9613424.1941 B018Q6-DAT-131 0000010

DATA CHEM LABORATORIES

START

ANALYTICAL REPORT

0043739

Form ARF-AL
Page 1 of 3
Part 1 of 1

Date 1/24/92
Agency Identification Number S91-1031
Account No. 3534C

JAN 1992 RECEIVED OSM DMO

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

FAX (509) 373-3992
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site 100 BC & 100 H Area Date of Collection December 09, 1991

Date Samples Received at DataChem December 11, 1991

APR 1996 RECEIVED EDMC

Analysis

Method of Analysis EPA 8080

Date(s) of Analysis January 09, 1992

Analytical Results

Field Sample Number	DataChem Lab Number	Sample Type	Aroclor 1016 µg/g	Aroclor 1221 µg/g	Aroclor 1232 µg/g	Aroclor 1242 µg/g	Aroclor 1248 µg/g	Aroclor 1254 µg/g	Aroclor 1260 µg/g		
B01 8Q6	EK 5938	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8Q7	EK 5939	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8Q8	EK 5940	SOIL	ND*	ND*	ND*	ND*	ND*	.19	**		†
B01 8Q9	EK 5941	SOIL	ND*	ND*	ND*	ND*	ND*	.89	**		†
B01 8R0	EK 5942	SOIL	ND*	ND*	ND*	ND*	ND*	6.4	**		†
B01 8R2	EK 5943	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	.34		
B01 8R2 MS	EK 5943 MS	SOIL	.18	ND*	ND*	ND*	ND*	ND*	**		†
B01 8R2 MSD	EK 5943 MSD	SOIL	.15	ND*	ND*	ND*	ND*	ND*	**		†
B01 8R3	EK 5944	SOIL	ND*	ND*	ND*	ND*	ND*	.15	**		†
B01 8R4	EK 5945	SOIL	ND*	ND*	ND*	ND*	ND*	.19	**		†
B01 8R5	EK 5946	SOIL	ND*	ND*	ND*	ND*	ND*	.42	**		†
B01 8R6	EK 5947	SOIL	ND*	ND*	ND*	ND*	ND*	**	**		†
B01 8R8	EK 5948	SOIL	ND*	ND*	ND*	ND*	ND*	.50	**		†

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
( ) Parameter between LOD and LOQ.

Analyst: Kim R. Leishman

Reviewer: Kemla Siddoway

Laboratory Supervisor: José C. Danino

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

MC 5-30-95

9613424.1942

DATA CHEM LABORATORIES

ANALYTICAL REPORT

Form ARF-BL
Page 2 of 3
Part 1 of 1

Date 1/24/92
Agency Identification Number S91-1031

Analytical Results

Field Sample Number	DataChem Lab Number	Sample Type	Aroclor 1016 µg/g	Aroclor 1221 µg/g	Aroclor 1232 µg/g	Aroclor 1242 µg/g	Aroclor 1248 µg/g	Aroclor 1254 µg/g	Aroclor 1260 µg/g		
B01 8R9	EK 5949	SOIL	ND*	ND*	ND*	ND*	ND*	2.7	**		†
B01 8S0	EK 5950	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8S0 MS	EK 5950 MS	SOIL	.15	ND*	ND*	ND*	ND*	ND*	**		†
B01 8S0 MSD	EK 5950 MSD	SOIL	.17	ND*	ND*	ND*	ND*	ND*	**		†
B01 8S1	EK 5951	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8S2	EK 5952	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8S3	EK 5953	SOIL	ND*	ND*	ND*	ND*	ND*	.021	**		†
B01 8S4	EK 5954	SOIL	ND*	ND*	ND*	ND*	ND*	.29	**		†
B01 8S5	EK 5955	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	1.2		
B01 8S6	EK 5956	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	.77		
B01 8S7	EK 5957	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	.63		
B01 8S9	EK 5958	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8T0	EK 5959	SOIL	ND*	ND*	ND*	ND*	ND*	.032	**		†
B01 8T1	EK 5960	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8T2	EK 5961	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
* Limit of Detection			.007	.007	.007	.007	.007	.007	.007		

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
( ) Parameter between LOD and LOQ.

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DATA CHEM LABORATORIES

ANALYTICAL REPORT

Date 1/24/92

Agency Identification Number S91-1031

General Set Comments

Method check and matrix spike recoveries are listed below. MS and MSD recoveries for aroclor 1260 were not quantifiable due to interferance peaks from the sample matrix.

Samples	% Aroclor 1016	% Aroclor 1260
MC I	96	91
MC II	112	169
EK 5943 MS	106	data not available
EK 5943 MSD	92	data not available
EK 5950 MS	91	data not available
EK 5950 MSD	105	data not available

Sample Comments

DataChem Lab Number	-- Comment --
EK 5940	Aroclor 1260 is also present in this sample.
EK 5941	Aroclor 1260 is also present in this sample.
EK 5942	Aroclor 1260 is also present in this sample.
EK 5943 MS	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5943 MSD	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5944	Aroclor 1260 is also present in this sample.
EK 5945	Aroclor 1260 is also present in this sample.
EK 5946	Aroclor 1260 is also present in this sample.
EK 5947	Due to interferance peaks, aroclor 1254 is not quantifiable.
EK 5948	Aroclor 1260 is also present in this sample.
EK 5949	Aroclor 1260 is also present in this sample.
EK 5950 MS	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5950 MSD	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5953	Aroclor 1260 is also present in this sample.
EK 5954	Aroclor 1260 is also present in this sample.
EK 5959	Aroclor 1260 is also present in this sample.

