0068770

SAF-RC-030
Remaining Sites Confirmation Sampling - Other Solid
FINAL VALIDATION PACKAGE

COMPLETE COPY OF VALIDATION PACKAGE TO:

Jeanette Duncan (2) H9-02 _____
INITIAL/DATE

COMMENTS:

SDG K0072 **SAF-RC-030**

Waste Site: 128-D-2

Date: 9 February 2006
To: Washington Closure Hanford (technical representative)
From: TechLaw, Inc.
Project: Remaining Sites Confirmation Sampling – Other Solid – Waste Site 128-D-2
Subject: Herbicide - Data Package No. K0072-LLI

INTRODUCTION

This memo presents the results of data validation on Data Package No. K0072 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	Date
J10D70	10/31/05	Solid	C	See note 1
J10D71	10/31/05	Solid	C	See note 1
J10D72	10/31/05	Solid	C	See note 1

1 – Herbicides by 8151A.

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, February 2005). Appendices 1 through 5 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
Appendix 5. Data Validation Supporting Documentation

DATA QUALITY OBJECTIVES

- **Holding Times**

Sample data were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be extracted within 14 days of the date of sample collection and analyzed within 40 days from the date of extraction.

If holding times are exceeded by less than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all

associated detected sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

- **Method Blank**

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation or analysis. At least one method blank analysis must be conducted for every 20 samples. Method blanks should not contain target compounds at a concentration greater than required quantitation limit (RQL). If target compounds are present, sample results less than five times the blank concentration are qualified as undetected and flagged "U". If the sample result is less than five times the blank concentration and less than RQL, the result is qualified as undetected and elevated to the RQL.

All method blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike & Laboratory Control Sample

Matrix spike (MS) and laboratory control sample (LCS) analyses are used to assess the analytical accuracy of the reported data . The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Recoveries must fall within the range of 70% to 130%. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Non-detected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

Due to matrix spike recoveries outside QC limits, all dalapon (23%), 2,4-D (28%) and pentachlorophenol (36%) results were qualified as estimates and flagged "J".

All other accuracy results were acceptable.

Surrogate Recovery

The analysis of surrogate compounds provides a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the laboratory. When a surrogate compound recovery is outside the control window, all positively identified target compounds associated with the unacceptable surrogate recoveries are qualified as estimates and flagged "J". Non-detected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Non-detected compounds with surrogate recoveries above the upper control limit require no qualification.

Due to surrogate recoveries outside QC limits, all herbicide results in samples J10D71 (21%) and J10D72 (30%) were qualified as estimates and flagged "J".

All other surrogate results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed as the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. For soil samples, results must be within RPD limits of plus/minus 30%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

Due to an RPD outside QC limits (38%), all dalapon results were qualified as estimates and flagged "J".

All other precision results were acceptable.

Field Duplicate Samples

One set of field duplicates (J10D70/J10D71) were submitted for analysis. Field duplicates are assessed using the same criteria as for laboratory duplicates. All field duplicate results were acceptable.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the 100 Area RQLs to ensure that laboratory detection levels meet the required criteria. Nine analytes exceeded the RQL. Under the WCH statement of work, no qualification is required.

- **Completeness**

Data Package No. K0072 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

The following minor deficiencies were noted:

- Due to matrix spike recoveries outside QC limits, all dalapon (23%), 2,4-D (28%) and pentachlorophenol (36%) results were qualified as estimates and flagged "J".

- Due to surrogate recoveries outside QC limits, all herbicide results in samples J10D71 (21%) and J10D72 (30%) were qualified as estimates and flagged "J".

- Due to an RPD outside QC limits (38%), all dalapon results were qualified as estimates and flagged "J".

Data flagged "J" indicates that the associated concentration is an estimate, but under the BHI statement of work, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

Nine analytes exceeded the RQL. Under the WCH statement of work, no qualification is required.

REFERENCES

WCH, Contract #20266, *Validation Statement of Work*, Washington Closure Hanford Incorporated, July 7, 2003.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the procedures herein 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 quantitation limit is an estimate.

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).

