

Date: 19 June 2001
 To: Bechtel Hanford Inc. (technical representative)
 From: TechLaw, Inc.
 Project: JA Jones Verification Sampling - Soil
 Subject: Inorganics - Data Package No. H1334-LLI (SDG No. H1334)

RECEIVED
 NOV 15 2001

INTRODUCTION

EDMC

This memo presents the results of data validation on Data Package No. H1334-LLI prepared by Lionville Laboratory Inc. (LLI). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analysis
B11RN9	4/19/01	Soil	C	See note 1
B11RP0	4/19/01	Soil	C	See note 1
B11RP1	4/19/01	Soil	C	See note 1
B11RP2	4/19/01	Soil	C	See note 1
B11RP3	4/19/01	Soil	C	See note 1
B11RP4	4/19/01	Soil	C	See note 1
B11RP5	4/19/01	Soil	C	See note 1
B11RP6	4/19/01	Soil	C	See note 1
B11RP7	4/19/01	Soil	C	See note 1
B11RP8	4/19/01	Soil	C	See note 1
B11RP9	4/20/01	Soil	C	See note 1
B11RR0	4/20/01	Soil	C	See note 1
B11RR1	4/20/01	Soil	C	See note 1
B11RR2	4/20/01	Soil	C	See note 1

1 - ICP metals by 6010A

Data validation was conducted in accordance with the Bechtel Hanford Incorporated (BHI) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL September 2000). Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Qualified Data Summary and Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation

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DATA QUALITY PARAMETERS

- **Holding Times**

Analytical holding times for metals are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be analyzed within 6 months for ICP metals.

All holding times were acceptable.

- **Preparation (Method) Blanks**

Preparation Blanks

At least one preparation blank, consisting of deionized distilled water processed through each sample preparation and analysis procedure, must be prepared and analyzed with every sample delivery group. In the case of positive blank results, samples with digestate concentrations less than five times the preparation blank value have had their associated values qualified as non-detected and flagged "U". Samples with concentrations of greater than five times the highest blank concentration do not require qualification.

In the case of negative blank results, if the absolute value exceeds the contract required detection limit (CRDL), all nondetects are rejected and flagged "UR" and all detects that are less than ten times the absolute value of the associated preparation blank result are qualified as estimates and flagged "J". If the absolute value of the negative preparation blank is greater than the instrument detection limit (IDL) and less than or equal to the CRDL, all nondetects are qualified as estimates and flagged "UJ" and all detects less than ten times the absolute value of the blank are qualified as estimates and flagged "J". If the sample results are greater than ten times the absolute value of the preparation blank, no qualification is necessary.

All preparation blank results were acceptable.

Field Blank

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike

Matrix spike (MS) analyses are used to assess the analytical accuracy of the reported data and the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike recoveries must fall within the range of 70% to 130%. Samples with a spike recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a spike recovery of 30% to 69% and a sample result less than the IDL are qualified "UJ". Samples with a spike recovery of greater than 130% or less than 70% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a spike recovery greater than 130% and a sample result less than the IDL, no qualification is required.

All matrix spike recovery results were acceptable.

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than 30%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All laboratory duplicate results were acceptable.

Field Duplicate

Two sets of field duplicate samples were submitted for analysis (B11RN9/B11RPO and B11RP4/B11RP5). The duplicate sample results were compared using the validation guidelines for determining the RPD between a sample and its duplicate. All field duplicate results were acceptable.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the 100 Area Remedial Action Sampling and Analysis Plan TDLs to ensure that laboratory

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detection levels meet the required criteria. All reported detection limits met the analyte specific TDL.

- **Completeness**

Data package No. H1334-LVI (SDG No. H1334) was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

BHI, MRB-SBB-A23665, *Validation Statement of Work*, Bechtel Hanford Incorporated, September 5, 1997.

DOE/RL-96-22, Rev. 2, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, September 2000.

