

Lockheed Environmental Systems & Technologies Co.
 Lockheed Analytical Services
 975 Kelly Johnson Drive Las Vegas, Nevada 89119-3705
 Telephone 702-361-0220 800-582-7605 Facsimile 702-361-8146

LOCKHEED MARTIN

December 28, 1995

Ms. Joan Kessner
 Bechtel Hanford, Inc.
 P.O. Box 969
 1022 Lee Boulevard
 Richland, WA 99352

RE:	Log-in No.:	L5984
	Quotation No.:	Q400000-B
	SAF:	B96-045
	Document File No.:	1207596A
	BHI Document File No.:	301
	SDG No.:	LK5984



The attached data report contains the analytical results of samples that were submitted to Lockheed Analytical Services on 7 December 1995.

The temperature of the cooler upon receipt was 2°C. Sample containers received agree with the chain-of-custody documentation. Sample containers were received intact. Samples were received in time to meet the analytical holding time requirements.

The case narratives included in the following attachments provide a detailed description of all events that occurred during sample preparation, analysis, and data review specific to the samples and analytical methods requested.

A list of data qualifiers, chain-of-custody forms, sample receiving checklist, and log-in report are also enclosed representing the samples received within this group.

If you have any questions concerning the analysis or the data please call Kathleen Hall at (509) 375-4741.



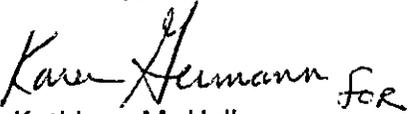
Lockheed Analytical Services

Log-in No.: L5984
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Document File No.: 1207596A
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Release of this data report has been authorized by the Laboratory Director or the Director's designee as evidenced by the following signature.

" I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manger or a designee, as verified by the following signature."

Sincerely,


Kathleen M. Hall
Client Services Representative

cc: Client Services
Document Control

0004

CASE NARRATIVE INORGANIC METALS ANALYSES

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- Three soil samples were received in good condition on December 7, 1995 and logged in as L5984.
- The samples were prepared as LAS Batch 1207BH and analyzed for selected analytes as requested on the chain of custody. Sample BOGYZ7 (L5984-4) was used for matrix spike and duplicate, post-digestion spike and serial dilution. All data flags due to the performance of the above-mentioned QC are associated with every sample digested with this batch.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The level of analytes in the method blanks were less than the reporting detection limits.

Internal Quality Control

All internal quality control were within acceptance limits.

Hongsheng LI

12/27/95

Prepared By

Date

0005

**CASE NARRATIVE
INORGANIC TCLP METALS ANALYSES**

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- Three TCLP samples were received in good condition on December 7, 1995 and logged in as L5984.
- The samples were prepared as LAS Batch 1207BHE and analyzed for selected analytes as requested on the chain of custody. Sample BOGYZ7 (L5984-7) was used for matrix spike and duplicate, post-digestion spike and serial dilution. All data flags due to the performance of the above-mentioned QC are associated with every sample digested with this batch.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The level of analytes in the method blanks were less than the reporting detection limits.

Internal Quality Control

All internal quality control were within acceptance limits.

Sample Results

- The regular ICP-MS spiking levels were used in place of the TCLP spiking levels.

Hongsheng LI

12/27/95

Prepared By

Date

0006

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (1n01)
 Dec 12 1995, 11:39 am

Revision

Login Number: L5984
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L5984-1 temp 2; SAF# B96-045 Location: 156TEMP-1 Soil 4 S SCREENING	BOGYZ7	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
L5984-2 temp 2; SAF# B96-045 Location: 156TEMP-1 Soil 4 S SCREENING	BOGYZ8	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
L5984-3 temp 2; SAF# B96-045 Location: 156TEMP-1 Soil 4 S SCREENING	BOGYZ9	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
L5984-4 temp 2; SAF# B96-045 Location: 156-016 Soil 4 S 200.8 ICP-MS METALS Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	BOGYZ7	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
		Hold:02-JAN-96		
		Hold:19-DEC-95		
L5984-5 temp 2; SAF# B96-045 Location: 156-016 Soil 4 S 200.8 ICP-MS METALS Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	BOGYZ8	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
		Hold:02-JAN-96		
		Hold:19-DEC-95		
L5984-6 temp 2; SAF# B96-045 Location: 156-016 Soil 4 S 200.8 ICP-MS METALS Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	BOGYZ9	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
		Hold:02-JAN-96		
		Hold:19-DEC-95		
* L5984-7 temp 2; SAF# B96-045, TCLP=M Location: 156TEMP-1 Soil 4 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 200.8 ICP-MS METALS TCLP Extr 13 S 7470 MERCURY.	BOGYZ7	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:19-DEC-95		
		Hold:02-JUN-96		
		Hold:02-JAN-96		

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Dec 12 1995, 11:39 am

Login Number: L5984
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L5984-8 *temp 2; SAF# B96-045, TCLP=M Location: 156TEMP-1 Soil 4 S 1311 TCLP REG. EXTR. Hold:19-DEC-95 TCLP Extr 13 S 200.8 ICP-MS METALS Hold:02-JUN-96 TCLP Extr 13 S 7470 MERCURY Hold:02-JAN-96	BOGYZ8	05-DEC-95	07-DEC-95	22-DEC-95
L5984-9 *temp 2; SAF# B96-045, TCLP=M Location: 153 Soil 4 S 1311 TCLP REG. EXTR. Hold:19-DEC-95 TCLP Extr 13 S 200.8 ICP-MS METALS Hold:02-JUN-96 TCLP Extr 13 S 7470 MERCURY Hold:02-JAN-96	BOGYZ9	05-DEC-95	07-DEC-95	22-DEC-95
L5984-10 SAF# B96-045 Location: Water 1 S EDD - DISK DEL. Water 1 S INORG TYPE 2 RPT	REPORT TYPE	07-DEC-95	07-DEC-95	22-DEC-95

* CHANGED 6010 ICP METALS & 7000 FURNACE METALS
 TO 200.8 ICP-MS METALS
 Per K. HALL

Signature: R. Callison

Date: 12-12-95

0010

1207596

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Dec 07 1995, 03:37 pm

Login Number: L5984
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L5984-1 temp 2; SAF# B96-045 Location: 157 Soil 4 S SCREENING	BOGYZ7	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
L5984-2 temp 2; SAF# B96-045 Location: 157 Soil 4 S SCREENING	BOGYZ8	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
L5984-3 temp 2; SAF# B96-045 Location: 157 Soil 4 S SCREENING	BOGYZ9	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
L5984-4 temp 2; SAF# B96-045 Location: 157 Soil 4 S 200.8 ICP-MS METALS Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	BOGYZ7	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
		Hold:02-JAN-96		
		Hold:19-DEC-95		
L5984-5 temp 2; SAF# B96-045 Location: 157 Soil 4 S 200.8 ICP-MS METALS Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	BOGYZ8	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
		Hold:02-JAN-96		
		Hold:19-DEC-95		
L5984-6 temp 2; SAF# B96-045 Location: 157 Soil 4 S 200.8 ICP-MS METALS Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	BOGYZ9	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:02-JUN-96		
		Hold:02-JAN-96		
		Hold:19-DEC-95		
L5984-7 temp 2; SAF# B96-045, TCLP=M Location: 157 Soil 4 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 6010 ICP METALS TCLP Extr 13 S 7000 FURNACE METALS TCLP Extr 13 S 7470 MERCURY	BOGYZ7	05-DEC-95	07-DEC-95	22-DEC-95
		Hold:19-DEC-95		
		Hold:02-JUN-96		
		Hold:02-JUN-96		
		Hold:02-JAN-96		

0011

12075961

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Dec 07 1995, 03:37 pm

Login Number: L5984
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L5984-8 temp 2; SAF# B96-045, TCLP=M Location: 157	BOGYZ8	05-DEC-95	07-DEC-95	22-DEC-95
Soil 4 S 1311	TCLP REG. EXTR.	Hold:19-DEC-95		
TCLP Extr 13 S 6010	ICP METALS	Hold:02-JUN-96		
TCLP Extr 13 S 7000	FURNACE METALS	Hold:02-JUN-96		
TCLP Extr 13 S 7470	MERCURY	Hold:02-JAN-96		
L5984-9 temp 2; SAF# B96-045, TCLP=M Location: 157	BOGYZ9	05-DEC-95	07-DEC-95	22-DEC-95
Soil 4 S 1311	TCLP REG. EXTR.	Hold:19-DEC-95		
TCLP Extr 13 S 6010	ICP METALS	Hold:02-JUN-96		
TCLP Extr 13 S 7000	FURNACE METALS	Hold:02-JUN-96		
TCLP Extr 13 S 7470	MERCURY	Hold:02-JAN-96		
L5984-10 SAF# B96-045 Location:	REPORT TYPE	07-DEC-95	07-DEC-95	22-DEC-95
Water 1 S	EDD - DISK DEL.			
Water 1 S	INORG TYPE 2 RPT			

Signature: *[Handwritten Signature]*
 Date: 12-7-95

0012

[Handwritten] 12.7.95

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

LS984

Data Turnaround

Priority
 Normal

Collector Jon Fancher	Company Contact Todd Harrington	Telephone 509-372-9584
Project Designation 116-C-1	Sampling Location 116-C-1	SAF No. B96-045
Ice Chest No. GWS-013	Field Logbook No. EL-1261	Method of Shipment Air
Shipped To Lockheed	Offsite Property No. N/A	Bill of Lading/Air Bill No. N/A

Possible Sample Hazards/Remarks	Preservation	Cwd	Cwd	Cwd
	Type of Container	P	P	P
	No. of Container(s)	1	1	1
Special Handling and/or Storage	Volume	125ml	125ml	125ml

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled			
B0G427	Soil	12/5/95	0830	x	x	x
B0G428	Soil	12/5/95	0845	x	x	x
B0G429	Soil	12/5/95	0900	x	x	x

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix*
Relinquished By	Date/Time	Received By	Date/Time	1=ICP Metals - TAL, Mercury			S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
J.D. Fancher	12/5/95 1534	Ell	12-5-95	2=TCLP METALS			
Relinquished By	Date/Time	Received By	Date/Time	3=Activity Scan			
Relinquished By	Date/Time	Received By	Date/Time	NOTE: Only TCLP container is full, others contain 50ml			

LABORATORY SECTION	Received By	Title	Date/Time
	L. M. [Signature]	Sample Custodian	12-7-95 / 0945
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

12075994A
 013

GAMMA-RAY ENERGY ANALYSIS SCREENING REPORT

Radiometric Laboratory
 Environmental Analytical Laboratory
 IT Hanford Co.

Customer ID Number: BOGJG1 *Subsample to give BOGYZ9*
 EAL ID Number: EAL01267

Isotope Activity, pCi/g on 31 Oct, 1995

Be7	<	2.3e+01	
K40	<	9.6e+01	
Co57	<	2.2e+01	
Co60		1.3e+02 +/-	6.9e+00
RuRh106	<	2.7e+01	
Sb125	<	7.9e+00	
I129	<	1.5e+04	
Cs134	<	3.3e+00	
Cs137		9.8e+02 +/-	4.9e+01
Ce144	<	2.1e+01	
Eu152		2.4e+03 +/-	1.2e+02
Eu154		2.8e+02 +/-	1.7e+01
Eu155	<	1.4e+01	
Th32dau	<	9.9e+00	
U235	<	2.1e+01	
U238	<	7.7e+03	
U238dau		1.4e+01 +/-	4.6e+00
Np237	<	5.7e+00	
Pu239	<	3.9e+04	
Pu240	<	5.3e+05	
Am241	<	1.5e+01	

Definitions:

All errors reported at 2 standard deviations

For soils and natural samples, the following applies:

The analysis of U238 is based on the activity of Pa234m

The analysis of Np237 is based on the activity of Pa233

U238dau is the activity of Pb214 and Bi214, short lived daughter products
 products of U238. Equilibrium between parent and daughter products probably
 does not exist in disturbed materials.

Th32dau is the activity of Ac228, Pb212, and Tl208, short lived daughter products
 products of Th232. Equilibrium between parent and daughter products may
 not exist in disturbed materials.

Other samples, not containing natural materials, may have inapplicable results
 for the Th, U, transuranics and daughter products. The results must then be
 balanced against the gross alpha analysis.

N/R means no result or analysis not requested.

V. J. ...
 Radiological analyst Date 10-31-95

Albert I. Davis
 Albert I. Davis Date 11-1-95
 Radiological Manager

0014

12C 7596A

GAMMA-RAY ENERGY ANALYSIS SCREENING REPORT

Radiometric Laboratory
Environmental Analytical Laboratory
IT Hanford Co.

Customer ID Number: B0GJG0
EAL ID Number: EAL01266

Subsampled to give B0GJ Z8

Isotope Activity, pCi/g on 31 Oct, 1995

Be7	<	5.0e+02	
K40	<	5.5e+02	
Co57	<	2.9e+02	
Co60		8.7e+02 +/-	7.1e+01
RuRh106	<	5.1e+02	
Sb125	<	1.7e+02	
I129	<	2.1e+04	
Cs134	<	6.4e+01	
Cs137		2.0e+04 +/-	1.0e+03
Ce144	<	2.8e+02	
Eu152		3.8e+03 +/-	3.7e+02
Eu154		5.6e+02 +/-	1.6e+02
Eu155	<	1.7e+02	
Th32dau	<	1.9e+02	
U235	<	2.9e+02	
U238	<	2.4e+04	
U238dau		9.3e+01 +/-	5.4e+01
Np237	<	9.9e+01	
Pu239	<	5.2e+05	
Pu240	<	7.1e+06	
Am241	<	2.1e+02	

Definitions:

All errors reported at 2 standard deviations

For soils and natural samples, the following applies:

The analysis of U238 is based on the activity of Pa234m

The analysis of Np237 is based on the activity of Pa233

U238dau is the activity of Pb214 and Bi214, short lived daughter products products of U238. Equilibrium between parent and daughter products probably does not exist in disturbed materials.

Th32dau is the activity of Ac228, Pb212, and Tl208, short lived daughter products products of Th232. Equilibrium between parent and daughter products may not exist in disturbed materials.

Other samples, not containing natural materials, may have inapplicable results for the Th, U, transuranics and daughter products. The results must then be balanced against the gross alpha analysis.

N/R means no result or analysis not requested.

J. P. Lapierre
Radiological analyst
Date 10-31-95

Albert I. Davis
Radiological Manager
Date 11-1-95

0015

1207596A

GAMMA-RAY ENERGY ANALYSIS SCREENING REPORT

Radiometric Laboratory
 Environmental Analytical Laboratory
 IT Hanford Co.

Customer ID Number: BOGJF9 *Subsample to give BOGYZ7*
 EAL ID Number: EAL01265

Isotope	Activity, pCi/g on 31 Oct, 1995
Be7	< 4.2e+02
K40	< 4.3e+02
Co57	< 2.5e+02
Co60	1.3e+03 +/- 8.1e+01
RuRh106	< 4.1e+02
Sb125	< 1.4e+02
I129	< 2.9e+04
Cs134	< 5.2e+01
Cs137	2.0e+04 +/- 1.0e+03
Ce144	< 2.4e+02
Eu152	4.0e+03 +/- 3.2e+02
Eu154	7.9e+02 +/- 1.1e+02
Eu155	< 1.5e+02
Ra226	< 0.0e+00
Th32dau	< 1.6e+02
U235	< 2.5e+02
U238	< 1.2e+04
U238dau	2.0e+02 +/- 5.4e+01
Np237	< 8.6e+01
Pu239	< 4.3e+05
Pu240	< 7.3e+06
Am241	3.2e+02 +/- 1.2e+02

Definitions:

All errors reported at 2 standard deviations

For soils and natural samples, the following applies:
 The analysis of U238 is based on the activity of Pa234m

The analysis of Np237 is based on the activity of Pa233

U238dau is the activity of Pb214 and Bi214, short lived daughter products
 products of U238. Equilibrium between parent and daughter products probably
 does not exist in disturbed materials.

Th32dau is the activity of Ac228, Pb212, and Tl208, short lived daughter products
 products of Th232. Equilibrium between parent and daughter products may
 not exist in disturbed materials.

Other samples, not containing natural materials, may have inapplicable results
 for the Th, U, transuranics and daughter products. The results must then be
 balanced against the gross alpha analysis.

NR means no result or analysis not requested.

Post-it® Fax Note	7671	Date	2-5	# of pages	3
To	<i>J. Davis</i>	From	<i>J. Davis</i>		
Co./Dept.		Co.			
Phone #		Phone #	3-3915		
Fax #	6-8851	Fax #	3-6640		

J. Davis *g.d.* *10-31-95*
 Radiological analyst Date

Albert I. Davis *11-1-95*
 Albert I. Davis Date
 Radiological Manager

0016

1207596

POTENTIAL HAZARDS

HEALTH HAZARDS

Radiation presents minimal risk to lives of persons during transportation accidents.

Low-level radioactive material; very little radiation hazard to people. Some radioactive materials cannot be detected by commonly available instruments.

Packages do not have RADIOACTIVE I, II, or III labels. Some may have EMPTY

FIRE OR EXPLOSION

Radioactivity does not change flammability or other properties of the materials.

Some of these materials may burn, but none of them ignites readily.

EMERGENCY ACTION

Priority response actions may be performed before taking radiation measurements.

Priorities are life saving, control of fire and other hazards, and first aid.

Keep unnecessary people away; isolate hazard area and deny entry.

Notify Radiation Authority of accident conditions.

Uninjured persons or equipment with suspected contamination should be detained or isolated; delay cleanup until instructions are received from Radiation Authority.

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

CALL Emergency Response Telephone Number on Shipping Paper first. If

Shipping Paper not available or no answer, CALL CHEMTREC AT 1-800-424-9300.

FIRE

Do not move damaged containers; move undamaged containers out of fire zone.

Small Fires: Dry Chemical, CO₂, water spray or regular foam.

Large Fires: Water spray, fog (flooding amounts).

SPILL OR LEAK

Do not touch damaged packages or spilled material.

Small Liquid Spills: Take up with sand, earth or other noncombustible absorbent material.

Cover powder spill with plastic sheet or tarp to minimize spreading.

FIRST AID

Use first aid treatment according to the nature of the injury.

If persons have contacted released material, use standard hazmat procedures for care of contaminated persons, for transport of the injured, and for notifications to authorities.

RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL

LOCKHEED MARTIN



Sample Login Login Review Checklist

Lot Number L5984

The login review should be conducted by that person logging in the samples as well as a peer. Please use this checklist to ensure that such reviews occur in a uniform basis. Please sign and date below to verify that a login review has occurred. This checklist should be affixed to each login package prior to distribution.

For effective login review, at a minimum, five reports from the login process are required. These are the COC (or equivalent), the login COC report, the sample summary report, the sample receiving checklist, and the login quotation. Before beginning review, ensure that these five components are available. Jobs with single component samples, the sample summary report may be omitted.

SAMPLE SUMMARY REPORT

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>Comment</u>
1. Are all sample ID's correct?	<u>X</u>	—	—	_____
2. Are all samples present?	<u>X</u>	—	—	_____
3. Are all matrices indicated correctly?	<u>X</u>	—	—	_____
4. Are all analyses on the COC logged in for the appropriate samples?	<u>X</u>	—	—	_____
5. Are all analyses logged in for the correct container?	<u>X</u>	—	—	_____
6. Are samples logged in according to LAS batching procedures?	<u>X</u>	—	—	_____

LOGIN CHAIN OF CUSTODY

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>Comment</u>
1. Are the collect, receive, and due dates correct for every sample?	<u>X</u>	—	—	_____
2. Have all appropriate comments been indicated in the comment section?	—	—	<u>X</u>	_____

SAMPLE RECEIVING CHECKLIST

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>Comment</u>
1. Are all discrepancies between the COC and the login noted (if applicable)?	—	—	<u>X</u>	_____

[Signature]
primary review signature

12-7-95
date

[Signature]
secondary review signature

12-07-95
date

0018

1207596A

SAMPLE CHECK-IN LIST

Date/Time Received: 12-02-95/9:45

SDG#: ML

Work Order Number: ML

SAF #: 096-045

Shipping Container ID: GWS-013 Chain of Custody # ML

- 1. Custody Seals on shipping container intact? Yes No
- 2. Custody Seals dated and signed? Yes No
- 3. Sample temperature 22
- 4. Vermiculite/packing materials is Wet Dry
- 5. Each sample is in a plastic bag? Yes No
- 6. Sample holding times exceeded? Yes No

7. Samples have:
_____ tape _____ hazard labels
 custody seals appropriate sample labels

8. Samples are:
 in good condition _____ leaking
_____ broken _____ have air bubbles

9. Is the information on the COC and Sample bottles in agreement?
Yes No

Notes: _____

Sample Custodian/Laboratory: Miller Date: 12-7-95

Telephoned To: Kathleen Hall On 12-7-95 By Anthony Miller

**Lockheed Analytical Services
Sample Receiving Checklist**

Client Name: Bechtel - W. Ford

Job No. LS984

Cooler ID:

COOLER CONDITION UPON RECEIPT

Temperature of cooler upon receipt: 2°C

temperature of temp. blank upon receipt:

	Yes	No	* Comments/Discrepancies
custody seals intact	X		
chain of custody present	X		
blue ice (or equiv.) present/frozen	X		
rad survey completed	X		

SAMPLE CONDITION UPON RECEIPT

	Yes	No	* Comments/Discrepancies
all bottles labeled	X		
samples intact	X		
proper container used for sample type	X		
sample volume sufficient for analysis	X		
proper pres. indicated on the COC	X		
VOA's contain headspace			NA
are samples bi-phasic (if so, indicate sample ID'S):			NA

MISCELLANEOUS ITEMS

	Yes	No	* Comments/Discrepancies
samples with short holding times		X	
samples to subcontract		X	

ADDITIONAL COMMENTS/DISCREPANCIES

Completed by / date: [Signature] 12-7-95

Sent to the client (date/initials):

** Client's signature upon receipt:

Notes: * = contact the appropriate CSR of any discrepancies immediately upon receipt

** = please review this information and return via facsimile to the appropriate CSR (702) 361-8146

1207546
020

Lockheed Analytical Laboratory
 SAMPLE SUMMARY REPORT (su02)
 Bechtel Hanford, Inc. * Richland, WA

Client Sample Number	LAL Sample Number	SDG Number	Matrix	Method
BOGYZ7 -	L5984-1		Soil	SCREENING -
	L5984-4		Soil	200.8 ICP-MS META
	L5984-4		Soil	7471 MERCURY -
	L5984-4		Soil	PERCENT SOLIDS -
	L5984-7		Soil	1311 TCLP REG. EX
	L5984-7		TCLP Extr	6010 ICP METALS -
	L5984-7		TCLP Extr	7000 FURNACE META
BOGYZ8 -	L5984-2		Soil	SCREENING -
	L5984-5		Soil	200.8 ICP-MS META
	L5984-5		Soil	7471 MERCURY -
	L5984-5		Soil	PERCENT SOLIDS -
	L5984-8		Soil	1311 TCLP REG. EX
	L5984-8		TCLP Extr	6010 ICP METALS -
	L5984-8		TCLP Extr	7000 FURNACE META
BOGYZ9 -	L5984-3		Soil	SCREENING -
	L5984-6		Soil	200.8 ICP-MS META
	L5984-6		Soil	7471 MERCURY
	L5984-6		Soil	PERCENT SOLIDS -
	L5984-9		Soil	1311 TCLP REG. EX
	L5984-9		TCLP Extr	6010 ICP METALS -
	L5984-9		TCLP Extr	7000 FURNACE META
REPORT TYPE -	L5984-10		Water	EDD - DISK DEL. -
	L5984-10		Water	INORG TYPE 2 RPT

0021

12075904

1
INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOGYZ7

Lab Name: L.A.S. _____ Contract: BECHTEL _____
 Lab Code: LOCK _____ Case No.: 1207BH SAS No.: _____ SDG No.: L6984S
 Matrix (soil/water): SOIL _____ Lab Sample ID: L5984-4 _____
 Level (low/med): LOW _____ Date Received: 12/07/95
 % Solids: _____ 95.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8800	-		P
7440-36-0	Antimony	0.56	B	N	P
7440-38-2	Arsenic	17.1	B	*	P
7440-39-3	Barium	95.3	B		P
7440-41-7	Beryllium	0.24	B		P
7440-43-9	Cadmium	5.9	B		P
7440-70-2	Calcium	5800	B		P
7440-47-3	Chromium	681		*	P
7440-48-4	Cobalt	29.1	B		P
7440-50-8	Copper	131		N	P
7439-89-6	Iron	103000		*	P
7439-92-1	Lead	182		*	P
7439-95-4	Magnesium	7090	B	*	P
7439-96-5	Manganese	796			P
7439-97-6	Mercury	22.6		*	AV
7440-02-0	Nickel	76.1	B	N*	P
7440-09-7	Potassium	862	B		P
7782-49-2	Selenium	2.2	B	N*	P
7440-22-4	Silver	0.28	B		P
7440-23-5	Sodium	864	B		P
7440-28-0	Thallium	0.83	B		P
7440-62-2	Vanadium	30.9	B		P
7440-66-6	Zinc	984			P

Color Before: BROWN _____ Clarity Before: _____ Texture: MEDIUM
 Color After: YELLOW _____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

0023

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOGYZ8

Lab Name: L.A.S. _____ Contract: BECHTEL _____

Lab Code: LOCK__ Case No.: 1207BH SAS No.: _____ SDG No.: L6984S

Matrix (soil/water): SOIL_ Lab Sample ID: L5984-5__

Level (low/med): LOW__ Date Received: 12/07/95

% Solids: __92.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5520	-		P
7440-36-0	Antimony	1.2	B	N	P
7440-38-2	Arsenic	16.1	B	*	P
7440-39-3	Barium	80.2	B		P
7440-41-7	Beryllium	0.16	B		P
7440-43-9	Cadmium	8.1	B		P
7440-70-2	Calcium	12800	-		P
7440-47-3	Chromium	2190	-	*	P
7440-48-4	Cobalt	63.9	B		P
7440-50-8	Copper	373	-	N	P
7439-89-6	Iron	210000	-	*	P
7439-92-1	Lead	337	-	*	P
7439-95-4	Magnesium	2960	B	*	P
7439-96-5	Manganese	1230	-		P
7439-97-6	Mercury	72.1	-	*	AV
7440-02-0	Nickel	76.4	B	N*	P
7440-09-7	Potassium	433	B		P
7782-49-2	Selenium	0.42	B	N*	P
7440-22-4	Silver	0.35	B		P
7440-23-5	Sodium	318	B		P
7440-28-0	Thallium	0.84	B		P
7440-62-2	Vanadium	10.8	B		P
7440-66-6	Zinc	1150	-		P

Color Before: BROWN__ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW__ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

0024

CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT ID NO.

BOGYZ9

Lab Name: L.A.S. _____ Contract: BECHTEL _____

Lab Code: LOCK _____ Case No.: 1207BH SAS No.: _____ SDG No.: L6984S

Matrix (soil/water): SOIL _____ Lab Sample ID: L5984-6 _____

Level (low/med): LOW _____ Date Received: 12/07/95

% Solids: _____ 96.1

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6070	-		P
7440-36-0	Antimony		U	N	P
7440-38-2	Arsenic	3.3	B	*	P
7440-39-3	Barium	72.5	B		P
7440-41-7	Beryllium	0.23	B		P
7440-43-9	Cadmium	1.8	B		P
7440-70-2	Calcium	4210	B		P
7440-47-3	Chromium	107		*	P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	27.0		N	P
7439-89-6	Iron	23200		*	P
7439-92-1	Lead	37.0		*	P
7439-95-4	Magnesium	5610	B	*	P
7439-96-5	Manganese	284			P
7439-97-6	Mercury	9.3		*	AV
7440-02-0	Nickel	13.8	B	N*	P
7440-09-7	Potassium	588	B		P
7782-49-2	Selenium	1.4	B	N*	P
7440-22-4	Silver	0.06	B		P
7440-23-5	Sodium	409	B		P
7440-28-0	Thallium	0.30	B		P
7440-62-2	Vanadium	45.4	B		P
7440-66-6	Zinc	224			P

Color Before: BROWN _____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW _____ Clarity After: _____ Artifacts: _____

Comments:

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0025