Appendix 2

Summary of Data Qualification

HERBICIDE DATA QUALIFICATION SUMMARY*

SDG: K0072	REVIEWER: TJP	Project: 1281D-2	PAGE 1 OF 1
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Dalapon 2,4-D Pentachlorophenol	J	All	MS recovery
All	J	J10D71, J10D72	Surrogate recovery
Dalapon	J	All	RPD

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

HERBICIDE ANALYSIS, SOLID MATRIX, (UG/KG)

Project: WASHINGTON CLOSURE HANFORD							
Laboratory: LLI	SDG: K0072						
Sample Number		J10D70		J10D71		J10D72	
Remarks				Duplicate			
Sample Date		10/31/05		10/31/05		10/31/05	
Extraction Date		11/7/05		11/7/05		11/7/05	
Analysis Date		11/10/05		11/10/05		11/10/05	
Chlorinated Herbicides	RQL	Result	Q	Result	Q	Result	Q
Dalapon	150	210	UJ	210	UJ	180	UJ
Dicamba	150	83	U	83	UJ	72	UJ
Dichloroprop	150	210	U	210	UJ	180	UJ
2,4-D	150	41	UJ	42	UJ	36	UJ
2,4,5-TP (Silvex)	150	21	U	21	UJ	18	UJ
2,4,5-T	150	21	U	21	UJ	18	UJ
2,4-DB	150	210	U	210	UJ	180	UJ
Dinoseb	150	21	U	21	UJ	18	UJ
Pentachlorophenol	150	17	UJ	17	UJ	14	UJ

110011

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.
Herbicides, Special List
Report Date: 11/11/05 14:18

RFW Batch Number: 0511L604 Client: TNUHANFORD RC-030 K0072 Work Order: 11343606001 Page: 1

	Cust ID:	J10D70	J10D71	J10D71	J10D71	J10D72	PBLKVX
Sample Information	RFW#:	002	003	003 MS	003 MSD	004	05LE0874-MB1
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Surrogate:	DCAA	46 %	21 * %	26 * %	30 * %	25 * %	128 %
Dalapon		210 U J	210 U J	23 * %	34 %	180 U J	170 U
Dicamba		83 U	83 U	37 %	40 %	72 U	67 U
Dichloroprop		210 U	210 U	40 %	46 %	180 U	170 U
2,4-D		41 U J	42 U	28 * %	35 %	36 U	33 U
2,4,5-TP (Silvex)		21 U	21 U	41 %	45 %	18 U	17 U
2,4,5-T		21 U	21 U	51 %	49 %	18 U	17 U
2,4-DB		210 U	210 U	44 %	49 %	180 U	170 U
Dinoseb		21 U	21 U	59 %	65 %	18 U	17 U
Pentachlorophenol		17 U J	17 U	36 * %	50 %	14 U	13 U

	Cust ID:	PBLKVX BS	PBLKVX BSD
Sample Information	RFW#:	05LE0874-MB1	05LE0874-MB1
	Matrix:	SOIL	SOIL
	D.F.:	1.00	1.00
	Units:	ug/kg	ug/kg
Surrogate:	DCAA	128 %	119 %
Dalapon		136 %	111 %
Dicamba		76 %	73 %
Dichloroprop		129 %	120 %
2,4-D		115 %	115 %
2,4,5-TP (Silvex)		108 %	98 %
2,4,5-T		108 %	100 %
2,4-DB		106 %	101 %
Dinoseb		122 %	108 %
Pentachlorophenol		105 %	88 %

2/8/06

11/11/05

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD RC-030
LVL #: 0511L604
SDG/SAF # K0072/RC-030

W.O. #: 11343-606-001-9999-00
Date Received: 11-02-2005

HERBICIDE

Three (3) solid samples were collected on 10-31-2005.

The samples and their associated QC samples were extracted on 11-07-2005 and analyzed according to Lionville Laboratory SOPs based on SW846, 3rd Edition procedures on 11-10,11-2005. The extraction and analysis procedures were based on method 8151A.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy, with the exception of some discrepancies, which have been recorded on the Sample Receipt Checklist.

2. Samples were extracted and analyzed within required holding time.

3. The method blank was below the reporting limits for all target compounds.

4. Four (4) of eight (8) surrogate recoveries was outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 05GC506) has been enclosed.

