

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2B
CRDL STANDARD FOR AA AND ICP

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

AA CRDL Standard Source: VENTURES____

ICP CRDL Standard Source: VENTURES____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum				4000.0	4160.00	104.0	4162.00	104.0
Antimony				120.0	118.30	98.6	118.30	98.6
Arsenic				20.0	15.66	78.3	14.35	71.8
Barium				400.0	399.40	99.8	397.90	99.5
Beryllium				10.0	9.88	98.8	9.93	99.3
Cadmium				10.0	10.08	100.8	10.11	101.1
Calcium				10000.0	10380.00	103.8	10410.00	104.1
Chromium				20.0	20.98	104.9	21.14	105.7
Cobalt				100.0	96.78	96.8	96.41	96.4
Copper				50.0	49.98	100.0	50.05	100.1
Iron				200.0	292.60	146.3	305.10	152.6
Lead				6.0	5.48	91.3	7.52	125.3
Magnesium				10000.0	10200.00	102.0	10240.00	102.4
Manganese				30.0	29.96	99.9	29.67	98.9
Mercury	0.2	0.22	110.0					
Nickel				80.0	77.24	96.6	77.51	96.9
Potassium				10000.0	11700.00	117.0	11620.00	116.2
Selenium				10.0	6.40	64.0	8.15	81.5
Silver				20.0	20.85	104.2	20.68	103.4
Sodium				10000.0	9797.00	98.0	9802.00	98.0
Thallium				20.0	19.43	97.2	20.93	104.6
Vanadium				100.0	100.30	100.3	100.60	100.6
Zinc				40.0	42.09	105.2	42.08	105.2

3
BLANKS

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	36.1	U	36.1	U	36.1	U	36.1	U	36.100	U	P
Antimony	3.6	U	3.6	U	3.6	U	3.6	U	3.600	U	P
Arsenic	4.4	U	4.4	U	4.4	U	4.4	U	4.400	U	P
Barium	7.7	U	7.7	U	7.7	U	7.7	U	7.700	U	P
Beryllium	0.3	U	0.3	U	0.3	U	0.3	U	0.300	U	P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U	0.600	U	P
Calcium	173.4	U	173.4	U	173.4	U	173.4	U	173.400	U	P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Cobalt	2.3	U	2.3	U	2.3	U	2.3	U	2.300	U	P
Copper	1.8	U	1.8	U	1.8	U	1.8	U	1.800	U	P
Iron	22.3	U	22.3	U	22.3	U	22.3	U	22.300	U	P
Lead	2.3	U	2.3	U	2.3	U	2.3	U	2.300	U	P
Magnesium	176.0	U	176.0	U	176.0	U	176.0	U	176.000	U	P
Manganese	0.7	U	0.7	U	0.7	U	0.7	U	0.700	U	P
Mercury	-0.1	B	-0.1	B	-0.1	B	-0.1	B	0.100	U	CV
Nickel	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	P
Potassium	237.1	U	237.1	U	237.1	U	237.1	U	237.100	U	P
Selenium	4.7	U	4.7	U	4.7	U	4.7	U	4.700	U	P
Silver	1.5	U	1.5	U	1.5	U	1.5	U	1.500	U	P
Sodium	328.2	U	328.2	U	328.2	U	328.2	U	328.200	U	P
Thallium	4.1	U	4.1	U	4.1	U	4.1	U	4.100	U	P
Vanadium	1.8	U	1.8	U	1.8	U	1.8	U	1.800	U	P
Zinc	2.3	U	2.3	U	2.3	U	2.3	U	2.300	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	5.000	U	AS

3
BLANKS

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			36.1	U					36.100	U	P
Antimony			3.6	U					3.600	U	P
Arsenic			4.4	U					4.400	U	P
Barium			7.7	U					7.700	U	P
Beryllium			0.3	U					0.300	U	P
Cadmium			0.6	U					0.600	U	P
Calcium			173.4	U					173.400	U	P
Chromium			1.0	U					1.000	U	P
Cobalt			2.3	U					2.300	U	P
Copper			1.8	U					1.800	U	P
Iron			22.3	U					22.300	U	P
Lead			2.3	U					2.300	U	P
Magnesium			176.0	U					176.000	U	P
Manganese			0.7	U					0.735	B	P
Mercury			0.1	U					0.100	U	CV
Nickel			2.6	U					2.600	U	P
Potassium			237.1	U					237.100	U	P
Selenium			4.7	U					4.700	U	P
Silver			1.5	U					1.500	U	P
Sodium			328.2	U					328.200	U	P
Thallium			4.1	U					4.100	U	P
Vanadium			1.8	U					1.800	U	P
Zinc			2.3	U					2.300	U	P
Cyanide	10.0	U	10.0	U	10.0	U			5.000	U	AS