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MC 5-30-95

Date Extracted: 12-23-91
Date Digested:
Date Analyzed: 1/4/92

Count:	DCL Set ID:	Sponsor:	SPLITS					
534C	591 1031	Westinghouse Hanford		PCB's				

Comment:

Date Sampled	Field ID Number	DCL Sample Number(s)	Sample Matrix	Number of Containers	Remarks
12-9-91	B01 8Q6	EK 5938	Soil	1	PCB's (8080)
	8Q7	5939			
	8Q8	5940			
	8Q9	5941			
	8R0	5942			
	8R2	5943			
	8R3	5944			
	8R4	5945			
	8R5	5946			
	8R6	5947			
	8R8	5948			
	8R9	5949			

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	12-11-91 1300	TB sample storage	SS SS	12-23-91 0001	[signature]
[signature]	12/23/91 13:35	[signature]			

Final Disposition: _____ Signature: _____

Date Extracted: [illegible]
Date Digested: [illegible]
Date Analyzed: 1/11/92 [illegible]

Count:	DCL Set-ID:	Sponsor:	SPLITS					
534C	591 1031	Westinghouse Hanford		PCB's				
Comment:								

Date Sampled	Field ID Number	DCL Sample Number(s)	Sample Matrix	Number of Containers	Remarks
12-9-91	B01 850	EK 5950	Soil	1	PCB's (8080)
	851	5951			
	852	5952			
	853	5953			
	854	5954			
	855	5955			
	856	5956			
	857	5957			
	859	5958			
	8T0	5959			
	8T1	5960			
	8T2	5961			

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	12-11-91 1300	Sample Storage	5555	12-23-91 0001	[signature]
[signature]	12/23/91 13:35	[signature]			

Final Disposition: _____ Signature: _____

DataChem Laboratories / 000 West LeVoy Drive / Salt Lake City, Utah 84123

REVISED 1/22/1990.

DATA CHEM LABORATORIES

9313424.1946

ANALYTICAL REQUEST FORM

000007

1. ☒ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE

CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES.

2. Date 12-10-91 Purchase Order No. _____

3. Company Name Westinghouse Hanford Co.

Address P.O. Box 1970

Richland WA ~~999~~ 99352

Person to Contact C.E. Heiden

Telephone (509) 376-2640

Fax Telephone ( ) _____

Billing Address (if different from above)

_____

_____

4. Sample Collection

Sampling Site 100 BC & 100 H Areas

Industrial Process _____

Date of Collection 12-9-91

Time Collected 0858 thru 1236

Date of Shipment 12-10-91

Chain of Custody No. _____

5. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
EK 5938	B01 8Q6	Soil	1-120ml	PCB's Method 8080 (SW846)
5939	8Q7			
5940	8Q8			
5941	8Q9			
5942	8R0			
5943	8R2			
5944	8R3			
5945	8R4			
5946	8R5			
5947	8R6			
5948	8R8			
5949	8R9			

*Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk Sample; Blood; Urine; Tissue; Soil; Water; Other

6. Q C REQUIREMENTS MUST BE COMPLETED - See General Services Terms and Conditions: QC samples billed at regular sample rate

☐ METHOD QC SAMPLES (Lab QC according to published methods)

☐ PROJECT PLAN QC SAMPLES (Lab QC according to provided QA/QC Plan)

☐ NO QC SAMPLES REQUESTED (May not conform to Agency requirements)

☐ OTHER (as specified below)

_____

_____

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Requested by _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801- 266-7700 / FAX: 801-268-9992
4388 Glendale-Milford Road / Cincinnati, OH 45242 800-458-1493 or 513-733-5336 / FAX: 513-733-5347

DATACHEM LABORATORIES - A SORENSON COMPANY

DISTRIBUTION: WHITE - LABORATORY COPY CANARY - CUSTOMER COPY

6-14-95 15

MC 5-30-95 2

ANALYTICAL REQUEST FORM

#13424.1947

000008

DATA CHEM LABORATORIES

1. ☒ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE

CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES.

2. Date 12-10-91 Purchase Order No. _____

3. Company Name Westinghouse Hanford Co.

Address P.O. Box 1970

Richland WA ~~995~~ 99352

Person to Contact C.E. Heiden

Telephone (509) 376-2640

Fax Telephone ( ) _____

Billing Address (if different from above)

_____

_____

4. Sample Collection

Sampling Site 100 BC & 100 H Areas

Industrial Process _____

Date of Collection 12-9-91

Time Collected 0858 thru 1236

Date of Shipment 12-10-91

Chain of Custody No. _____

5. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
EK 5950	801 850	Soil	1-120ml	PCB's Method 8080 (SW846)
5951	851			
5952	852			
5953	853			
5954	854			
5955	855			
5956	856			
5957	857			
5958	859			
5959	8T0			
5960	8T1			
5961	8T2			

*Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk Sample; Blood; Urine; Tissue; Soil; Water; Other

6. Q C REQUIREMENTS

MUST BE COMPLETED - See General Services Terms and Conditions: QC samples billed at regular sample rate

☐ METHOD QC SAMPLES (Lab QC according to published methods)

☐ PROJECT PLAN QC SAMPLES (Lab QC according to provided QA/QC Plan)

☐ NO QC SAMPLES REQUESTED (May not conform to Agency requirements)

☐ OTHER (as specified below)

_____

_____

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Requested by _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801- 266-7700 / FAX: 801-268-9992
4388 Glendale-Milford Road / Cincinnati, OH 45242 800-458-1493 or 513-733-5336 / FAX: 513-733-5347

DATACHEM LABORATORIES - A SORENSON COMPANY

DISTRIBUTION: WHITE - LABORATORY COPY CANARY - CUSTOMER COPY

Westinghouse Hanford Company 9613424.1948

CHAIN OF CUSTODY

Custody Form Initiator C.E. Heiden

Company Contact C.E. Heiden Telephone 376-2640

Project Designation/Sampling Locations 100-BC and 100-H Collection Date 12/9/91

PCB Sampling

Ice Chest No. RH #40 Field Logbook No. WHC-N-429-1

Bill of Lading/Airbill No. 2509862439 0 Offsite Property No. W92-0-0123 #8

Method of Shipment Emery

Shipped to Data Chem Salt Lake City, UT

Possible Sample Hazards/Remarks —

Sample Identification

B018Q6		B018R8		B018S9	
B018Q7		B018R9		B018T0	
B018Q8		B018S0		B018T1	Soil 1-120 ml
B018Q9		B018S1		B018T2	
B018R0		B018S2			
B018R2	Soil 1-120ml	B018S3	Soil 1-120 ml		
B018R3		B018S4			
B018R4		B018S5			
B018R5		B018S6			
B018R6		B018S7			

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.E. Heiden C.E. Heiden	T. Jackson	12-11-91 1100
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90)

9613424.1949

CHAIN OF CUSTODY RECORD

Project G457-27 **Chem** __ **Rad** __ **Transmittal No.** X01296

Sample	Unit	Validate?	Sample	Unit	Validate?
		V B P M C R O H T			V B P M C R O H T
See attached		V B P M C R O H T			V B P M C R O H T
		V B P M C R O H T			V B P M C R O H T
		V B P M C R O H T			V B P M C R O H T
		V B P M C R O H T			V B P M C R O H T

Date Sent	Transferred From	Transferred To	Date Rec'd	Comments
9/2/92	WHC	H. Duncan	9/2/92	verified 9/2/92
9/28/92	H. Duncan	S. Chari SC	9/28/92	Validation
		H Duncan	11/30/92	
12/1/92	H. Duncan	S. Chari		
		H Duncan	1/15/93	
1/27/93	H Duncan	T Brown		
		H. Duncan	3/23/93	

PESTICIDE/PCB DATA VALIDATION CHECKLIST - FORM A-3

PROJECT: WHC	REVIEWER: SC	DATE: 9/28/92
LABORATORY:	CASE:	SDG:
SAMPLES/MATRIX: SOIL		
B018Q6, B018Q7, B018Q8, B018Q9, B018R0, B018R2,		
B018R3, B018R4, B018R5, B018R6, B018R8, B018R9, B018S0,		
B018S1, B018S2, B018S3, B018S4, B018S5, B018S6,		
B018S7, B018S70, B018T1 & B018T2		

1. DATA PACKAGE COMPLETENESS

Review the data package for completeness and check off the items below. If any data review elements are missing contact the laboratory for resubmittal.

Data Package Item	Present?: Yes	No	N/A
Case Narrative	✓		
Data Summary	✓		
Chain-of-Custody	✓		
QC Summary			
Surrogate report	✓		
MS/MSD report	✓		
Blank summary report	✓		
Sample Data			
Sample reports	✓		
Chromatograms	✓		
GC integration reports	✓		
Worksheets		✓	
UV traces from GPC			✓
GC/MS confirmation spectra			✓
Standards Data			
Pesticides Evaluation Standards Summary			✓
Pesticides/PCB Standards Summary	✓		
Pesticides/PCB identification	✓		
Pesticides standard chromatograms			✓
Raw QC Data			
Blank analysis report forms and chromatograms	✓		
MS/MSD report forms and chromatograms	✓		

Data Package Item	Present?: Yes	No	N/A
Additional Data			
Moisture/% solids data sheets		✓	
Reduction formulae		✓	
Instrument time logs		✓	
Chemist notebook pages		✓	
Sample preparation sheets		✓	

2. HOLDING TIMES

Were all samples extracted within holding time? Yes **(No)** N/A

Were all samples analyzed within holding time? **(Yes)** No N/A

ACTION: If any holding times were exceeded, but not by greater than a factor of two, qualify associated samples as estimated (J for detects or UJ for nondetects), otherwise reject all nondetects (R) and qualify all associated detects as estimated (J).

3. INSTRUMENT PERFORMANCE AND CALIBRATIONS

3.1 INSTRUMENT PERFORMANCE (2/88 SOW)

Are DDT retention times greater than 12 minutes? Yes No **(N/A)**

ACTION: If DDT retention time is $\leq$12 minutes and resolution is <25% qualify associated data as unusable (R).

Is resolution between DDT peaks acceptable? Yes No **(N/A)**

ACTION: If resolution between DDT peaks is unacceptable qualify associated data as unusable (R).

Do all pesticide standards elute within the established retention time windows? Yes No **(N/A)**

ACTION: If the standards do not meet the retention time criteria and peaks are not present near or within the retention time windows no sample qualification is necessary. If peaks are near or within the retention time windows and the standards and matrix spikes do not fall within the expanded retention time windows calculated according to the validation requirements, qualify all associated sample results from the last in-control point as unusable (R).

Are DDT breakdowns $\leq$20%? Yes No **(N/A)**

ACTION: If the DDT percent breakdown exceeds 20%, qualify all detected results for DDT as estimated (J) and all nondetects as unusable (R) if DDD and DDE are detected. In addition qualify all results for DDD or DDE as presumptive and estimated (NJ).

Are endrin breakdowns $\leq$20%? Yes No **(N/A)**

ACTION: If the endrin breakdown exceeds 20%, qualify all detected results for endrin as estimated (J) and all nondetects as unusable (R) if endrin aldehyde or endrin ketone are detected. In addition, qualify all results for endrin ketone as presumptive and estimated (NJ).

Are DBC retention time differences within specification? Yes No N/A

ACTION: If DBC %D values are outside the limits and the shift is ocurring repeatedly in samples and standards, qualify affected sample results as unusable (R).

3.2 CALIBRATIONS (2/88 SOW)

Are RSD values for aldrin, endrin, DDT and DBC ≤ 10%? Yes No N/A

Have all standards been analyzed within 72 h of any sample? Yes No N/A

Has a 3-point calibration been conducted for DDT or toxaphene? Yes No N/A

Have all standards been analyzed at the start of each 72-h sequence? Yes No N/A

Have evaluation standards A, B, and C been analyzed within 72 h of any sample? Yes No N/A

Has the confirmation standard mix been analyzed after every five samples? Yes No N/A

Has evaluation standard B analyzed every 10 samples? Yes No N/A

Are %D values for initial and subsequent standards ≤ 15% for quantitation standards and ≤ 20% for confirmation standards? Yes No N/A

ACTION: If the RSD criteria were exceeded or three point calibrations not conducted qualify associated detects as estimated (J). If all standards were not analyzed at the beginning of each 72-h sequence qualify associated data as unusable (R). If the confirmation standards were not analyzed properly qualify associated detects as estimated (J). If the continuing calibration criteria were not met qualify associated quantitation data as estimated (J).

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

Is peak resolution acceptable? Yes No N/A

ACTION: If the resolution criteria are not met, reject positive sample results generated after initial calibration (R).

Are DDT and endrin breakdowns ≤20.0% Yes No N/A

ACTION: If the breakdown criteria are not met qualify sample results as described in Section 5.3.1 of the validation requirements.

Are single component target compounds in the PEMs, INDA, INDB and the calibration standards within the retention time windows? Yes No N/A

ACTION: If the retention time criteria are not met and no peaks are present in the samples within two times the retention time windows (±0.04, ±0.05 for methoxychlor), no qualification is necessary. If peaks are present in samples within the retention time window a review is made of the raw data to determine expanded retention time windows (see Section 5.3.1 of the validation requirements). If all standards and matrix spikes fall within the expanded windows then no qualification of sample results is necessary. If all standards and matrix spikes do not fall within the expanded windows then all affected sample results are qualified as unusable (R).

Are the RPDs acceptable for the PEMs? Yes No N/A

ACTION: If the RPD criteria are not met qualify associated positive sample results as estimated (J).

Are the RSDs for the calibration factors <10.0% (<15.0% for the BHC series, DDT, endrin, and methoxychlor)? Yes No N/A

ACTION: If the RSD criteria are not met qualify associated positive sample results as estimated (J).

3.4 CALIBRATION VERIFICATION (3/90 SOW)

Have the analytical sequence requirements been met for the analysis of instrument blanks, PEMs, INDA and INDB mixes? Yes No N/A

ACTION: If the analytical sequence requirements are not followed and any of the resolution or retention time criteria listed below are exceeded, reject associated positive results (R).

Is peak resolution acceptable for PEMs, INDA and INDB mixes? Yes No N/A

ACTION: If the resolution criteria are not met reject positive sample results generated after a noncompliant standard analysis (R).

Are single component target compounds in the PEMs, INDA and INDB mixes within the retention time windows? Yes No N/A

ACTION: If the retention time criteria are not met and no peaks are present in the samples analyzed after the noncompliant standard within two times the retention time windows (±0.04, ±0.05 for methoxychlor), no qualification is necessary. If peaks are present in samples within the expanded windows rejected associated positive and nondetect results (R).

Are RPDs between the calculated and true amounts in the PEMs, INDA and INDB mixes ≤25.0%? Yes No N/A

ACTION: If the RPD criteria are not met qualify associated positive sample results as estimated (J).

Are DDT and endrin breakdowns in the PEMs ≤20.0% (≤30.0% total combined)? Yes No N/A

ACTION: If the breakdown criteria are not met qualify associated positive sample results in accordance with the criteria specified in Section 5.3.1.

4. BLANKS

4.1 LABORATORY BLANKS

Has the laboratory analyzed the method blanks at the required frequency? Yes No N/A

Has the laboratory analyzed a sulfur clean-up blank if required? Yes No N/A

Has the laboratory analyzed instrument blanks at the required frequency? Yes No N/A

Are target compounds present in the blanks? Yes No N/A

ACTION: Qualify all associated positive results as nondetects (U) that are <5 times the highest concentration in any acceptable blank.

4.2 FIELD BLANKS

Are target compounds present in the field blanks? Yes No N/A

ACTION: If target compounds are present in the field blanks qualify all positive sample results <5 times the highest valid field blank concentrations as nondetects (U) and note the results in the validation narrative.

5. ACCURACY

5.1 SURROGATE RECOVERY

Are any surrogate recoveries out of specification?	Yes	No	N/A
Do any samples show nondetects for surrogates?	Yes	No	N/A
Are any method blank surrogates out of specification?	Yes	No	N/A

ACTION: Qualify all associated sample results as estimated (J for detects and UJ for nondetects) for surrogates out of specification. If the surrogate was not detected (0% recovery) in the sample qualify associated nondetects as unusable (R). If method blank surrogates are out of specification and sample surrogates are acceptable, no qualification is required however, the laboratory should be contacted for an explanation.

5.2 MATRIX SPIKE RECOVERY

Has the laboratory analyzed a MS/MSD per matrix for the the sample group?	Yes	No	N/A
Are MS/MSD recoveries within specification?	Yes	No	N/A
Are there any calculation or transcription errors?	Yes	No	N/A

ACTION: If MS/MSD analyses have not been conducted contact the laboratory for clarification. Review the MS/MSD recoveries in conjunction with other QC data such as surrogate recoveries and note the results in the validation narrative. If MS/MSD recoveries are out of specification and sample concentration is >5 times the spike concentration, no qualification is required, otherwise qualify results as follows: Qualify positive results as estimated (J) in all samples if associated surrogates are also out of specification. The qualification shall only be done on samples of similar matrix as the MS/MSD samples. If it is determined from the review that only the spiked samples are affected by the low recoveries, qualify only the results for the spiked sample as described above. If it is determined from the review that out of specification MS/MSD recoveries are indicative of systematic problems in the laboratory such as sample preparation or sample-specific matrix interferences this must be noted in the validation narrative along with the potential affect on the sample results.

5.3 PERFORMANCE AUDIT SAMPLES

Are performance audit sample results within the acceptance limits?	Yes	No	N/A

ACTION: Note the results of the performance audit samples in the validation narrative.

6. PRECISION

6.1 MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLES

Are the RPD values within specification? Yes No N/A

ACTION: Review the MS/MSD results in conjunction with other QC data such as field duplicates and note the results in the validation narrative. If MS/MSD RPD values are out of specification and sample results are >5xCRQL qualify positive results as estimated (J). If it is determined from the review that out of specification MS/MSD results are indicative of systematic problems in the laboratory such as sample preparation or sample-specific matrix interferences this must be noted in the validation narrative along with the potential affect on the sample results.

6.2 FIELD DUPLICATE SAMPLES

Are field duplicate RPD values acceptable? Yes No N/A

ACTION: Note the results of the field duplicate samples in the validation narrative.

6.3 FIELD SPLIT SAMPLES

Are field split RPD values acceptable? Yes No N/A

ACTION: Note the results of the field split samples in the validation narrative.

7. COMPOUND IDENTIFICATION AND QUANTITATION

7.1 COMPOUND IDENTIFICATION

Do positive results meet the retention time window criteria? Yes No N/A

Were positive results analyzed on disimilar columns? Yes No N/A

If dieldrin and DDE were reported was a 3% OV-1 column used for confirmation (2/88 SOW data only)? Yes No N/A

Do retention times and relative peak height ratios match the expected patterns for multipeak compounds (PCB, toxaphene or chlordane)? Yes No N/A

Has GC/MS confirmation been conducted on sample extract concentrations > 10 ppm? Yes No N/A

ACTION: If positive results do not meet the retention time criteria qualify all detected results as nondetects as follows: If the misidentified peak is outside the retention time windows and no interferences are noted report the CRQL and if the misidentified peak interferes with a target peak then the report value is qualified as estimated and nondetected (UJ). If positive results were not confirmed on disimilar columns, reject affected results (R). If a 3% OV-1 was used to confirm dieldrin and DDE, reject the affected data (R). If PCB, chlordane or toxaphene identification is questionable qualify the results as presumptive and estimated (NJ). If GC/MS confirmation was not conducted contact the laboratory for explanation and note in the validation narrative.

7.2 REPORTED RESULTS AND QUANTITATION LIMITS

Are results and quantitation limits calculated properly?	Yes	No	N/A
Has the laboratory reported the sample quantitation limits within 5xCRQL values?	Yes	No	N/A

ACTION: If results and quantitation limits are in error contact the laboratory for clarification and note in the validation narrative.

8. OVERALL ASSESSMENT AND SUMMARY

Has the laboratory conducted the analysis in accordance with the analytical SOW?	Yes	No	N/A
Were project specific data quality objectives met for this analysis?	Yes	No	N/A

ACTION: Summarize all the data qualifications and complete the data validation narrative as specified in Section 10.0 of the data validation requirements.

COMMENTS (attach additional sheets as necessary):

(1) The following data needs to be submitted to verify the calculated results: moisture content, sample weight & dilution factors. Although the instrument runs & QC results are submitted the above data needs to be submitted for verification of results. Therefore all ~~results~~ detects for PCBs have been qualified as "JN". ~~and~~ where detected results may be valid but supporting data is missing.

(2) Due to extraction holding time problems, the following results are flagged "J" and are considered to be usable for limited purpose:

-all PCBs for all samples

The samples were collected on 12/9/92 and extracted on 12/23/92. This exceeds the 7 day holding requirement by 7 days.

9613424.1959

DATA CHEM LABORATORIES

ANALYTICAL REPORT

Date 1/24/92
Agency Identification Number S91-1031
Account No. 3534C

JAN 1992 RECEIVED OSM DMO

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

FAX (509) 373-3992
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site 100 BC & 100 H Area Date of Collection December 09, 1991

Date Samples Received at DataChem December 11, 1991

Analysis

Method of Analysis EPA 8080

Date(s) of Analysis January 09, 1992

Analytical Results

Field Sample Number	DataChem Lab Number	Sample Type	Aroclor 1016 µg/g	Aroclor 1221 µg/g	Aroclor 1232 µg/g	Aroclor 1242 µg/g	Aroclor 1248 µg/g	Aroclor 1254 µg/g	Aroclor 1260 µg/g		
B01 8Q6	EK 5938	SOIL	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ		
B01 8Q7	EK 5939	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8Q8	EK 5940	SOIL	ND*	ND*	ND*	ND*	ND*	.19 J	** J		1
B01 8Q9	EK 5941	SOIL	ND*	ND*	ND*	ND*	ND*	.89	**		1
B01 8R0	EK 5942	SOIL	ND*	ND*	ND*	ND*	ND*	6.4	**		1
B01 8R2	EK 5943	SOIL	ND*	ND*	ND*	ND*	ND*	ND* UJ	.34		
B01 8R2 MS	EK 5943 MS	SOIL	.18	ND*	ND*	ND*	ND*	ND*	**		1
B01 8R2 MSD	EK 5943 MSD	SOIL	.15	ND*	ND*	ND*	ND*	ND*	**		1
B01 8R3	EK 5944	SOIL	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	.15 J	** J		1
B01 8R4	EK 5945	SOIL	ND*	ND*	ND*	ND*	ND*	.19	**		1
B01 8R5	EK 5946	SOIL	ND*	ND*	ND*	ND*	ND*	.42	**		1
B01 8R6	EK 5947	SOIL	ND*	ND*	ND*	ND*	ND*	**	**		1
B01 8R8	EK 5948	SOIL	ND*	ND*	ND*	ND*	ND*	.50	**		1

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.
** See comment on last page.
( ) Parameter between LOD and LOQ.

Analyst: Kim R. Leishman

Reviewer: Kamla Siddoway

Laboratory Supervisor: Jose C. Danino

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

8

9613424.1960

DATA CHEM LABORATORIES

ANALYTICAL REPORT

Date 1/24/92
Agency Identification Number S91-1031

Analytical Results

Field Sample Number	DataChem Lab Number	Sample Type	Aroclor 1016 µg/g	Aroclor 1221 µg/g	Aroclor 1232 µg/g	Aroclor 1242 µg/g	Aroclor 1248 µg/g	Aroclor 1254 µg/g	Aroclor 1260 µg/g		
B01 8R9	EK 5949	SOIL	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	2.7 J	J		↑
B01 8S0	EK 5950	SOIL	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ		
B01 8S0 MS	EK 5950 MS	SOIL	.15	ND*	ND*	ND*	ND*	ND*	**		↑
B01 8S0 MSD	EK 5950 MSD	SOIL	.17	ND*	ND*	ND*	ND*	ND*	**		↑
B01 8S1	EK 5951	SOIL	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ		
B01 8S2	EK 5952	SOIL	ND	ND	ND	ND	ND	ND UJ	ND UJ		
B01 8S3	EK 5953	SOIL	ND	ND	ND	ND	ND	.021 J	* J		↑
B01 8S4	EK 5954	SOIL	ND	ND	ND	ND	ND	.29 J	* J		↑
B01 8S5	EK 5955	SOIL	ND	ND	ND	ND	ND	ND UJ	1.2 J		
B01 8S6	EK 5956	SOIL	ND	ND	ND	ND	ND	ND	.77 J		
B01 8S7	EK 5957	SOIL	ND	ND	ND	ND	ND	ND	.63 J		
B01 8S9	EK 5958	SOIL	ND	ND	ND	ND	ND	ND	ND UJ		
B01 8T0	EK 5959	SOIL	ND	ND	ND	ND	ND	.032 J	* J		↑
B01 8T1	EK 5960	SOIL	ND	ND	ND	ND	ND	ND UJ	ND UJ		
B01 8T2	EK 5961	SOIL	ND	ND	ND	ND	ND	ND UJ	ND UJ		
* Limit of Detection			.007	.007	.007	.007	.007	.007	.007		

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
( ) Parameter between LOD and LOQ.

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9613424.1961

DATA CHEM LABORATORIES

ANALYTICAL REPORT

Date 1/24/92

Agency Identification Number S91-1031

General Set Comments

Method check and matrix spike recoveries are listed below. MS and MSD recoveries for aroclor 1260 were not quantifiable due to interferance peaks from the sample matrix.

Samples	% Aroclor 1016	% Aroclor 1260
MC I	96	91
MC II	112	169
EK 5943 MS	106	data not available
EK 5943 MSD	92	data not available
EK 5950 MS	91	data not available
EK 5950 MSD	105	data not available

Sample Comments

DataChem Lab Number	-- Comment --
EK 5940	Aroclor 1260 is also present in this sample.
EK 5941	Aroclor 1260 is also present in this sample.
EK 5942	Aroclor 1260 is also present in this sample.
EK 5943 MS	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5943 MSD	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5944	Aroclor 1260 is also present in this sample.
EK 5945	Aroclor 1260 is also present in this sample.
EK 5946	Aroclor 1260 is also present in this sample.
EK 5947	Due to interferance peaks, aroclor 1254 is not quantifiable.
EK 5948	Aroclor 1260 is also present in this sample.
EK 5949	Aroclor 1260 is also present in this sample.
EK 5950 MS	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5950 MSD	Due to interferance peaks, aroclor 1260 is not quantifiable.
EK 5953	Aroclor 1260 is also present in this sample.
EK 5954	Aroclor 1260 is also present in this sample.
EK 5959	Aroclor 1260 is also present in this sample.

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A Sorenson Company

9613424.1962

Westinghouse Hanford Company
Surrogate recovery data and set comments

DCL Ref.: S91-1031
Samples: EK 5938-61
Matrix: Soil
Analyst: Kim R Leishman

Samples were analyzed using method EPA 8080. Several samples in this set contained aroclor 1254 and aroclor 1260. Sample EK 5947 showed chromatographic peak patterns matching aroclor 1254 but quantitation of this analyte was not possible due to high level interferance peaks associated with the sample matrix. The samples containing aroclor 1254 also contained aroclor 1260. Aroclor 1260 was not quantified because of several peaks that coeluted with aroclor 1254. Aroclor 1254 was quantified instead of aroclor 1260 because it was present at much higher levels.

The surrogates used in this method are 2,4,5,6-Tetrachloro-m-xylene (TCMX) and Dibutyl chlorendate (DBC). Due to an error in comunication, the surrogate Decachlorobiphenyl (DCB) was used instead DBC. Thus surrogate recovery data was only available only for TCMX. The TCMX recoveries are as follows:

Samples	% Recovery
EK 5938	>100% *
EK 5939	98%
EK 5940	83%
EK 5941	94%
EK 5942	**
EK 5943	82%
EK 5944	78%
EK 5946	59%
EK 5947	***
EK 5948	***
EK 5949	***
EK 5950	***
EK 5951	***
EK 5952	94%
EK 5953	83%

Samples	% Recovery
EK 5954	82%
EK 5955	40%
EK 5956	64%
EK 5957	61%
EK 5958	75%
EK 5959	77%
EK 5960	78%
EK 5961	85%
EK 5943 MS	82%
EK 5943 MSD	71%
EK 5950 MS	***
EK 5950 MSD	***

* Sample surrogate recovery was greater than 100%. No standards were run at levels higher than 100%.

** Sample was diluted, which brought the resultant peak height below that of the low standard. That value was the lowest value that could be quantified in the standard curve.

*** These samples did not contain the surrogate TCMX. The causes for the lack of TCMX in this case were unknown. Matrix effects or sample misspikes were the most probable reasons for these results.

CHAIN OF CUSTODY RECORD

Date Extracted: 12-23-91 SS
Date Digested:
Date Analyzed: 1/4/92 kmc

Account:	DCL Set ID:	Sponsor:	SPLITS					
3534C	591 1031	Westinghouse Hanford		PCB's				
Field Comment:								

Date Sampled	Field ID Number	DCL Sample Number(s)	Sample Matrix	Number of Containers	Remarks
12-9-91	B01 8Q6	EK 5938	Soil	1	PCB's (8080)
	8Q7	5939			
	8Q8	5940			
	8Q9	5941			
	8R0	5942			
	8R2	5943			
	8R3	5944			
	8R4	5945			
	8R5	5946			
	8R6	5947			
	8R8	5948			
	8R9	5949			

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	12-11-91 1300	sample storage	SS SS	12-23-91 0001	[signature]
[signature]	12/23/91 13:35	[signature]			

Final Disposition: _____ Signature: _____

DataChem Laboratories/ 900 West LeVoy Drive / Salt Lake City, Utah 84123

REVISED 1/23/19

9613424.1963

CHAIN OF CUSTODY RECORD

Date Extracted: 12-23-91 SS
Date Digested:
Date Analyzed: 1/4/92 KM

Account:	DCL Set ID:	Sponsor:	SPLITS					
3534C	591 1031	Westinghouse Hanford		PCB's				

Field Comment:

Date Sampled	Field ID Number	DCL Sample Number(s)	Sample Matrix	Number of Containers	Remarks
12-9-91	B01 850	EK 5950	Soil	1	PCB's (8080)
	851	5951			
	852	5952			
	853	5953			
	854	5954			
	855	5955			
	856	5956			
	857	5957			
	859	5958			
	8T0	5959			
	8T1	5960			
	8T2	5961			

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	12-11-91 1300	sample storage	SSSS	12-23-91 0001	[signature]
[signature]	12/23/91 13:35	[signature]			

Final Disposition: _____ Signature: _____

DataChem Laboratories / 960 West LeVoy Drive / Salt Lake City, Utah 84123

REVISED 1/23/1990.

9613424.1964

9613424.1965

ANALYTICAL REQUEST FORM

DATA CHEM LABORATORIES

1. ☑ REGULAR Status

☐ RUSH Status Requested - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE

CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES.

2. Date 12-10-91 Purchase Order No. _____

3. Company Name Westinghouse Hanford Co.

Address P.O. Box 1970

Richland WA ~~99~~ 99352

Person to Contact C.E. Heiden

Telephone (509) 376-2640

Fax Telephone ( ) _____

Billing Address (if different from above)

_____

_____

4. Sample Collection

Sampling Site 100 BC & 100 H Areas

Industrial Process _____

Date of Collection 12-9-91

Time Collected 0858 thru 1236

Date of Shipment 12-10-91

Chain of Custody No. _____

5. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
EK 5938	801 8Q6	Soil	1-120ml	PCB's Method 8080 (SW846)
5939	8Q7			
5940	8Q8			
5941	8Q9			
5942	8R0			
5943	8R2			
5944	8R3			
5945	8R4			
5946	8R5			
5947	8R6			
5948	8R8			
5949	8R9			

*Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk Sample; Blood; Urine; Tissue; Soil; Water; Other

6. Q C REQUIREMENTS
MUST BE COMPLETED - See General Services Terms and Conditions: QC samples billed at regular sample rate

☐ METHOD QC SAMPLES
(Lab QC according to published methods)

☐ PROJECT PLAN QC SAMPLES
(Lab QC according to provided QA/QC Plan)

☐ NO QC SAMPLES REQUESTED
(May not conform to Agency requirements)

☐ OTHER (as specified below)

_____

_____

Comments _____

_____

Possible Contamination and/or Chemical Hazards _____

7. Requested by _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801- 266-7700 / FAX: 801-268-9992
4388 Glendale-Milford Road / Cincinnati, OH 45242 800-458-1493 or 513-733-5336 / FAX: 513-733-5347

DATACHEM LABORATORIES - A SORENSON COMPANY

DISTRIBUTION: WHITE - LABORATORY COPY CANARY - CUSTOMER COPY

9613424.1966

ANALYTICAL REQUEST FORM

DATA CHEM LABORATORIES

1. ☒ REGULAR Status

☐ **RUSH Status Requested - ADDITIONAL CHARGE**

RESULTS REQUIRED BY _____ DATE

CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES.

2. Date 12-10-91 Purchase Order No. _____

3. Company Name Westinghouse Hanford Co.

Address P.O. Box 1970

Richland WA ~~99~~ 99352

Person to Contact C.E. Heiden

Telephone (509) 376-2640

Fax Telephone ( ) _____

Billing Address (if different from above)

_____

_____

4. Sample Collection

Sampling Site 100 BC & 100 H Areas

Industrial Process _____

Date of Collection 12-9-91

Time Collected 0858 thru 1236

Date of Shipment 12-10-91

Chain of Custody No. _____

5. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
EK 5950	801 850	Soil	1-120ml	PCB's Method 8080 (SW846)
5951	851			
5952	852			
5953	853			
5954	854			
5955	855			
5956	856			
5957	857			
5958	859			
5959	8T0			
5960	8T1			
5961	8T2			

*Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk Sample; Blood; Urine; Tissue; Soil; Water; Other

6. **Q C REQUIREMENTS**
MUST BE COMPLETED - See General Services Terms and Conditions: QC samples billed at regular sample rate

☐ METHOD QC SAMPLES
(Lab QC according to published methods)

☐ PROJECT PLAN QC SAMPLES
(Lab QC according to provided QA/QC Plan)

☐ NO QC SAMPLES REQUESTED
(May not conform to Agency requirements)

☐ OTHER (as specified below)

_____

_____

Comments _____

_____

Possible Contamination and/or Chemical Hazards _____

7. Requested by _____

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801- 266-7700 / FAX: 801-268-9992
4388 Glendale-Milford Road / Cincinnati, OH 45242 800-458-1493 or 513-733-5336 / FAX: 513-733-5347

DATACHEM LABORATORIES - A SORENSON COMPANY

DISTRIBUTION: WHITE - LABORATORY COPY CANARY - CUSTOMER COPY

Westinghouse Hanford Company 9613424.1967

CHAIN OF CUSTODY

Custody Form Initiator: C.E. Heiden

Company Contact: C.E. Heiden — Telephone: 376-2640

Project Designation/Sampling Locations: 100-BC and 100-H — Collection Date: 12/9/91

PCB Sampling

Ice Chest No.: RH #40 — Field Logbook No.: WHC-N-429-1

Bill of Lading/Airbill No.: 2509842439 0 — Offsite Property No.: W93-0-0123 #8

Method of Shipment: Emery

Shipped to: Data Chem Salt Lake City, UT

Possible Sample Hazards/Remarks: —

Sample Identification

B018Q6		B018R8		B018S9	
B018Q7		B018R9		B018T0	
B018Q8		B018S0		B018T1	Soil 1-120 ml
B018Q9		B018S1		B018T2	
B018R0		B018S2			
B018R2	Soil 1-120ml	B018S3	Soil 1-120 ml		
B018R3		B018S4			
B018R4		B018S5			
B018R5		B018S6			
B018R6		B018S7			

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C.E. Heiden C.E. Heiden	T. Jackson	12-11-91 1100

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:
Comments:		

A-6000-407 (12/90)

9613424.1968

DATA CHEM LABORATORIES

ANALYTICAL REPORT

Form ARF-AL
Page 1 of 3
Part 1 of 1

Date 1/24/92
Agency Identification Number S91-1031
Account No. 3534C

JAN 1992 RECEIVED OSM DMO

Westinghouse Hanford Company
2355 Stevens Drive
MSIN T6-08
Richland,, WA 99352
Attention: Jeanette Duncan

FAX (509) 373-3992
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site 100 BC & 100 H Area Date of Collection December 09, 1991

Date Samples Received at DataChem December 11, 1991

Analysis

Method of Analysis EPA 8080

Date(s) of Analysis January 09, 1992

Analytical Results

Field Sample Number	DataChem Lab Number	Sample Type	Aroclor 1016 µg/g	Aroclor 1221 µg/g	Aroclor 1232 µg/g	Aroclor 1242 µg/g	Aroclor 1248 µg/g	Aroclor 1254 µg/g	Aroclor 1260 µg/g	
B01 8Q6	EK 5938	SOIL	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	
B01 8Q7	EK 5939	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*	
B01 8Q8	EK 5940	SOIL	ND*	ND*	ND*	ND*	ND*	.19 JN	** JN	†
B01 8Q9	EK 5941	SOIL	ND*	ND*	ND*	ND*	ND*	.89	**	†
B01 8R0	EK 5942	SOIL	ND*	ND*	ND*	ND*	ND*	6.4	**	†
B01 8R2	EK 5943	SOIL	ND*	ND*	ND*	ND*	ND*	ND* UJ	.34	
B01 8R2 MS	EK 5943 MS	SOIL	.18	ND*	ND*	ND*	ND*	ND*	**	†
901 8R2 MSD	EK 5943 MSD	SOIL	.15	ND*	ND*	ND*	ND*	ND*	**	†
01 8R3	EK 5944	SOIL	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	.15 JN	* JN	†
8R4	EK 5945	SOIL	ND*	ND*	ND*	ND*	ND*	.19	**	†
8R5	EK 5946	SOIL	ND*	ND*	ND*	ND*	ND*	.42	**	†
R6	EK 5947	SOIL	ND*	ND*	ND*	ND*	ND*	**	**	†
8	EK 5948	SOIL	ND*	ND*	ND*	ND*	ND*	.50	**	†

e comment on last page.
rameter not detected.
ameter not requested.

