ERID # 57497
Michael 1998

(15)

State of New Mexico
ENVIRONMENT DEPARTMENT
DOE OVERSIGHT BUREAU
P.O. Box 1663, MS/J-993
Los Alamos, New Mexico 87545

GARY JOHNSON
GOVERNOR

MARK E. WEIDLER
SECRETARY

Jane Jones
Golder Federal Services
MS - M327
Los Alamos, NM 877545

February 13, 1998

Dear Ms Jones

Re: Assessment of PCB analytical data obtained from the July, 1996, collection of aquatic insects, in the Upper Sandia Canyon wetlands

This is in response to your request for information relating to DOE Oversight Bureau PCB data pertaining to Odonata (dragonflies & damselflies) collected during the summer of 1996 from the Upper Sandia Canyon wetlands

Adult Odonata (Zygoptera & Anisoptera) were sampled using a hand held butterfly net from July 29 - 30, 1996 The Sandia Canyon watercourse was sampled from Potential Release Site 3-056(c) downstream to the culvert below Los Alamos County Landfill rubble pile and from the culvert opening at the head of the wetlands throughout the Sandia wetlands A high percentage of insects were collected at the culvert opening at the head of the wetlands All insects were composited in the field, held on ice @ 4°C until returning to lab, where they were sorted to suborder [Zygoptera (≈35), Anisoptera (7)] and frozen Samples were weighed and shipped on ice to Paragon Analytics, Inc Samples were analyzed for seven PCB Aroclors The case narrative, results, and QA/QC provided by Paragon Analytics, Inc , is included as an attachment to this memo

The detection limits did not meet the data quality objective of 100 µg/kg PCB This was due to the small sample weight resulting from the sorting of the sample into suborders I have discussed this issue with Lance Steer, of Paragon Analytics Inc., and he recommends a minimum of 10 grams (preferably more - up to 30 grams) of insect sample be supplied to the lab for PCB analysis to ensure an adequate data reporting limit of 100 µg/kg for PCB Aroclors

MAR 2 1 1998

7402

If you have any further questions, please call Ralph Ford-Schmid at 827-1536

Sincerely,

Tim Michael
Program Manager
Technical Support Section
DOE Oversight Bureau

TM/rf-s

Enclosures

cc
w/o enclosures

Mat Johansen, DOE MP POC, M316
Kathryn Bennet, ESH-20 M887
Gil Gonzales, ESH-20, M887

Paragon Analytics, Inc.

PCBs Case Narrative

NMED-DOE Oversight Bureau

96ECO Surveillance--96-1044-ECO-SUV

Client ID	Paragon ID	Client ID	Paragon ID
SA01 (Damsel) 2.55 gm	96-08-098-01	COCH01 Crappie	96-08-098-03
SA02 (Dragon Fly) 4.87 gm	96-08-098-02	COCH02 Bluegill	96-08-098-04

1. This report consists of 2 insect samples and 2 fish samples received by Paragon on 08/16/96.

2. These samples were extracted and analyzed according to SW-846, 3rd Edition procedures. Specifically, the insect samples were ground in a large mortar and combined with sodium sulfate. The sample weights for the insects were those that were provided by the client. The fish samples were pulverized in a blender and combined with sodium sulfate. All samples were then extracted using soxhlet procedures based on Method 3540. These extracts were then processed using sulfuric acid cleanup by Method 3650 in an attempt to remove potential interferences.

3. The extracts were then analyzed using GC/ECD (electron capture detectors) with a DB-17 capillary column according to protocols based on Method 8081. All positive results were then confirmed on a DB-1701 column. The quantitation of each analyte is the lower of the concentrations obtained from each column. This minimizes the chances of reporting elevated results based on interferences.

4. All samples were extracted and analyzed within the established holding times.

5. The method blank associated with this project was below the reporting limits for all analytes.

6. All blank spike and blank spike duplicate recoveries and RPDs were within the acceptance criteria.

7. All matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria. Matrix spikes and matrix spike duplicates could not be performed on the insect samples because of insufficient sample volume. A blank spike and blank spike duplicate were performed instead. See Item 6 for details on recoveries.

8. All surrogate recoveries were within acceptance criteria.

9. All initial and continuing calibration criteria were within acceptance criteria.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, Paragon Analytics, Inc. certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Marty Brown GC Analyst	3/22/96 Date
RPB Reviewer's Initials	5-06-96 Date

AROCLORS

Method 8080

Sample ID

Reagent Blank

Lab Name: Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Lab Sample ID: IRB1 08/19/96

Date Collected: N/A
Date Extracted: 8-19-96
Date Analyzed: 8-21-96

Sample Matrix: Sodium Sulfate
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 30 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Conc (ug/kg)	Reporting Limit (ug/kg)
Aroclor 1016	ND	33
Aroclor 1221	ND	33
Aroclor 1232	ND	33
Aroclor 1242	ND	33
Aroclor 1248	ND	33
Aroclor 1254	ND	33
Aroclor 1260	ND	33

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	98	43 - 124

ND = Not Detected at or above client requested reporting limit.

AROCLORS

Method 8080

Sample ID

SA01 (Damsal) 2.55 gm

Lab Name. Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Date Collected: 7/29/96
Date Extracted: 8/19/96
Date Analyzed: 8/21/96

Lab Sample ID: 96-08-098-01

Sample Matrix: Insect
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 2.55 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Conc (ug/kg)	Reporting Limit (ug/kg)
Aroclor 1016	ND	390
Aroclor 1221	ND	390
Aroclor 1232	ND	390
Aroclor 1242	ND	390
Aroclor 1248	ND	390
Aroclor 1254	ND	390
Aroclor 1260	ND	390

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	81	43 - 124

ND = Not Detected at or above client requested reporting limit

AROCLORS

Method 8080

Sample ID

SA02 (Dragon Fly) 4.87 gm

Lab Name: Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Lab Sample ID: 96-08-098-02

Date Collected: 7/30/96
Date Extracted: 8/19/96
Date Analyzed: 8/21/96

Sample Matrix: Insect
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 4.87 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Conc (ug/kg)	Reporting Limit (ug/kg)
Aroclor 1016	ND	210
Aroclor 1221	ND	210
Aroclor 1232	ND	210
Aroclor 1242	ND	210
Aroclor 1248	ND	210
Aroclor 1254	ND	210
Aroclor 1260	ND	210

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	78	43 - 124

ND = Not Detected at or above client requested reporting limit.

AROCLOR BLANK SPIKE

Method 8080

Sample ID

Blank Spike

Lab Name: Paragon Analytics, Inc.

Client Name: NMED-DOE Oversight Bureau

Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Date Extracted: 8-19-96

Lab Sample ID: IBS1 08/19/96

Date Analyzed: 8-21-96

Sample Matrix: Sodium Sulfate

Sample Weight: 30 g

Cleanup: Sulfuric Acid

Final Volume: 10 mL

Analyte	Spike Added (ug/kg)	BS Concentration (ug/kg)	BS Percent Recovery	QC Limits % Rec
Aroclor 1260	250	189	75	50 - 150

Analyte	Spike Added (ug/kg)	BSD Concentration (ug/kg)	BSD Percent Recovery	RPD	QC Limits RPD
Aroclor 1260	250	190	76	1	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery BS	% Recovery BSD	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	93	97	43 -124

AROCLORS

Method 8080

Sample ID

Reagent Blank

Lab Name: Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Lab Sample ID: FRB1 08/19/96

Date Collected: N/A
Date Extracted: 8-19-96
Date Analyzed: 8-21-96

Sample Matrix: Sodium Sulfate
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 30 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Conc (ug/kg)	Reporting Limit (ug/kg)
Aroclor 1016	ND	33
Aroclor 1221	ND	33
Aroclor 1232	ND	33
Aroclor 1242	ND	33
Aroclor 1248	ND	33
Aroclor 1254	ND	33
Aroclor 1260	ND	33

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	97	43 - 124

ND = Not Detected at or above client requested reporting limit.

AROCLORS

Method 8080

Sample ID

COCH01 Crappie

Lab Name: Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Lab Sample ID: 96-08-098-03

Date Collected: 6/12/96
Date Extracted: 8/19/96
Date Analyzed: 8/21/96

Sample Matrix: Fish
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 10 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Conc (ug/kg)	Reporting Limit (ug/kg)
Aroclor 1016	ND	100
Aroclor 1221	ND	100
Aroclor 1232	ND	100
Aroclor 1242	ND	100
Aroclor 1248	ND	100
Aroclor 1254	ND	100
Aroclor 1260	ND	100

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	70	43 - 124

ND = Not Detected at or above client requested reporting limit.

AROCLORS

Method 8080

Sample ID

COCH02 Bluegill

Lab Name: Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Lab Sample ID: 96-08-098-04

Date Collected: 6/12/96
Date Extracted: 8/19/96
Date Analyzed: 8/21/96

Sample Matrix: Fish
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 10 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Conc (ug/kg)	Reporting Limit (ug/kg)
Aroclor 1016	ND	100
Aroclor 1221	ND	100
Aroclor 1232	ND	100
Aroclor 1242	ND	100
Aroclor 1248	ND	100
Aroclor 1254	ND	100
Aroclor 1260	ND	100

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	83	43 - 124

ND = Not Detected at or above client requested reporting limit

AROCLOR MATRIX SPIKE

Method 8080

Sample ID

In House

Lab Name: Paragon Analytics, Inc.
Client Name: NMED-DOE Oversight Bureau
Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Lab Sample ID: 96-08-064-04

Date Collected: 8-08-96
Date Extracted: 8-19-96
Date Analyzed: 8-21-96

Sample Matrix: Fish
Cleanup: Sulfuric Acid
% Moisture: 0 %
Results based on wet weight

Sample Weight: 10 g
Final Volume: 10 mL
Dilution Factor: 1

Analyte	Spike Added (ug/kg)	Sample Concentration (ug/kg)	MS Concentration (ug/kg)	MS Percent Recovery	QC Limits % Rec
Aroclor 1260	750	ND	649	87	50 - 150

Analyte	Spike Added (ug/kg)	MSD Concentration (ug/kg)	MSD Percent Recovery	RPD	QC Limits RPD
Aroclor 1260	750	547	73	17	20

SURROGATE RECOVERY MS/MSD

Analyte	% Recovery MS	% Recovery MSD	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	86	90	43 - 124

ND = Not Detected

AROCLOR BLANK SPIKE

Method 8080

Sample ID

Blank Spike

Lab Name: Paragon Analytics, Inc.

Client Name: NMED-DOE Oversight Bureau

Client Project ID: 96ECO Surveillance--96-1044-ECO-SUV

Date Extracted: 8-19-96

Lab Sample ID: FBS1 08/19/96

Date Analyzed: 8-21-96

Sample Matrix: Sodium Sulfate

Sample Weight: 30 g

Cleanup: Sulfuric Acid

Final Volume: 10 mL

Analyte	Spike Added (ug/kg)	BS Concentration (ug/kg)	BS Percent Recovery	QC Limits % Rec
Aroclor 1260	250	204	82	50 - 150

Analyte	Spike Added (ug/kg)	BSD Concentration (ug/kg)	BSD Percent Recovery	RPD	QC Limits RPD
Aroclor 1260	250	178	71	14	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery BS	% Recovery BSD	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	100	89	43 -124

COMMERCE DRIVE
FORT COLLINS, CO
80524

(303) 490-1511
(303) 490-1522 FAX
1 (800) 443-1511

Chain of Custody

DATE 8-15-96 PAGE 1 OF 1

ACCESSION NUMBER: 96 08 058

PROJECT MANAGER: Ralph Ford-Schmid
COMPANY: NMED - DOE OB
ADDRESS: 2044 Galisteo Ave.
Santa Fe, NM 87501

SAMPLER: Ralph Ford-Schmid
505 827-1536 — PHONE NUMBER
505 827-1545 — FAX NUMBER

SAMPLE ID	SAMPLE DATE	SAMPLE TIME	MATRIX	LAB ID
A01 (Damsel) 2.55gm.	7/29/96	NA	BIO	01
A02 (Dragon Fly) 4.87gm	7-30/96	NA	BIO	02
OCH01 Crappie	6/12/96	NA	BIO	03
OCH02 Bluegill	6/12/96	NA	BIO	04

ANALYSIS REQUESTED

SAMPLE ID	9070/9071 — Oil & Grease	418.1 — TRPH	8015 Mod — Gasoline	8015 Mod — Diesel	8015/8020 — Gasoline/BTEX	8020 — BTEX	8240 — GC/MS VOC's	8270 — GC/MS SVOC's	8080 — Pesticides/PCB's	8080 — PCB Only	8310 — PNA's	8150 — Herbicides	8140 — OP Pesticides	TOX — EOX — TX	Total Metals:	TCLP	Gross Alpha	Gross Beta	Radium 226	Radium 228	Tritium	Strontium	% Moisture							Number of Containers
A01										X																				1
A02										X																				1
OCH01										X																				1
OCH02										X																				1

PROJECT INFORMATION
PROJECT NUMBER: 96-1044-ECO-SUV
PROJECT NAME: 96 ECO Surveillance
PURCHASE ORDER NUMBER:
TAT: ☐ STANDARD ☐ RUSH DUE: _____

SAMPLE RECEIPT
TOTAL NUMBER OF CONTAINERS
CHAIN OF CUSTODY SEALS Y/N
SEALS INTACT? Y/N/NA
RECEIVED GOOD COND./COLD

SAMPLE DISPOSAL: ☐ HAZ WASTE $5.00 ☐ RAD CHEM $15.00 ☐ RETURN

Comments: Damsel flies - 2.55 gms (Approx 35)
Dragon flies 4.87 gms (7)
Bluegill 1 fish, filleted, 160 mm
Crappie 4 fish, filleted, 186 mm (avg)

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Time: 2:19	Signature: Time:	Signature: Time:
Printed Name: Ralph Ford-Schmid Date: 8/15/96	Printed Name: Date:	Printed Name: Date:
Company: NMED	Company: FDX	Company:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: 3.**
Signature: Time:	Signature: Time: 930	Signature: Time:
Printed Name: Date:	Printed Name: H. Jl Date: 8/16/96	Printed Name: Date:
Company: FDX	Company: PAI	Company:

DISTRIBUTION: White, Canary - ANALYTICAL TECHNOLOGIES, INC • Pink ORIGINATOR

Paragon Analytics - Fort Collins, Colorado

CONDITION OF SAMPLE UPON RECEIPT

CLIENT: NMED SHIPPING CONTAINER #: Cooler

WORKORDER NO. 96-08-098 INITIALS: DK DATE: 8/16/96

1.	Does this project require special handling according to NEESA. Level 3, or CLP protocols? If yes, complete a. and b. a. Cooler Temperature_____ b. Lot No's._____ c. Airbill Number _____		Yes	(No)
2.	Are custody seals on the cooler intact? If so, how many _____	(N/A)	Yes	No
3.	Are custody seals on sample containers intact?	(N/A)	Yes	No
4.	Is there a Chain of Custody (COC) or other representative documents, letters or shipping memos?		(Yes)	No
5.	Is the COC complete? Relinquished: Yes ✓ No__ Requested Analysis: Yes ✓ No__		(Yes)	No
6.	Is the COC in agreement with the samples received? No. of Samples: Yes ✓ No__ Sample ID's: Yes ✓ No__ Matrix: Yes ✓ No__ No. of Containers: Yes ✓ No__		(Yes)	No
7.	Are the samples preserved correctly?	(N/A)	Yes	No
	Is there enough sample? If so, are they in the proper containers?		(Yes)	(No)
	Are all samples within holding times for the requested analyses?		Yes	No
10.	Were the sample received on ice?	N/A	(Yes)	No
11.	Were all sample containers received intact? (not broken or leaking, etc.)		(Yes)	No
12.	Are samples requiring no headspace, headspace free?	(N/A)	Yes	No
13.	Do the samples require quarantine?		Yes	(No)
14.	Do samples require ATI disposal?		(Yes)	No
15.	Did the client return any unused bottles?		Yes	(No)

Describe "NO" items (except No's 1, 13, &14): (8) unknown if Enough - only small amounts

Was the client contacted? Yes____ No X

If yes, Date:_____ Name of person contacted:_____

Describe actions taken or client instructions:_____

Group Leader's Signature:_____ Date:_____

Cooler Temperature: -2°c

ATI FRM 201FC5 (2/21/96)