3
BLANKS

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	36.1	U	36.1	U	36.1	U	36.1	U			P
Antimony	3.6	U	3.6	U	3.6	U	3.6	U			P
Arsenic	4.4	U	-4.4	B	4.4	U	-4.6	B			P
Barium	7.7	U	7.7	U	7.7	U	7.7	U			P
Beryllium	0.3	U	1.7	B	0.3	U	0.3	U			P
Cadmium	0.6	U	0.6	U	0.6	U	0.6	U			P
Calcium	173.4	U	173.4	U	173.4	U	173.4	U			P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U			P
Cobalt	2.3	U	2.3	U	2.3	U	2.3	U			P
Copper	1.8	U	1.8	U	1.8	U	1.8	U			P
Iron	22.6	B	22.3	U	22.3	U	22.3	U			P
Lead	2.4	B	2.3	U	2.3	U	2.3	U			P
Magnesium	176.0	U	176.0	U	176.0	U	176.0	U			P
Manganese	0.8	B	2.3	B	0.7	U	0.7	U			P
Mercury	0.1	U	0.1	U	0.1	U			0.100	U	CV
Nickel	2.6	U	2.6	U	2.6	U	2.6	U			P
Potassium	237.1	U	237.1	U	237.1	U	237.1	U			P
Selenium	4.7	U	4.7	U	4.7	U	4.7	U			P
Silver	1.7	B	1.5	U	1.5	U	1.5	U			P
Sodium	328.2	U	328.2	U	328.2	U	328.2	U			P
Thallium	4.1	U	4.1	U	4.1	U	4.1	U			P
Vanadium	1.8	U	3.1	B	1.8	U	1.8	U			P
Zinc	2.3	U	2.3	U	2.3	U	2.3	U			P
Cyanide	10.0	U	10.0	U	10.0	U			5.000	U	AS

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3
BLANKS

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide	10.0	U	10.0	U	10.0	U					AS

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No: _____ SDG No.: 61529_

ICP ID Number: ICP4 TJA 61E ICS Source: VENTURES____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial %R	Final Found Sol. A	Final Found Sol. AB	Final %R
Aluminum	500000	464515	499100	482800.0	103.9	500100	481000.0	103.5
Antimony	0	523	1	569.3	108.9	3	563.6	107.8
Arsenic	0	99	2	101.8	102.8	1	100.0	101.0
Barium	0	466	1	475.2	102.0	1	474.8	101.9
Beryllium	0	446	0	462.2	103.6	0	462.7	103.7
Cadmium	0	882	1	911.1	103.3	2	907.6	102.9
Calcium	500000	492600	528500	515100.0	104.6	528400	513100.0	104.2
Chromium	0	452	4	465.3	102.9	5	463.9	102.6
Cobalt	0	433	0	444.0	102.5	0	442.6	102.2
Copper	0	486	3	501.9	103.3	3	501.7	103.2
Iron	200000	176700	195500	184200.0	104.2	195600	183700.0	104.0
Lead	0	50	-4	43.9	87.8	-3	45.7	91.4
Magnesium	500000	494586	520100	516300.0	104.4	518900	513700.0	103.9
Manganese	0	451	1	465.1	103.1	1	464.2	102.9
Mercury								
Nickel	0	883	3	910.2	103.1	3	902.8	102.2
Potassium	0	0	-21	-55.9		32	21.6	
Selenium	0	50	4	50.7	101.4	4	53.0	106.0
Silver	0	169	1	173.8	102.8	1	173.7	102.8
Sodium	0	0	-82	-169.0		-163	-133.0	
Thallium	0	98	4	89.5	91.3	4	96.3	98.3
Vanadium	0	460	2	472.8	102.8	2	473.5	102.9
Zinc	0	951	19	984.4	103.5	20	982.2	103.3

