2646-Scubed-007A

0046071

MAXWELL
S-CUBED Division

SORRENTO VALLEY OFFI
3398 Carmel Mountain Road., San Diego, CA 92121-1(
P.O. Box 1620, La Jolla, CA 92038-1(

December 10, 1991

Ms. Jeanette Duncan
MSIN: T6-08
Office of Sample Management
Westinghouse Hanford Company
2355 Stevens Drive
Richland, WA 99352

DEC 1996
RECEIVED
LDMC

Reference No. 32359-04

Dear Ms. Owens:

Enclosed are the results from the analysis of soil samples received by S-Cubed on October 19, 1991 for the Site Wide Soil project for SDG 2646. The analyses include metals, silica, anions, ammonia and alkalinity.

The enclosed report contains a sample summary, narrative, copies of the chain-of-custody, and a full data package for each analysis. If you have any question about the data, please give me a call.

Sincerely,

Stacie O'Flaherty for

John DeWald
Manager, Commercial Analysis Section

/alb

encl: a/s

DEC 1991
RECEIVED
OSM DMO

Westinghouse Hanford Company

Hanford Operations and Engineering Contractor for the US Department of Energy
P.O. Box 1970 Richland, Wa. 99352

NONCONFORMANCE REPORT

Page 1 of ____

No. B 06175

1. MFR/ORG: MAXWELL S-CUBED DIVISION

ITEM/MATERIAL NAME: ENVIR. SAMPLE — PART NO.: N/A

DRAWING/SPEC. NO.: — REV.: N/A

PROGRAM/PROJECT: SITE-WIDE Background — P.O./W.O. NO.:

UNUSUAL OCCURRENCE REPORT REQUIRED: ☐ YES ☒ NO — SYSTEM/END USE: — DATE: 01/28/92

2. DESCRIPTION OF NONCONFORMANCE

LABORATORY IS PERFORMING INORGANIC ANALYSIS (SOIL) WITHOUT UTILIZING A SOLID MATRIX LCS FOR CLP METALS ANALYSIS.

EXAMPLES: SDG # 2630 & 2633

NOTE: THE LAB INDICATES THAT ALL METAL ANALYSIS (CLP) HAVE BEEN PERFORMED WITHOUT A SOIL LCS.

3. REQUIREMENT VIOLATED

"ONE SOLID LCS MUST BE PREPARED & ANALYZED FOR EVERY GROUP OF SOLID SAMPLES IN A SAMPLE DELIVERY GROUP....."

DOCUMENT	REV	ZONE/PARA
CLP. SOW INORGANICS	2/88	PART E, SECTION V, ITEM #8

M.A. Beck — ORIGINATOR
12500/OSM — ORGANIZATION
01/28/92 — DATE

4. ASME CODE ITEM(s): ☐ NO ☐ YES. NOTIFY AUTHORIZED INSPECTOR.

WHC QAR: ____ ____

5. CAUSE OF NONCONFORMANCE

☐ PROCEDURES ☐ PERSONNEL ☐ MATERIALS
☐ EQUIPMENT ☒ OTHERS

REMARKS: See 8A

PR-07, EQ-001-002

6. CORRECTIVE ACTION TO ELIMINATE CAUSE

- S³ has obtained and is currently using a solid LCS sample for the QC requirement (see S³ letter to T. Washington 3/2)

INITIATION DATE: ____ SERIAL NO.: ____

RESPONSIBLE ORG. REP. ____ TITLE ____ DATE ____

7. RECOMMENDED DISPOSITION: ☑ ACCEPT ☐ REJECT ☐ REPAIR ☐ REWORK ☐ OTHER

8A. DISPOSITION JUSTIFICATION AND INSTRUCTIONS

S³ did perform the LCS at the required frequency using an aqueous standard prior to receiving and testing the solid LCS. The aqueous LCS results were evaluated in the applicable data packages and performance was documented with the validation paperwork.

9. ADDITIONAL REVIEWS REQUIRED (WHC ONLY) ☐ YES ☒ NO

IF YES, IDENTIFY:

8B. SUPPLIER ENG. ____ SUPPLIER QA ____

10. DISPOSITION APPROVAL (WHC ONLY)

☒ APPROVED ☐ DISAPPROVED
☐ OTHER (SEE CONTINUATION SHEET)

J. Hoover for — COGNIZANT ENGINEER — DATE 5/21/92

LW VANCE L.W. Vance — COGNIZANT QA ENGINEER — DATE 5/21/92

NA — AUTHORIZED INSPECTOR REVIEW — DATE

11. ADDITIONAL APPROVALS

NAME	TITLE	DATE	NAME	TITLE	DATE

12. DISPOSITION ACTION COMPLETE

L.W. Vance — NAME — 5/21/92 — DATE

QTY. ACCEPT: NA QTY. REJ.: NA

FOLLOW ON NCR

QA LOG NO.: EQA-92-013

The issuance and acceptance of this request in no way limits or affects the warranty provisions of the order. This request shall not establish a precedent or obligation to accept similar conditions in the future.

FOLLOW-UP LEVEL: A ☐ B ☐ C ☐

A-7310-104 (4-87)

MAXWELL
S-CUBED Division

SORRENTO VALLEY OFFI
3398 Carmel Mountain Road., San Diego, CA 92121-10
P.O. Box 1620, La Jolla, CA 92038-16

March 27, 1992

Ted Washington
MSIN: T6-08
Office of Sample Management
Westinghouse Hanford Company
2355 Stevens Drive
Richland, WA 99352

Dear Mr. Washington:

We have recently been able to validate and confirm true values for the ERA solid LCS source using the CLP method. The validation study was performed by preparing and analyzing ten solid LCS samples using the CLP method and determining the average value obtained for each analyte and the appropriate windows of acceptability. This validation study was required by the solid LCS source since the certified true value determinations were based on the method 3050, SW-846 (see attached sheet).

Prior to the availability of validated solid LCS for CLP soil analysis, EPA-approved aqueous LCS spike solution was spiked into a clean, empty beaker and then prepared and analyzed by the CLP soil method. Thus quality control requirements for preparation and analysis are acceptable and confirm the reliability and validity of the associated samples using the available LCS at that time.

Sincerely,

Wipawan Nisamaneepong

Wipawan Nisamaneepong, Ph.D.
Inorganics Laboratory Manager

Instructions for the use of

PriorityPollutnT™/CLP Quality Control Standards

Inorganics in Soil **Caution: Read instructions carefully before opening PriorityPollutnT™/CLP standards.**

PriorityPollutnT™/CLP Quality Control Standards are designed to test your complete inorganic priority pollutant and CLP analysis procedure. The Trace Metals solid standard contains 24 trace metals (refer to the back of this sheet for a complete list). The Cyanide solid standard is designed for cyanide analysis, either a simple or a complex cyanide, or both, may be present.

I. Standard Preparation

The standards must be prepared by the following directions before analysis.

A. Trace Metals

Digest the standard using Method 3050, SW-846. This digestion is essentially a hot acid leach of the standard and is not a total digestion. The standard should then be analyzed by ICP and/or atomic absorption. Results different from the certified values will be obtained if a total digestion using hydrofluoric acid, perchloric acid or fusion is employed. Digest and analyze the sample for mercury using Method 7471, SW-846.

B. Cyanide

Prepare the standard using Method 9010 or 9012, SW-846. The preparation quoted is intended for use with an aqueous waste. The only required modification is to place 10 grams of the soil standard into the appropriate aliquot of water in the distillation flask (step 7.2.1). All other preparation steps should be followed. The digestate obtained is then analyzed for cyanide using Method 9010 (manual) or 9012 (automated), SW-846.

II. Standard Storage

Store the standards in a cool, dark place. The stability and certified values are unconditionally guaranteed for one year. Due to possible sample contamination, the guarantee is void after the standards are opened.

III. Standard Analysis

Remember ... PriorityPollutnT™/CLP standards are designed to help you evaluate the accuracy of your routine laboratory procedures. Therefore, analyze PriorityPollutnT™/CLP standards using your regular methods.

IV. Certified Results

The ERA certified and advisory range of values are included. The advisory range is the range of values that an experienced laboratory can expect to attain using the most precise methods and equipment. Certified and advisory values for ERA inorganic quality control standards are based on analytical results from applicable EPA reference methods. Certified values represent 100% recoveries for the analyses. Since many inorganic analytical methods do not yield 100% recoveries, especially for soil samples, ERA advisory ranges reflect typical recoveries from samples for the applicable EPA methodologies. The advisory ranges for these standards are wider than for ERA aqueous standards due to the variability of the SW-846 preparation methods.

Inorganics in Soil has been prepared using a cleaned, dried and sieved topsoil substrate. The final product was digested by a variety of methods, including the recommended 3050 (SW-846), to evaluate the effect of digestion variability on the results the laboratory should obtain. The certified values and advisory ranges shown on the accompanying certification sheet were arrived at after extensive evaluation of the experimental results. It should be noted that antimony and molybdenum are especially difficult to quantitatively recover using Method 3050. Low recoveries may also be experienced for arsenic, selenium, silver, thallium and vanadium. The advisory ranges for these elements have been adjusted to reflect this fact.

Experiments conducted by ERA using a "weak acid" digestion with only hydrochloric acid significantly improved the recovery of antimony. Digestion of Inorganics in Soil by a closed vessel microwave methodology also decreased the recovery of silver to <10% of the certified value. High recoveries of the metals native to the soil matrix (e.g. aluminum, calcium, manganese, iron and magnesium) indicate a too vigorous digestion procedure. In general, it should be noted that Method 3050 is not an extremely rugged methodology and close attention should be paid to the procedure to insure recovery of the listed elements within the advisory ranges. ERA stresses that it is the responsibility of the individual laboratory to determine acceptable levels of performance for a particular analytical result depending on the intended use of the data.

V. Safety

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. If you need a Material Safety Data Sheet for any ERA product, please call toll-free at 1-800-ERA-0122.

MAXWELL
S-CUBED Division

FAX

TO:	M. Beck
FROM:	J. Goodin
DATE:	January 22, 1992
FAX NO:	(509) 373-3992
Pages to follow:	0

At S-Cubed, we do not have access to the EPA's solid LCS sample described in the CLP protocols because we are not currently under CLP contract with them for inorganic analysis. It might be possible to obtain some other solid reference material, but we have not yet found one containing all or even most of the metals. In the Quality Assurance Project Plan for Westinghouse Hanford Company, no solid LCS is specified and no solid LCS is discussed in the SW-846 (RCRA) methods. The LCS is used to determine laboratory consistency, for which purpose the liquid LCS is sufficient and allows us to monitor all of the metals of interest. We have recently analyzed a purchased solid reference standard, containing five of the metals, and would be glad to furnish you with these results. I hope that this explanation will satisfy your client. If you have any other questions or comments, please call me at (619) 587-8409.

CORRESPONDENCE DISTRIBUTION COVERSHEET

To: Distribution

From: Environmental Quality Assurance
H4-16 / 6-8557 / 6-9490

Subject: DISTRIBUTION OF NCR #B06175 (EQA-92-013)

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	W/att
		M. A. Beck	T6-08	
		J. H. Kessner	T6-08	
		J. D. Hoover	H4-57	
		L. W. Vance	H4-16	
		APA	B5-20	
		QUEST	L4-86	
		EQA File	H4-16	

Jeanette
Fancy
Ford
Jeff

MAY 1992
RECEIVED
J.H. KESSNER

SAMPLE SUMMARY

S-Cubed Reference No. 32359-04, SDG No. 2646, Project Name: Site Wide Soil

S-Cubed Number	Sample ID ID	Date Received	Sample Type	Analysis								
				A	B	C	D	E	F	G	H	I
BO14B3	2646-1	10/19/91	Soil	3	3	3	3	3	3	3	3	3
BO14B4	2646-2	10/19/91	Soil	3	3	3	3	3	3	3	3	3
BO14B5	2646-3	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14B6	2646-4	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14B9	2646-5	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C0	2646-6	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C1	2646-7	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C2	2646-8	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C3	2646-9	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C4	2646-10	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C5	2646-11	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C6	2646-12	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C7	2646-13	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C8	2646-14	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14C9	2646-15	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D0	2646-16	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D4	2646-17	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D5	2646-18	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D6	2646-19	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D7	2646-20	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D8	2646-21	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14D9	2646-22	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14F0	2646-23	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14F1	2646-24	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO1494	2646-25	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO1495	2646-26	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO1496	2646-27	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO1497	2646-28	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO1498	2646-29	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO1499	2646-30	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14H7	2646-31	10/19/91	Soil	1	1	1	1	1	1	1	1	1
BO14H8	2646-32	10/19/91	Soil	1	1	1	1	1	1	1	1	1

Analysis Key:

A=Ti
B=Zr
C=OCPCLP
D=TOC
E=ICPCLP-M
F=FURNCLP
G=HGCLP
H=ANIONS
I=N-NH3

NARRATIVE

DATE: December 9, 1991
REFERENCE NO.: 32359-04, SDG 2646

CLP METALS

The samples were analyzed according to the 2/88 CLP Inorganics Statement of Work and Method 6010. The zero point for the Hg initial calibration curve slightly biases zero absobances at -0.3. Data is not affected. Levels greater than the CRDL were found in one CCB for Al and Fe, however, this SDG is not affected. Zn was detected in CCB5 greater than IDL and CRDL and affects 2646-29, 30, 31, and 32. No corrective action was taken. Cu and Pb were detected in one of the prep blanks for 10/30/91. However, the second prep blank for this SDG for this date is clean for all analytes. Therefore, no corrective action was taken. There were significant levels of several analytes detected in the sample.

The quality control results were generally acceptable. Matrix recovery for several analytes were outside criteria due to matrix problems. Duplicate values for several metals are out of criteria due to the soil matrix.

Westinghouse Hanford Company	CHAIN OF CUSTODY Priority Samples Project No. 91-075

Custody Form Initiator: C. D. Kramer

Company Contact: Chris Kramer — Telephone: (509) 376-4186

Project Designation/Sampling Locations: Site-wide Background - Sites 8 + 9 — Collection Date: 10/9, 11/91

Ice Chest No.: RM 38 — Field Logbook No.: WHC-N-438

Bill of Lading/Airbill No.: 2424963288 — Offsite Property No.: W92-0-0014 #4

Method of Shipment: Emery

Shipped to: S-Cubed San Diego, CA

Possible Sample Hazards/Remarks: None

Sample Identification

B01494. (3) 120-ml jars
B01495.
B01496.
B01497.
B01498.
B01499.
B014B3.
B014B4.
B014B5.
B014B6.
B014B9.

B014C0. (3) 120-ml jars
B014C1.
B014C2.
B014C3.

B014H7 (0) jars - Sample no. to be used for reporting additional prep blank. Blank generated at S-Cubed -- not enclosed.

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.D. Kramer C. D. Kramer	T. Dirfon SOL LAB	10/19/91 6pm

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90)

4

Chest Rm 38

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Priority Samples Project 91-075

PART I: FIELD SECTION

Collector C. Kramer Date Sampled 10/9-11/91 Time _____ hours

Company Contact Chris Kramer Telephone (509) 376-4186

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B01494	(3) 120-ml	Soil	See attached Tables A-1, A-2
B01495			Each sample is to be analyzed
B01496			for all analytes by the method
B01497			shown except for fluoride.
B01498			Fluoride may be done by
B01499			ion chromatography.
B014B3			
B014B4			
B014B5			
B014B6			
B014B9			
B014C0			
B014C1			
B014C2			
B014C3			
B014H7	0 jars	None	Additional prep blank for
			all analyses. This sample
			number is to be used for
			reporting this request.

Field Information** Sites 8 + 9

Special Handling and/or Storage Sieve samples. Use the less-than 2 mm size fraction in analytical aliquots. Exclude stones, etc. larger than 2 mm.

Possible Sample Hazards None.

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Table A-1. Primary Inorganic Analytes.

Element	Typical expected (mg/kg)	Requested soil detection (mg/kg)	Requested method
Antimony	0 - 3	12	204.2 CLP-M
Arsenic	0 - 8	2	206.2 CLP-M
Barium	44 - 229	40	200.7 CLP-M
Beryllium	0 - 0.8	1	200.7 CLP-M
Cadmium	0 - 8	1	213.2 CLP-M
Chromium	2 - 48	2	200.7 CLP-M
Cobalt	0 - 15	10	200.7 CLP-M
Copper	0 - 20	5	200.7 CLP-M
Lead	1 - 13	0.6	239.2 CLP-M
Mercury	< 0.2	0.1	245.5 CLP-M
Nickel	6 - 25	8	200.7 CLP-M
Selenium	0 - 0.1	1	270.2 CLP-M
Silver	0 - 1.5	2	272.2 CLP-M
Thallium	0 - 0.2	2	279.2 CLP-M
Vanadium	24 - 96	10	200.7 CLP-M
Zinc	27 - 112	4	200.7 CLP-M

Table A-2. Secondary Inorganic Analytes.

