

# START

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3306-SCU-063 122

## SDG Memo/Sample Summary

Client Name: WESTINGHOUSE HANFORD CO. Date: 10 Oct 1992  
 Project Name: SITE WIDE IV Update No.:  
 SDG No.: 3306 Work Order No.: 32359-42  
 Project Manager: J. DEWALD  
 Mail Date:

Client Samp No.	S-Cubed Samp No.	Date Rcvd	Date Samp	Matrix	ANIONS	FURN7000	HG7000	ICP6010	NO2/NO3	S	TALK	TC	TOC
BO&JC3	3306-01	9-11-1992	9-10-1992	SOIL	X	X	X	X	X	X	X	X	X
BO&JC3MS	3306-01MS	9-11-1992	9-10-1992	SOIL	X	X	X	X	X	X	X	X	X
BO&JC3REP	3306-01REP	9-11-1992	9-10-1992	SOIL	X	X	X	X	X	X	X	X	X

(X) = Non-Billable Sample





## NARRATIVE

October 14, 1992

**Narrative Project:** Site Wide IV  
**Reference No.:** 32359-42  
**Client:** WHC  
**SDG No.:** 3306

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### METALS

The samples were analyzed according to EPA Methods 6010 and the 7000 series for the TCL metals and Mo. No dilutions were required.

The quality control results were generally acceptable. Several MS recoveries and duplicate RPDs are outside windows due to matrix. All other QC results are acceptable. Soil LCS results are within advisory ranges.

### ANIONS

The samples were analyzed according to EPA Method 300.0 for anions. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### NO<sub>2</sub>/NO<sub>3</sub>

The samples were analyzed according to EPA Method 353.3 for NO<sub>2</sub>/NO<sub>3</sub>. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### SULFIDE

The samples were analyzed according to EPA Method 9030 for sulfide. The samples were analyzed according to EPA Method 9030 for sulfide. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.



## *NARRATIVE*

### **TOTAL ALKALINITY**

The samples were analyzed according to EPA Method 310.1 for total alkalinity. Due to high concentration, 1 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **TOTAL CARBON**

The samples were analyzed according to EPA Method 9060 by combustion and then IR analysis. Prior to analysis, a sample aliquot was ground to a fine powder texture. The sample then went through the combustion and IR analysis process. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **TOTAL ORGANIC CARBON**

The samples were analyzed according to EPA Method 9060 by combustion and then IR analysis. Prior to analysis, a sample aliquot was measured and phosphoric acid was added to the soil. The mixture was placed in an oven at 70 C for one hour, then removed, cooled, and ground to a fine powder texture. The sample then went through the combustion and IR analysis process. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

A handwritten signature in black ink, appearing to read 'John DeWald', is written over a horizontal line.

John DeWald  
Project Manager

enclosures

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"Next Day Delivery" "Signature Security" 9/10/92

Contractor Westinghouse Hanford Co.	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W472-C-0622 #14
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PART I - TO BE COMPLETED BY ORIGINATOR

Department Env. Restor. Eng.	Section Env. Remedial Actions	Unit —
The following items are to be shipped from <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Routing <i>Emery</i> <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Shipped to S-Cubed 3398 Carmel Mt. Rd. San Diego, CA 92121-1028		Off-site Custodian John Dewald
		Full Title —

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1  19 lbs	Poly ice chest (CRM#32) containing a glass sample container of soil packed in blue ice and vermiculite.  Sample # B06VC3	

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 # 252156761 T

RECEIVED  
SEP 10 1992

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

RM Clearance for Public Release <i>[Signature]</i>	RM Survey No 910688	Date 9-10-92
Location of Property (Area & Bldg.) #679-48-95 Yakima Barricade Bargehole	Contact J.G. Lucas	Phone 376-2789
Date Ready for Shipment 9-10-92 610.3-613.2 #1 interval	Cost Code to be Charged PK1BB 81220	Approximate Date This Property will be Returned N/A
Originated By J.G. Lucas	Date 9-10-92	Authorized By <i>[Signature]</i> Date 9-10-92
Signature and Name of Property Control	Custodian Date <i>[Signature]</i>	Property Management Approval <i>[Signature]</i> Date 9-10-92

PART II - TO BE COMPLETED BY SHIPPER

Signature of Recipient <i>[Signature]</i>	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 9-10-92 1324				

DISTRIBUTION

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

Check  Cash

FCCOD

Bill to Shipper  Bill to Consignee  Third Party Billing

**EMERY**  
**WORLDWIDE**



SERVICES

Same Day (Extra Charges)  
 AM  
 Second Day  
 Saturday Delivery

Express   
Standard Plus   
Preferred   
Standard

Business Documents   
Customs Clearance   
Delivery

Shipper's Account Number  
**E 850281585**

Date: 09-10-92  
Origin: PEC  
Destination: 252156761 T

From: WESTINGHOUSE SHIPPING DEPT (509) 376-6665  
U.S. DEPARTMENT OF ENERGY C/O  
WESTINGHOUSE HANFORD

To: JOHN DEWALD  
S-CUBED  
3398 CARMEL MT. RD.