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No: _____ SDG No.: 61529_

ICP ID Number: ICP5 TJA 61E ICS Source: VENTURES____

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial %R	Final Found Sol. A	Final Found Sol. AB	Final %R
Aluminum	500000	494914	502700	507200.0	102.5	501500	504200.0	101.9
Antimony	0	492	0	581.8	118.3	-3	587.3	119.4
Arsenic	0	93	-2	87.6	94.2	-4	90.2	97.0
Barium	0	474	1	497.0	104.9	1	494.7	104.4
Beryllium	0	466	0	480.7	103.2	0	478.9	102.8
Cadmium	0	883	3	908.1	102.8	3	906.2	102.6
Calcium	500000	479786	501300	499700.0	104.2	499900	498700.0	103.9
Chromium	0	459	5	475.9	103.7	5	474.0	103.3
Cobalt	0	440	1	452.9	102.9	1	451.4	102.6
Copper	0	491	4	510.9	104.1	4	508.1	103.5
Iron	200000	180600	191000	188900.0	104.6	190600	188500.0	104.4
Lead	0	44	-4	41.3	93.9	-3	42.0	95.5
Magnesium	500000	483614	495500	505400.0	104.5	493800	504100.0	104.2
Manganese	0	457	-1	469.9	102.8	-1	468.5	102.5
Mercury								
Nickel	0	878	0	899.0	102.4	-1	897.2	102.2
Potassium	0	0	25	29.9		15	30.3	
Selenium	0	69	4	62.0	89.9	1	60.8	88.1
Silver	0	197	1	214.5	108.9	0	214.2	108.7
Sodium	0	0	499	237.2		256	336.8	
Thallium	0	92	0	87.3	94.9	-1	91.4	99.3
Vanadium	0	470	1	486.4	103.5	1	485.6	103.3
Zinc	0	958	19	981.5	102.5	20	978.4	102.1

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LABORATORY CONTROL SAMPLE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Solid LCS Source: _____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	51000.0	51900.00	101.8						
Antimony	2000.0	1964.00	98.2						
Arsenic	1050.0	1002.00	95.4						
Barium	500.0	468.50	93.7						
Beryllium	500.0	480.50	96.1						
Cadmium	525.0	488.30	93.0						
Calcium	50000.0	50070.00	100.1						
Chromium	500.0	477.90	95.6						
Cobalt	500.0	464.40	92.9						
Copper	500.0	490.80	98.2						
Iron	50500.0	50520.00	100.0						
Lead	1015.0	949.10	93.5						
Magnesium	50000.0	49840.00	99.7						
Manganese	500.0	470.00	94.0						
Mercury	1.0	1.01	101.0						
Nickel	500.0	467.60	93.5						
Potassium	50000.0	49570.00	99.1						
Selenium	525.0	502.00	95.6						
Silver	500.0	468.60	93.7						
Sodium	50000.0	50810.00	101.6						
Thallium	550.0	511.40	93.0						
Vanadium	500.0	478.70	95.7						
Zinc	500.0	482.70	96.5						
Cyanide									

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LABORATORY CONTROL SAMPLE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Solid LCS Source: _____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury	1.0	0.96	96.0						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

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LABORATORY CONTROL SAMPLE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Solid LCS Source: _____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	51000.0	49270.00	96.6						
Antimony	2000.0	1901.00	95.0						
Arsenic	1050.0	981.20	93.4						
Barium	500.0	457.50	91.5						
Beryllium	500.0	472.90	94.6						
Cadmium	525.0	477.30	90.9						
Calcium	50000.0	48240.00	96.5						
Chromium	500.0	466.60	93.3						
Cobalt	500.0	456.40	91.3						
Copper	500.0	477.00	95.4						
Iron	50500.0	48810.00	96.7						
Lead	1015.0	935.30	92.1						
Magnesium	50000.0	48030.00	96.1						
Manganese	500.0	458.50	91.7						
Mercury									
Nickel	500.0	457.40	91.5						
Potassium	50000.0	49470.00	98.9						
Selenium	525.0	494.74	94.2						
Silver	500.0	481.80	96.4						
Sodium	50000.0	48280.00	96.6						
Thallium	550.0	500.00	90.9						
Vanadium	500.0	470.80	94.2						
Zinc	500.0	466.90	93.4						
Cyanide									

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LABORATORY CONTROL SAMPLE

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Solid LCS Source: _____

Aqueous LCS Source: VENTURES____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury	1.0	1.08	108.0						
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

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8
STANDARD ADDITION RESULTS

ab Name: INCHCAPE_ENVIRONMENTAL___ Contract:93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.:______ SDG No.:61529_

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q

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ICP SERIAL DILUTION

EPA SAMPLE NO.

OB042L

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	391.50		670.10	B	71.2		P
Antimony	3.60	U	18.00	U			P
Arsenic	4.40	U	22.00	U			P
Barium	19.77	B	38.50	U	100.0		P
Beryllium	0.30	U	1.50	U			P
Cadmium	0.60	U	3.00	U			P
Calcium	163200.00		162500.00		0.4		P
Chromium	1.00	U	5.00	U			P
Cobalt	2.30	U	11.50	U			P
Copper	1.80	U	11.06	B			P
Iron	565.00		787.60		39.4		P
Lead	2.30	U	11.50	U			P
Magnesium	61750.00		61140.00		1.0		P
Manganese	50.56		56.03	B	10.8	E	P
Mercury							NR
Nickel	4.12	B	16.36	B	297.1		P
Potassium	8292.00		9109.00	B	9.9		P
Selenium	4.70	U	23.50	U			P
Silver	1.50	U	7.50	U			P
Sodium	16480.00		17650.00	B	7.1		P
Thallium	4.12	B	20.50	U	100.0		P
Vanadium	1.80	U	9.00	U			P
Zinc	9.35	B	41.30	B	341.7		P

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ICP SERIAL DILUTION

EPA SAMPLE NO.

