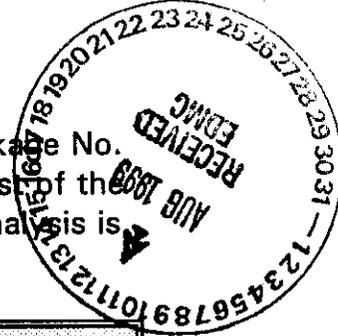


Date: 20 November 1998
 To: Bechtel Hanford Inc. (technical representative)
 From: TechLaw, Inc.
 Project: 100D Areas - Full Protocol (Waste Site 107-D1)
 Subject: Pesticide/PCB - Data Package No. W02130-QES (SDG No. W02130)

INTRODUCTION

This memo presents the results of data validation on Summary Data Package No. W02130-QES prepared by Quanterra Environmental Services (QES). A list of the 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
BOMMM4	12/16/97	Soil	C	Pest/PCBs by EPA 8080
BOMMM5	12/16/97	Soil	C	Pest/PCBs by EPA 8080
BOMMM6	12/16/97	Soil	C	Pest/PCBs by EPA 8080
BOMMM7	12/16/97	Soil	C	Pest/PCBs by EPA 8080

Data validation was conducted in accordance with the BHI validation statement of work (BHI 1997) and the 100 Area Remedial Action Sampling and Analysis Plan (May 1998). 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**

Analytical holding times 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".

Holding times were met for all samples.

- **Blanks**

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 the CRQL. If target compounds are present, sample results less than five times the blank concentration are qualified as nondetects and flagged "U". If the sample result is less than five times the blank concentration and less than CRQL, the result is qualified as a nondetect, elevated to the CRQL and flagged "U".

All method blank target compound results were acceptable.

- **Accuracy**

Matrix Spike/Matrix Spike Duplicate Recoveries

Matrix spike/matrix spike duplicate 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/matrix spike duplicate analyses are performed in duplicate using six compounds and must be within the established laboratory quality control limits of 70-130 percent. If spike recoveries are outside control limits, detected sample results less than 5 times the spike concentration are qualified as estimates and flagged "J". Undetected 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.

All matrix spike/matrix spike duplicate recovery results were acceptable.

Surrogate Recovery

The analysis of surrogate compounds provide 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". Nondetected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Undetected compounds with surrogate recoveries above the upper control limit require no qualification.

Due to the lack of a DCB surrogate analysis, all results were qualified as estimates and flagged "J".

All TCMX surrogate recovery 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 RPD between the recoveries of duplicate matrix spike analyses performed on a sample. Results must be within RPD limits of +/- 30% for soil samples. 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.

All matrix spike/matrix spike duplicate RPD results were acceptable.

- **Detection Levels**

Reported laboratory detection levels are compared against project specific target detection limits (TDLs) to ensure that laboratory detection levels meet the required criteria. The reported analytical detection level for toxaphene was above the TDL in all samples. Under the BHI statement of work, no qualification is required. All other reported detection levels were at or below the TDL.

- **Completeness**

Data Package No. W02130-QES (SDG No.W02130) was submitted for validation and verified for completeness. The completion rate was 100%.

000003

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Due to the lack of a DCB surrogate analysis, all results were qualified as estimates and flagged "J". Data flagged "J" is an estimate, but under the BHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

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

DOE/RL-96-22, Rev. 1, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, May 1998.

Appendix 1

Glossary of Data Reporting Qualifiers

000005

Qualifiers which may be applied by data validators in compliance with the 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 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. The associated concentration is an estimate, but the data are usable for decision-making purposes.
- R - Indicates the compound or analyte was analyzed for, detected, and due to an identified 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 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

000007

DATA QUALIFICATION SUMMARY

SDG: W02130	REVIEWER: TLI	DATE: 11/20/98	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
All	J	All	No DCB surrogate analysis