** See comment on last page.
( ) Parameter between LOD and LOQ.

Analyst: Kim R. Leishman

Reviewer: Kenla Siddoway

9613424.1969

DATA CHEM LABORATORIES

ANALYTICAL REPORT

Form ARF-BL
Page 2 of 3
Part 1 of 1

Date 1/24/92
Agency Identification Number S91-1031

Analytical Results

Field Sample Number	DataChem Lab Number	Sample Type	Aroclor 1016 µg/g	Aroclor 1221 µg/g	Aroclor 1232 µg/g	Aroclor 1242 µg/g	Aroclor 1248 µg/g	Aroclor 1254 µg/g	Aroclor 1260 µg/g		
B01 8R9	EK 5949	SOIL	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	2.7 JN	** JN		†
B01 8S0	EK 5950	SOIL	ND*	ND*	ND*	ND*	ND*	ND* UJ	ND* UJ		
B01 8S0 MS	EK 5950 MS	SOIL	.15	ND*	ND*	ND*	ND*	ND*	**		†
B01 8S0 MSD	EK 5950 MSD	SOIL	.17	ND*	ND*	ND*	ND*	ND*	**		†
B01 8S1	EK 5951	SOIL	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ	ND* UJ		
B01 8S2	EK 5952	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
B01 8S3	EK 5953	SOIL	ND*	ND*	ND*	ND*	ND*	.02 JN	** JN		†
B01 8S4	EK 5954	SOIL	ND*	ND*	ND*	ND*	ND*	.29 JN	**		†
B01 8S5	EK 5955	SOIL	ND*	ND*	ND*	ND*	ND*	ND* UJ	1.2		
B01 8S6	EK 5956	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	.77		
B01 8S7	EK 5957	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	.63		
B01 8S9	EK 5958	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND* UJ		
B01 8T0	EK 5959	SOIL	ND*	ND*	ND*	ND*	ND*	.032 JN	** JN		†
B01 8T1	EK 5960	SOIL	ND*	ND*	ND*	ND*	ND*	ND* UJ	ND* UJ		
B01 8T2	EK 5961	SOIL	ND*	ND*	ND*	ND*	ND*	ND*	ND*		
* Limit of Detection			.007	.007	.007	.007	.007	.007	.007		

* See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
( ) Parameter between LOD and LOQ.

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company

9613424.1970

OSM RCRA DATA ASSESSMENT

DATE April 6, 1992

REVIEWED BY L.L. Ames

LABORATORY Data Chem

CASE # 100-BC and 100-H

SDG # PCB Sampling

SAMPLES/MATRIX (All soils)

B018Q6	B018R3	B018R9	B018S4	B01
B018Q7	B018R4	B018S0	B018S5	B018
B018Q8	B018R5	B018S1	B018S6	B018
B018Q9	B018R6	B018S2	B018S7	B018
B018R2	B018R8	B018S3	B018S9	1

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS PCBs by EPA 8080		
1. Holding Times	X		
2. Surrogate Recovery	X		
3. Matrix Spikes	O		
4. Duplicates	O		
5. Other QC	O		
6.			
7.			
8.			
9.			
10.			

O = data had no problems
X = minor problems, data may be qualified
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: Holding these samples for 12 days before extracting may be a problem; otherwise the results are acceptable with the attached qualifiers.

NOTES:

o Refer to the corresponding attachments for explanation of any problems.

9613424.1971

RCRA QC

Name L.L. Ames LLA Date 4/6/92

QC Check: Holding Times

COMMENTS: The samples were held in storage from 12/11/91 to 12/23/91. The seven day maximum holding time from sample collection to extraction was not met. The 40 day maximum holding time from extraction to analysis was met.

ACTION: Qualify all sample results as estimated.

sample #	constituent	value/qual
All	Aroclor 1016-1248	UJ
B018Q6, B018Q7	Aroclor 1254	UJ
	Aroclor 1260	UJ
B018Q8, B018Q9, B018R0	Aroclor 1254	J
	Aroclor 1260	J
B018R2	Aroclor 1254	UJ
	Aroclor 1260	J
B018R3, B018R4, B018R5, B018R6, B018R8, B018R9	Aroclor 1254	J
	Aroclor 1260	J
B018S0, B018S1, B018S2	Aroclor 1254	UJ
	Aroclor 1260	UJ
B018S3, B018S4	Aroclor 1254	J
	Aroclor 1260	J
B018S5, B018S6, B018S7	Aroclor 1254	UJ
	Aroclor 1260	J
B018S9, B018T1, B018T2	Aroclor 1254	UJ
	Aroclor 1260	UJ
B018T0	Aroclor 1254	J
	Aroclor 1260	J

9613424.1972

RCRA QC

Name L.L. Ames LLA Date 4/6/92

QC Check: Surrogate Recovery

COMMENTS: No surrogate recovery limits were given in the report so that 50% to 120% were applied. Twelve of the 24 spiked (TCMX) samples were outside of these limits.

ACTION: Qualify the samples outside of limits as estimated (J or UJ).

sample #	constituent	value/qual
B018R5	Aroclor 1254	J
	Aroclor 1260	J
B018R6	Aroclor 1254	J
	Aroclor 1260	J
B018R8	Aroclor 1254	J
	Aroclor 1260	J
B018R9	Aroclor 1254	J
	Aroclor 1260	J
B018S0	Aroclor 1254	UJ
	Aroclor 1260	UJ
B018S1	Aroclor 1254	UJ
	Aroclor 1260	UJ
B018S5	Aroclor 1254	UJ
	Aroclor 1260	J
B018S6	Aroclor 1254	UJ
	Aroclor 1260	J
B018S7	Aroclor 1254	UJ
	Aroclor 1260	J
B018S9	Aroclor 1254	UJ
	Aroclor 1260	UJ
B018T0	Aroclor 1254	J
	Aroclor 1260	J
B018T1	Aroclor 1254	UJ
	Aroclor 1260	UJ
All	Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248	UJ

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9613424.1973

RCRA QC

Name L. L. Ames LLA Date 4/6/92

QC Check: Matrix Spikes

COMMENTS: Matrix spike recoveries for samples B01BR2 and B01B50 were within the 75% to 125% recovery limits for Aroclor 1016. Duplicate results on the above spiked samples also were within control limits of ±20% RPD.

ACTION: No action is required.

sample #	constituent	value/qual	sample #	constituent	value/qual

9613424.1974

RCRA QC

Name L.L. Ames LLA Date 4/6/92

QC Check: Duplicates

COMMENTS: This requirement was met by the MSD analysis. Both MSD sample results (B018R2 and B01850) were within control limits.

ACTION: No action is required.

sample #	constituent	value/qual	sample #	constituent	value/qual

6

9613424.1975

RCRA QC

Name L.L. Ames LLA Date 4/6/92

QC Check: Other QC

COMMENTS: A GC method check was performed. Aroclor 1016 recoveries of 96% and 112% were reported.

ACTION: No action is required.

sample #	constituent	value/qual	sample #	constituent	value/qual