OB035L

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

Matrix (soil/water): WATER Level (low/med): LOW__

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	36.10	U	180.50	U			P
Antimony	3.60	U	18.00	U			P
Arsenic	4.40	U	22.00	U			P
Barium	7.70	U	38.50	U			P
Beryllium	0.30	U	1.50	U			P
Cadmium	0.60	U	3.00	U			P
Calcium	173.40	U	867.00	U			P
Chromium	1.00	U	5.00	U			P
Cobalt	2.30	U	11.50	U			P
Copper	5.02	B	9.00	U	100.0		P
Iron	22.30	U	111.50	U			P
Lead	2.30	U	11.50	U			P
Magnesium	176.00	U	880.00	U			P
Manganese	0.70	U	3.50	U			P
Mercury							NR
Nickel	3.38	B	13.00	U	100.0		P
Potassium	283.30	B	1185.50	U	100.0		P
Selenium	4.70	U	23.50	U			P
Silver	1.50	U	7.50	U			P
Sodium	358.80	B	1641.00	U	100.0		P
Thallium	4.10	U	20.50	U			P
Vanadium	1.80	U	9.00	U			P
Zinc	**14.38**	B	34.91	B	142.8		P

10

Instrument Detection Limits (Quarterly)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

CP ID Number: ICP4_TJA_61E Date: 10/01/96

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.22		200	31.5	P
Antimony	206.84		60	3.6	P
Arsenic	189.04		10	2.8	P
Barium	493.41		200	7.7	P
Beryllium	313.04		5	0.3	P
Cadmium	226.50		5	0.4	P
Calcium	317.93		5000	173.4	P
Chromium	267.72		10	1.0	P
Cobalt	228.62		50	2.3	P
Copper	324.75		25	1.8	P
Iron	271.44		100	15.8	P
Lead	220.35		3	1.5	P
Magnesium	279.08		5000	176.0	P
Manganese	257.61		15	0.6	P
Mercury			0.2		NR
Nickel	231.60		40	2.6	P
Potassium	766.49		5000	237.1	P
Selenium	196.03		5	3.1	P
Silver	328.07		10	1.2	P
Sodium	330.23		5000	307.7	P
Thallium	190.86		10	3.6	P
Vanadium	292.40		50	1.8	P
Zinc	213.86		20	2.3	P

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP5_TJA_61E Date: 10/01/96

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	237.31		200	36.1	P
Antimony	206.84		60	3.0	P
Arsenic	189.04		10	4.4	P
Barium	493.41		200	3.2	P
Beryllium	313.04		5	0.2	P
Cadmium	226.50		5	0.6	P
Calcium	317.93		5000	82.1	P
Chromium	267.72		10	1.0	P
Cobalt	228.61		50	1.3	P
Copper	324.75		25	1.1	P
Iron	271.44		100	22.3	P
Lead	220.35		3	2.3	P
Magnesium	279.08		5000	72.9	P
Manganese	294.92		15	0.7	P
Mercury			0.2		NR
Nickel	231.60		40	2.5	P
Potassium	766.49		5000	93.5	P
Selenium	196.03		5	4.7	P
Silver	328.07		10	1.5	P
Sodium	330.23		5000	328.2	P
Thallium	190.86		10	4.1	P
Vanadium	292.40		50	1.6	P
Zinc	213.85		20	1.4	P

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: _____ Date: 07/01/96

Flame AA ID Number : CV1_PS200II_

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.1	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: _____ Date: 10/01/96

Flame AA ID Number : PS1214_____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP4 TJA 61E Date: 01/01/96

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	CO_
Aluminum_	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony_	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic__	189.04	0.0000000	0.0000000	-0.0000390	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000400	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	0.0000000	0.0000000	0.0001035	0.0000000	0.0000000
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt___	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper___	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron_____	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	-0.0000596	-0.0000184	0.0000823	0.0000111	-0.0048710
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	0.0000000	-0.0011240
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.03	0.0000000	0.0000000	-0.0001999	0.0000000	-0.0000465
Silver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium___	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	-0.0000100	0.0000000	-0.0000800	0.0000000	0.0049700
Vanadium_	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc_____	213.86	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

omments:

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ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP4 TJA 61E Date: 01/01/96