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

000009

Project: BECHTEL-HANFORD																							
Laboratory: Quanterra																							
Case		SDG: W02130																					
Sample Number		BOMMM4				BOMMM5				BOMMM6				BOMMM7									
Location		A1,5,7,15				B1,10,13,15				C3,4,5,11				D3,4,8,13									
Remarks																							
Sample Date		12/16/97				12/16/97				12/16/97				12/16/97									
Pest/PCB	CRDL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q		
alpha-BHC	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
beta-BHC	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
delta-BHC	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
gamma-BHC (Lindane)	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Heptachlor	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Aldrin	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Heptachlor epoxide	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Endosulfan I	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Dieldrin	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
4,4'-DDE	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Endrin	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Endosulfan II	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
4,4'-DDD	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Endosulfan sulfate	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
4,4'-DDT	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Methoxychlor	50	3.4	UJ	3.4	UJ	3.4	UJ	3.4	UJ	3.5	UJ												
Endrin Aldehyde	50	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ												
Tech. Chlordane	50	18	UJ	18	UJ	18	UJ	18	UJ	18	UJ												
Toxaphene	50	70	UJ	70	UJ	70	UJ	70	UJ	71	UJ												
Aroclor-1221	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												
Aroclor-1232	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												
Aroclor-1242	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												
Aroclor-1016	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												
Aroclor-1248	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												
Aroclor-1254	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												
Aroclor-1260	50	34	UJ	34	UJ	34	UJ	34	UJ	34	UJ												

000010

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOMMM4

Lab Name: QUANTERRA, MO Contract: 550.231

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: W02130

Matrix: (soil/water) SOIL Lab Sample ID: 16514-001

Sample wt/vol: 30.1 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: 12-16-97

% Moisture: not dec. 5 dec. _____ Date Extracted: 12-19-97

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 12-31-97 *

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CONCENTRATION UNITS:

CAS NO. Compound (ug/L or ug/Kg) UG/KG Q

319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	1.8	U
72-55-9	4,4'-DDE	1.8	U
72-20-8	Endrin	1.8	U
33213-65-9	Endosulfan II	1.8	U
72-54-8	4,4'-DDD	1.8	U
1031-07-8	Endosulfan sulfate	1.8	U
50-29-3	4,4'-DDT	1.8	U
72-43-5	Methoxychlor	3.4	U
53494-70-5	Endrin Aldehyde	1.8	U
57-74-9	Tech. Chlordane	18	U
8001-35-2	Toxaphene	70	U
11104-28-2	Aroclor-1221	34	U
11141-28-2	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12674-11-2	Aroclor-1016	34	U
12672-29-6	Aroclor-1248	34	U
11097-57-4	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

U: Concentration of analyte is less than the value given.

*: Sample was run on 12-30-97 for PCB's only.

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOMM5

Lab Name: QUANTERRA, MO Contract: 550.231

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: W02130

Matrix: (soil/water) SOIL Lab Sample ID: 16514-002

Sample wt/vol: 30.1 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: 12-16-97

% Moisture: not dec. 4 dec. _____ Date Extracted: 12-19-97

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 01-01-98 *

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CAS NO.	Compound	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	UG/KG
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	1.8	U
72-55-9	4,4'-DDE	1.8	U
72-20-8	Endrin	1.8	U
33213-65-9	Endosulfan II	1.8	U
72-54-8	4,4'-DDD	1.8	U
1031-07-8	Endosulfan sulfate	1.8	U
50-29-3	4,4'-DDT	1.8	U
72-43-5	Methoxychlor	3.4	U
53494-70-5	Endrin Aldehyde	1.8	U
57-74-9	Tech. Chlordane	18	U
8001-35-2	Toxaphene	70	U
11104-28-2	Aroclor-1221	34	U
11141-28-2	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12674-11-2	Aroclor-1016	34	U
12672-29-6	Aroclor-1248	34	U
11097-57-4	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

U: Concentration of analyte is less than the value given.
 *: Sample was run on 12-30-97 for PCB's only.