BLDG 1163  
2395 STEVENS DRIVE

SAN DIEGO CA

RICHLAND WA  
Canada

Hold for Pick Up   
Canada

Customer's Reference Numbers  
W01220 PK1BB W92-0-0622#14 99352

Consignee's Account Number  
E 92121-1095

Description	Pcs	L	W	H	Total Pieces	Total Weight (LBS)
1 ICE CHEST RM#32 Soil SAMPLES # 806JC3	1	16	16	16	1	19

FOR INFORMATION OR RATES  
CALL 1-800 44 EMERY  
1-800-443-6391

Remarks  
OVERNIGHT DELIVERY  
SIGNATURE SECURITY SERVICE  
Shipper's Signature: *[Signature]*

Zip Ship   
Mark if Emery Packaging is used  
Urgent Letter  9X12  
Urgent Pack  12X15

252156761 T  
*[Handwritten: 3/30/92]*  
*[Handwritten: 9/10/92]*

**SAN-A**  
Terms and Conditions on back

Third Party Account Number: E  
International Customs Value  
International Insurance  
Total Transportation Charges  
Other Charges/Advance at Origin: \$

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U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3306-01

Lab Name: S\_CUBED Contract: 32359-42

Lab Code: S3 Case No.: SWIV SAS No.: SDG No.: 3306

Matrix (soil/water): SOIL Lab Sample ID: 3306-01

Level (low/med): LOW Date Received: 09/11/92

% Solids: 74.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23700		*	P
7440-36-0	Antimony	12.9	U	N	P
7440-38-2	Arsenic	1.8	B	N	F
7440-39-3	Barium	125			P
7440-41-7	Beryllium	0.81	B		P
7440-43-9	Cadmium	0.81	U		P
7440-70-2	Calcium	18200			P
7440-47-3	Chromium	17.5		*	P
7440-48-4	Cobalt	27.7			P
7440-50-8	Copper	26.1			P
7439-89-6	Iron	32800			P
7439-92-1	Lead	8.7			F
7439-95-4	Magnesium	8090			P
7439-96-5	Manganese	970			P
7439-97-6	Mercury	0.13	U		CV
7440-02-0	Nickel	18.5			P
7440-09-7	Potassium	4410			P
7782-49-2	Selenium	0.81	U		F
7440-22-4	Silver	4.0		N	P
7440-23-5	Sodium	209	B		P
7439-98-7	Molybdenum	2.7	U	N	P
7440-62-2	Vanadium	47.6		*	P
7440-66-6	Zinc	87.1			P
7440-28-0	Thallium	0.81	U	N	F

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

B06JC3

## ANIONS ANALYSIS

PAGE 1 OF 1

LABORATORY: S-CUBED  
 CLIENT: WHC  
 PROJECT: SITE WIDE IV  
 LOT #: 3306  
 FILE #: ANI3306S  
 DISK #: ANI0928  
 METHOD NO.: 300.0  
 UNIT: MG/KG

DATA REVIEWER: *W 10/7*  
 PROJECT REVIEWER:  
 CHARGE #: 32359-42  
 DATE SAMPLED: 09-10-92  
 DATE RECEIVED: 09-11-92  
 PREP DATE: 10-02-92  
 DATE ANALYZED: 10-02-92  
 SAMPLE TYPE: SOIL

LAB ID	F	CL	NO2	BR	NO3	PO4	SO4
3306-01	1.04	2.42	<0.3	13.8	2.92	<0.7	89.6

All GC requirement were acceptable. 10 gm of soil was leached into 50 mL DI H<sub>2</sub>O prior to analysis







MAXWELL  
S-CUBED

ANALYTE:	TC	CALIBRATION			QC SUMMARY			
METHOD REF.:	9060	STD 2000ppm	1993	M S	CONC	OBSERVED	%REC.	ACCEPT.
DATE:	9/24/92	STD 400ppm	399.9	L C S	2000	1979	99	80-120
ANALYST:	MM	STD 10ppm	9.99					80-120
MATRIX:	Soil	CAL BLANK	.097					

TOC CONC.=(TOC READING/2000)\*(0.08mg/0.00001kg)\*DIL.FACTOR  
FINAL CONC.=TOC CONC./1-(%MOIST.\*0.01)

SAMPLE ID. (S3)	TC READING	DIL. FACTOR	TOC CONC. (mg/kg)	%MOIS	FINAL CONC (mg/kg)	CLIENT SAMP.ID
EBS0924	0.245	1	0.24	0	0.00	
LCSS0924	1979	1	1979	0	1980	
3306-01	570.3	1	2281.2	25.56	3060	BO6JC3
3306-01REP	534.8	1	2139.2	25.56	2870	BO6JC3

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**MAXWELL  
S-CUBED**

<b>ANALYTE:</b>	<b>TOC</b>	<b>CALIBRATION</b>		<b>QC SUMMARY</b>				
<b>METHOD REF.:</b>	<b>9060</b>	<b>STD 2000ppm</b>	<b>1993</b>	<b>CONC</b>	<b>OBSERVED</b>	<b>%REC.</b>	<b>ACCEPT.</b>	
<b>DATE:</b>	<b>9/24/92</b>	<b>STD 400ppm</b>	<b>399.9</b>	<b>M S</b>			<b>80-120</b>	
<b>ANALYST:</b>	<b>MM</b>	<b>STD 10ppm</b>	<b>9.99</b>	<b>L C S</b>	<b>2000</b>	<b>1979</b>	<b>99</b>	<b>80-120</b>
<b>MATRIX:</b>	<b>Soil</b>	<b>CAL BLANK</b>	<b>0.097</b>					

TOC CONC. = (TOC READING/2000)\*(0.08mg/0.00001kg)\*DIL.FACTOR  
 FINAL CONC. = TOC CONC./1-(%MOIST.\*0.01)

<b>SAMPLE ID.</b> <b>(S3)</b>	<b>TOC READING</b>	<b>DIL. FACTOR</b>	<b>TOC CONC.</b> <b>(mg/kg)</b>	<b>%MOIS</b>	<b>FINAL CONC</b> <b>(mg/kg)</b>	<b>CLIENT</b> <b>SAMP.ID</b>
EBS0924	0.245	1	0.245	0	0	
LCSS0924	1979	1	1979	0	1980	
3306-01	149.7	1	598.8	25.56	800	BO6JC3
3306-01REP	147.6	1	590.4	25.56	790	BO6JC3

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