Analyte	Wavelength (nm)	Interelement Correction Factors for : CR_	MN_	NI_	V__	___
Aluminum_	308.22	0.0000000	0.0000000	0.0000000	0.0264000	
Antimony_	206.84	0.0055040	0.0000000	-0.0002668	-0.0036670	
Arsenic__	189.04	-0.0029900	0.0000000	0.0000000	0.0000000	
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0011400	
Cadmium__	226.50	0.0000000	0.0000000	-0.0000329	0.0000000	
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	
Chromium_	267.72	0.0000000	0.0000704	0.0000000	-0.0000540	
Cobalt___	228.62	0.0000000	0.0000000	0.0000000	0.0000000	
Copper___	324.75	0.0000000	0.0000000	0.0000000	0.0000000	
Iron_____	271.44	0.0000000	0.0000000	0.0000000	0.0000000	
Lead_____	220.35	-0.0001864	0.0000279	0.0002131	-0.0006255	
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	
Mercury__						
Nickel___	231.60	0.0000000	-0.0001310	0.0000000	0.0000000	
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium_	196.03	0.0000000	0.0002108	0.0000000	0.0000188	
Silver___	328.07	0.0000000	0.0000000	0.0000000	0.0000000	
Sodium___	330.23	0.0000000	0.0000000	0.0000000	0.0000000	
Thallium_	190.86	0.0003750	-0.0005820	0.0000000	0.0036030	
Vanadium_	292.40	0.0000000	0.0000000	0.0000000	0.0000000	
Zinc_____	213.86	0.0000000	0.0000000	0.0000000	0.0000000	

omments:

U.S. EPA - CLP

11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP5 TJA 61E Date: 04/22/96

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	CD_
Aluminum_	237.31	0.0000000	0.0000000	-0.0004721	0.0000000	0.0000000
Antimony_	206.84	0.0000000	0.0000000	0.0000310	0.0000000	0.0000000
Arsenic__	189.04	0.0000000	0.0000000	-0.0000520	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000040	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium__	226.50	-0.0000020	0.0000000	0.0001380	0.0000000	0.0000000
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000000	0.0000000	-0.0002050
Cobalt___	228.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0002010
Copper___	324.75	0.0000000	0.0000000	-0.0000580	0.0000000	0.0000000
Iron_____	271.44	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead_____	220.35	0.0004860	0.0000000	0.0000960	0.0000080	0.0000000
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	294.92	0.0000000	0.0000000	0.0004730	0.0000000	0.0000000
Mercury__						
Nickel___	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.03	0.0000000	0.0000000	-0.0000210	0.0000080	0.0000000
Silver___	328.07	0.0000080	0.0000070	0.0000150	0.0000020	0.0000000
Sodium___	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	-0.0000080	0.0000000	-0.0000650	0.0000000	0.0000000
Vanadium_	292.40	0.0000000	0.0000000	0.0000250	0.0000000	0.0000000
Zinc_____	213.85	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

omments:

U.S. EPA - CLP

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP5 TJA 61E Date: 04/22/96

Analyte	Wavelength (nm)	Interelement Correction Factors for: CO_	CR_	MN_	NI_	TI_
Aluminum_	237.31	0.0010260	-0.0001500	0.0004560	0.0000000	0.0000000
Antimony_	206.84	0.0000000	0.0106760	0.0000000	-0.0010930	0.0009800
Arsenic__	189.04	0.0000000	0.0000130	-0.0000260	0.0000000	0.0000000
Barium___	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0006000
Cadmium__	226.50	0.0000190	0.0000000	0.0000000	-0.0001420	0.0001100
Calcium__	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium_	267.72	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt___	228.61	0.0000000	0.0000760	0.0000000	0.0001550	0.0021800
Copper___	324.75	-0.0006200	0.0000000	0.0000000	0.0000000	0.0000000
Iron_____	271.44	0.0834400	0.0000000	-0.0010430	-0.0005400	0.0000000
Lead_____	220.35	-0.0032100	-0.0000200	0.0000000	0.0001830	0.0002200
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	294.92	0.0000000	-0.0001100	0.0000000	0.0000000	0.0000000
Mercury__						
Nickel___	231.60	0.0005300	0.0000000	-0.0000770	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium_	196.03	0.0003320	0.0000000	0.0003360	0.0000000	0.0000000
Silver___	328.07	0.0000000	0.0000450	0.0001060	0.0000000	0.0004400
Sodium___	330.23	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium_	190.86	0.0031500	0.0003050	-0.0053100	0.0000000	0.0003200
Vanadium_	292.40	0.0000000	-0.0014900	-0.0000760	0.0000000	0.0005480
Zinc_____	213.85	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

omments:

U.S. EPA - CLP

11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP5 TJA 61E Date: 04/22/96

Analyte	Wave-length (nm)	Interelement Correction Factors for: V	ZN			
Aluminum	237.31	-0.0041100	0.0000000			
Antimony	206.84	-0.0107300	0.0002410			
Arsenic	189.04	-0.0010590	0.0000000			
Barium	493.41	0.0000420	0.0000000			
Beryllium	313.04	0.0000000	0.0000000			
Cadmium	226.50	0.0000000	0.0000000			
Calcium	317.93	0.0000000	0.0000000			
Chromium	267.72	0.0000000	0.0000000			
Cobalt	228.61	0.0000000	0.0000000			
Copper	324.75	-0.0001320	0.0000000			
Iron	271.44	0.0076000	0.0000000			
Lead	220.35	0.0000000	0.0000000			
Magnesium	279.08	0.0000000	0.0000000			
Manganese	294.92	0.0048700	0.0000000			
Mercury						
Nickel	231.60	-0.0001520	0.0000000			
Potassium	766.49	0.0000000	0.0000000			
Selenium	196.03	0.0001120	0.0000000			
Silver	328.07	0.0004460	0.0000000			
Sodium	330.23	0.0000000	-0.1301000			
Thallium	190.86	0.0018800	0.0000000			
Vanadium	292.40	0.0000000	0.0000000			
Zinc	213.85	-0.0054500	0.0000000			

Comments:

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12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

ICP ID Number: ICP4 TJA 61E Date: 10/01/96

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	10.00	1000000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	20000.0	P
Barium	10.00	10000.0	P
Beryllium	10.00	10000.0	P
Cadmium	10.00	10000.0	P
Calcium	10.00	500000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	100000.0	P
Copper	10.00	100000.0	P
Iron	10.00	1000000.0	P
Lead	10.00	100000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	10000.0	P
Mercury			NR
Nickel	10.00	20000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	4000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	10000.0	P
Vanadium	10.00	100000.0	P
Zinc	10.00	5000.0	P

Comments:

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12
ICP LINEAR RANGES (QUARTERLY)

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.: 61529_

CP ID Number: ICP5 TJA 61E Date: 10/01/96

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	10.00	250000.0	P
Antimony	10.00	100000.0	P
Arsenic	10.00	20000.0	P
Barium	10.00	50000.0	P
Beryllium	10.00	5000.0	P
Cadmium	10.00	10000.0	P
Calcium	10.00	500000.0	P
Chromium	10.00	100000.0	P
Cobalt	10.00	20000.0	P
Copper	10.00	100000.0	P
Iron	10.00	500000.0	P
Lead	10.00	100000.0	P
Magnesium	10.00	500000.0	P
Manganese	10.00	50000.0	P
Mercury			NR
Nickel	10.00	50000.0	P
Potassium	10.00	100000.0	P
Selenium	10.00	20000.0	P
Silver	10.00	2000.0	P
Sodium	10.00	100000.0	P
Thallium	10.00	20000.0	P
Vanadium	10.00	50000.0	P
Zinc	10.00	5000.0	P

Comments:

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PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW1	10/01/96		100
OB035	10/01/96		100
OB036	10/01/96		100
OB037	10/01/96		100
OB038	10/01/96		100
OB039	10/01/96		100
OB040	10/01/96		100
OB041	10/01/96		100
PBW1	10/01/96		100

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PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW2	10/18/96		100
OB042	10/18/96		100
PBW2	10/18/96		100

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PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW1	09/30/96		100
LCSW2	09/30/96		100
OB035	09/30/96		100
OB036	09/30/96		100
OB037	09/30/96		100
OB040	09/30/96		100
OB041	09/30/96		100
PBW1	09/30/96		100
PBW2	09/30/96		100

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PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW3	10/15/96		100
OB038	10/15/96		100
OB039	10/15/96		100
OB042	10/15/96		100
PBW3	10/15/96		100

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PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: AS

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV	10/02/96		250
OB035	10/02/96		250
OB036	10/02/96		250
OB037	10/02/96		250
PBW1	10/02/96		250

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PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: AS

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV	10/07/96		250
ICV	10/07/96		250
OB038	10/07/96		250
OB039	10/07/96		250
OB040	10/07/96		250
OB041	10/07/96		250
PBW2	10/07/96		250

13
PREPARATION LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.:_OBASH_ SAS No.: _____ SDG No.:61529_

Method: AS

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV	10/10/96		250
OB042	10/10/96		250
PBW3	10/10/96		250