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOMM6

Lab Name: QUANTERRA,MO Contract: 550.231

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: W02130

Matrix: (soil/water) SOIL Lab Sample ID: 16514-003

Sample wt/vol: 30.2 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: 12-16-97

% Moisture: not dec. 5 dec. _____ Date Extracted: 12-19-97

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 01-01-98 *

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	<u>Q</u>
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	1.8	U
72-55-9	4,4'-DDE	1.8	U
72-20-8	Endrin	1.8	U
33213-65-9	Endosulfan II	1.8	U
72-54-8	4,4'-DDD	1.8	U
1031-07-8	Endosulfan sulfate	1.8	U
50-29-3	4,4'-DDT	1.8	U
72-43-5	Methoxychlor	3.4	U
53494-70-5	Endrin Aldehyde	1.8	U
57-74-9	Tech. Chlordane	18	U
8001-35-2	Toxaphene	70	U
11104-28-2	Aroclor-1221	34	U
11141-28-2	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12674-11-2	Aroclor-1016	34	U
12672-29-6	Aroclor-1248	34	U
11097-57-4	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U

U: Concentration of analyte is less than the value given.
 *: Sample was run on 12-30-97 for PCB's only.

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BOMM7

Lab Name: QUANTERRA, MO Contract: 550.231

Lab Code: ITMO Case No.: _____ SAS No.: _____ SDG No.: W02130

Matrix: (soil/water) SOIL Lab Sample ID: 16514-004

Sample wt/vol: 30.3 (g/ml) G Lab File ID: _____

Level: (low/med) LOW Date Sampled: 12-16-97

% Moisture: not dec. 7 dec. _____ Date Extracted: 12-19-97

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 01-01-98 *

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	Compound	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u>	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	1.8	U
72-55-9	4,4'-DDE	1.8	U
72-20-8	Endrin	1.8	U
33213-65-9	Endosulfan II	1.8	U
72-54-8	4,4'-DDD	1.8	U
1031-07-8	Endosulfan sulfate	1.8	U
50-29-3	4,4'-DDT	1.8	U
72-43-5	Methoxychlor	3.5	U
53494-70-5	Endrin Aldehyde	1.8	U
57-74-9	Tech. Chlordane	18	U
8001-35-2	Toxaphene	71	U
11104-28-2	Aroclor-1221	35	U
11141-28-2	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12674-11-2	Aroclor-1016	35	U
12672-29-6	Aroclor-1248	35	U
11097-57-4	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

U: Concentration of analyte is less than the value given.

*: Sample was run on 12-30-97 for PCB's only.

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

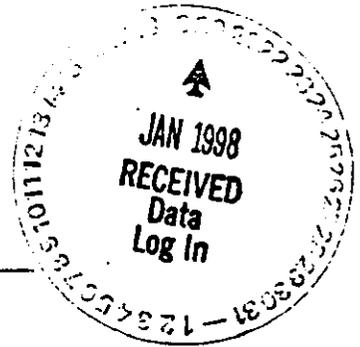
314 298-8566 Telephone
314 298-8757 Fax

CASE NARRATIVE

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

January 19, 1998

Attention: Joan Kessner



Project number	:	550.231
Date Received by Lab	:	December 16, 1997
Number of Samples	:	Four (4)
Sample Type	:	Soil
SDG Number	:	W02130
Data Deliverable	:	Summary

I. Introduction

On December 16, 1997, four (4) soil samples were received by Quanterra, St. Louis for chemical analysis. Upon receipt, the samples were given the following laboratory ID numbers to correspond with the specific client IDs:

<u>St. Louis ID</u>	<u>BHLID</u>	<u>Richland ID</u>	<u>Matrix</u>	<u>Date of Receipt</u>
16514-001	BOMMM4	71230401	Soil	16-DEC-97
16514-002	BOMMM5	71230402	Soil	16-DEC-97
16514-003	BOMMM6	71230403	Soil	16-DEC-97
16514-004	BOMMM7	71230404	Soil	16-DEC-97

II. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits.

Analyses requested: Pest/PCBs by EPA Method 8080.

Bechtel Hanford Incorporated
January 19, 1998
Project Number: 550.231
SDG: W02130
Page 2

III. Quality Control

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch. A Matrix Spike and Matrix Spike Duplicate were performed per the protocol for each analyte in this SDG.

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike

V. Comments

Shipping and Receiving

There were no variances noted during sample receipt..

PCBs

There are no comments or nonconformances associated with this analysis.

Bechtel Hanford Incorporated
January 19, 1998
Project Number: 550.231
SDG: W02130
Page 3

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 Manager or a designee, as verified by the following signature.

Reviewed and approved:



Wade H. Price

Project Manager

e:\price\hanford\hanw12130.nar

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B98-022-1

Collector MT Stankovich	Company Contact Gil Hamilton	Telephone No. 531-0731	Project Coordinator KOERNER, CC	Data Turnaround 15 Days
----------------------------	---------------------------------	---------------------------	------------------------------------	-----------------------------------

Project Designation 100 D Areas - Full Protocol	Sampling Location 107-D1	SAF No. B98-022
--	-----------------------------	--------------------

Ice Chest No. 96-026	Field Logbook No. EL-1339-1	Method of Shipment Hand Delivered
-------------------------	--------------------------------	--------------------------------------

Shipped To Quanterra Incorporated	Offsite Property No. NA	Bill of Lading/Air Bill No. NA
--------------------------------------	----------------------------	-----------------------------------

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	Cool to C																	
	Type of Container	P	oG																	
	No. of Container(s)	1	2																	

Special Handling and/or Storage	Volume	20ml	60ml																	
---------------------------------	--------	------	------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SAMPLE ANALYSIS <i>SDX</i> <i>W02130</i>	Activity Scan	Feet/PCBs - 8000 (TCL)																		
--	---------------	------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample No	Matrix *	Sample Date	Sample ID																	
BOMMM4	01	Soil	12-16-97	0935	X	X														
BOMMM5	02	Soil	12-16-97	0951	X	X														
BOMMM6	03	Soil	12-16-97	1005	X	X														
BOMMM7	04	Soil	12-16-97	1005 22	X	X														

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS **COA R00D22 2F00**
---------------------	------------------	---

Relinquished By <i>[Signature]</i>	Date/Time 12-16-97 1535	Received By <i>[Signature]</i>	Date/Time 12-16-97 1535
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

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

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

000019

Appendix 5

Data Validation Supporting Documentation

PESTICIDE/PCB DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 100-DR-1 RM ACT			DATA PACKAGE: W02130		
VALIDATOR: TLI		LAB: QES		DATE: 11/17/97	
CASE:			SDG: W02130		
ANALYSES PERFORMED					
<input type="checkbox"/> CLP3/90	<input checked="" type="checkbox"/> SW-846 8080	<input type="checkbox"/> SW-846 8081	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SAMPLES/MATRIX <u>soil</u>					
<u>BOMM4, BOMM5, BOMM6, BOMM7</u>					

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: 12/14/97

3. INSTRUMENT PERFORMANCE AND CALIBRATIONS

3.1 INSTRUMENT PERFORMANCE (METHOD 8080 AND 8081)

Are DDT retention times acceptable Yes No N/A

Are calibration standard retention times acceptable? Yes No N/A

Are DDT and endrin breakdowns acceptable? Yes No N/A

A-S/L

PESTICIDE/PCB DATA VALIDATION CHECKLIST

Are DBC retention times acceptable? Yes No

N/A
N/A

Is the GC/MS tuning/performance check acceptable? Yes No

Comments: _____

3.2 CALIBRATIONS (METHOD 8080 AND 8081)

Are EVAL standard calibration factors and %RSD values acceptable? Yes No

N/A
N/A
N/A
N/A

Are quantitation column calibration factor %RSD values acceptable? Yes No

Were the analytical sequence requirements met? Yes No

Are continuing calibration %D values acceptable? Yes No

Comments: _____

3.3 INSTRUMENT PERFORMANCE AND INITIAL CALIBRATION (3/90 SOW)

Was the initial calibration sequence performed? Yes No

Was the resolution acceptable in the resolution check mix? Yes No

Is resolution acceptable in the PEM, INDA and INDB? Yes No

Are DDT and Endrin breakdowns acceptable? Yes No

Are retention times in PEMs and calibration mixes acceptable? Yes No

Are RPD values in the PEMs acceptable? Yes No

Are %RSD values acceptable? Yes No

N/A
N/A
N/A
N/A
N/A
N/A

Comments: _____

3.4 CALIBRATION VERIFICATION (3/90 SOW)

Were the analytical sequence requirements met? Yes No

Is resolution acceptable in the PEMs? Yes No

Are initial calibrations acceptable? Yes No

N/A
N/A
N/A

A-0/7

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Are retention times acceptable in the PEMS, INDA and INDB mixes?	Yes	No	N/A
Are RPD values in the PEMS acceptable?	Yes	No	N/A
Are the DDT and endrin breakdowns acceptable?	Yes	No	N/A
Was GPC cleanup performed?	Yes	No	N/A
Is the GPC calibration check acceptable?	Yes	No	N/A
Was Florisil cleanup performed?	Yes	No	N/A
Is the Florisil performance check acceptable?	Yes	No	N/A