5. All blank spike recoveries were within acceptance criteria.

6. Three (3) of eighteen (18) matrix spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 05GC506) has been enclosed

7. The initial calibrations associated with this data set were within acceptance criteria.

8. The continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

9. 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.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

11/14/05
Date

kim\r:\group\data\herb\tnu\0511-604.doc

208 Welsh Pool Road • Exton, PA 19341- 1313 • (610) 280-3000 • Fax (610) 280-3041

Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 056506

Initiator: DR
Date: 11/11/05
Client: TAN

Batch: 0511604
Samples:
Method: SW846/MCAWW/CLP/

Parameter: OHBGX
Matrix: SOLIDS
Prep Batch: 0510874

1. Reason for SDR

a. COC Discrepancy __ Tech Profile Error __ Client Request __ Sampler Error on C-O-C __ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy

__ Missing Sample/Extract* __ Container Broken __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

c. Problem (Include all relevant specific results; attach data if necessary) Several of samples Exhibited low surrogate recoveries, As well As several MS/MSD recoveries being low. Blank, BS/BSD recoveries All Acceptable and the rest of the Batch had reasonable surrogate recoveries. Believe this to be due to sample matrix.
Please Advise See Attached

2. Known or Probable Causes(s)

MATRIX - X - other solid

3. Discussion and Proposed Action Other Description:

__ Re-log
__ Entire Batch
__ Following Samples: _____
__ Re-leach
__ Re-extract
__ Re-digest
__ Revise EDD
__ Change Test Code to _____
__ Place On/Take Off Hold (circle)

4. Project Manager Instructions...signature/date: 11/10/05

√ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
__ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: 11/11/5 Other Explanation:

__ Verified re-[log][leach][extract][digest][analysis] (circle)
__ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
__	X Initiator	__	__ Metals: Beegle
__	X Lab General Manager: M. Taylor	__	__ Inorganic: Perrone
__	X Project Mgr: Stone/Johnson	__	__ GC/LC: Kiger
__	__ Data Management: Stilwell	__	__ MS: Rychlak/Daley
__	__ Sample Prep: Beegle/Kiger	__	__ Log-in: Perry
		__	__ Admin: _____
		__	__ Other: _____

0511L604

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-030-005	Page 1 of 2
Collector: STANKOVICH/HUDSON	Company Contact: Mike Stankovich	Telephone No.: 531-7620	Project Coordinator: KESSNER, JH	Price Code: 9C; Air Quality: —	Data Turnaround: 15 Days
Project Designation: Remaining Sites Confirmation Sampling - Other Solid	Sampling Location: 128-D-2:1		SAF No.: RC-030	
Ice Chest No.: ERC-02-002	Field Logbook No.: EL-1578-7	COA: R10DR16700	Method of Shipment: FedEx	
Shipped To: EBERLINE SERVICES / LIONVILLE	Offsite Property No.: A060060		Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

Non Rad

Special Handling and/or Storage

Cool 4°C

Preservation	None	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C				
Type of Container	G/P	G/P	aG	G	aG	G				
No. of Container(s)	1	1	1	1	1	1				
Volume	500mL	~~60mL~~ 120	60mL	60mL	60mL	250mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	See item (2) in Special Instructions.	PCBs - 8081; Pesticides - 8081; Chloro-Herbicides - EPA8151	VOA - 8260A (GC/MS)	Semi-VOA - 8270A (TCL)	TPH (Total) - 418.1				

Sample No.	Matrix *	Sample Date	Sample Time								
J10D68	OTHER SOLID	10/31/05	1000	X	- 1000mL Only						
~~J10D69~~	~~OTHER SOLID~~	10/31/05	1200	X	X	X	X	X	11/01/05		11/01/05
J10D70	OTHER SOLID	10/31/05	1245	X	X	X		X	X		
J10D71	OTHER SOLID	10/31/05	1245	X	X	X		X	X		
J10D72	OTHER SOLID	10/31/05	1515	X	X	X		X	X		

910016

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BILL HUDSON	10/31/05 1645	3718 BLDG REFR-2B	10/31/05 1645
3718 Ref 2B	11/01/05 1100	D Stanley	11/01/05 1100
D Stanley	11/01/05 1100	Fed Ex	
Fed Ex	11/2/05 0940		11/2/05 0940

Sign/Print Names

SPECIAL INSTRUCTIONS w 10/31/05

(1) Gamma Spectroscopy (TCL List) {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - ~~Add-on (Americium-241), Americium-241~~, Gross Alpha & Gross Beta; ~~Nickel-63; Isotopic Plutonium, Strontium-89,90 Total-U, Technetium-99; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238)~~; Total Uranium

(2) ICP Metals - 6010A (SW-846) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc}; Mercury - 7471 -(CV)

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

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

BHI-EE-011 (08/29/2005)

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNL HANFORD **Date:** 11/2/05