Element	Typical expected (mg/kg)	Requested soil detection (mg/kg)	Requested method
Aluminum	3600 - 13300	40	200.7 CLP-M
Calcium	2000 - 14000	1000	200.7 CLP-M
Iron	19000 - 29000	20	200.7 CLP-M
Magnesium	2780 - 6910	1000	200.7 CLP-M
Manganese	164 - 2870	3	200.7 CLP-M
Molybdenum	< 4	0.5	7481
Potassium	455 - 2600	1000	200.7 CLP-M
Sodium	125 - 1710	1000	200.7 CLP-M
Silicon	200 - 2900	20	200.7 CLP-M
Titanium	500 - 3500	50	Any method capable of meeting the requested DL
Zirconium	15 - 65	5	Any method capable of meeting the requested DL
Chloride	0 - 20	1	300.0
Nitrate and nitrite	0 - 15	1	300.0
Phosphate	0 - 3	2	300.0
Sulfate	0 - 35	2	300.0
Fluoride	0 - 8	1	Extraction by 300.0, Analysis by ASTM D 3868 - 79
Ammonium	0 - 4	1	Any method capable of meeting the requested DL
Carbonate	Highly Variable	1.0%	ASTM D 4373 - 84

REQUESTED BY: _____

PHONE NUMBER: _____

~~WELL NUMBER~~: RIS Soil samples sites 8+9a7

DATE: 10/18/91

SAMPLE NUMBER (DEPTH)	SAMPLE DATE	SAMPLE DESCRIPTION	ANALYSIS DATE	LAB NUMBER	RESULTS BETA/GAMMA (pCi/gr)	RESULTS ALPHA (pCi/gr)
B014B4	10/9/91	soil	10/15/91	1132-91B	34.02	1.76
B01496				1133-91B	39.27	0.56
B01480				1134-91B	48.84	1.69
B01465				1135-91B	38.69	0.74
B01499				1136-91B	35.86	1.21
B01498			10/15/91	1137-91B	34.00	LD
B014B3			10/16/91	1138-91B	28.65	0.20
B01486				1139-91B	23.56	1.21
B01495				1140-91B	29.85	LD
~~B01495~~ B01494 α MISSING				1141-91B	21.37	1.69
B014B1				1142-91B	42.67	1.41
B014B7				1143-91B	19.74	0.40
B014B8				1144-91B	37.57	1.41
B01497	10/9/91			1145-91B	43.30	LD
B014D0	10/11/91			1146-91B	24.83	0.60
B014D1				1147-91B	24.2	LD
B014C3				1148-91B	11.13	3.71
B014D4				1149-91B	22.27	0.19
B014C0				1150-91B	21.65	LD
B014D6				1151-91B	18.31	1.13
B014C8				1152-91B	12.31	0.56
B014D3				1153-91B	20.15	1.72
B014D5				1154-91B	19.43	2.19
B014C9				1155-91B	12.1	0.81
B014C1				1156-91B	13.73	0.64
B014B9				1157-91B	45.02	LD

PERFORMED BY: Craig R. Radford

DATE: 10/18/91

SHEET 1 OF 2

REQUESTED BY: _____

PHONE NUMBER: _____

~~WELL NUMBER:~~ OKS soil samples sites 7,8,9

DATE: 10/16/91

SAMPLE NUMBER (DEPTH)	SAMPLE DATE	SAMPLE DESCRIPTION	ANALYSIS DATE	LAB NUMBER	RESULTS BETA/GAMMA (pCi/gr)	RESULTS ALPHA (pCi/gr)
B014C7	10/11/91	soil	10/16/91	1158-91B	2.55	0.81
B014C6				1159-91B	12.10	0.40
B014C2				1160-91B	13.48	0.56
B014C5				1161-91B	35.76	1.61
B014C4	10/11/91			1162-91B	23.45	0.37

PERFORMED BY: [signature]

DATE: 10/18/91

SHEET 2 OF 2

Westinghouse Hanford Company	CHAIN OF CUSTODY Priority Samples	Project No. 91-075

Custody Form Initiator: C. D. Kramer

Company Contact: Chris Kramer — Telephone: (509) 376-4186

Project Designation/Sampling Locations: Site-wide Background - Site #11 — Collection Date: 10/15/91

Ice Chest No.: RM 100 — Field Logbook No.: WHC-N-438

Bill of Lading/Airbill No.: 2424963288 — Offsite Property No.: W92-0-0014 #4

Method of Shipment: Emery

Shipped to: S-Cubed San Diego, CA

Possible Sample Hazards/Remarks: None

Sample Identification

B014D7 • (3) 120-ml jars •
B014D8 •
B014D9 •
B014F0 •
B014F1 •

☐ Field Transfer of Custody — **CHAIN OF POSSESSION** — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.D. Kramer C. D. Kramer	Dalton Sov Lab	10/17/91 6 pm
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90)

Ice Chest # RM 100

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Priority Samples Project 91-075

PART I: FIELD SECTION

Collector C. Kramer Date Sampled 10/15/91 Time ____ hours

Company Contact Chris Kramer Telephone (509) 376-4186

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B014D7	(3) 120-ml	Soil	See attached Tables A-1 A-2
B014D8	↓	↓	Each sample is to be analyzed
B014D9			for all analytes by the method
B014F0			shown except for fluoride.
B014F1			Fluoride may be done by
			ion chromatography.

Field Information** Background Site #11 - Cold Creek

Special Handling and/or Storage Sieve samples. Use the less-than 2 mm size fraction in analytical aliquots. Exclude stones, etc. larger than 2mm.

Possible Sample Hazards None.

PART II: LABORATORY SECTION

Received by ____ Title ____ Date ____

Analysis Required ____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

Table A-1. Primary Inorganic Analytes.

Element	Typical expected (mg/kg)	Requested soil detection (mg/kg)	Requested method
Antimony	0 - 3	12	204.2 CLP-M
Arsenic	0 - 8	2	206.2 CLP-M
Barium	44 - 229	40	200.7 CLP-M
Beryllium	0 - 0.8	1	200.7 CLP-M
Cadmium	0 - 8	1	213.2 CLP-M
Chromium	2 - 48	2	200.7 CLP-M
Cobalt	0 - 15	10	200.7 CLP-M
Copper	0 - 20	5	200.7 CLP-M
Lead	1 - 13	0.6	239.2 CLP-M
Mercury	< 0.2	0.1	245.5 CLP-M
Nickel	6 - 25	8	200.7 CLP-M
Selenium	0 - 0.1	1	270.2 CLP-M
Silver	0 - 1.5	2	272.2 CLP-M
Thallium	0 - 0.2	2	279.2 CLP-M
Vanadium	24 - 96	10	200.7 CLP-M
Zinc	27 - 112	4	200.7 CLP-M

Table A-2. Secondary Inorganic Analytes.

Element	Typical expected (mg/kg)	Requested soil detection (mg/kg)	Requested method
Aluminum	3600 - 13300	40	200.7 CLP-M
Calcium	2000 - 14000	1000	200.7 CLP-M
Iron	19000 - 29000	20	200.7 CLP-M
Magnesium	2780 - 6910	1000	200.7 CLP-M
Manganese	164 - 2870	3	200.7 CLP-M
Molybdenum	< 4	0.5	7481
Potassium	455 - 2600	1000	200.7 CLP-M
Sodium	125 - 1710	1000	200.7 CLP-M
Silicon	200 - 2900	20	200.7 CLP-M
Titanium	500 - 3500	50	Any method capable of meeting the requested DL
Zirconium	15 - 65	5	Any method capable of meeting the requested DL
Chloride	0 - 20	1	300.0
Nitrate and nitrite	0 - 15	1	300.0
Phosphate	0 - 3	2	300.0
Sulfate	0 - 35	2	300.0
Fluoride	0 - 8	1	Extraction by 300.0, Analysis by ASTM D 3868 - 79
Ammonium	0 - 4	1	Any method capable of meeting the requested DL
Carbonate	Highly Variable	1.0%	ASTM D 4373 - 84

Westinghouse Hanford Company	CHAIN OF CUSTODY Priority Samples Project No. 91-075

Custody Form Initiator: C.D. Kramer

Company Contact: Chris Kramer — Telephone: (509) 376-4186

Project Designation/Sampling Locations: Site-wide Background - Site #7 — Collection Date: 10/11/91

Ice Chest No.: RM50 — Field Logbook No.: WHC-N-438

Bill of Lading/Airbill No.: 2424963288 — Offsite Property No.: W92-0-0014 #4

Method of Shipment: Emery

Shipped to: S-Cubed San Diego, CA

Possible Sample Hazards/Remarks: None

Sample Identification

B014C4 (3) 120-ml jars
B014C5
B014C6
B014C7
B014C8
B014C9
B014D0
B014D4
B014D5
B014D6

B014H8 (0) jars - Sample number to be used for reporting additional prep blank. Blank generated at S-Cubed - not enclosed.

☐ Field Transfer of Custody — **CHAIN OF POSSESSION** — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.D. Kramer / C.D. Kramer	J. Dufor for Lab	10/14/91 6pm
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90)

REQUESTED BY: _____

PHONE NUMBER: _____

~~WELL NUMBER:~~ 816 Soil samples sites 8 & 9 & 7

DATE: 10/18/91

SAMPLE NUMBER (DEPTH)	SAMPLE DATE	SAMPLE DESCRIPTION	ANALYSIS DATE	LAB NUMBER	RESULTS BETA/GAMMA (pCi/gr)	RESULTS ALPHA (pCi/gr)
B014B4	10/9/91	soil	10/15/91	1132-91B	34.02	1.76
B01496				1133-91B	39.27	0.56
B014B0				1134-91B	48.84	1.69
B014B5				1135-91B	38.69	0.74
B01499				1136-91B	35.86	1.21
B01498			10/15/91	1137-91B	34.00	LD
B014B3			10/16/91	1138-91B	28.65	0.20
B014B6				1139-91B	23.56	1.21
B01495				1140-91B	29.85	LD
~~B01495~~ B01494 dc				1141-91B	21.37	1.69
B014B1				1142-91B	42.67	1.41
B014B7				1143-91B	19.74	0.40
B014B8				1144-91B	37.57	1.41
B01497	10/9/91			1145-91B	43.30	LD
B014D0	10/11/91			1146-91B	24.83	0.60
B014D1				1147-91B	24.2	LD
B014C3				1148-91B	11.13	3.71
B014D4				1149-91B	22.27	0.19
B014C0				1150-91B	21.65	LD
B014D6				1151-91B	18.31	1.13
B014C8				1152-91B	12.31	0.56
B014D3				1153-91B	20.15	1.72
B014D5				1154-91B	19.43	2.19
B014C9				1155-91B	12.1	0.81
B014C1				1156-91B	13.73	0.64
B014B9				1157-91B	45.02	LD

PERFORMED BY: [signature]

DATE: 10/18/91

SHEET 1 OF 2

Ice Chest RM 50

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Priority Samples Project 91-075

PART I: FIELD SECTION

Collector C. Kramer Date Sampled _____ Time _____ hours

Company Contact Chris Kramer Telephone (509) 376-4186

Sample Number	Number and Type of Sample Containers	Type of Sample*	Analysis Requested
B014C4	(3) 120-ml	Soil	See attached Tables A-1, A-2
B014C5			Each sample is to be analyzed
B014C6			for all analytes by the method
B014C7			shown except for fluoride.
B014C8			Fluoride may be done by
B014C9			ion chromatography.
B014D0			
B014D4			
B014D5			
B014D6			
B014H8	0 jars	None	Additional prep blank for
			all analyses. This sample
			number is to be used for
			reporting this request.

Field Information** Background Site #7

Special Handling and/or Storage Sieve samples. Use the less-than 2 mm size fraction in analytical aliquots. Exclude stones, etc. larger than 2 mm.

Possible Sample Hazards None.

PART II: LABORATORY SECTION

Received by _____ Title _____ Date _____

Analysis Required _____

*Indicate whether sample is soil, sludge, water, etc.

**Use back of page for additional information relative to sample location.

A-6000-406 (05/90)

"Saturday Delivery" "Signature Security"

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
Westinghouse Hanford Co.		~~W91-0-0579~~ #4 W92-0-0014

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Engineering	Technical Baseline	

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Emery ☒ Contractor ☐ Vendor

Shipped to	Off-site Custodian
S-Cubed 3398 Carmel Mt. Rd. San Diego, CA 92121-1095	John Dewald
	Full Title Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
3	Poly Ice Chest (~~RM #A-1~~) (RM 38, RM 50, RM 100)	
Weight	Glass jars of soil packed in vermiculite and blue ice.	
31	Sample # – B014D7, B014D8, B014D9, B014F0, B014F1 in RM 100	
43	Samples B014C4 thru B014C9, B014D0, B014D4, B014D5, B014D6 in RM 50	
62 lb	Samples B01494 thru B01499, B014B3 thru B014B6, B014B9, B014C0 thru B014C3 in RM 38	

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Program not available on site.

Bill of Lading # 242496328 8

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No	Date
M L Sawyer	910767	10/18/91
Location of Property (Area & Bldg.)	**Contact**	**Phone**
Background Site (#11, 8, 9, 7)	C. D. Kramer	376-4186
Date Ready for Shipment	**Cost Code to be Charged**	**Approximate Date This Property will be Returned**
10-18-91	~~EK4A~~/81223 PKIBB	N/A
Originated By	**Date**	**Authorized By**	**Date**
C. D. Kramer C.D. Kramer 13:45	10-18-91	RP Hill	10/18/91
Signature and Name of Property Control	**Custodian Date**	**Property Management Approval**	**Date**
		Terry Donaldson	10/18/91

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
J. Hengarest				
Date 10/18/91				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Yellow – Retain Green – Property Control Custodian (Issuing Office) Pink – Originator

"Saturday Delivery" "Signature Security"

Contractor	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT)
Westinghouse Hanford Co.		~~W91-0-0579~~ W92-0-0014 #4

PART I – TO BE COMPLETED BY ORIGINATOR

Department	Section	Unit
Env. Engineering	Technical Baseline	

The following items are to be shipped from ☒ Contractor ☐ Vendor

Routing Emery ☒ Contractor ☐ Vendor

Shipped to	Off-site Custodian
S-Cubed 3398 Carmel Mt. Rd. San Diego, CA 92121-1095	John Dewald Title Project Coordinator

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
3 Weight 31 43 62 lb	Poly Ice Chest ~~(RM #A-1)~~ (RM 38, RM 50, RM 100) Glass jars of soil packed in vermiculite and blue ice. Sample # – B014D7, B014D8, B014D9, B014F0, B014F1 in RM 100 Samples B014C4 thru B014C9, B014D0, B014D4, B014D5, B014D6 in RM 50 Samples B01494 thru B01499, B014B3 thru B014B6, B014B9, B014C0 thru B014C3 in RM 38	

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Program not available on site.