Comments: _____

4. BLANKS

Were laboratory blanks analyzed?	<input checked="" type="radio"/> Yes	No	N/A
Are laboratory blank results acceptable?	<input checked="" type="radio"/> Yes	No	N/A
Were field/trip blanks analyzed?	Yes	<input checked="" type="radio"/> No	N/A
Are field/trip blank results acceptable?	Yes	No	<input checked="" type="radio"/> N/A

Comments: _____

5. ACCURACY

Were surrogates analyzed?	Yes	<input checked="" type="radio"/> No	N/A
Are surrogate recoveries acceptable?	Yes	<input checked="" type="radio"/> No	N/A
Were MS/MSD samples analyzed?	<input checked="" type="radio"/> Yes	No	N/A
Are MS/MSD results acceptable?	Yes	<input checked="" type="radio"/> No	N/A
Were LCS samples analyzed?	<input checked="" type="radio"/> Yes	No	<input checked="" type="radio"/> N/A
Are LCS results acceptable?	<input checked="" type="radio"/> Yes	No	<input checked="" type="radio"/> N/A

Comments: check each of PCB surrogate
 MS Lindane 133 - J/UJ → MSD 152 } all undetectable
 MSD Aldrin 133 Endrin 132 } no good request

 Did not run PCB - J all

AK

PESTICIDE/PCB DATA VALIDATION CHECKLIST

6. PRECISION

- Are MS/MSD RPD values acceptable? Yes No N/A
- Are laboratory duplicate results 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. SYSTEM PERFORMANCE

- Is chromatographic performance acceptable? Yes No N/A
- Are positive results resolved acceptably? Yes No N/A

Comments: _____

8. COMPOUND IDENTIFICATION AND QUANTITATION

- Is compound identification acceptable? Yes No N/A
- Is compound quantitation acceptable? Yes No N/A

Comments: _____

9. REPORTED RESULTS AND QUANTITATION LIMITS

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

Comments: toxicology on

AS

2E
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: QUANTERRA, MO

Contract: 550.231

Lab Code: ITMO Case No.: _____

SAS No.: _____ SDG No.: W02130

	EPA SAMPLE NO.	S1 (DCB)#	S2 (TCMX)#
01	PBLK01		68
02	PSPK01		73
03	BOMMM4		83
04	BOMMM4MS		82
05	BOMMM4MSD		88
06	BOMMM5		79
07	BOMMM6		84
08	BOMMM7		85
09			
10			
11			
12			
13			
14			
15			
16			

ADVISORY
QC LIMITS
(10-264)
(32-152)

S1 (DCB) = Decachlorobiphenyl
S2 (TCMX) = Tetrachlorom-m-xylene

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

000035

000025

<h1>Review Comment Record (RCR)</h1>	1. Date 12/02/98	2. Review No. BHI/QA98015
	3. Project 100 D Areas	4. Page Page 1 of 1

5. Document Number(s)/Title(s) WO2130-QES (SDG No. WO2130)	6. Program/Project/ Building Number 100D Areas – Full Protocol (Waste Site 107-D1)	7. Reviewer Claude Stacey	8. Organization/Group BHI/QA	9. Location/Phone H0-16/372-9208
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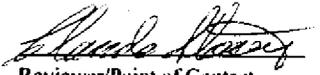
17. Comment Submittal Approval: _____ 10. Agreement with indicated comment disposition(s) _____ 11. CLOSED

Organization Manager (Optional) _____

Date _____

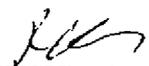
Reviewer/Point of Contact _____

32 Dec 98
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	Page 010, for sample number B0MMM7 the PBCs are shown as 34UJ; whereas, the laboratory data sheets (page 014) has the data as 35UJ.		correct 	
2				
3				

Out to Claude
+ Blumenkranz

11/24