Appendix 1

Glossary of Data Reporting Qualifiers

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Qualifiers which may be applied by data validators in compliance with BHI validation SOW are as follows:

- U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.
- BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.
- UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.
- NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).
- N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

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Appendix 2

Summary of Data Qualification

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DATA QUALIFICATION SUMMARY

SDG: H1334	REVIEWER: TLI	DATE: 6/19/01	PAGE <u>1</u> OF <u>1</u>
COMMENTS: No qualifiers assigned			

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Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

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Project: BECHTEL-HANFORD																			
Laboratory: LU																			
Case	SDG: H1334																		
Sample Number	B11RN9		B11RP0		B11RP1		B11RP2		B11RP3		B11RP4		B11RP5		B11RP6		B11RP7		
Remarks	Duplicate																		
Sample Date	4/19/01		4/19/01		4/19/01		4/19/01		4/19/01		4/19/01		4/19/01		4/19/01		4/19/01		
Inorganics	TDL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Barium		74.50		74.3		71.7		74.5		80.8		66.4		68.8		87.0		75.2	
Cadmium		0.44	U	0.43	U	0.43	U	0.47	U	0.45	U	0.47		0.44	u	0.44	U	0.44	U
Chromium	0.5	9.8		8.8		9.0		9.2		10.0		8.8		8.8		26.1		9.1	
Lead	2	9.8		7.0		8.4		7.5		17.1		6.4		4.9		76.7		8.8	

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Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

Project: BECHTEL-HANFORD																						
Laboratory: LLI																						
Case		SDG: H1334																				
Sample Number		B11RP8			B11RP9			B11RR0			B11RR1			B11RR2								
Remarks		Duplicate																				
Sample Date		5/24/01			5/24/01			5/24/01			5/24/01			5/24/01								
Inorganic Analysis	CRDL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q			
Barium		63.9		70.1		72.6		70.2		101												
Cadmium		0.42	U	0.43	U	0.44	U	0.43	U	0.50												
Chromium	0.5	7.9		8.4		10.3		8.0		18.0												
Lead	2	5.6		8.2		8.0		9.8		14.4												

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Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 05/16/01

CLIENT: TNUHANFORD B01-074 M1334
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0104L617

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B11RN9	Barium, Total	74.5	MG/KG	0.35	1.0
		Cadmium, Total	0.44	u MG/KG	0.44	1.0
		Chromium, Total	9.8	MG/KG	0.40	1.0
		Lead, Total	9.8	MG/KG	3.2	1.0
-002	B11RP0	Barium, Total	74.3	MG/KG	0.34	1.0
		Cadmium, Total	0.43	u MG/KG	0.43	1.0
		Chromium, Total	8.8	MG/KG	0.39	1.0
		Lead, Total	7.0	MG/KG	3.2	1.0
-003	B11RP1	Barium, Total	71.7	MG/KG	0.34	1.0
		Cadmium, Total	0.43	u MG/KG	0.43	1.0
		Chromium, Total	9.0	MG/KG	0.39	1.0
		Lead, Total	8.4	MG/KG	3.1	1.0
-004	B11RP2	Barium, Total	74.5	MG/KG	0.35	1.0
		Cadmium, Total	0.47	MG/KG	0.45	1.0
		Chromium, Total	9.2	MG/KG	0.40	1.0
		Lead, Total	7.5	MG/KG	3.2	1.0
-005	B11RP3	Barium, Total	80.6	MG/KG	0.36	1.0
		Cadmium, Total	0.45	u MG/KG	0.45	1.0
		Chromium, Total	10.0	MG/KG	0.41	1.0
		Lead, Total	17.1	MG/KG	3.3	1.0
-006	B11RP4	Barium, Total	66.4	MG/KG	0.34	1.0
		Cadmium, Total	0.47	MG/KG	0.43	1.0
		Chromium, Total	8.6	MG/KG	0.39	1.0
		Lead, Total	6.4	MG/KG	3.1	1.0
-007	B11RP5	Barium, Total	68.6	MG/KG	0.35	1.0
		Cadmium, Total	0.44	u MG/KG	0.44	1.0
		Chromium, Total	8.8	MG/KG	0.40	1.0
		Lead, Total	4.9	MG/KG	3.2	1.0
-008	B11RP6	Barium, Total	87.0	MG/KG	0.34	1.0
		Cadmium, Total	0.44	u MG/KG	0.44	1.0
		Chromium, Total	26.1	MG/KG	0.39	1.0
		Lead, Total	76.7	MG/KG	3.2	1.0

JR
 5/19/01

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 05/16/01

CLIENT: TRUMANFORD B01-074 H1334
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0104L617

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-009	B11RP7	Barium, Total	75.2	MG/KG	0.35	1.0
		Cadmium, Total	0.44	u MG/KG	0.44	1.0
		Chromium, Total	9.1	MG/KG	0.40	1.0
		Lead, Total	8.8	MG/KG	3.2	1.0
-010	B11RP8	Barium, Total	63.9	MG/KG	0.33	1.0
		Cadmium, Total	0.42	u MG/KG	0.42	1.0
		Chromium, Total	7.9	MG/KG	0.38	1.0
		Lead, Total	5.6	MG/KG	3.0	1.0
-011	B11RP9	Barium, Total	70.1	MG/KG	0.34	1.0
		Cadmium, Total	0.43	u MG/KG	0.43	1.0
		Chromium, Total	8.4	MG/KG	0.39	1.0
		Lead, Total	8.2	MG/KG	3.1	1.0
-012	B11RR0	Barium, Total	72.6	MG/KG	0.34	1.0
		Cadmium, Total	0.44	u MG/KG	0.44	1.0
		Chromium, Total	10.3	MG/KG	0.40	1.0
		Lead, Total	8.0	MG/KG	3.2	1.0
-013	B11RR1	Barium, Total	70.2	MG/KG	0.34	1.0
		Cadmium, Total	0.43	u MG/KG	0.43	1.0
		Chromium, Total	8.0	MG/KG	0.39	1.0
		Lead, Total	9.6	MG/KG	3.1	1.0
-014	B11RR2	Barium, Total	101	MG/KG	0.34	1.0
		Cadmium, Total	0.50	MG/KG	0.43	1.0
		Chromium, Total	16.0	MG/KG	0.39	1.0
		Lead, Total	14.4	MG/KG	3.1	1.0

JR
 6/19/01

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Analytical Report

Client: TNU-HANFORD B01-074
LVL#: 0104L617
SDG/SAF#: H1334/B01-074

W.O.#: 11343-606-001-9999-00
Date Received: 04-26-01

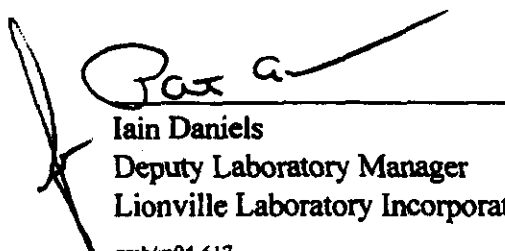
METALS CASE NARRATIVE

1. This narrative covers the analyses of 14 soil samples.
2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary.
3. All analyses were performed within the required holding times.
4. The cooler temperature has been recorded on the Chain of Custody.
5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury).
6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).
7. All preparation/method blanks (MB) were within method criteria {less than the Practical Quantitation Limit (3X the IDL), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.
8. All ICP Interference Check Standards were within control limits.
9. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to the Inorganics Laboratory Control Standards Report.
10. All matrix spike (MS) recoveries were within the 75-125% control limits. Refer to the Inorganics Accuracy Report.
11. The duplicate analysis for 1 analyte was outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.
12. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 19 pages.

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

14. As of January 27, 2001, Recra LabNet Philadelphia became Lionville Laboratory Incorporated. Some forms may still reference Recra LabNet Philadelphia.


Iain Daniels
Deputy Laboratory Manager
Lionville Laboratory Incorporated
gmb/m04-617

05-29-01
Date



000016

Collector: Thomas, GS *R. F. Fehlers*
 Company Contact: Lerch, JA Telephone No.: 373-5904 Project Coordinator: TRENT, SJ Price Code: 8L Data Turnaround: 21 Days
 Project Designation: JA Jones Verification Sampling - Soil Sampling Location: JA Jones Excavation SAF No.: B01-074 Air Quality:

Ice Chest No.: *ER-8* Field Logbook No.: *EL-1517-2* COA: RJONES2E00 Method of Shipment: Fed Ex
 Shipped To: *TM/RECRA* Offsite Property No.: *A010247* Bill of Lading/Air Bill No.: *42357954-3933*

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	Cool 4C																		
	Type of Container	2G																		
	No. of Container(s)	1																		
	Volume	250mL																		

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS

See item (1) in Special Instructions.