Bill of Lading # 242496328 8

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release	RM Survey No	Date
M L Sawyer	91076T	10/18/91

Location of Property (Area & Bldg.)	Contact	Phone
Background Site (#11, 8, 9, 7)	C. D. Kramer	376-4186

Date Ready for Shipment	Cost Code to be Charged	Approximate Date This Property will be Returned
10-18-91	~~EK20A~~/81223 PK/BB	N/A

Originated By	Date	Authorized By	Date
C. D. Kramer C.D. Kramer 13:45	10-18-91	KPH	10/18/91
Signature and Name of Property Control	**Custodian Date**	**Property Management Approval**	**Date**
		Tony Smalumas	10/18/91

PART II – TO BE COMPLETED BY SHIPPING

Signature of Recipient	Return Order No.	Date Issued	Purchase Order No.	Date Issued
J. Dewald				
Date 10/18/91				

DISTRIBUTION

By Originator	Shipping Operation – Sign all Copies and Forward to:
White, Green, Yellow, Pink – Property Management Goldenrod – Retain	White – Property Management Green – Property Control Custodian (Issuing Office) Yellow – Retain Pink – Originator

18

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD XX COL ☐ OTH ☐ COMAT ☐

E Shipper's Account Number

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ PM ☐ Second Day ☐ Saturday Delivery XX

INTERNATIONAL: Express ☐ Business Documents ☐ Preferred ☐ Customs Clearance ☐ Standard ☐ Delivery ☐

Date: 10-18-91 Origin: Shipment Number: 242496328 8

PULL FOR SHPT. NO. TAB

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA 99352
Canada ☐

To:
JOHN DEWALD
S-CUBED
3398 CARMEL MT. RD
SAN DIEGO CA 92121-1095
Canada ☐

Tariff Dest. Gateway

Check to Shipper $

Hold for Pick Up ☐

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: W81223 PK1BB W92-0-0014#4

Zip: 99352

E Consignee's Account Number

Zip: 92121-1095

Declared Value $

Description	Pcs.	Dimensions L	W	H	Total Pieces	Total Weight (in Lbs.)
3 ICE CHEST RM100 31#, RM50 43#, RM38 62#	3	27	16	17	3	136

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

242496328 8

A B C D E F G H I J K

1 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☐

Y SERVICE

Code

Third party Account Number mandatory for Third party billing. E

Third Party Account Number

International Customs Value

International Insurance

Total Transportation Charges

Other Charges/Advance at Origin ☐ COD/PO $

Terms and Conditions on Back

SAN-SA

BEST AVAILABLE COPY

242496328

PACKAGE COPY — 4

ALL POINT PEN. BEAR DOWN FIRMLY IN BOXES TO ASSURE ACCURACY

CODE SAN SERVICE SAT

CODE SAN SERVICE SAT

CODE SERVICE

20066-46 (5-89)

EMERY WORLDWIDE — A CF Company

(18)

SIGNATURE AND TALLY RECORD

80029-46 (6/90) Litho USA

DATE: 10-18-91 SHIPMENT NO.: 242496328 8
SHIPPER: WESTINGHOUSE SHIPPING DEPT (509) 376-6665
REFERENCE NO.: W92-0-00148 4

SHIPPER NAME AND ADDRESS
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
62-06 US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DRIVE 1163 BUILDING
PO BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
JOHN BENALD
S-CUBED
3398 CARMEL MT. RD
SAN DIEGO CA 92121-1095

W92-0-0014 04

Pieces	Weight	Description/Marks	Emery Authorization No.
3	136 LBS	SOIL SAMPLES ICE CHEST: 8A100 31F,8A50 43#	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
1. [illegible]	[illegible]	[illegible]	[illegible]
2.			
3. Tel Ulrich EWW	PSC	Tel Ulrich	15:30 10/18/91
4. K Rowden Horizon	Rmtt	K Rowden	[illegible]
5. Slot		Slot	
6. [illegible]		[illegible]	
7. Rachel Sandmann S-Cubed	S-Cubed	Rachel Sandmann 1755	10-19-91
8.			

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

BEST AVAILABLE COPY

MAXWELL S-CUBED Division

Lot No. 2646 1 OF 3

Sample Log-In Sheet

DC No. ____-____-____

Date Received 10-19-91 Date Sampled 10-9-91, 10-11-91, 10-15-91

Time Received 6:00 PM

Received by (Sig.) RACHEL SANDMAND

Airbill No. 2424963288

Charge No. 32359-04

Client Code WESTINGHOUSE/HANFORD

Custody Seals Present/Intact (Y) N

Chain of Custody Present (Y) N

Client Forms Present (Y) N

Reporting Format: Summ. CLP Summ. Full CLP Disk

Turnaround Req'd: 45d 30d 21d 14d 48hr Other ____

Quality Control Req'd: Level 1(Low) 2(CLP) 3(RCRA) 4(Other)

Case No./Proj. Code SITE WIDE SOIL SDG No. 2646

S-Cubed No.	Sample Identification	Samp. Type	No. Cont.	Samp. Cond.	Samp. Stor.	A	B	C	D	E	F	G	H		All Info Agree	Notes
2646-1	B014B33	S	~~9~~ 3	OK	WA	X	X	X	X	X	X	X	X			A B E G H I J K
-2	B4															
-3	B5															
-4	B6															
-5	B9															
-6	C0															
-7	C1														H	Si
-8	C2														G	ALK
-9	C3														F	ANIONS
-10	C4														E	N-NH3
-11	C5														D	HG CLP
-12	C6														C	FURO CLP
-13	C7														B	ICPCLP-M extra Zr, Mo, Ti
-14	C8														A	ICPCLP

Container Types

Water 90 X 120 ML AMBER

Soil

S = Soil/Sediment/Sludge

W = Aqueous

NAL = Non-Aqueous Liquid

NSS = Non-Soil Solid

Water MS, MSD ____

Soil MS, MSD ____

SDG Complete (Y) N

Review JD 10/22

SC-03, Rev. 7/91

MAXWELL S-CUBED Division

Lot No. 2646 2 OF 3

Sample Log-In Sheet

DC No. ____-____-____

Date Received 10-19-91 Date Sampled 10-9-91 10-11-91 10-15-91

Client Code WESTINGHOUSE/HANFORD

Time Received 6:00PM

Received by (Sig.) RACHEL SANDMANN

Custody Seals Present/Intact (Y) N

Reporting Format: Summ. CLP Summ. Full CLP Disk

Airbill No. 242496328-8

Chain of Custody Present (Y) N

Turnaround Req'd: 45d 30d 21d 14d 48hr Other ____

Charge No. 32359-04

Client Forms Present (Y) N

Quality Control Req'd: Level 1(Low) 2(CLP) 3(RCRA) 4(Other)

Case No./Proj. Code SITEWIDE SOIL SDG No. 2646

S-Cubed No.	Sample Identification	Samp. Type	No. Cont.	Samp. Cond.	Samp. Stor.	A	B	C	D	E	F	G	H		All Info Agree	Notes
2646-15	B014C9	S	~~2~~ 3	OK	WA	X	X	X	X	X	X	X	X			
-16	14D0															
-17	14D4															
-18	14D5															
-19	14D6															
-20	14D7															
-21	14D8															
-22	14D9															
-23	14F0															
-24	14F1															
-25	1494															
-26	1495															
-27	1496															
-28	1497															

Container Types

Water ____

(Soil) ____

(S) = Soil/Sediment/Sludge
W = Aqueous
NAL = Non-Aqueous Liquid
NSS = Non-Soil Solid

Water MS, MSD ____

Soil MS, MSD ____

SDG Complete (Y) N

Review JO 10/22

SC-03, Rev. 7/91

22

MAXWELL
S-CUBED Division

Lot No. 2646 3 OF 3

Sample Log-In Sheet

DC No. ____-____-____

Date Received 10-19-91 Date Sampled 10-9-91 10-11-91 ~~10-15-91~~

Time Received 6:00 PM

Client Code WESTINGHOUSE/HANFORD

Received by (Sig.) RACHEL SAMIDMAN

Custody Seals Present/Intact (Y) N

Reporting Format: Summ. CLP Summ. Full CLP Disk

Airbill No. 2424963288

Chain of Custody Present (Y) N

Turnaround Req'd: 45d 30d 21d 14d 48hr Other ____

Charge No. 32359-04

Client Forms Present (Y) N

Quality Control Req'd: Level 1(Low) 2(CLP) 3(RCRA) 4(Other)

Case No./Proj. Code SITEWIDE SOIL SDG No.

S-Cubed No.	Sample Identification	Samp. Type	No. Cont.	Samp. Cond.	Samp. Stor.	A	B	C	D	E	F	G	H		All Info Agree	Notes
2646-29	B014 98	S	0/3	OK	WA	X	X	X	X	X	X	X	X			
-30	1499	|	|	|	|	|	|	|	|	|	|	|	|			
* -31	B014H7	|	0/0			|	|	|	|	|	|	|	|			
* -32	B014H8	|	0/0			↓	↓	↓	↓	↓	↓	↓	↓			

* PREP BLANKS TO BE GENERATED BY LABS

Container Types

Water ____

Soil ____

S = Soil/Sediment/Sludge
W = Aqueous
NAL = Non-Aqueous Liquid
NSS = Non-Soil Solid

Water MS, MSD ____

Soil MS, MSD ____

SDG Complete (Y) N

Review JD 10/22

SC-03, Rev. 7/91

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U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: S_CUBED_____ Contract: 32359-04__

Lab Code: S3____ Case No.: SITEW SAS No.: _____ SDG No.:2646__

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
_2646-1_____	__2646-1_____
_2646-1D_____	__2646-1R_____
_2646-1L_____	__2646-1L_____
_2646-1S_____	__2646-1S_____
_2646-10_____	__2646-10_____
_2646-11_____	__2646-11_____
_2646-12_____	__2646-12_____
_2646-13_____	__2646-13_____
_2646-14_____	__2646-14_____
_2646-15_____	__2646-15_____
_2646-16_____	__2646-16_____
_2646-17_____	__2646-17_____
_2646-18_____	__2646-18_____
_2646-19_____	__2646-19_____
_2646-2_____	__2646-2_____
_2646-2D_____	__2646-2R_____
_2646-2L_____	__2646-2L_____
_2646-2S_____	__2646-2S_____
_2646-20_____	__2646-20_____
_2646-21_____	__2646-21_____

Were ICP interelement corrections applied ? Yes/No NO_

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

Comments:

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: _____

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: S_CUBED_____ Contract: 32359-04__

Lab Code: S3____ Case No.: SITEW SAS No.: _____ SDG No.:2646__

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
_2646-22_____	__2646-22_____
_2646-23_____	__2646-23_____
_2646-24_____	__2646-24_____
_2646-25_____	__2646-25_____
_2646-26_____	__2646-26_____
_2646-27_____	__2646-27_____
_2646-28_____	__2646-28_____
_2646-29_____	__2646-29_____
_2646-3_____	__2646-3_____
_2646-30_____	__2646-30_____
_2646-31_____	__2646-31_____
_2646-32_____	__2646-32_____
_2646-4_____	__2646-4_____
_2646-5_____	__2646-5_____
_2646-6_____	__2646-6_____
_2646-7_____	__2646-7_____
_2646-8_____	__2646-8_____
_2646-9_____	__2646-9_____
_____	_____
_____	_____

Were ICP interelement corrections applied ? Yes/No NO_

Were ICP background corrections applied ? Yes/No YES

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

Comments:

_____

_____

_____

_____

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: _____

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-1

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-1

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8300			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	3.4			F
7440-39-3	Barium	66.9		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	7790			P
7440-47-3	Chromium	11.8		*	P
7440-48-4	Cobalt	8.1		N	P
7440-50-8	Copper	11.9			P
7439-89-6	Iron	20600		*	P
7439-92-1	Lead	7.5		*	F
7439-95-4	Magnesium	4800			P
7439-96-5	Manganese	377			P
7439-97-6	Mercury	0.37		N*	CV
7440-02-0	Nickel	9.2		N	P
7440-09-7	Potassium	1700		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	284	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	36.6		*	P
7440-66-6	Zinc	42.8			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B3

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-1

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-1

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	898		E	P
7440-32-6	Zirconium	10.1	U		P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B3

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-2

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-2

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13800			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	4.0			F
7440-39-3	Barium	88.5		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6050			P
7440-47-3	Chromium	17.7		*	P
7440-48-4	Cobalt	13.0		N	P
7440-50-8	Copper	19.1			P
7439-89-6	Iron	26300		*	P
7439-92-1	Lead	7.9		*	F
7439-95-4	Magnesium	6050			P
7439-96-5	Manganese	553			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	17.3		N	P
7440-09-7	Potassium	2710		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	566			P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	48.8		*	P
7440-66-6	Zinc	54.1			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B4

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-2

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-2

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1290		E	P
7440-32-6	Zirconium	19.4			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B4

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-3

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-3

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	5.2			F
7440-39-3	Barium	79.7		N	P
7440-41-7	Beryllium	1.2		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6900			P
7440-47-3	Chromium	17.5		*	P
7440-48-4	Cobalt	10.3		N	P
7440-50-8	Copper	17.3			P
7439-89-6	Iron	24100		*	P
7439-92-1	Lead	11.4		*	F
7439-95-4	Magnesium	5840			P
7439-96-5	Manganese	409			P
7439-97-6	Mercury	1.7		N*	CV
7440-02-0	Nickel	14.7		N	P
7440-09-7	Potassium	2240		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	374	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	43.7		*	P
7440-66-6	Zinc	55.2			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B5

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-3

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-3

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.5

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1250		E	P
7440-32-6	Zirconium	16.0			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B5

FORM I - IN

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-4

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-4

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8110			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	5.4			F
7440-39-3	Barium	79.7		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	7250			P
7440-47-3	Chromium	13.1		*	P
7440-48-4	Cobalt	7.6		N	P
7440-50-8	Copper	10.6			P
7439-89-6	Iron	19500		*	P
7439-92-1	Lead	9.5		*	F
7439-95-4	Magnesium	4830			P
7439-96-5	Manganese	364			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	9.3		N	P
7440-09-7	Potassium	1720		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	317	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	35.4		*	P
7440-66-6	Zinc	43.4			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B6

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-4

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-4

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1070		E	P
7440-32-6	Zirconium	10.1			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B6

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-5

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-5

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6530			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	3.9			F
7440-39-3	Barium	61.5		N	P
7440-41-7	Beryllium	0.92		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	8620			P
7440-47-3	Chromium	8.1		*	P
7440-48-4	Cobalt	8.4		N	P
7440-50-8	Copper	10.1			P
7439-89-6	Iron	21400		*	P
7439-92-1	Lead	5.6		*	F
7439-95-4	Magnesium	4120			P
7439-96-5	Manganese	323			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.1		N	P
7440-09-7	Potassium	1110		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	234	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	46.5		*	P
7440-66-6	Zinc	42.4			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B9

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-5

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-5

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1340		E	P
7440-32-6	Zirconium	12.6			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B9

FORM I - IN 012 7/88

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-6

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-6

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7770			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	3.0			F
7440-39-3	Barium	85.1		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6820			P
7440-47-3	Chromium	12.8		*	P
7440-48-4	Cobalt	9.2		N	P
7440-50-8	Copper	22.8			P
7439-89-6	Iron	23500		*	P
7439-92-1	Lead	9.2		*	F
7439-95-4	Magnesium	4670			P
7439-96-5	Manganese	377			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	13.1		N	P
7440-09-7	Potassium	1370		*	P
7882-49-2	Selenium	1.8		N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	228	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	53.1		*	P
7440-66-6	Zinc	43.4			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C0

FORM I - IN

013/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-6

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-6

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1250		E	P
7440-32-6	Zirconium	12.7			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C0

FORM I - IN 014 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-7

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-7

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5870			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	3.1			F
7440-39-3	Barium	64.7		N	P
7440-41-7	Beryllium	0.81		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	13200			P
7440-47-3	Chromium	8.3		*	P
7440-48-4	Cobalt	8.0		N	P
7440-50-8	Copper	11.0			P
7439-89-6	Iron	18900		*	P
7439-92-1	Lead	3.4		*	F
7439-95-4	Magnesium	3720			P
7439-96-5	Manganese	414			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	6.4		N	P
7440-09-7	Potassium	1160		*	P
7882-49-2	Selenium	1.5		N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	176	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	40.9		*	P
7440-66-6	Zinc	39.8			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C1

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-7

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-7

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1250		E	P
7440-32-6	Zirconium	12.5			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C1

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-8

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-8

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5570			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	2.5			F
7440-39-3	Barium	49.5		N	P
7440-41-7	Beryllium	0.81		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6470			P
7440-47-3	Chromium	7.0		*	P
7440-48-4	Cobalt	8.9		N	P
7440-50-8	Copper	10.7			P
7439-89-6	Iron	18400		*	P
7439-92-1	Lead	3.4		*	F
7439-95-4	Magnesium	4480			P
7439-96-5	Manganese	254			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	11.3		N	P
7440-09-7	Potassium	1010		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	197	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	40.5		*	P
7440-66-6	Zinc	36.8			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C2

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-8

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-8

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1390		E	P
7440-32-6	Zirconium	13.1			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C2

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-9

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-9

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5690			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	2.0			F
7440-39-3	Barium	98.6		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	7970			P
7440-47-3	Chromium	4.7		*	P
7440-48-4	Cobalt	15.2		N	P
7440-50-8	Copper	12.9			P
7439-89-6	Iron	32600		*	P
7439-92-1	Lead	2.9		*	F
7439-95-4	Magnesium	4360			P
7439-96-5	Manganese	409			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	6.4		N	P
7440-09-7	Potassium	926		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0		N	P
7440-23-5	Sodium	366	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	88.4		*	P
7440-66-6	Zinc	59.7			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C3

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-9

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-9

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3350		E	P
7440-32-6	Zirconium	36.7			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C3

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-10

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-10

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6520			P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	4.6			F
7440-39-3	Barium	102		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	8970			P
7440-47-3	Chromium	5.2		*	P
7440-48-4	Cobalt	16.6		N	P
7440-50-8	Copper	13.8			P
7439-89-6	Iron	34000		*	P
7439-92-1	Lead	5.5		*	F
7439-95-4	Magnesium	5520			P
7439-96-5	Manganese	496			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.1		N	P
7440-09-7	Potassium	1090		*	P
7882-49-2	Selenium	1.4		N	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	306	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	88.0		*	P
7440-66-6	Zinc	59.5			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C4