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: ICP4 TJA 61E_ Method: P_

Start Date: 10/08/96 End Date: 10/08/96

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1535		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
S	1.00	1539					X	X	X		X	X	X				X	_	X			X			X	X	_
S	1.00	1544		X	_	_	_	_	_	X	_	_	_	X	_	X	_	_	_	X	_	_	X	_	_	_	_
S	1.00	1548		_	X	X	_	_	_	_	_	_	_	_	X	_	_	_	_	_	_	X	_	_	X	_	_	_
ICV	1.00	1554		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICB	1.00	1559		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICSA	1.00	1604		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICSAB	1.00	1609		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CRI	1.00	1613		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCV	1.00	1618		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCB	1.00	1623		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZZ	1.00	1628		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1633		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1638		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1642		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
PBW1	1.00	1647		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
LCSW1	1.00	1652		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZZ	1.00	1657		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	5.00	1702		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1706		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1711		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
CCV	1.00	1716		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCB	1.00	1721		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZZ	1.00	1726		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
OB035	1.00	1731		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB035L	5.00	1735		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB036	1.00	1740		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB037	1.00	1745		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB040	1.00	1750		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB041	1.00	1755		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB038	1.00	1759		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB039	1.00	1804		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
				_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: ______ SDG No.:61529_

Instrument ID Number: ICP4 TJA 61E_ Method: P_

Start Date: 10/08/96 End Date: 10/08/96

EPA Sample No.	D/F	Time	% R	AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	1809		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1.00	1814		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSA	1.00	1819		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSAB	1.00	1824		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CRI	1.00	1829		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCV	1.00	1833		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1.00	1838		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: ICP5 TJA 61E_ Method: P_

Start Date: 10/22/96 End Date: 10/22/96

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1247		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
S	1.00	1250		X						X				X		X		_		X			X				_
S	1.00	1254			X	X									X			_			X			X			_
S	1.00	1259					X	X	X		X	X	X				X	_	X			X			X	X	_
ICV	1.00	1304		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICB	1.00	1308		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICSA	1.00	1313		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICSAB	1.00	1317		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CRI	1.00	1322		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCV	1.00	1326		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCB	1.00	1331		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
PBW2	1.00	1335		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
LCSW2	1.00	1339		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB042	1.00	1344		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
OB042L	5.00	1348		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZZ	1.00	1353		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1357		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1401		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1406		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	5.00	1410		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1415		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
CCV	1.00	1421		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCB	1.00	1425		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ZZZZZZ	1.00	1430		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1434		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1438		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	5.00	1443		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ZZZZZZ	1.00	1447		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
ICSA	1.00	1452		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
ICSAB	1.00	1456		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CRI	1.00	1500		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
CCV	1.00	1505		X	X	X	X	X	X	X	X	X	X	X	X	X	X	_	X	X	X	X	X	X	X	X	_
				_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: ______ SDG No.:61529_

Instrument ID Number: ICP5 TJA 61E_ Method: P_

Start Date: 10/22/96 End Date: 10/22/96

EPA Sample No.	D/F	Time	% R	AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	1509		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: CV1 PS200II__ Method: CV

Start Date: 10/01/96 End Date: 10/01/96

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1451																X									
S0.2	1.00	1453																X									
S0.5	1.00	1455																X									
S1	1.00	1458																X									
S5	1.00	1500																X									
S10	1.00	1503																X									
ICV	1.00	1505																X									
ICB	1.00	1508																X									
CRA	1.00	1510																X									
CCV	1.00	1512																X									
CCB	1.00	1515																X									
PBW1	1.00	1517																X									
LCSW1	1.00	1519																X									
ZZZZZZ	1.00	1521																										
ZZZZZZ	1.00	1524																										
ZZZZZZ	1.00	1526																										
ZZZZZZ	1.00	1529																										
ZZZZZZ	1.00	1531																										
ZZZZZZ	1.00	1534																										
ZZZZZZ	1.00	1537																										
CCV	1.00	1539																X									
CCB	1.00	1541																X									
ZZZZZZ	1.00	1543																										
ZZZZZZ	1.00	1546																										
ZZZZZZ	1.00	1548																										
ZZZZZZ	1.00	1550																										
ZZZZZZ	1.00	1552																										
ZZZZZZ	1.00	1555																										
ZZZZZZ	1.00	1557																										
ZZZZZZ	1.00	1559																										
ZZZZZZ	1.00	1601																										
CCV	1.00	1604																X									

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: CV1 PS200II__ Method: CV

Start Date: 10/01/96 End Date: 10/01/96

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	1606																X								
OB040	1.00	1608																X								
OB041	1.00	1610																X								
OB035	1.00	1613																X								
ZZZZZZ	1.00	1615																								
PBW2	1.00	1617																X								
LCSW2	1.00	1620																X								
OB037	1.00	1622																X								
ZZZZZZ	1.00	1624																								
ZZZZZZ	1.00	1626																								
CCV	1.00	1628																X								
CCB	1.00	1631																X								

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: CV1 PS200II__ Method: CV

Start Date: 10/16/96 End Date: 10/16/96

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1109																X									
S0.2	1.00	1112																X									
S0.5	1.00	1115																X									
S1	1.00	1117																X									
S5	1.00	1120																X									
S10	1.00	1122																X									
ICV	1.00	1125																X									
ICB	1.00	1127																X									
CRA	1.00	1129																X									
CCV	1.00	1131																X									
CCB	1.00	1134																X									
PBW3	1.00	1137																X									
LCSW3	1.00	1139																X									
ZZZZZZ	1.00	1141																									
OB038	1.00	1143																X									
OB039	1.00	1145																X									
OB042	1.00	1148																X									
ZZZZZZ	1.00	1150																									
ZZZZZZ	1.00	1152																									
ZZZZZZ	1.00	1154																									
CCV	1.00	1157																X									
CCB	1.00	1159																X									

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: PS1214_____ Method: AS

Start Date: 10/03/96 End Date: 10/03/96

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	2221																								X
S10	1.00	2223																								X
S50	1.00	2225																								X
S100	1.00	2227																								X
S200	1.00	2229																								X
S300	1.00	2232																								X
ICV	1.00	2234																								X
ICB	1.00	2236																								X
CCV	1.00	2238																								X
CCB	1.00	2240																								X
ZZZZZZ	1.00	2242																								
PBW1	1.00	2245																								X
ZZZZZZ	1.00	2247																								
ZZZZZZ	5.00	2249																								
ZZZZZZ	1.00	2251																								
ZZZZZZ	1.00	2253																								
ZZZZZZ	1.00	2255																								
ZZZZZZ	1.00	2257																								
ZZZZZZ	1.00	2259																								
ZZZZZZ	1.00	2301																								
CCV	1.00	2303																								X
CCB	1.00	2305																								X
ZZZZZZ	1.00	2308																								
ZZZZZZ	1.00	2310																								
OB035	1.00	2312																								X
OB036	1.00	2314																								X
OB037	1.00	2316																								X
ZZZZZZ	1.00	2318																								
ZZZZZZ	1.00	2320																								
CCV	1.00	2322																								X
CCB	1.00	2324																								X

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: PS1214_____ Method: AS

Start Date: 10/08/96 End Date: 10/08/96

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	2238																								X
S10	1.00	2240																								X
S50	1.00	2242																								X
S100	1.00	2245																								X
S200	1.00	2247																								X
S300	1.00	2249																								X
ICV	1.00	2251																								X
ICB	1.00	2254																								X
CCV	1.00	2256																								X
CCB	1.00	2258																								X
ZZZZZZ	1.00	2300																								
PBW2	1.00	2302																								X
ZZZZZZ	1.00	2304																								
ZZZZZZ	5.00	2306																								
ZZZZZZ	1.00	2308																								
OB040	1.00	2310																								X
OB041	1.00	2313																								X
OB038	1.00	2315																								X
OB039	1.00	2317																								
CCV	1.00	2319																								X
CCB	1.00	2321																								X

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: ______ SDG No.:61529_

Instrument ID Number: PS1214________ Method: AS

Start Date: 10/08/96 End Date: 10/09/96

EPA Sample No.	D/F	Time	% R	AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	2359																									X
S10	1.00	0001																									X
S50	1.00	0003																									X
S100	1.00	0005																									X
S200	1.00	0007																									X
S300	1.00	0010																									X
ICV	1.00	0012																									X
ICB	1.00	0014																									X
CCV	1.00	0016																									X
CCB	1.00	0019																									X
ZZZZZZ	1.00	0021																									
ZZZZZZ	1.00	0023																									
OB039	1.00	0025																									X
CCV	1.00	0027																									X
CCB	1.00	0029																									X

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ANALYSIS RUN LOG

Lab Name: INCHCAPE_ENVIRONMENTAL___ Contract: 93206_____

Lab Code: INCHVT Case No.: OBASH_ SAS No.: _____ SDG No.:61529_

Instrument ID Number: PS1214_____ Method: AS

Start Date: 10/14/96 End Date: 10/14/96

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	2126																								X
S10	1.00	2128																								X
S50	1.00	2130																								X
S100	1.00	2132																								X
S200	1.00	2135																								X
S300	1.00	2137																								X
ICV	1.00	2139																								X
ICB	1.00	2141																								X
CCV	1.00	2144																								X
CCB	1.00	2146																								X
ZZZZZZ	1.00	2148																								
PBW3	1.00	2150																								X
ZZZZZZ	1.00	2152																								
ZZZZZZ	5.00	2154																								
ZZZZZZ	1.00	2156																								
ZZZZZZ	1.00	2158																								
ZZZZZZ	1.00	2200																								
ZZZZZZ	1.00	2202																								
OB042	1.00	2205																								X
CCV	1.00	2207																								X
CCB	1.00	2209																								X