TIETO 000000

Sample No.	Matrix *	Sample Date	Sample Time																		
B11RN9	SOIL	4/18/01	1240	X																	B11RL9
B11RP0	SOIL	4/19/01	1240	X																	B11RL9
B11RP1	SOIL	4/19/01	1300	X																	B11RM2
B11RP2	SOIL	4/19/01	1310	X																	B11RM1
B11RP3	SOIL	4/19/01	1320	X																	B11RM1

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
<i>R. F. Fehlers</i>	<i>4-19-01</i>	<i>Ref z.c</i>	<i>04-19-01</i>
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
<i>R. F. Fehlers</i>	<i>4/25/01</i>	<i>R. Thorer</i>	<i>4/25/01</i>
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
<i>R. Thorer</i>	<i>4/25/01</i>	<i>FED Ex</i>	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
<i>FED Ex</i>	<i>4-26-01 9:35</i>	<i>Carl K...</i>	<i>4-26-01 9:35</i>
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010A (TAI) (Barium, Cadmium, Chromium); H.P Metals - 6000A (Add-on) (Lead)

Samples stored in Ref. # *2* at the 3728 Shipping Facility on *4/19/01*. Collector not available to relinquish samples on *4/20/01* for shipment.

4-25-01 4/25/01 *4/26/01*

Matrix *

- 1. Soil
- 2. Sediment
- 3. Sludge
- 4. Water
- 5. Air
- 6. Ice
- 7. Other
- 8. Other
- 9. Other
- 10. Other
- 11. Other
- 12. Other
- 13. Other
- 14. Other
- 15. Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed by	Date/Time

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B01-074-3	Page 2 of 2		
Collector Thomas, GS / <i>Fabikang</i>		Company Contact Lerch, JA		Telephone No. 373-5904		Project Coordinator TRENT, SJ	Price Code 8L	Data Turnaround 21 Days	
Project Designation JA Jones Verification Sampling - Soil		Sampling Location JA Jones Excavation		SAF No. B01-074		Air Quality <input type="checkbox"/>			
Ice Chest No. <i>ER-8</i>		Field Logbook No. <i>EL-1510 EL1512-2 4-19-01</i>		COA RJONES2E00		Method of Shipment Fed Ex			
Shipped To TMA/RECRA		Offsite Property No. <i>A010242</i>		Bill of Lading/Air Bill No. <i>42557954-3933</i>					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool AC				
Special Handling and/or Storage				Type of Container	nG				
				No. of Container(s)	1				
				Volume	250mL				
SAMPLE ANALYSIS				See Item (1) in Special Instructions.					
Sample No.	Matrix *	Sample Date	Sample Time						
B11RP4	SOIL	<i>04/19/01</i>	<i>1340</i>	<i>X</i>				<i>B11RM 3</i>	
B11RP5	SOIL	<i>4/19/01</i>	<i>1340</i>	<i>X</i>				<i>B11RM 3</i>	
B11RP6	SOIL	<i>4/19/01</i>	<i>1355</i>	<i>X</i>				<i>B11RM 4</i>	
B11RP7	SOIL	<i>4/19/01</i>	<i>1405</i>	<i>X</i>				<i>B11RM 5</i>	
B11RP8	SOIL	<i>4/19/01</i>	<i>1420</i>	<i>X</i>				<i>B11RM 6</i>	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>R. Fabikang</i>		<i>4-19-01 15:00</i>		<i>R. Fabikang</i>		<i>4-19-01 15:00</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>R. Fabikang</i>		<i>4/25/01 09:00</i>		<i>R. Fabikang</i>		<i>4/25/01 09:00</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>R. Fabikang</i>		<i>4/25/01 09:00</i>		<i>F. D. Ex</i>		<i>4/25/01 09:00</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>F. D. Ex</i>		<i>4-26-01 9:35</i>		<i>Carl Hanf</i>		<i>4-26-01 9:35</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION	Received By	Title				Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time			

000018

TRENT

(1) ICP Metals - 6010A (TAL) (Barium, Cadmium, Chromium); R'P Metals - 6010A (Add-on) (Lead)

Samples stored in Ref. 72C at the 3728 Shipping Facility on 4/20/01. Collector not available to relinquish samples on 4/25/01 for shipment.

RT
4/25/01

- S-Soil
- SI-Sediment
- SI-Cold
- SI-Mud
- W-Water
- TC-TC
- A-Air
- IS-In Situ Solid
- IS-Phase Spec.
- I-Incinerator
- W-Water
- U-Urinal
- S-Sludge

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B01-074-3	Page 1 of 2
Collector Thomas, GS / <u>Fahlberg</u>		Company Contact Lerch, JA		Telephone No. 373-5904		Project Coordinator TRENT, SJ	
Project Designation JA Jones Verification Sampling - Soil		Sampling Location JA Jones Excavation		SAF No. B01-074		Price Code 8L Data Turnaround 21 Days	
Ice Chest No. <u>ER-8</u>		Field Logbook No. <u>56-1918 6L15172</u>		COA RJONES2E00		Method of Shipment Fed Ex	
Shipped To TMARECRA		Offsite Property No. <u>A010242</u>		Bill of Lading/Air Bill No. <u>42357954-3933</u>			
POSSIBLE SAMPLE HAZARDS/REMARKS							
Special Handling and/or Storage							
				570000			
SAMPLE ANALYSIS				See item (1) in Special Instructions			
				T1RTR			
Sample No.	Matrix *	Sample Date	Sample Time				
B11RP9	SOIL	4/20/01	0810	X			B11RP9
B11RR0	SOIL	4/20/01	0820	X			B11RR0
B11RR1	SOIL	4/20/01	0830	X			B11RR1
B11RR2	SOIL	4/20/01	0840	X			B11RR2
B11RR3	SOIL						
CHAIN OF POSSESSION			Sign/Print Names		SPECIAL INSTRUCTIONS		
Relinquished By/Removed From		Date/Time	Received By/Stored In		(1) ICP Metals - 6010A (TAL) (Barium, Cadmium, Chromium); ICP Metals - 6010A (Analog) (Lead) Samples stored in Ref. # <u>2</u> at the 3728 Shipping Facility on <u>4/20/01</u> . Collector not available to relinquish samples on <u>4/25/01</u> for shipment.		
<u>R. Fahlberg</u>		<u>4-20-01 1045</u>	<u>Ref 2.c</u>				
<u>Ref 2.c</u>		<u>4-25-01</u>	<u>R. Trent</u>				
<u>R. Trent</u>		<u>4/25/01</u>	<u>FED EX</u>				
<u>FED EX</u>		<u>4-26-01 9:35</u>	<u>Carol Hanford</u>				
Relinquished By/Removed From		Date/Time	Received By/Stored In		Matrix *		
					* Soil * Sediment * Solid * Liquid * Gas * Other		
LABORATORY SECTION		Received By		Title		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time	

Appendix 5

Data Validation Supporting Documentation

000020

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	JA Jones Verification		DATA PACKAGE: H1334		
VALIDATOR:	HL	LAB: LLF	DATE: 6/18/9		
CASE:			SDG: H1334		
ANALYSES PERFORMED					
<input type="checkbox"/> CLP/PCP	<input type="checkbox"/> CLP/GFAA	<input type="checkbox"/> CLP/Mg	<input type="checkbox"/> CLP/Cyanide	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> SW-846/PCP	<input type="checkbox"/> SW-846/GFAA	<input type="checkbox"/> SW-846/Mg	<input type="checkbox"/> SW-846 Cyanide	<input type="checkbox"/>	<input type="checkbox"/>
SAMPLES/MATRIX					
B11R09	B11R00	B11R01	B11R02	B11R03	
B11R04	B11R05	B11R06	B11R07	B11R08	
B11R09	B11R00	B11R01	B11R02		

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Is technical verification documentation present? Yes No **N/A**

Is a case narrative present? **Yes** No **N/A**

Comments: _____

2. HOLDING TIMES

Are sample holding times acceptable? **Yes** No N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

3. INSTRUMENT PERFORMANCE AND CALIBRATIONS

Were initial calibrations performed on all instruments?	Yes	No	N/A
Are initial calibrations acceptable?	Yes	No	N/A
Are ICP interference checks acceptable?	Yes	No	N/A
Were ICV and CCV checks performed on all instruments?	Yes	No	N/A
Are ICV and CCV checks acceptable?	Yes	No	N/A

Comments: _____

4. BLANKS

Were ICB and CCB checks performed for all applicable analyses?	Yes	No	N/A
Are ICB and CCB results acceptable?	Yes	No	N/A
Were preparation blanks analyzed?	Yes	No	N/A
Are preparation blank results acceptable?	Yes	No	N/A
Were field/trip blanks analyzed?	Yes	No	N/A
Are field/trip blank results acceptable?	Yes	No	N/A

Comments: _____

5. ACCURACY

Were spike samples analyzed?	Yes	No	N/A
Are spike sample recoveries acceptable?	Yes	No	N/A
Were laboratory control samples (LCS) analyzed?	Yes	No	N/A
Are LCS recoveries acceptable?	Yes	No	N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

6. PRECISION

- Were laboratory duplicates analyzed? Yes No N/A
- Are laboratory duplicate samples RPD values acceptable? Yes No N/A
- Were ICP serial dilution samples analyzed? Yes No N/A
- Are ICP serial dilution %D values acceptable? Yes No N/A
- Are field duplicate RPD values acceptable? Yes No N/A
- Are field split RPD values acceptable? Yes No N/A

Comments: _____

7. FURNACE AA QUALITY CONTROL

- Were duplicate injections performed as required? Yes No N/A
- Are duplicate injection %RSD values acceptable? Yes No N/A
- Were analytical spikes performed as required? Yes No N/A
- Are analytical spike recoveries acceptable? Yes No N/A
- Was MSA performed as required? Yes No N/A
- Are MSA results acceptable? Yes No N/A

Comments: _____

8. REPORTED RESULTS AND DETECTION LIMITS

- Are results reported for all requested analyses? Yes No N/A
- Are all results supported in the raw data? Yes No N/A
- Are results calculated properly? Yes No N/A
- Do results meet the CRDLs? Yes No N/A

Comments: _____

Appendix 6

Additional Documentation Requested by Client

000024

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 05/16/01

CLIENT: TNUHANFORD B01-074 H1334
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 01046617

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	01L0235-NB1	Barium, Total	0.34 u	MG/KG	0.34	1.0
		Cadmium, Total	0.43 u	MG/KG	0.43	1.0
		Chromium, Total	0.39 u	MG/KG	0.39	1.0
		Lead, Total	3.1 u	MG/KG	3.1	1.0

000025

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 05/16/01

CLIENT: TNUHANPORD B01-074 H1334
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0104L617

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-001	B11RN9	Barium, Total	282	74.5	204	101.7	1.0
		Cadmium, Total	5.1	0.44u	5.1	100	1.0
		Chromium, Total	29.9	9.8	20.4	98.5	1.0
		Lead, Total	57.3	9.8	50.9	93.3	1.0

000026

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 05/16/01

CLIENT: TNUHANFORD B01-074 H1334
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0104L617

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-001REP	B11RN9	Barium, Total	74.5	77.2	3.6	1.0
		Cadmium, Total	0.44u	0.44	NC 200	1.0
		Chromium, Total	9.8	9.5	3.1	1.0
		Lead, Total	9.8	8.4	15.4	1.0

7/29/01

000057

Duncan, Jeanette M

From: Weiss, Richard L
Sent: Wednesday, June 20, 2001 10:38 AM
To: Duncan, Jeanette M
Subject: FW: Review of Validation Packages H1334 and H1367

Revised to include comments from J. Lerch

-----Original Message-----

From: Weiss, Richard L
Sent: Tuesday, June 19, 2001 2:36 PM
To: Duncan, Jeanette M
Subject: Review of Validation Packages H1334 and H1367

Jeaette,

H1334

Page 3 "Field Duplicates"; This section normally has a descriptions of the criteria used for evaluation. Should be included.

Pages 1/ 4 "References"; Issue date for the SAP, Rev 2, is September 2000.

Pages 10/11; The referenced SAP does not define a TDL for Barium.

H1367

Page 4 "Field Duplicates"; This section normally has a descriptions of the criteria used for evaluation. Should be included.

Page 4 "Analytical Detection Levels; There were no non-detects for total chromium. These words probably were meant to apply to non-detects for chromium VI. However the wrong TDL was applied (taken from Rev 1 - 0.1 mg/kg). The Rev 2 value (0.5 mg/kg) shows no TDLs missed. Need to revise checklists (pg 36)

Page 4 "Minor Deficiencies"; Same comment regarding TDL as for comment above (Analytical Detection Levels).

Pages 1/ 5 "References"; Issue date for the SAP, Rev 2, is September 2000.

Pages 11,12,13: The correct TDL for CrVI is 0.5 not 0.1.

rich

Review Comment Record (RCR)

1. Date
06/20/01

2. Review No.
QA01-006

3. Project
JA Jones
Verification Sampling

4. Page
Page 1 of 1

5. Document Number(s)/Title(s)

SDG No. H1334

6. Program/Project/
Building Number

JA Jones Verification
Sampling - Soil

7. Reviewer

Claude Stacey

8. Organization/Group

BHI/QA

9. Location/Phone

H0-16/372-9208

17. Comment Submittal Approval:

10. Agreement with indicated comment disposition(s)

11. CLOSED

Organization Manager (Optional)

Date

Reviewer/Point of Contact

Date

Reviewer/Point of Contact

Author/Originator

Author/Originator

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	OK No comments			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				