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-10

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-10

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.2

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3160		E	P
7440-32-6	Zirconium	33.3			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C4

FORM I - IN

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-11

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-11

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7110			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	3.7			F
7440-39-3	Barium	85.4		N	P
7440-41-7	Beryllium	1.4		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	7660			P
7440-47-3	Chromium	6.3		*	P
7440-48-4	Cobalt	16.7		N	P
7440-50-8	Copper	10.5			P
7439-89-6	Iron	34400		*	P
7439-92-1	Lead	4.5		*	F
7439-95-4	Magnesium	5380			P
7439-96-5	Manganese	456			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.4		N	P
7440-09-7	Potassium	1130		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	352	B		P
7440-28-0	Thallium	0.92	U	N	F
7440-62-2	Vanadium	92.7		*	P
7440-66-6	Zinc	61.5			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C5

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-11

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-11

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.7

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3540		E	P
7440-32-6	Zirconium	35.5			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C5

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-12

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-12

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6990			P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	3.1			F
7440-39-3	Barium	115		N	P
7440-41-7	Beryllium	1.5		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	8100			P
7440-47-3	Chromium	6.3		*	P
7440-48-4	Cobalt	16.9		N	P
7440-50-8	Copper	11.5			P
7439-89-6	Iron	35000		*	P
7439-92-1	Lead	4.0		*	F
7439-95-4	Magnesium	5220			P
7439-96-5	Manganese	564			P
7439-97-6	Mercury	0.43		N*	CV
7440-02-0	Nickel	9.3		N	P
7440-09-7	Potassium	1070		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0		N	P
7440-23-5	Sodium	294	B		P
7440-28-0	Thallium	0.93	U	N	F
7440-62-2	Vanadium	92.2		*	P
7440-66-6	Zinc	61.9			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C6

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-12

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-12

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.5

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.5	U		P
7440-32-6	Titanium	3450		E	P
7440-32-6	Zirconium	36.1			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C6

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-13

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-13

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6290			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	2.8			F
7440-39-3	Barium	73.4		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	10000			P
7440-47-3	Chromium	4.5		*	P
7440-48-4	Cobalt	15.7		N	P
7440-50-8	Copper	11.5			P
7439-89-6	Iron	33700		*	P
7439-92-1	Lead	3.6		*	F
7439-95-4	Magnesium	4510			P
7439-96-5	Manganese	434			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	6.8		N	P
7440-09-7	Potassium	1040		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.2		N	P
7440-23-5	Sodium	408	B		P
7440-28-0	Thallium	0.92	U	N	F
7440-62-2	Vanadium	89.8		*	P
7440-66-6	Zinc	59.8			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C7

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-13

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-13

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.9

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3280		E	P
7440-32-6	Zirconium	37.2			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C7

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-14

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-14

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7120			P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	6.1			F
7440-39-3	Barium	80.6		N	P
7440-41-7	Beryllium	1.2		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	11500			P
7440-47-3	Chromium	6.0		*	P
7440-48-4	Cobalt	13.2		N	P
7440-50-8	Copper	15.2			P
7439-89-6	Iron	28600		*	P
7439-92-1	Lead	8.6		*	F
7439-95-4	Magnesium	4950			P
7439-96-5	Manganese	388			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	10.3		N	P
7440-09-7	Potassium	1220		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	339	B		P
7440-28-0	Thallium	0.93	U	N	F
7440-62-2	Vanadium	63.4		*	P
7440-66-6	Zinc	75.0			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C8

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-14

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-14

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.8

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.7			P
7440-32-6	Titanium	2320		E	P
7440-32-6	Zirconium	32.2			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C8

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-15

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-15

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6580			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	2.1			F
7440-39-3	Barium	85.0		N	P
7440-41-7	Beryllium	0.81		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6660			P
7440-47-3	Chromium	7.7		*	P
7440-48-4	Cobalt	7.1		N	P
7440-50-8	Copper	8.6			P
7439-89-6	Iron	17400		*	P
7439-92-1	Lead	3.1		*	F
7439-95-4	Magnesium	3920			P
7439-96-5	Manganese	262			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	7.2		N	P
7440-09-7	Potassium	1160		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	142	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	36.4		*	P
7440-66-6	Zinc	36.4			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C9

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-15

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-15

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1180		E	P
7440-32-6	Zirconium	10.2			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C9

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-16

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-16

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7330			P
7440-36-0	Antimony	5.9	U	N	P
7440-38-2	Arsenic	4.3			F
7440-39-3	Barium	108		N	P
7440-41-7	Beryllium	1.4		N	P
7440-43-9	Cadmium	0.32	U	N	P
7440-70-2	Calcium	7790			P
7440-47-3	Chromium	6.4		*	P
7440-48-4	Cobalt	14.8		N	P
7440-50-8	Copper	11.0			P
7439-89-6	Iron	31200		*	P
7439-92-1	Lead	5.4		*	F
7439-95-4	Magnesium	5070			P
7439-96-5	Manganese	451			P
7439-97-6	Mercury	0.11	U	N*	CV
7440-02-0	Nickel	8.0		N	P
7440-09-7	Potassium	1220		*	P
7882-49-2	Selenium	1.3	U	N	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	372	B		P
7440-28-0	Thallium	0.95	U	N	F
7440-62-2	Vanadium	77.2		*	P
7440-66-6	Zinc	56.4			P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D0

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-16

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-16

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.5	U		P
7440-32-6	Titanium	3130		E	P
7440-32-6	Zirconium	33.1			P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D0

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-17

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-17

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7020			P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	3.0			F
7440-39-3	Barium	71.7		N	P
7440-41-7	Beryllium	0.83		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	6440			P
7440-47-3	Chromium	9.3		*	P
7440-48-4	Cobalt	7.1		N	P
7440-50-8	Copper	10.2			P
7439-89-6	Iron	17300		*	P
7439-92-1	Lead	4.7		*	F
7439-95-4	Magnesium	4440			P
7439-96-5	Manganese	280			P
7439-97-6	Mercury	0.34		N*	CV
7440-02-0	Nickel	8.5		N	P
7440-09-7	Potassium	1270		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	167	B		P
7440-28-0	Thallium	0.93	U	N	F
7440-62-2	Vanadium	35.8		*	P
7440-66-6	Zinc	36.7			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D4

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-17

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-17

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1180		E	P
7440-32-6	Zirconium	11.4			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D4

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-18

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-18

Level (low/med): LOW Date Received: 10/19/91

% Solids: 88.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7900			P
7440-36-0	Antimony	6.3	U	N	P
7440-38-2	Arsenic	3.7			F
7440-39-3	Barium	98.9		N	P
7440-41-7	Beryllium	0.91		N	P
7440-43-9	Cadmium	0.34	U	N	P
7440-70-2	Calcium	8900			P
7440-47-3	Chromium	11.3		*	P
7440-48-4	Cobalt	8.5		N	P
7440-50-8	Copper	10.5			P
7439-89-6	Iron	19700		*	P
7439-92-1	Lead	4.3		*	F
7439-95-4	Magnesium	5110			P
7439-96-5	Manganese	361			P
7439-97-6	Mercury	0.11	U	N*	CV
7440-02-0	Nickel	10.4		N	P
7440-09-7	Potassium	1530		*	P
7882-49-2	Selenium	1.4	U	N	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	183	B		P
7440-28-0	Thallium	1.0	U	N	F
7440-62-2	Vanadium	38.3		*	P
7440-66-6	Zinc	43.0			P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D5

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-18

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-18

Level (low/med): LOW Date Received: 10/19/91

% Solids: 88.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.6	U		P
7440-32-6	Titanium	1270		E	P
7440-32-6	Zirconium	11.3	U		P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D5

038

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-19

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-19

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6130			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	2.3			F
7440-39-3	Barium	80.7		N	P
7440-41-7	Beryllium	0.82		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	5640			P
7440-47-3	Chromium	6.7		*	P
7440-48-4	Cobalt	9.7		N	P
7440-50-8	Copper	11.6			P
7439-89-6	Iron	21000		*	P
7439-92-1	Lead	2.7		*	F
7439-95-4	Magnesium	4020			P
7439-96-5	Manganese	413			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.2		N	P
7440-09-7	Potassium	1430		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	210	B		P
7440-28-0	Thallium	0.92	U	N	F
7440-62-2	Vanadium	41.4		*	P
7440-66-6	Zinc	41.3			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D6

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-19

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-19

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1270		E	P
7440-32-6	Zirconium	13.3			P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D6

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040 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-20

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-20

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9570			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	5.6			F
7440-39-3	Barium	86.7		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	13600			P
7440-47-3	Chromium	15.1		*	P
7440-48-4	Cobalt	9.0		N	P
7440-50-8	Copper	13.3			P
7439-89-6	Iron	20300		*	P
7439-92-1	Lead	7.1		*	F
7439-95-4	Magnesium	5690			P
7439-96-5	Manganese	420			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	12.4		N	P
7440-09-7	Potassium	1760		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	331	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	36.8		*	P
7440-66-6	Zinc	45.5			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D7

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-20

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-20

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	973		E	P
7440-32-6	Zirconium	10.5			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D7

042

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-21

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-21

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	11.0			F
7440-39-3	Barium	137		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	14100			P
7440-47-3	Chromium	19.8		*	P
7440-48-4	Cobalt	12.0		N	P
7440-50-8	Copper	22.1			P
7439-89-6	Iron	24300		*	P
7439-92-1	Lead	14.7		*	F
7439-95-4	Magnesium	7380			P
7439-96-5	Manganese	502			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	19.4		N	P
7440-09-7	Potassium	2450		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	850			P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	40.2		*	P
7440-66-6	Zinc	61.4			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D8

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-21

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-21

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1020		E	P
7440-32-6	Zirconium	12.8			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D8

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044

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-22

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-22

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15700			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	11.2			F
7440-39-3	Barium	198		N	P
7440-41-7	Beryllium	1.4		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	17000			P
7440-47-3	Chromium	23.1		*	P
7440-48-4	Cobalt	12.4		N	P
7440-50-8	Copper	22.6			P
7439-89-6	Iron	26900		*	P
7439-92-1	Lead	19.1		*	F
7439-95-4	Magnesium	8850			P
7439-96-5	Manganese	519			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	21.8		N	P
7440-09-7	Potassium	2900		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	473	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	45.4		*	P
7440-66-6	Zinc	69.0			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D9

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-22

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-22

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1210		E	P
7440-32-6	Zirconium	13.4			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D9

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45A 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-23

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-23

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15100			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	6.0			F
7440-39-3	Barium	153		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	13800			P
7440-47-3	Chromium	20.1		*	P
7440-48-4	Cobalt	11.2		N	P
7440-50-8	Copper	17.1			P
7439-89-6	Iron	26300		*	P
7439-92-1	Lead	8.2		*	F
7439-95-4	Magnesium	6670			P
7439-96-5	Manganese	444			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	17.8		N	P
7440-09-7	Potassium	2280		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	629			P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	49.7		*	P
7440-66-6	Zinc	57.1			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014F0

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-23

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-23

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.0

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1330		E	P
7440-32-6	Zirconium	21.7			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014F0

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-24

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-24

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17600			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	11.4			F
7440-39-3	Barium	170		N	P
7440-41-7	Beryllium	1.5		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	16400			P
7440-47-3	Chromium	23.8		*	P
7440-48-4	Cobalt	12.8		N	P
7440-50-8	Copper	23.5			P
7439-89-6	Iron	27000		*	P
7439-92-1	Lead	14.8		*	F
7439-95-4	Magnesium	8460			P
7439-96-5	Manganese	528			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	20.4		N	P
7440-09-7	Potassium	2950		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	331	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	45.8		*	P
7440-66-6	Zinc	68.2			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014F1

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-24

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-24

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1200		E	P
7440-32-6	Zirconium	13.9			P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014F1

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-25

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-25

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9950			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	3.3			F
7440-39-3	Barium	193		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	11700			P
7440-47-3	Chromium	12.4		*	P
7440-48-4	Cobalt	9.0		N	P
7440-50-8	Copper	13.6			P
7439-89-6	Iron	20800		*	P
7439-92-1	Lead	5.2		*	F
7439-95-4	Magnesium	5160			P
7439-96-5	Manganese	356			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	10.7		N	P
7440-09-7	Potassium	1840		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	511			P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	39.1		*	P
7440-66-6	Zinc	45.6			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01494

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-25

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-25

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1120		E	P
7440-32-6	Zirconium	13.3			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01494

FORM I - IN

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-26

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-26

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	5.1			F
7440-39-3	Barium	70.7		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	11600			P
7440-47-3	Chromium	14.5		*	P
7440-48-4	Cobalt	11.0		N	P
7440-50-8	Copper	17.8			P
7439-89-6	Iron	26700		*	P
7439-92-1	Lead	5.8		*	F
7439-95-4	Magnesium	7300			P
7439-96-5	Manganese	382			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	12.7		N	P
7440-09-7	Potassium	2010		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0		N	P
7440-23-5	Sodium	796			P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	57.8		*	P
7440-66-6	Zinc	52.4			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B01495

FORM I - IN

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-26

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-26

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1600		E	P
7440-32-6	Zirconium	21.7			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01495

FORM I - IN

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-27

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-27

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9350			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	4.6			F
7440-39-3	Barium	95.0		N	P
7440-41-7	Beryllium	1.1		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	4000			P
7440-47-3	Chromium	10.2		*	P
7440-48-4	Cobalt	10.6		N	P
7440-50-8	Copper	11.4			P
7439-89-6	Iron	24100		*	P
7439-92-1	Lead	7.9		*	F
7439-95-4	Magnesium	4200			P
7439-96-5	Manganese	350			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	11.3		N	P
7440-09-7	Potassium	1760		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	217	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	54.2		*	P
7440-66-6	Zinc	45.1			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01496

FORM I - IN

7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-27

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-27

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1620		E	P
7440-32-6	Zirconium	22.6			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After:. YELLOW Clarity After: Artifacts:

Comments:
B01496

FORM I - IN

055

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-28

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-28

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23000			P
7440-36-0	Antimony	5.8	U	N	P
7440-38-2	Arsenic	6.7			F
7440-39-3	Barium	294		N	P
7440-41-7	Beryllium	2.1		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	10600			P
7440-47-3	Chromium	22.7		*	P
7440-48-4	Cobalt	16.8		N	P
7440-50-8	Copper	22.6			P
7439-89-6	Iron	37000		*	P
7439-92-1	Lead	9.7		*	F
7439-95-4	Magnesium	8920			P
7439-96-5	Manganese	814			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	17.0		N	P
7440-09-7	Potassium	3630		*	P
7882-49-2	Selenium	1.3	U	N	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	976			P
7440-28-0	Thallium	0.94	U	N	F
7440-62-2	Vanadium	66.7		*	P
7440-66-6	Zinc	79.9			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01497

FORM I - IN

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-28

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-28

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.9

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.5	U		P
7440-32-6	Titanium	1640		E	P
7440-32-6	Zirconium	30.0			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01497

057

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-29

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-29

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600			P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	4.2			F
7440-39-3	Barium	120		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	10800			P
7440-47-3	Chromium	13.1		*	P
7440-48-4	Cobalt	8.8		N	P
7440-50-8	Copper	16.2			P
7439-89-6	Iron	19800		*	P
7439-92-1	Lead	6.3		*	F
7439-95-4	Magnesium	5660			P
7439-96-5	Manganese	403			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	11.2		N	P
7440-09-7	Potassium	1920		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	477	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	35.1		*	P
7440-66-6	Zinc	47.6			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01498

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-29

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-29

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1040		E	P
7440-32-6	Zirconium	10.5			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01498

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-30

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-30

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10100			P
7440-36-0	Antimony	5.7	U	N	P
7440-38-2	Arsenic	6.5			F
7440-39-3	Barium	98.6		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	25400			P
7440-47-3	Chromium	10.3		*	P
7440-48-4	Cobalt	9.7		N	P
7440-50-8	Copper	15.4			P
7439-89-6	Iron	21400		*	P
7439-92-1	Lead	7.2		*	F
7439-95-4	Magnesium	5600			P
7439-96-5	Manganese	326			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	10.3		N	P
7440-09-7	Potassium	1100		*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	293	B		P
7440-28-0	Thallium	0.91	U	N	F
7440-62-2	Vanadium	50.1		*	P
7440-66-6	Zinc	45.2			P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01499

FORM I - IN

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-30

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-30

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1540		E	P
7440-32-6	Zirconium	12.7			P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01499

FORM I - IN

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-31

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-31

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18.1	B		P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	0.60	U		F
7440-39-3	Barium	4.1	U	N	P
7440-41-7	Beryllium	0.20	U	N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	107	U		P
7440-47-3	Chromium	0.70	U	*	P
7440-48-4	Cobalt	1.6	U	N	P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	8.7	B	*	P
7439-92-1	Lead	0.30	U	*	F
7439-95-4	Magnesium	249	U		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	3.2	U	N	P
7440-09-7	Potassium	130	U	*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	98.7	U		P
7440-28-0	Thallium	0.90	U	N	F
7440-62-2	Vanadium	2.0	U	*	P
7440-66-6	Zinc	5.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:
B014H7

FORM I - IN

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-31

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-31

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1.5		E	P
7440-32-6	Zirconium	10.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:
B014H7

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-32

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-32

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10.7	B		P
7440-36-0	Antimony	5.6	U	N	P
7440-38-2	Arsenic	0.60	U		F
7440-39-3	Barium	4.1	U	N	P
7440-41-7	Beryllium	0.20	U	N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	107	U		P
7440-47-3	Chromium	0.70	U	*	P
7440-48-4	Cobalt	1.6	U	N	P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	6.9	U	*	P
7439-92-1	Lead	0.55		*	F
7439-95-4	Magnesium	249	U		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	3.2	U	N	P
7440-09-7	Potassium	130	U	*	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	98.7	U		P
7440-28-0	Thallium	0.90	U	N	F
7440-62-2	Vanadium	2.0	U	*	P
7440-66-6	Zinc	5.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:
B014H8

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-32

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-32

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1.3		E	P
7440-32-6	Zirconium	10.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:
B014H8

FORM I - IN

MAXWELL
S-CUBED Division

NARRATIVE

DATE: December 9, 1991
REFERENCE NO.: 32359-04, SDG 2646

SILICA

The samples were analyzed according to Method 370.1 for dissolved silica. There were no difficulties with the analysis. There were moderate levels of Si detected in the samples.

The quality control results were acceptable.

AMMONIA

The samples were analyzed according to Method 350.3. There were no difficulties with the analysis. There were low levels of ammonia detected in the samples.

The quality control results were acceptable.

ALKALINITY

The samples were analyzed according to Method 310.1. There were no difficulties with the analysis. There were significant levels of alkalinity detected in most of the samples.

The quality control results were acceptable.

ANIONS

The samples were analyzed according to Method 300.0. There were no difficulties with the analysis. Dilutions were required for several samples for the analysis of Cl, NO3, and SO4. There were moderate levels of most analytes detected in most samples.

The quality control results were acceptable.

SILICA ANALYSIS

LAB: S-CUBED
CLIENT: WHC
CASE: SITE WIDE SOIL
LOT: 2646
FILE: SI1019
DISK: SI1023
METHOD: 370.1
RESULTS: UNIT AS MG/KG

DATA REVIEWER: CLN 11/20/91
PROJECT REVIEWER:
CHARGE NO: 32359-04
DATE RECEIVED: 10/19/91
DATE PREP: 11/11/91
DATE ANALYZED: 11/11/91
MATRIX: SOIL

LAB ID	CONCENTRATION
2646 -1	5.52
2646 -2	12.7
2646 -3	19.1
2646 -4	6.14
2646 -5	12.1
2646 -6	15.1
2646 -7	14.2
2646 -8	8.97
2646 -9	10.9
2646 -10	9.62
2646 -11	22.1
2646 -12	16.8
2646 -13	11.1
2646 -14	16.0
2646 -15	6.76
2646 -16	9.73
2646 -17	20.7
2646 -18	9.34
2646 -19	8.22
2646 -20	<5
2646 -21	8.37
2646 -22	8.00
2646 -23	10.9
2646 -24	22.1
2646 -25	6.59
2646 -26	10.4
2646 -27	9.74
2646 -28	19.8
2646 -29	13.2
2646 -30	11.4
** 2646 -31	< 5
** 2646 -32	< 5

COMMENTS:

** Extra lab blank is calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.045 L (Leaching Volume)}}{\text{0.009 kg (Sample Weight)}}$$

AMMONIA ANALYSIS

LABORATORY:	S-CUBED	DATA REVIEWER:	UN 11/20/91
CLIENT:	WHC	PROJECT REVIEWER:	
CASE:	SITE WIDE SOIL	CHARGE #:	32359-04
LOT #:	2646	DATE RECEIVED:	10/19/91
FILE#:	NH31019	DATE PREP:	11/15/91
DISK:	NH31024	DATE ANALYZED:	11/15/91
METHOD NO.	350.3	MATRIX:	SOIL

RESULTS: UNIT AS MG/KG DRY WEIGHT

LAB ID	CONCENTRATION
2646 -1	5.58
2646 -1R	6.74
2646 -1S	17.8
2646 -2	0.89
2646 -2R	0.82
2646 -2S	13.5
2646 -3	< 0.15
2646 -4	< 0.15
2646 -5	< 0.15
2646 -6	< 0.15
2646 -7	< 0.15
2646 -8	< 0.15
2646 -9	0.59
2646 -10	< 0.15
2646 -11	< 0.15
2646 -12	< 0.16
2646 -13	< 0.15
2646 -14	< 0.15
2646 -15	< 0.15
2646 -16	0.92
2646 -17	< 0.16
2646 -18	< 0.17
2646 -19	< 0.15
2646 -20	< 0.15
2646 -21	< 0.15
2646 -22	1.65
2646 -23	< 0.15
2646 -24	< 0.15
2646 -25	6.54
2646 -26	6.43
2646 -27	1.03
2646 -28	0.85
2646 -29	0.69
2646 -30	0.95
** 2646 -31	< 0.15
** 2646 -32	< 0.15

COMMENTS:

009

** Extra lab blank is calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.05 L (Leaching Volume)}}{\text{0.01 kg (Sample Weight)}}$$

ALKALINITY ANALYSIS

LAB:	S-CUBED	DATA REVIEWER:	aN 11/12/91
CLIENT:	WHC	PROJECT REVIEWER:	
CASE:	SITE WIDE SOIL	CHARGE #:	32359-04
LOT #:	2646	DATE RECIEVED:	10/19/91
FILE #:	ALK1019	DATE PREP:	10/28/91
DISK #:	ALK1016	DATE ANALYZED:	10/29/91
METHOD NO.:	EPA 310.1	MATRIX:	SOIL

RESULTS: RESULTS AS DRY WEIGHT - MG/KG

LAB ID	CONCENTRATION
2646 - 1	1180
2646 - 2	299
2646 - 3	1320
2646 - 4	219
2646 - 5	303
2646 - 6	179
2646 - 7	240
2646 - 8	229
2646 - 9	507
2646 - 10	347
2646 - 11	500
2646 - 12	662
2646 - 13	448
2646 - 14	660
2646 - 15	219
2646 - 16	905
2646 - 17	225
2646 - 18	1540
2646 - 19	171
2646 - 20	2790
2646 - 21	4600
2646 - 22	5320
2646 - 23	4010
2646 - 24	5920
2646 - 25	299
2646 - 26	1240
2646 - 27	5350
2646 - 28	3540
2646 - 29	2080
2646 - 30	7650
2646 - 31	< 5 **
2646 - 32	< 5 **

COMMENTS:

** Extra lab blanks are calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.025 L (Leaching Volume)}}{\text{0.005 kg (Sample Weight)}}$$

LAB: S-CUBED DATA REVIEWER: WN 11/12/91
LOT #: 2646 PROJECT REVIEWER:

REPLICATE SUMMARY UNIT: MG/KG

LAB ID	CONTROL LIMIT	ORIGINAL SAMPLE RESULT	REPLICATE SAMPLE RESULT	%RPD
2646-1	+/- 20	1180	1220	3.3
2646-2	+/- 20	299	309	3.3

MATRIX SPIKE SUMMARY UNIT: MG/KG

LAB ID	CONTROL LIMIT	SPIKED SAMPLE RESULT	SAMPLE RESULT	AMOUNT SPIKED	%RECOVERY
2646-1	75 - 125	1770	1180	507	116.4
2646-2	75 - 125	855	299	503	110.6

ANIONS ANALYSIS

LABORATORY:	S-CUBED	DATA REVIEWER:	CWN 11/12/91
CLIENT:	WHC	PROJECT REVIEWER:	
CASE:	SITE WIPE SOIL	CHARGE #:	32359-04
LOT #:	2646	DATE RECEIVED:	10/19/91
FILE#:	ANI1019	DATE PREP:	10/28-31/91
DISK:	ANI1110	DATE ANALYZED:	10/28-31/91
METHOD NO.	300.0	MATRIX:	SOIL

RESULTS: UNIT AS MG/KG DRY WEIGHT

LAB ID	F	CL	NO2	NO3	PO4	SO4
2646 -1	0.63	2.76	< 0.2	1.05	< 0.5	1.44
2646 -2	0.76	2.84	< 0.2	2.82	< 0.5	1.18
2646 -3	0.79	3.05	< 0.2	3.08	0.88	3.36
2646 -4	1.30	365	< 0.2	18.0	< 0.5	91.1
2646 -5	0.24	87.6	< 0.2	5.60	< 0.5	55.0
2646 -6	0.68	3.77	< 0.2	1.23	< 0.5	4.82
2646 -7	0.63	11.6	< 0.2	1.90	< 0.5	15.0
2646 -8	0.59	10.3	< 0.2	1.46	1.48	13.7
2646 -9	0.57	6.97	< 0.2	1.95	< 0.5	9.92
2646 -10	0.68	5.97	< 0.2	1.45	< 0.5	9.10
2646 -11	0.58	9.78	< 0.2	2.76	< 0.5	11.1
2646 -12	1.07	8.18	< 0.2	1.15	< 0.5	19.4
2646 -13	0.85	2.62	< 0.2	5.83	< 0.5	1.26
2646 -14	0.73	2.67	< 0.2	3.20	< 0.5	4.02
2646 -15	0.41	3.97	< 0.2	1.37	< 0.5	4.77
2646 -16	0.59	74.2	< 0.2	1.20	< 0.5	59.4
2646 -17	0.51	63.2	< 0.2	5.00	< 0.5	75.1
2646 -18	0.95	170	< 0.2	14.9	< 0.6	160
2646 -19	0.62	2.93	< 0.2	0.58	< 0.5	2.59
2646 -20	1.72	450	< 0.2	474	< 0.5	43.2
2646 -21	4.86	1480	< 0.2	440	< 0.5	108
2646 -22	4.81	170	< 0.2	906	< 0.5	97.7
2646 -23	2.85	555	< 0.2	778	< 0.5	84.8
2646 -24	3.29	5.60	< 0.2	29.2	1.60	21.0
2646 -25	0.69	30.7	< 0.2	2.29	< 0.5	28.5
2646 -26	1.76	19.1	< 0.2	3.15	2.37	22.9
2646 -27	0.83	11.2	< 0.2	50.1	1.49	5.40
2646 -28	1.37	39.8	< 0.2	68.9	0.85	340
2646 -29	0.91	5.79	< 0.2	1.30	0.83	10.6
2646 -30	2.94	3.00	0.27	14.1	< 0.5	12.5
** 2646 -31	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5	< 0.5
** 2646 -32	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5	< 0.5

COMMENTS:

** Extra lab blank is calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.045 L (Leaching Volume)}}{\text{0.009 kg (Sample Weight)}}$$

OSM INORGANIC DATA ASSESSMENT

DATE 2-10-92

REVIEWED BY Ted Washington

LABORATORY Maxwell-Stubed

CASE # Site wide

SDG # 2646

2-10-92

SAMPLES/MATRIX

B014B3 B014C0 B014C9 B014D9
B014B4 B014C1 B014D0 B014F0
B014B5 B014C2 B014D4 B014F1
B014B6 B014C3 B014D5 B01494
B014B9 B014C4 B014D6 B01495
B014C5 B014C6 B014D7 B01496
B014C7 B014C8 B014D8 B01497
B01499 B01498
B014H7
B014H8

DATA ASSESSMENT SUMMARY

	ICP	AA	Hg	CN
1. Calibrations (Form II)	O	O	O	
2. Blanks (III)	X	X	O	
3. ICS (IV)	M			
4. Matrix Spike (V)	M	X	X	
5. Duplicate Analysis (VI)	O	X	O	
6. LCS (VII)	X	O		
7. Serial Dilution (IX)	X			
8. GFAA		X		
9. Holding Times (XIV)	O	O	O	
10. Other QC	O	O	O	

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: THE DATA WAS ACCEPTABLE WITH ATTACHED QUALIFIERS. HOWEVER THREE WERE REJECTED FOR ALL SAMPLES (TITANIUM, ZIRCONIUM, AND ANTIMONY).

NOTES: THE WHC SAMPLE NUMBER CAN BE FOUND IN THE LOWER LEFT HAND CORNERS ON FORM I

o Refer to the corresponding attachments for explanation of any problems.

INORGANIC QC - Calibrations

Name Ted Washington Date 2-7-92 2-10-92

COMMENTS: - The proper calibration procedure were followed, each time an instrument was set up. It had the correct number of blanks and standards.
- Mercury had an acceptable correlation coefficient.
- All ICV result had adequate % recoveries.
- There was only one CCV analyte that was out of control (Beryllium). It was in CCV 6 and did not affect any WHC samples.

ACTION: None - no actions required.

sample #	constituent	value/qual	sample #	constituent	value/qual

INORGANIC QC - Blanks

Name Ted Washington Date 2-10-92 TW 2-6-92

COMMENTS: THERE WERE CONTAMINANTS FOUND IN THE BLANKS OF Lead and Zinc. These were found in CCB5 and only AFFECTED THREE SAMPLES.

ACTION: ALL AFFECTED samples had THE ANALYTES qualified ~~estimated (uj or~~ (U) AS PER OSM procedures.

sample #	constituent	value/qual
B014H8	Lead	U
B01498	Zinc	U
B01499		

sample #	constituent	value/qual

INORGANIC QC - ICS

Name Ted Washington Date 2-10-92 TXW 2-10-92

COMMENTS: - THE MINIMUM number OF Interference check samples were run in each case.
- THERE were no ICP RESULTS WITH AN ABSOLUTE VALUE > IDL FOR ANALYTES which were NOT PRESENT in THE ICS SOLUTION.
- THERE WERE TWO AB RECOVERIES (%R) THAT WERE OUT OF CONTROL (TITANIUM and ZIRCONIUM).

ACTION: TITANIUM and ZIRCONIUM were ~~re~~ qualified unusable because THEY had %RECOVERY OF LESS THAN 50% . TITANIUM (44.8%) ZIRCONIUM (47.0%).

sample #	constituent	value/qual
ALL SAMPLES	TITANIUM	R
	ZIRCONIUM	R

sample #	constituent	value/qual

INORGANIC QC - Matrix Spike

Name Ted Washington Date 2-10-92 2-10-92

COMMENTS: - There was no way to verify if a field blank was used for the spiked sample or not.
- ~~Blank~~ There were several spike recoveries that were out of control limit requirements.

ACTION: - All samples qualified estimated (UJ or J) or unusable (R) as per OSM procedure.
Antimony was qualified unusable because its % Recovery (%R) was below 30% (Antimony 29.2%).

sample #	constituent	value/qual
B014H7 B014H8	Arsenic	Acceptable
All other samples	Arsenic	J
B014H7	Lead	Acceptable
All other samples	Lead	J
B014B3 B014B5 B014C6 B014D4	mercury	J
All samples	Antimony	R

sample #	constituent	value/qual

INORGANIC QC - Duplicate Analysis

Name Ted Washington Date 2-10-92

TW 2-10-92

COMMENTS: - THERE WAS NO WAY TO VERIFY IF A FIELD BLANK WAS USED FOR THE DUPLICATE SAMPLE ANALYSIS.
- LEAD WAS THE ONLY ANALYTE THAT WAS OUT OF CONTROL.

ACTION: ALL SAMPLES QUALIFIED ESTIMATED (J OR UJ) AS PER OSM PROCEDURES.

sample #	constituent	value/qual	sample #	constituent	value/qual
B014H7	LEAD	UJ			
ALL OTHER SAMPLES	LEAD	J			

INORGANIC QC - LCS

Name Ted Washington Date 2-10-92 TW 2-10-92

COMMENTS: THERE WERE NO SOLID LCS RUN EVEN THOUGH THESE WERE ALL SOIL SAMPLES. BECAUSE THE TEST WERE ALL RUN AS AQUEOUS DOES NOT NECCESARILLY MEAN THEY SHOULD BE QUALIFIED.

ACTION: ALL SAMPLES QUALIFIED AS ESTIMATED (J OR UJ) AS PER OSM PROCEDURES.

sample #	constituent	value/qual
B014H7 B014H8	Chromium	Acceptable
ALL OTHER SAMPLES	Chromium	J
B014H7 B014H8	Copper	Acceptable
ALL OTHER SAMPLES	Copper	J
B014H8	Iron	Acceptable
ALL OTHER SAMPLES	Iron	J

sample #	constituent	value/qual

INORGANIC QC - Serial Dilution

Name Ted Washington Date 2-10-92

TXW 2-10-92

COMMENTS: THERE WERE SEVERAL ANALYTES THAT WERE OUT OF CONTROL (Copper, NICKEL, SODIUM, POTASSIUM, VANADIUM, ZINC AND TITANIUM).

TXW 2-10-92

ACTION: ALL SAMPLES QUALIFIED AS ESTIMATED (UJ OR J) AS PER OSM PROCEDURES.

sample #	constituent	value/qual
B014C9 B014H7 B014H8	COPPER	ACCEPTABLE
ALL OTHER SAMPLES	COPPER	J
B014B4 B014D8 B014D9 B014F0 B014F1 B01497	NICKEL	J
B014B4 B014D8 B014F0 B01494 B01495 B01497	SODIUM	J

sample #	constituent	value/qual
B014H7 B014H8	POTASSIUM	ACCEPTABLE
ALL OTHER SAMPLES	POTASSIUM	J
B014H7 B014H8	VANADIUM ZINC TITANIUM	ACCEPTABLE
ALL OTHER SAMPLES	VANADIUM ZINC TITANIUM	J
~~B01498~~	~~ZINC~~	~~UJ~~

INORGANIC QC - GFAA

Name Ted Washington Date 2-10-92

TXW 2-10-92

COMMENTS: - THERE WERE GFAA duplicate injections THAT WERE OUT OF CONTROL.
- THERE WERE POST digest spike recoveries (p.d) THAT WERE OUT OF CONTROL.

ACTION: ALL OUT OF CONTROL ANALYTES WERE qualified estimated (UJ or J) in ALL AFFECTED samples as per OSM procedures

sample #	constituent	value/qual
B014C9	Arsenic	J
B014C5		
B014C4		
B014C3		
B014C2		
B014C1		
B014C0		
B014B6		
B014B5		
B014H7	Arsenic	UJ
B014B5	Selenium	Acceptable
B014B9		
B014C0	Selenium	J
B014C1		
B014C4		
ALL OTHER samples	Selenium	UJ

sample #	constituent	value/qual
B014B3	Thallium	Acceptable
B014B4	Lead	
B014B5		
B014B6		
B014B9		
B014C0		
B014C1		
B014C2		
B014C3		
B014C4		
ALL OTHER samples	Thallium	UJ
~~B014B3~~ ~~B4~~ ~~B5~~ ~~B014H7~~		
B014H7	Lead	UJ
ALL OTHER samples	Lead	J

INORGANIC QC - Holding Times

Name Ted Washington Date 2-10-92 TXW 2-10-92

COMMENTS: ALL holding time requirements were met.

ACTION: none - no actions required.

sample #	constituent	value/qual	sample #	constituent	value/qual

INORGANIC QC - other

Name Ted Washington Date 2-10-92

TW 2-10-92

COMMENTS: OVERALL QC WAS POOR, THERE WERE MANY ANALYTES AND SAMPLES THAT NEED TO be QUALIFIED (UJ OR J) OR (R) AS A RESULT, EACH WAS DOCUMENTED.

ACTION: none - no ACTIONS required.

sample #	constituent	value/qual	sample #	constituent	value/qual

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-1

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-1

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8300			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	3.4		J	F
7440-39-3	Barium	66.9		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	7790			P
7440-47-3	Chromium	11.8		J *	P
7440-48-4	Cobalt	8.1		N	P
7440-50-8	Copper	11.9		J	P
7439-89-6	Iron	20600		J *	P
7439-92-1	Lead	7.5		J *	F
7439-95-4	Magnesium	4800			P
7439-96-5	Manganese	377			P
7439-97-6	Mercury	0.37		J ~~N*~~	CV
7440-02-0	Nickel	9.2		N	P
7440-09-7	Potassium	1700		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	284	B		P
7440-28-0	Thallium	3.3	~~U~~	~~UJ N~~ N	F
7440-62-2	Vanadium	36.6		J *	P
7440-66-6	Zinc	42.8		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014B3

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-1

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-1

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	898		~~J~~ ER	P
7440-32-6	Zirconium	10.1	~~U~~	R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014B3

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004

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-2

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-2

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13800			P
7440-36-0	Antimony	5.6	~~U~~	~~N~~	P
7440-38-2	Arsenic	4.0		J	F
7440-39-3	Barium	88.5		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6050			P
7440-47-3	Chromium	17.7		J *	P
7440-48-4	Cobalt	13.0		N	P
7440-50-8	Copper	19.1		J	P
7439-89-6	Iron	26300		J *	P
7439-92-1	Lead	7.9		J *	F
7439-95-4	Magnesium	6050			P
7439-96-5	Manganese	553			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	17.3		J ~~N~~	P
7440-09-7	Potassium	2710		J *	P
7882-49-2	Selenium	1.2	~~U~~	UJ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	566		J	P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	48.8		J *	P
7440-66-6	Zinc	54.1		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014B4

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-2

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-2

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1290		~~J E~~ R	P
7440-32-6	Zirconium	19.4		R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014B4

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-3

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-3

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	5.2		J	F
7440-39-3	Barium	79.7		N	P
7440-41-7	Beryllium	1.2		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6900			P
7440-47-3	Chromium	17.5		J *	P
7440-48-4	Cobalt	10.3		N	P
7440-50-8	Copper	17.3		J	P
7439-89-6	Iron	24100		J *	P
7439-92-1	Lead	11.4		J *	F
7439-95-4	Magnesium	5840			P
7439-96-5	Manganese	409			P
7439-97-6	Mercury	1.7		J ~~N*~~	CV
7440-02-0	Nickel	14.7		J ~~N~~	P
7440-09-7	Potassium	2240		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~WJ~~ ~~N~~ N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	374	~~B~~	~~J~~ B	P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	43.7		J *	P
7440-66-6	Zinc	55.2		J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B5

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-3

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-3

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.5

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1250		~~J E~~ R	P
7440-32-6	Zirconium	16.0		R	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B5

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-4

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-4

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8110			P
7440-36-0	Antimony	5.6	~~U~~	~~R~~ N	P
7440-38-2	Arsenic	5.4		J	F
7440-39-3	Barium	79.7		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	7250			P
7440-47-3	Chromium	13.1		J *	P
7440-48-4	Cobalt	7.6		N	P
7440-50-8	Copper	10.6		J	P
7439-89-6	Iron	19500		J *	P
7439-92-1	Lead	9.5		J *	F
7439-95-4	Magnesium	4830			P
7439-96-5	Manganese	364			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	9.3		N	P
7440-09-7	Potassium	1720		J *	P
7882-49-2	Selenium	1.2	~~U~~	UJ N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	317	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	35.4		J *	P
7440-66-6	Zinc	43.4		J	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B6

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-4

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-4

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1070		~~J~~ ~~B~~ R	P
7440-32-6	Zirconium	10.1		R	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014B6

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-5

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-5

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6530			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ N	P
7440-38-2	Arsenic	3.9		J	F
7440-39-3	Barium	61.5		N	P
7440-41-7	Beryllium	0.92		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	8620			P
7440-47-3	Chromium	8.1		J*	P
7440-48-4	Cobalt	8.4		N	P
7440-50-8	Copper	10.1		J	P
7439-89-6	Iron	21400		J*	P
7439-92-1	Lead	5.6		J*	F
7439-95-4	Magnesium	4120			P
7439-96-5	Manganese	323			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.1		N	P
7440-09-7	Potassium	1110		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~ N	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	234	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	46.5		J*	P
7440-66-6	Zinc	42.4		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B9

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-5

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-5

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1340		~~J E~~ R	P
7440-32-6	Zirconium	12.6		R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014B9

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-6

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-6

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7770			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ N	P
7440-38-2	Arsenic	3.0		J	F
7440-39-3	Barium	85.1		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6820			P
7440-47-3	Chromium	12.8		J *	P
7440-48-4	Cobalt	9.2		N	P
7440-50-8	Copper	22.8		J	P
7439-89-6	Iron	23500		J *	P
7439-92-1	Lead	9.2		J *	F
7439-95-4	Magnesium	4670			P
7439-96-5	Manganese	377			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	13.1		N	P
7440-09-7	Potassium	1370		J *	P
7882-49-2	Selenium	1.8		J N*	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	228	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	53.1		J *	P
7440-66-6	Zinc	43.4		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C0

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012/88

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-6

Lab Name: S_CUBED_____ Contract: 32359-04__

Lab Code: S3____ Case No.: SITEW SAS No.: _____ SDG No.: 2646__

Matrix (soil/water): SOIL_ Lab Sample ID: 2646-6____

Level (low/med): LOW__ Date Received: 10/19/91

% Solids: _99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1250		~~E~~ R	P
7440-32-6	Zirconium	12.7		R	P

Color Before: GRAY_____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
B014C0

FORM I - IN 014 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-7

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-7

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5870			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	3.1		J	F
7440-39-3	Barium	64.7		N	P
7440-41-7	Beryllium	0.81		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	13200			P
7440-47-3	Chromium	8.3		J *	P
7440-48-4	Cobalt	8.0		N	P
7440-50-8	Copper	11.0		J	P
7439-89-6	Iron	18900		J *	P
7439-92-1	Lead	3.4		J *	F
7439-95-4	Magnesium	3720			P
7439-96-5	Manganese	414			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	6.4		N	P
7440-09-7	Potassium	1160		J *	P
7882-49-2	Selenium	1.5		J ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	176	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	40.9		J *	P
7440-66-6	Zinc	39.8		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C1

FORM I - IN 015

7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-7

Lab Name: S_CUBED_____ Contract: 32359-04__

Lab Code: S3____ Case No.: SITEW SAS No.: _____ SDG No.: 2646__

Matrix (soil/water): SOIL_ Lab Sample ID: 2646-7____

Level (low/med): LOW__ Date Received: 10/19/91

% Solids: _98.7

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1250		~~E~~ R	P
7440-32-6	Zirconium	12.5		R	P

Color Before: GRAY_____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:
B014C1

FORM I - IN 016 7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-8

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-8

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5570			P
7440-36-0	Antimony	5.6	~~U~~	~~R N~~	P
7440-38-2	Arsenic	2.5		J	F
7440-39-3	Barium	49.5		N	P
7440-41-7	Beryllium	0.81		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6470			P
7440-47-3	Chromium	7.0		J *	P
7440-48-4	Cobalt	8.9		N	P
7440-50-8	Copper	10.7		J	P
7439-89-6	Iron	18400		J *	P
7439-92-1	Lead	3.4		J *	F
7439-95-4	Magnesium	4480			P
7439-96-5	Manganese	254			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	11.3		N	P
7440-09-7	Potassium	1010		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	197	B		P
7440-28-0	Thallium	3.3	U	N	F
7440-62-2	Vanadium	40.5		J *	P
7440-66-6	Zinc	36.8		J	P

FXD 2-10-92

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C2

FORM I - IN

7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-8

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-8

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1390		R E	P
7440-32-6	Zirconium	13.1		R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C2

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-9

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-9

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5690			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	2.0		J	F
7440-39-3	Barium	98.6		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	7970			P
7440-47-3	Chromium	4.7		J *	P
7440-48-4	Cobalt	15.2		N	P
7440-50-8	Copper	12.9		J	P
7439-89-6	Iron	32600		J *	P
7439-92-1	Lead	2.9		J *	F
7439-95-4	Magnesium	4360			P
7439-96-5	Manganese	409			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	6.4		N	P
7440-09-7	Potassium	926		J *	P
7882-49-2	Selenium	1.2	~~U~~	UJ N	F
7440-22-4	Silver	1.0		N	P
7440-23-5	Sodium	366	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	88.4		J *	P
7440-66-6	Zinc	59.7		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C3

FORM I - IN 019 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-9

Lab Name: S_CUBED_____ Contract: 32359-04__

Lab Code: S3____ Case No.: SITEW SAS No.: _____ SDG No.: 2646__

Matrix (soil/water): SOIL_ Lab Sample ID: 2646-9____

Level (low/med): LOW__ Date Received: 10/19/91

% Solids: _98.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3350		R ~~E~~	P
7440-32-6	Zirconium	36.7		R	P

TKN 2-10-92

Color Before: GRAY_____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

B014C3

FORM I - IN 020 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-10

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-10

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.2

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

TXW 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6520			P
7440-36-0	Antimony	5.8	~~U~~	R ~~N~~	P
7440-38-2	Arsenic	4.6		J	F
7440-39-3	Barium	102		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	8970			P
7440-47-3	Chromium	5.2		J*	P
7440-48-4	Cobalt	16.6		N	P
7440-50-8	Copper	13.8		J	P
7439-89-6	Iron	34000		J*	P
7439-92-1	Lead	5.5		J*	F
7439-95-4	Magnesium	5520			P
7439-96-5	Manganese	496			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.1		N	P
7440-09-7	Potassium	1090		J*	P
7882-49-2	Selenium	1.4		J ~~N~~	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	306	B		P
7440-28-0	Thallium	3.4	U	N	F
7440-62-2	Vanadium	88.0		J*	P
7440-66-6	Zinc	59.5		J	P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C4

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-10

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-10

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.2

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3160		R ~~E~~	P
7440-32-6	Zirconium	33.3		R	P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C4

FORM I - IN

022
7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-11

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-11

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7110			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	3.7		J	F
7440-39-3	Barium	85.4		N	P
7440-41-7	Beryllium	1.4		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	7660			P
7440-47-3	Chromium	6.3		J *	P
7440-48-4	Cobalt	16.7		N	P
7440-50-8	Copper	10.5		J	P
7439-89-6	Iron	34400		J *	P
7439-92-1	Lead	4.5		J *	F
7439-95-4	Magnesium	5380			P
7439-96-5	Manganese	456			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.4		N	P
7440-09-7	Potassium	1130		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	352	B		P
7440-28-0	Thallium	0.92	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	92.7		J *	P
7440-66-6	Zinc	61.5		J	P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C5

FORM I - IN

023

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-11

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-11

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.7

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3540		R-B	P
7440-32-6	Zirconium	35.5		R	P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C5

FORM I - IN

024

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-12

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-12

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6990			P
7440-36-0	Antimony	5.8	~~U~~	~~N~~	P
7440-38-2	Arsenic	3.1		J	F
7440-39-3	Barium	115		N	P
7440-41-7	Beryllium	1.5		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	8100			P
7440-47-3	Chromium	6.3		J *	P
7440-48-4	Cobalt	16.9		N	P
7440-50-8	Copper	11.5		J	P
7439-89-6	Iron	35000		J *	P
7439-92-1	Lead	4.0		J *	F
7439-95-4	Magnesium	5220			P
7439-96-5	Manganese	564			P
7439-97-6	Mercury	0.43		J ~~N~~ *	CV
7440-02-0	Nickel	9.3		N	P
7440-09-7	Potassium	1070		J *	P
7882-49-2	Selenium	1.2	~~U~~	UJ ~~N~~	F
7440-22-4	Silver	1.0		N	P
7440-23-5	Sodium	294	B		P
7440-28-0	Thallium	0.93	~~U~~	UJ ~~N~~	F
7440-62-2	Vanadium	92.2		J *	P
7440-66-6	Zinc	61.9		J	P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C6

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-12

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-12

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.5

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.5	U		P
7440-32-6	Titanium	3450		R ~~E~~	P
7440-32-6	Zirconium	36.1		R	P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C6

026

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-13

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-13

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6290			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	2.8		J	F
7440-39-3	Barium	73.4		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	10000			P
7440-47-3	Chromium	4.5		J *	P
7440-48-4	Cobalt	15.7		N	P
7440-50-8	Copper	11.5		J	P
7439-89-6	Iron	33700		J *	P
7439-92-1	Lead	3.6		J *	F
7439-95-4	Magnesium	4510			P
7439-96-5	Manganese	434			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	6.8		N	P
7440-09-7	Potassium	1040		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~WJN~~	F
7440-22-4	Silver	1.2		N	P
7440-23-5	Sodium	408	B		P
7440-28-0	Thallium	0.92	~~U~~	~~WJN~~	F
7440-62-2	Vanadium	89.8		J *	P
7440-66-6	Zinc	59.8		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C7

027

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-13

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-13

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.9

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

TKW 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	3280		R ~~E~~	P
7440-32-6	Zirconium	37.2		R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C7

FORM I - IN

028

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-14

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-14

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7120			P
7440-36-0	Antimony	5.8	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	6.1		J	F
7440-39-3	Barium	80.6		N	P
7440-41-7	Beryllium	1.2		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	11500			P
7440-47-3	Chromium	6.0		J *	P
7440-48-4	Cobalt	13.2		N	P
7440-50-8	Copper	15.2		J	P
7439-89-6	Iron	28600		J *	P
7439-92-1	Lead	8.6		J *	F
7439-95-4	Magnesium	4950			P
7439-96-5	Manganese	388			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	10.3		N	P
7440-09-7	Potassium	1220		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	339	B		P
7440-28-0	Thallium	0.93	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	63.4		J *	P
7440-66-6	Zinc	75.0		J	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C8

029

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-14

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-14

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.8

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.7			P
7440-32-6	Titanium	2320		R ~~E~~	P
7440-32-6	Zirconium	32.2		R	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C8

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-15

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-15

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6580			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	2.1		J	F
7440-39-3	Barium	85.0		N	P
7440-41-7	Beryllium	0.81		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	6660			P
7440-47-3	Chromium	7.7		J *	P
7440-48-4	Cobalt	7.1		N	P
7440-50-8	Copper	8.6		J	P
7439-89-6	Iron	17400		J *	P
7439-92-1	Lead	3.1		J *	F
7439-95-4	Magnesium	3920			P
7439-96-5	Manganese	262			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	7.2		N	P
7440-09-7	Potassium	1160		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	142	B		P
7440-28-0	Thallium	0.91	~~U~~	~~UJ N~~	F
7440-62-2	Vanadium	36.4		J *	P
7440-66-6	Zinc	36.4		J	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014C9

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-15

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-15

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1180		R E	P
7440-32-6	Zirconium	10.2		R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014C9

FORM I - IN 033

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-16

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-16

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7330			P
7440-36-0	Antimony	5.9	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	4.3		J	F
7440-39-3	Barium	108		N	P
7440-41-7	Beryllium	1.4		N	P
7440-43-9	Cadmium	0.32	U	N	P
7440-70-2	Calcium	7790			P
7440-47-3	Chromium	6.4		J*	P
7440-48-4	Cobalt	14.8		N	P
7440-50-8	Copper	11.0		J	P
7439-89-6	Iron	31200		J*	P
7439-92-1	Lead	5.4		J*	F
7439-95-4	Magnesium	5070			P
7439-96-5	Manganese	451			P
7439-97-6	Mercury	0.11	U	N*	CV
7440-02-0	Nickel	8.0		N	P
7440-09-7	Potassium	1220		J*	P
7882-49-2	Selenium	1.3	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	372	B		P
7440-28-0	Thallium	0.95	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	77.2		J*	P
7440-66-6	Zinc	56.4		J	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D0

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-16

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-16

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.5	U		P
7440-32-6	Titanium	3130		R E	P
7440-32-6	Zirconium	33.1		R	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D0

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-17

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-17

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7020			P
7440-36-0	Antimony	5.8	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	3.0		J	F
7440-39-3	Barium	71.7		N	P
7440-41-7	Beryllium	0.83		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	6440			P
7440-47-3	Chromium	9.3		J *	P
7440-48-4	Cobalt	7.1		N	P
7440-50-8	Copper	10.2		J	P
7439-89-6	Iron	17300		J *	P
7439-92-1	Lead	4.7		J *	F
7439-95-4	Magnesium	4440			P
7439-96-5	Manganese	280			P
7439-97-6	Mercury	0.34		J ~~N~~*	CV
7440-02-0	Nickel	8.5		N	P
7440-09-7	Potassium	1270		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~W~~ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	167	B		P
7440-28-0	Thallium	0.93	~~U~~	~~W~~ ~~N~~	F
7440-62-2	Vanadium	35.8		J *	P
7440-66-6	Zinc	36.7		J	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D4

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-17

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-17

Level (low/med): LOW Date Received: 10/19/91

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1180		R ~~E~~	P
7440-32-6	Zirconium	11.4		R	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D4

FORM I - IN

036

7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-18

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-18

Level (low/med): LOW Date Received: 10/19/91

% Solids: 88.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7900			P
7440-36-0	Antimony	6.3	~~U~~	~~R N~~	P
7440-38-2	Arsenic	3.7		J	F
7440-39-3	Barium	98.9		N	P
7440-41-7	Beryllium	0.91		N	P
7440-43-9	Cadmium	0.34	U	N	P
7440-70-2	Calcium	8900			P
7440-47-3	Chromium	11.3		J*	P
7440-48-4	Cobalt	8.5		N	P
7440-50-8	Copper	10.5		J	P
7439-89-6	Iron	19700		J*	P
7439-92-1	Lead	4.3		J*	F
7439-95-4	Magnesium	5110			P
7439-96-5	Manganese	361			P
7439-97-6	Mercury	0.11	U	N*	CV
7440-02-0	Nickel	10.4		N	P
7440-09-7	Potassium	1530		J*	P
7882-49-2	Selenium	1.4	~~U~~	~~W N~~	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	183	B		P
7440-28-0	Thallium	1.0	~~U~~	~~W N~~	F
7440-62-2	Vanadium	38.3		J*	P
7440-66-6	Zinc	43.0		J	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D5

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-18

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-18

Level (low/med): LOW Date Received: 10/19/91

% Solids: 88.3

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

TRW 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.6	U		P
7440-32-6	Titanium	1270		R ~~E~~	P
7440-32-6	Zirconium	11.3	~~U~~	R	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D5

038

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7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-19

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-19

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6130			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	2.3		J	F
7440-39-3	Barium	80.7		N	P
7440-41-7	Beryllium	0.82		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	5640			P
7440-47-3	Chromium	6.7		J *	P
7440-48-4	Cobalt	9.7		N	P
7440-50-8	Copper	11.6		J	P
7439-89-6	Iron	21000		J *	P
7439-92-1	Lead	2.7		J *	F
7439-95-4	Magnesium	4020			P
7439-96-5	Manganese	413			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	8.2		N	P
7440-09-7	Potassium	1430		J *	P
7882-49-2	Selenium	1.2	~~U~~	UJ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	210	B		P
7440-28-0	Thallium	0.92	~~U~~	UJ ~~N~~	F
7440-62-2	Vanadium	41.4		J *	P
7440-66-6	Zinc	41.3		J	P

JW 2-10-92

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D6

FORM I - IN

039

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-19

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-19

Level (low/med): LOW Date Received: 10/19/91

% Solids: 97.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1270		R ~~E~~	P
7440-32-6	Zirconium	13.3		R	P

Color Before: GRAY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D6

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-20

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-20

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9570			P
7440-36-0	Antimony	5.6	~~U~~	~~N~~	P
7440-38-2	Arsenic	5.6		J	F
7440-39-3	Barium	86.7		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	13600			P
7440-47-3	Chromium	15.1		J*	P
7440-48-4	Cobalt	9.0		N	P
7440-50-8	Copper	13.3		J	P
7439-89-6	Iron	20300		J*	P
7439-92-1	Lead	7.1		J*	F
7439-95-4	Magnesium	5690			P
7439-96-5	Manganese	420			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	12.4		N	P
7440-09-7	Potassium	1760		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	331	B		P
7440-28-0	Thallium	0.91	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	36.8		J*	P
7440-66-6	Zinc	45.5		J	P

3-10-92

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D7

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041 7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-20

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-20

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

TXD 7-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	973		R E	P
7440-32-6	Zirconium	10.5		R	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D7

042

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-21

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-21

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	11.0		J	F
7440-39-3	Barium	137		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	14100			P
7440-47-3	Chromium	19.8		J*	P
7440-48-4	Cobalt	12.0		N	P
7440-50-8	Copper	22.1		J	P
7439-89-6	Iron	24300		J*	P
7439-92-1	Lead	14.7		J*	F
7439-95-4	Magnesium	7380			P
7439-96-5	Manganese	502			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	19.4		~~J~~ ~~N~~	P
7440-09-7	Potassium	2450		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	850		J	P
7440-28-0	Thallium	0.91	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	40.2		J*	P
7440-66-6	Zinc	61.4		J	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014D8

043

FORM I - IN

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U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-21

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-21

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

TKD 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1020		R ~~E~~	P
7440-32-6	Zirconium	12.8		R	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D8

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-22

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-22

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15700			P
7440-36-0	Antimony	5.6	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	11.2		J	F
7440-39-3	Barium	198		N	P
7440-41-7	Beryllium	1.4		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	17000			P
7440-47-3	Chromium	23.1		J *	P
7440-48-4	Cobalt	12.4		N	P
7440-50-8	Copper	22.6		J	P
7439-89-6	Iron	26900		J *	P
7439-92-1	Lead	19.1		J *	F
7439-95-4	Magnesium	8850			P
7439-96-5	Manganese	519			P
7439-97-6	Mercury	0.10	~~U~~	N*	CV
7440-02-0	Nickel	21.8		J ~~N~~	P
7440-09-7	Potassium	2900		J *	P
7882-49-2	Selenium	1.2	~~U~~	UJ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	473	B		P
7440-28-0	Thallium	0.91	~~U~~	UJ ~~N~~	F
7440-62-2	Vanadium	45.4		J *	P
7440-66-6	Zinc	69.0		J	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D9

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-22

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-22

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.3

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

TXW 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1210		~~E~~ R	P
7440-32-6	Zirconium	13.4		R	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014D9

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-23

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-23

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15100			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	6.0		J	F
7440-39-3	Barium	153		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	13800			P
7440-47-3	Chromium	20.1		J*	P
7440-48-4	Cobalt	11.2		N	P
7440-50-8	Copper	17.1		J	P
7439-89-6	Iron	26300		J*	P
7439-92-1	Lead	8.2		J*	F
7439-95-4	Magnesium	6670			P
7439-96-5	Manganese	444			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	17.8		~~J N~~	P
7440-09-7	Potassium	2280		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	629		J	P
7440-28-0	Thallium	0.91	~~U~~	~~UJ N~~	F
7440-62-2	Vanadium	49.7		J*	P
7440-66-6	Zinc	57.1		J	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014F0

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-23

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-23

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.0

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1330		R ~~E~~	P
7440-32-6	Zirconium	21.7		R	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014F0

FORM I - IN

047

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-24

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-24

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17600			P
7440-36-0	Antimony	5.7	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	11.4		J	F
7440-39-3	Barium	170		N	P
7440-41-7	Beryllium	1.5		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	16400			P
7440-47-3	Chromium	23.8		J ~~*~~	P
7440-48-4	Cobalt	12.8		N	P
7440-50-8	Copper	23.5		J	P
7439-89-6	Iron	27000		J ~~*~~	P
7439-92-1	Lead	14.8		J ~~*~~	F
7439-95-4	Magnesium	8460			P
7439-96-5	Manganese	528			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	20.4		J ~~N~~	P
7440-09-7	Potassium	2950		J ~~*~~	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	331	B		P
7440-28-0	Thallium	0.91	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	45.8		J ~~*~~	P
7440-66-6	Zinc	68.2		J	P

Fed 2/10-92

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B014F1

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-24

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-24

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1200		R E	P
7440-32-6	Zirconium	13.9		R	P

Color Before: WHITE Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B014F1

FORM I - IN

049 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-25

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-25

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9950			P
7440-36-0	Antimony	5.6	~~U~~	~~R N~~	P
7440-38-2	Arsenic	3.3		J	F
7440-39-3	Barium	193		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	11700			P
7440-47-3	Chromium	12.4		J*	P
7440-48-4	Cobalt	9.0		N	P
7440-50-8	Copper	13.6		J	P
7439-89-6	Iron	20800		J*	P
7439-92-1	Lead	5.2		J*	F
7439-95-4	Magnesium	5160			P
7439-96-5	Manganese	356			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	10.7		N	P
7440-09-7	Potassium	1840		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	511		J	P
7440-28-0	Thallium	0.91	~~U~~	~~UJ N~~	F
7440-62-2	Vanadium	39.1		J*	P
7440-66-6	Zinc	45.6		J	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B01494

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-25

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-25

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1120		R E	P
7440-32-6	Zirconium	13.3		R	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B01494

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-26

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-26

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	5.7	~~U~~	~~P~~ ~~N~~	P
7440-38-2	Arsenic	5.1		J	F
7440-39-3	Barium	70.7		N	P
7440-41-7	Beryllium	1.3		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	11600			P
7440-47-3	Chromium	14.5		J *	P
7440-48-4	Cobalt	11.0		N	P
7440-50-8	Copper	17.8		J	P
7439-89-6	Iron	26700		J *	P
7439-92-1	Lead	5.8		J *	F
7439-95-4	Magnesium	7300			P
7439-96-5	Manganese	382			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	12.7		N	P
7440-09-7	Potassium	2010		J *	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.0		N	P
7440-23-5	Sodium	796		J	P
7440-28-0	Thallium	0.91	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	57.8		J *	P
7440-66-6	Zinc	52.4		J	P

TRW 2-10-92

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B01495

FORM I - IN

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-26

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-26

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1600		~~E~~	P
7440-32-6	Zirconium	21.7			P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01495

FORM I - IN

053 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-27

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-27

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9350			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	4.6		J	F
7440-39-3	Barium	95.0		N	P
7440-41-7	Beryllium	1.1		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	4000			P
7440-47-3	Chromium	10.2		J*	P
7440-48-4	Cobalt	10.6		N	P
7440-50-8	Copper	11.4		J	P
7439-89-6	Iron	24100		J*	P
7439-92-1	Lead	7.9		J*	F
7439-95-4	Magnesium	4200			P
7439-96-5	Manganese	350			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	11.3		N	P
7440-09-7	Potassium	1760		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	217	B		P
7440-28-0	Thallium	0.91	~~U~~	~~UJ N~~	F
7440-62-2	Vanadium	54.2		J*	P
7440-66-6	Zinc	45.1		J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01496

FORM I - IN

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-27

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-27

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.1

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

TLW 2/10/92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1620		R E	P
7440-32-6	Zirconium	22.6		R	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01496

FORM I - IN

055

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-28

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-28

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23000			P
7440-36-0	Antimony	5.8	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	6.7		J	F
7440-39-3	Barium	294		N	P
7440-41-7	Beryllium	2.1		N	P
7440-43-9	Cadmium	0.31	U	N	P
7440-70-2	Calcium	10600			P
7440-47-3	Chromium	22.7		J *	P
7440-48-4	Cobalt	16.8		N	P
7440-50-8	Copper	22.6		J	P
7439-89-6	Iron	37000		J *	P
7439-92-1	Lead	9.7		J *	F
7439-95-4	Magnesium	8920			P
7439-96-5	Manganese	814			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	17.0		J ~~N~~	P
7440-09-7	Potassium	3630		J *	P
7882-49-2	Selenium	1.3	~~U~~	~~UJ~~ ~~N~~	F
7440-22-4	Silver	1.1		N	P
7440-23-5	Sodium	976		J	P
7440-28-0	Thallium	0.94	~~U~~	~~UJ~~ ~~N~~	F
7440-62-2	Vanadium	66.7		J *	P
7440-66-6	Zinc	79.9		J	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01497

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056 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-28

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-28

Level (low/med): LOW Date Received: 10/19/91

% Solids: 95.9

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.5	U		P
7440-32-6	Titanium	1640		R ~~B~~	P
7440-32-6	Zirconium	30.0		R	P

TKW 3-10-92

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01497

057

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-29

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-29

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600			P
7440-36-0	Antimony	5.6	~~U~~	~~R~~ ~~N~~	P
7440-38-2	Arsenic	4.2		J	F
7440-39-3	Barium	120		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	10800			P
7440-47-3	Chromium	13.1		J *	P
7440-48-4	Cobalt	8.8		N	P
7440-50-8	Copper	16.2		J	P
7439-89-6	Iron	19800		J *	P
7439-92-1	Lead	6.3		J *	F
7439-95-4	Magnesium	5660			P
7439-96-5	Manganese	403			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	11.2		N	P
7440-09-7	Potassium	1920		J *	P
7882-49-2	Selenium	1.2	U	N	F
7440-22-4	Silver	1.0	~~U~~	UJ ~~N~~	P
7440-23-5	Sodium	477	B		P
7440-28-0	Thallium	0.91	~~U~~	UJ ~~N~~	F
7440-62-2	Vanadium	35.1		J *	P
7440-66-6	Zinc	47.6		~~N~~ ~~*~~	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

B01498

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U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-29

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-29

Level (low/med): LOW Date Received: 10/19/91

% Solids: 99.4

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

TKW 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1040		R ~~E~~	P
7440-32-6	Zirconium	10.5		R	P

Color Before: GRAY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01498

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7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-30

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-30

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

JKO 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10100			P
7440-36-0	Antimony	5.7	~~U~~	~~R N~~	P
7440-38-2	Arsenic	6.5		~~J~~ J	F
7440-39-3	Barium	98.6		N	P
7440-41-7	Beryllium	1.0		N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	25400			P
7440-47-3	Chromium	10.3		J*	P
7440-48-4	Cobalt	9.7		N	P
7440-50-8	Copper	15.4		J	P
7439-89-6	Iron	21400		J*	P
7439-92-1	Lead	7.2		J*	F
7439-95-4	Magnesium	5600			P
7439-96-5	Manganese	326			P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	10.3		N	P
7440-09-7	Potassium	1100		J*	P
7882-49-2	Selenium	1.2	~~U~~	~~UJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	293	B		P
7440-28-0	Thallium	0.91	~~U~~	~~UJ N~~	F
7440-62-2	Vanadium	50.1		J*	P
7440-66-6	Zinc	45.2		J	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

B01499

FORM I - IN

C60 7/88

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-30

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-30

Level (low/med): LOW Date Received: 10/19/91

% Solids: 98.8

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

TKD 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1540		R ~~E~~	P
7440-32-6	Zirconium	12.7		R	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:
B01499

FORM I - IN

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-31

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-31

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18.1	B		P
7440-36-0	Antimony	5.6	~~U~~	~~R N~~	P
7440-38-2	Arsenic	0.60	~~U~~	WJ	F
7440-39-3	Barium	4.1	U	N	P
7440-41-7	Beryllium	0.20	U	N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	107	U		P
7440-47-3	Chromium	0.70	U	*	P
7440-48-4	Cobalt	1.6	U	N	P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	8.7	~~B~~	~~J *~~	P
7439-92-1	Lead	0.30	~~U~~	~~WJ *~~	F
7439-95-4	Magnesium	249	U		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	3.2	U	N	P
7440-09-7	Potassium	130	U	*	P
7882-49-2	Selenium	1.2	~~U~~	~~WJ N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	98.7	U		P
7440-28-0	Thallium	0.90	~~U~~	~~WJ N~~	F
7440-62-2	Vanadium	2.0	U	*	P
7440-66-6	Zinc	5.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

B014H7

FORM I - IN

062 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-31

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-31

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

TAD 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1.5		R ~~E~~	P
7440-32-6	Zirconium	10.0	~~U~~	R	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

B014H7

FORM I - IN

063

7/88

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-32

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-32

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

TSW 2-10-92

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10.7	B		P
7440-36-0	Antimony	5.6	~~U~~	R ~~N~~	P
7440-38-2	Arsenic	0.60	U		F
7440-39-3	Barium	4.1	U	N	P
7440-41-7	Beryllium	0.20	U	N	P
7440-43-9	Cadmium	0.30	U	N	P
7440-70-2	Calcium	107	U		P
7440-47-3	Chromium	0.70	U	*	P
7440-48-4	Cobalt	1.6	U	N	P
7440-50-8	Copper	1.8	U		P
7439-89-6	Iron	6.9	U	*	P
7439-92-1	Lead	0.55		J ~~*~~	F
7439-95-4	Magnesium	249	U		P
7439-96-5	Manganese	0.60	U		P
7439-97-6	Mercury	0.10	U	N*	CV
7440-02-0	Nickel	3.2	U	N	P
7440-09-7	Potassium	130	U	*	P
7882-49-2	Selenium	1.2	~~U~~	W ~~N~~	F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	98.7	U		P
7440-28-0	Thallium	0.90	~~U~~	W ~~N~~	F
7440-62-2	Vanadium	2.0	U	*	P
7440-66-6	Zinc	5.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

B014H8

FORM I - IN

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2646-32

Lab Name: S_CUBED Contract: 32359-04

Lab Code: S3 Case No.: SITEW SAS No.: SDG No.: 2646

Matrix (soil/water): SOIL Lab Sample ID: 2646-32

Level (low/med): LOW Date Received: 10/19/91

% Solids: 100.0

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

CAS No.	Analyte	Concentration	C	Q	M
7439-98-7	Molybdenu	1.4	U		P
7440-32-6	Titanium	1.3		R E	P
7440-32-6	Zirconium	10.0	U	R	P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:
B014H8

FORM I - IN

all soil

OSM RCRA DATA ASSESSMENT

DATE 2/7/92 mlb. SAMPLES/MATRIX B014B3 B014B4 B014B5 B014B6 B014B9 B014C0 B014C1 B014C2 B014C3 B014C4 B014C5 B014C6 B014C7 B014C8 B014C9 B014D0 B014D4 B014D5 B014D6 B014D B014D8 B014D9 B014F0 B014F1 B01494 B01495 B01496 B0149 B01498 B01499 B014A7 B014A

REVIEWED BY Mark A. Beck

LABORATORY Maxwell-S-Cubed

CASE # Site Wide Soil

SDG # 2646

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	Silica by 370.1 Ammonia by 350.3	alkalinity by 310.1	Anions by 300.0
1. Holding Times		X	X	M
2. Matrix Spikes		O	O	O
3. Duplicates		O	O	O
4. Blanks		O	O	O
5. Calibrations/LCS		O	O	O
6. Other		O	O	O
7.				
8.				
9.				
10.				

O = data had no problems
X = minor problems, data may be qualified
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: The data are acceptable with the attached qualifiers.

NOTES: The correspondence between the lab sample ID and WHC sample numbers can be found in the enclosed "Sample Summary"

o Refer to the corresponding attachments for explanation of any problems.

RCRA QC

Name Mark A. Beck Date 2/7/92 MAB

QC Check: Holding Times

COMMENTS: Holding times were met for silica (by the 28 days allowed by SW-846), fluoride, chloride and sulfate. Holding time requirements were missed by ammonia, alkalinity, nitrite, nitrate and orthophosphate. Nitrite is the most severely affected by loss of holding time requirements.

ACTION: Qualify all ammonia, alkalinity, nitrite nitrate and phosphate (ortho-phosphate) results as estimated. (UJ or J)

sample #	constituent	value/qual
all	ammonia	J or UJ
all except B01417 B01418	alkalinity	J
		UJ
all except B01499	nitrite NO_2^-	UJ
		J

sample #	constituent	value/qual
all except B01417 B01418	nitrate NO_3^-	J
		UJ
all	o-phosphate (HPO_4^{-2}) → result given as PO_4^{-3}	UJ or J

___ of ___

RCRA QC

Name Mark A. Beck Date 2/7/92 MAB

QC Check: Matrix Spikes

COMMENTS: Matrix Spikes were run for silica, ammonia, alkalinity and all anions, ~~all~~ Both spike for each analysis type met acceptance criteria

ACTION: none - none needed.

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

RCRA QC

Name Mark A. Beck Date 2/7/92 MAB.

QC Check: Duplicates

COMMENTS: Appropriate number of duplicates were run for silica, ammonia, alkalinity and all anions. All analyses had ~~dif~~ duplicates with acceptable RPD's.

ACTION: none-none needed.

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

RCRA QC

Name Mark G. Beck Date 2/7/92 MGB.

QC Check: Blanks

COMMENTS: appropriate blanks were run for silica ammonia, alkalinity, and all anions. all blanks for all analyses were free of contamination.

ACTION: none - none needed

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

RCRA QC

Name Mark A. Beck Date 2/7/92 MAB.

QC Check: Calibrations/LCS

COMMENTS: Set-up calibrations were done appropriately for all analyses. All LCS, ICV and CCV % recoveries were within control limits for all analyses, and all analytes.

ACTION: none - none needed

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

RCRA QC

Name Mark A. Peck Date 2/7/92 MAP

QC Check: Other

COMMENTS: This SDG (Sample Data Group) is larger than the 20 samples usually taken as an SDG maximum size. 2 (two) sets of duplicates LCS, PBS, spikes were performed, as is appropriate in this situation.

ACTION: none - the lab performed all QC samples appropriately. No action needed.

sample #	constituent	value/qual	sample #	constituent	value/qual

___ of ___

SILICA ANALYSIS

LAB: S-CUBED
CLIENT: WHC
CASE: SITE WIDE SOIL
LOT: 2646
FILE: SI1019
DISK: SI1023
METHOD: 370.1
RESULTS: UNIT AS MG/KG

DATA REVIEWER: CCN 11/25/91
PROJECT REVIEWER:
CHARGE NO: 32359-04
DATE RECEIVED: 10/19/91
DATE PREP: 11/11/91
DATE ANALYZED: 11/11/91
MATRIX: SOIL

LAB ID	CONCENTRATION
2646 -1	5.52
2646 -2	12.7
2646 -3	19.1
2646 -4	6.14
2646 -5	12.1
2646 -6	15.1
2646 -7	14.2
2646 -8	8.97
2646 -9	10.9
2646 -10	9.62
2646 -11	22.1
2646 -12	16.8
2646 -13	11.1
2646 -14	16.0
2646 -15	6.76
2646 -16	9.73
2646 -17	20.7
2646 -18	9.34
2646 -19	8.22
2646 -20	<5
2646 -21	8.37
2646 -22	8.00
2646 -23	10.9
2646 -24	22.1
2646 -25	6.59
2646 -26	10.4
2646 -27	9.74
2646 -28	19.8
2646 -29	13.2
2646 -30	11.4
** 2646 -31	< 5
** 2646 -32	< 5

COMMENTS:

** Extra lab blank is calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.045 L (Leaching Volume)}}{\text{0.009 kg (Sample Weight)}}$$

MLB 2/7/92

001

AMMONIA ANALYSIS

LABORATORY:	S-CUBED	DATA REVIEWER:	UN 11/20/91
CLIENT:	WHC	PROJECT REVIEWER:	
CASE:	SITE WIDE SOIL	CHARGE #:	32359-04
LOT #:	2646	DATE RECEIVED:	10/19/91
FILE#:	NH31019	DATE PREP:	11/15/91
DISK:	NH31024	DATE ANALYZED:	11/15/91
METHOD NO.	350.3	MATRIX:	SOIL

RESULTS: UNIT AS MG/KG DRY WEIGHT

LAB ID	CONCENTRATION
2646 -1	5.58 J
2646 -1R	6.74
2646 -1S	17.8
2646 -2	0.89
2646 -2R	0.82
2646 -2S	13.5 J
2646 -3	< 0.15 UJ
2646 -4	< 0.15
2646 -5	< 0.15
2646 -6	< 0.15
2646 -7	< 0.15
2646 -8	< 0.15 UJ
2646 -9	0.59 J
2646 -10	< 0.15 UJ
2646 -11	< 0.15
2646 -12	< 0.16
2646 -13	< 0.15
2646 -14	< 0.15
2646 -15	< 0.15 UJ
2646 -16	0.92 J
2646 -17	< 0.16 UJ
2646 -18	< 0.17
2646 -19	< 0.15
2646 -20	< 0.15
2646 -21	< 0.15 UJ
2646 -22	1.65 J
2646 -23	< 0.15 UJ
2646 -24	< 0.15 UJ
2646 -25	6.54 J
2646 -26	6.43
2646 -27	1.03
2646 -28	0.85
2646 -29	0.69
2646 -30	0.95 J
** 2646 -31	< 0.15 UJ
** 2646 -32	< 0.15 UJ

COMMENTS:

** 009

** Extra lab blank is calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.05 L (Leaching Volume)}}{\text{0.01 kg (Sample Weight)}}$$

2/7/92
mab

ALKALINITY ANALYSIS

LAB:	S-CUBED	DATA REVIEWER:	aN 11/12/91
CLIENT:	WHC	PROJECT REVIEWER:	
CASE:	SITE WIDE SOIL	CHARGE #:	32359-04
LOT #:	2646	DATE RECIEVED:	10/19/91
FILE #:	ALK1019	DATE PREP:	10/28/91
DISK #:	ALK1016	DATE ANALYZED:	10/29/91
METHOD NO.:	EPA 310.1	MATRIX:	SOIL

RESULTS: RESULTS AS DRY WEIGHT - MG/KG

LAB ID	CONCENTRATION
2646 - 1	1180 J
2646 - 2	299
2646 - 3	1320
2646 - 4	219
2646 - 5	303
2646 - 6	179
2646 - 7	240
2646 - 8	229
2646 - 9	507
2646 - 10	347
2646 - 11	500
2646 - 12	662
2646 - 13	448
2646 - 14	660
2646 - 15	219
2646 - 16	905
2646 - 17	225
2646 - 18	1540
2646 - 19	171
2646 - 20	2790
2646 - 21	4600
2646 - 22	5320
2646 - 23	4010
2646 - 24	5920
2646 - 25	299
2646 - 26	1240
2646 - 27	5350
2646 - 28	3540
2646 - 29	2080
2646 - 30	7650 J
2646 - 31	< 5 **
2646 - 32	< 5 **

COMMENTS:

** Extra lab blanks are calculated from:

$$\frac{\text{Method Detection Limit (mg/L) X 0.025 L (Leaching Volume)}}{\text{0.005 kg (Sample Weight)}}$$

2/7/92 mab

ANIONS ANALYSIS

LABORATORY:	S-CUBED	DATA REVIEWER:	WN 11/12/91
CLIENT:	WHC	PROJECT REVIEWER:	
CASE:	SITE WIPE SOIL	CHARGE #:	32359-04
LOT #:	2646	DATE RECEIVED:	10/19/91
FILE#:	ANI1019	DATE PREP:	10/28-31/91
DISK:	ANI1110	DATE ANALYZED:	10/28-31/91
METHOD NO.	300.0	MATRIX:	SOIL

RESULTS: UNIT AS MG/KG DRY WEIGHT

LAB ID	F	CL	NO2	NO3	PO4	SO4
2646 -1	0.63	2.76	< 0.2 UJ	1.05	< 0.5 UJ	1.44
2646 -2	0.76	2.84	< 0.2	2.82	< 0.5 UJ	1.18
2646 -3	0.79	3.05	< 0.2	3.08	0.88 J	3.36
2646 -4	1.30	365	< 0.2	18.0	< 0.5 UJ	91.1
2646 -5	0.24	87.6	< 0.2	5.60	< 0.5	55.0
2646 -6	0.68	3.77	< 0.2	1.23	< 0.5	4.82
2646 -7	0.63	11.6	< 0.2	1.90	< 0.5 UJ	15.0
2646 -8	0.59	10.3	< 0.2	1.46	1.48 J	13.7
2646 -9	0.57	6.97	< 0.2	1.95	< 0.5 UJ	9.92
2646 -10	0.68	5.97	< 0.2	1.45	< 0.5	9.10
2646 -11	0.58	9.78	< 0.2	2.76	< 0.5	11.1
2646 -12	1.07	8.18	< 0.2	1.15	< 0.5	19.4
2646 -13	0.85	2.62	< 0.2	5.83	< 0.5	1.26
2646 -14	0.73	2.67	< 0.2	3.20	< 0.5	4.02
2646 -15	0.41	3.97	< 0.2	1.37	< 0.5	4.77
2646 -16	0.59	74.2	< 0.2	1.20	< 0.5	59.4
2646 -17	0.51	63.2	< 0.2	5.00	< 0.5	75.1
2646 -18	0.95	170	< 0.2	14.9	< 0.6	160
2646 -19	0.62	2.93	< 0.2	0.58	< 0.5	2.59
2646 -20	1.72	450	< 0.2	474	< 0.5	43.2
2646 -21	4.86	1480	< 0.2	440	< 0.5	108
2646 -22	4.81	170	< 0.2	906	< 0.5	97.7
2646 -23	2.85	555	< 0.2	778	< 0.5 UJ	84.8
2646 -24	3.29	5.60	< 0.2	29.2	1.60 J	21.0
2646 -25	0.69	30.7	< 0.2	2.29	< 0.5 UJ	28.5
2646 -26	1.76	19.1	< 0.2	3.15	2.37 J	22.9
2646 -27	0.83	11.2	< 0.2	50.1	1.49	5.40
2646 -28	1.37	39.8	< 0.2	68.9	0.85	340
2646 -29	0.91	5.79	< 0.2 UJ	1.30	0.83 UJ mrb.	10.6
2646 -30	2.94	3.00	0.27 J	14.1	< 0.5	12.5
** 2646 -31	< 0.1	< 0.1	< 0.2 UJ	< 0.5	< 0.5	< 0.5
** 2646 -32	< 0.1	< 0.1	< 0.2 UJ	< 0.5	< 0.5	< 0.5

COMMENTS:

** Extra lab blank is calculated from:

Method Detection Limit (mg/L) X 0.045 L (Leaching Volume)

0.009 kg (Sample Weight) ** 022

2/7/92
mrb.