Purchase Order / Project# / SAF# / SOW# / Release #: RC-030

LvLI Batch # : 0511L604 **Sample Custodian:** J Kennedy

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or Shipped	Carrier FedEx		Airbill# 791771453732	
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No		
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No		
5.	Samples received cooled or ambient?	Temp 2.1 °C		Cooler # ERC-02-002	
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals	
7.	coc signed and dated?	☑ Yes	☐ No		
8.	Sample containers are intact?	☑ Yes	☐ No		
9.	All samples on coc received? All samples received on coc?	☐ Yes	☑ No	#001 not Rec'd	
10.	All sample label information matches coc?	☑ Yes	☐ No		
11.	Samples properly preserved?	☑ Yes	☐ No		
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No		
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A	
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A	
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☐ Yes	☑ No		
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☑ Yes	☐ No	☐ No Discrepancies	

SR-002-B

LVLI LIONVILLE LABORATORY INC.

Appendix 5

Data Validation Supporting Documentation

GENERAL ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 128-D-2			DATA PACKAGE: K0072		
VALIDATOR: TLI		LAB: LLI		DATE: 2/4/02	
			SDG: K0072		
ANALYSES PERFORMED					
8015	8021	8141	8151	8315	
		WTPH-HCID	WTPH-G	WTPH-D	
SAMPLES/MATRIX:					
J10D70 J10D71 J10D72					
soil					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments: _____

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

Initial calibrations acceptable? ..... Yes No (N/A)

Continuing calibrations acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

Comments: _____

GENERAL ORGANIC DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) ..... Yes No (N/A)
Calibration blank results acceptable? (Levels D, E) ..... Yes No (N/A)
Laboratory blanks analyzed? ..... (Yes) No N/A
Laboratory blank results acceptable? ..... (Yes) No N/A
Field/trip blanks analyzed? (Levels C, D, E) ..... Yes (No) N/A
Field/trip blank results acceptable? (Levels C, D, E) ..... Yes No (N/A)
Transcription/calculation errors? (Levels D, E) ..... Yes No (N/A)
Comments: no FB

4. ACCURACY (Levels C, D, and E)

Surrogates/system monitoring compounds analyzed? ..... (Yes) No N/A
Surrogate/system monitoring compound recoveries acceptable? ..... Yes (No) N/A
Surrogates traceable? (Levels D, E) ..... Yes No (N/A)
Surrogates expired? (Levels D, E) ..... Yes No (N/A)
MS/MSD samples analyzed? ..... (Yes) No N/A
MS/MSD results acceptable? ..... Yes (No) N/A
MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No (N/A)
MS/MSD standards expired? (Levels D, E) ..... Yes No (N/A)
LCS/BSS samples analyzed? ..... (Yes) No N/A
LCS/BSS results acceptable? ..... (Yes) No N/A
Standards traceable? (Levels D, E) ..... Yes No (N/A)
Standards expired? (Levels D, E) ..... Yes No (N/A)
Transcription/calculation errors? (Levels D, E) ..... Yes No (N/A)
Performance audit sample(s) analyzed? ..... Yes (No) N/A
Performance audit sample results acceptable? ..... Yes No (N/A)
Comments: 7142 surrogates low - J all
MS dalapon, 2,4-D + pentachlorophenol - low MS J all
no RPD

GENERAL ORGANIC DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes (No) N/A

Duplicate results acceptable? ..... Yes (No) N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No (N/A)

MS/MSD standards expired? (Levels D, E) ..... Yes No (N/A)

Field duplicate RPD values acceptable? ..... (Yes) No N/A

Field split RPD values acceptable? ..... Yes No (N/A)

Transcription/calculation errors? (Levels D, E) ..... Yes No (N/A)

Comments: dalapon - 3870 J all

6. HOLDING TIMES (all levels)

Samples properly preserved? ..... (Yes) No N/A

Sample holding times acceptable? ..... (Yes) No N/A

Comments:

GENERAL ORGANIC DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Rresults supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: Q over

9. SAMPLE CLEANUP (Levels D and E)

Fluoricil ® (or other aborbant) cleanup performed? ..... Yes No N/A

Lot check performed? ..... Yes No N/A

Check recoveries aceptable? ..... Yes No N/A

Check materials traceable? ..... Yes No N/A

Check materials Expired? ..... Yes No N/A

Analytical batch QC given similar cleanup? ..... Yes No N/A

Transcription/Calculation Errors? ..... Yes No N/A

Comments: