UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

0000002

EPA Region 5 Records Ctr.

223406

REPLY TO THE ATTENTION OF
DT-8J

JUN 09 2000

MEMORANDUM

SUBJECT: PCB Analysis Results - Ohio Edison
CRL Data Set No. TOSB20000031
Sample No. 2000TS09

FROM: David A. Payne, Chemist
Toxics Program Section

TO: Kendall Moore, Environmental Scie
Pesticides and Toxics Enforcement Section

OPTIONAL FORM 99 (7-90)
FAX TRANSMITTAL # of pages ▶ 11

To Joe Freedle	From Kendall Moore
Dept./Agency	Phone #
Fax # 440-250-1750	Fax # 312-353-4788

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Sima Labs International, Merrillville, Indiana has completed the determinations of PCBs in the subject data set. The data set is for two solids/sludges (S01 and S02) and one multiphase solid/water sample (S03). Separate PCB concentrations were determined for the solid/sludge phase and water phase of Sample S03.

PCBs were identified as Aroclor 1260 at high concentrations in all samples submitted. During initial sample preparation steps, the laboratory added surrogate and matrix spike compounds at a concentration level different than specified by their contract. This was corrected by extracting separate portions of the solid samples with the correct spike concentrations. For the two solid type samples (S01 and S02) both the initial sample preparation and second sample preparation PCB results are reported. The second sample preparation is noted as "Reanalysis" in the PCB data reports. Note that Sample S01 contained chunks of concrete or stone causing the soil/sludge to be heterogeneous and the two PCB results to differ by 20-30%. Both PCB results reported for Sample S01 are large.

Sample S03 was multiphasic with a solid/sludge layer and a definite aqueous layer. The aqueous layer contained a certain amount of "oily" suspended solids. The two phases were separated and individually tested, consistent with requirements of 40 CFR 761. Concentrations of PCBs in each phase are reported. The solid/sludge layer was extracted a second time, as for Samples S01 and S02, with the second PCB result noted as "Reanalysis".

The extract of the aqueous layer provided a concentration less than the lowest concentration of the instrument calibration curve. Aroclor 1260 is definitely present, but its measured concentration is probably biased high by 20-30%. This is why a data flag "J" is added to the aqueous layer PCB result, as being detected below Reporting Limits. The aqueous layer

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definitely contained more than 2 or 3 mg/l Aroclor 1260. Insufficient sample volume was available for reanalysis of the aqueous layer of Sample S03.

Aroclor 1260 is reported on a dry weight basis for the solid/sludge Samples S01 and S02 as well as for the solid/sludge phase of Sample S03. PCB results are appropriate and acceptable for these two solid samples and for the Sample S03 solid phase.

PCB results, the Case Narrative and a copy of the Chain-of-Custody Record are attached.

Attachments

SIMALABS
INTERNATIONAL

June 06, 2000

David Payne
Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

RE: 2000TS09 / Ohio Edison **Work Order: ME0005031**

Dear David Payne,

Enclosed are the results for the 3 samples we received on Tuesday, May 02, 2000 for the analyses presented in the following report.

All data included has been reviewed for and meets all project specific and Quality Control requirements, unless otherwise noted. In addition, a complete Quality Assurance data package has been included per your request.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
SIMALABS International

Carla E. Svetich
Project Manager

Enclosures

250 West 84th Drive, Merrillville, IN 46410 TEL 800 536 8379 TEL 219 769 8378 FAX 219 769 1664

INTERNATIONAL

SIMALABS International

Date: *Tuesday, June 06, 2000*

CLIENT: Environmental Protection Agency
Project: 2000TS09 / Ohio Edison
Lab Order: ME0005031
Date Received: 5/2/00

Work Order/ Sample Delivery Group Summary

Lab Sample ID	Client Sample ID	Client Description	Collection Date
ME0005031-01A	S01	South Sump Break	25-Apr-00
ME0005031-02A	S03	South Sump 1	25-Apr-00
ME0005031-03A	S02	Sump 4	25-Apr-00

RECEIVED
JUN 07 2000
TOXICS PROGRAM SECTION
Waste, Pesticides & Toxics Division
U.S. EPA – REGION 5

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INTERNATIONAL

ANALYTICAL RESULTS

Date: *Tuesday, June 06, 2000*

Client:	Environmental Protection Agency	***Client Project:***	2000TS09 / Ohio Edison
		Work Order:	ME0005031
Client Sample ID:	S01	***SIMALABS ID:***	ME0005031-01A
Sample Description:	South Sump Break		
Sample Matrix:	Soil		
Collection Date:	04/25/00		
Date Received:	05/02/00		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date Analyzed
PCB'S		Method: SW8082		Prep Date: 5/26/00		Analyst: CMC	
(REANALYSIS)							
Aroclor 1016	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1221	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1232	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1242	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1248	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1254	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1260	A	5700	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1262	A	ND	930		mg/Kg-dry	5,000	05/27/00
Aroclor 1268	A	ND	930		mg/Kg-dry	5,000	05/27/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	5,000	05/27/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	5,000	05/27/00
PCB'S		Method: SW8082		Prep Date: 5/9/00		Analyst: CMC	
Aroclor 1016	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1221	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1232	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1242	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1248	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1254	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1260	A	3800	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1262	A	ND	930		mg/Kg-dry	5,000	05/18/00
Aroclor 1268	A	ND	930		mg/Kg-dry	5,000	05/18/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	5,000	05/18/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	5,000	05/18/00

Samp Type: A - Analytic, S - Surrogate, I - Internal Standard

Qual: ND - Not Detected at the Reporting Limit
B - Detected in the associated Method Blank
* - Exceeds Maximum Contaminant Level
J - Detected below Reporting Limits (Metals / Organics)

DF - Dilution Factor
S - Spike recovery outside recovery limits
SD - Value diluted out
R - RPD outside accepted recovery limits
E - Value above quantitation range
I - Matrix Interference

250 West 84th Drive, Merrillville, IN 46410 TEL 800.536.8379 TEL 219.769.8378 FAX 219.769.1664

SIMALABS

INTERNATIONAL

ANALYTICAL RESULTS

Date: *Tuesday, June 06, 2000*

Client: Environmental Protection Agency

Client Project: 2000TS09 / Ohio Edison
Work Order: ME0005031
SIMALABS ID: ME0005031-03A

Client Sample ID: S02
Sample Description: Sump 4
Sample Matrix: Soil
Collection Date: 04/25/00
Date Received: 05/02/00

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date Analyzed
PCB'S		Method: SW8082		Prep Date: 5/26/00		Analyst: CMC	
(REANALYSIS)							
Aroclor 1016	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1221	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1232	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1242	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1248	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1254	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1260	A	2000	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1262	A	ND	840		mg/Kg-dry	5,000	05/27/00
Aroclor 1268	A	ND	840		mg/Kg-dry	5,000	05/27/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	5,000	05/27/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	5,000	05/27/00
PCB'S		Method: SW8082		Prep Date: 5/9/00		Analyst: CMC	
Aroclor 1016	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1221	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1232	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1242	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1248	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1254	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1260	A	2200	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1262	A	ND	830		mg/Kg-dry	5,000	05/18/00
Aroclor 1268	A	ND	830		mg/Kg-dry	5,000	05/18/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	5,000	05/18/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	5,000	05/18/00

Samp Type: A - Analyte, S - Surrogate, I - Internal Standard
Qual: ND - Not Detected at the Reporting Limit
B - Detected in the associated Method Blank
* - Exceeds Maximum Contaminant Level
J - Detected below Reporting Limits (Metals / Organics)

DF - Dilution Factor
S - Spike recovery outside recovery limits
SD - Value diluted out
R - RPD outside accepted recovery limits
E - Value above quantitation range
I - Matrix Interference

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INTERNATIONAL

ANALYTICAL RESULTS

Date: *Tuesday, June 06, 2000*

Client:	Environmental Protection Agency	***Client Project:***	2000TS09 / Ohio Edison
		Work Order:	ME0005031
Client Sample ID:	S03	***SIMALABS ID:***	ME0005031-02A
Sample Description:	South Sump 1		
Sample Matrix:	Aqueous/Solid		
Collection Date:	04/25/00		
Date Received:	05/02/00		

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date Analyzed
PCB'S		Method: SW8082		Prep Date: 5/26/00		Analyst: JLN	
Aroclor 1016	A	ND	10		mg/L	200	05/27/00
Aroclor 1221	A	ND	10		mg/L	200	05/27/00
Aroclor 1232	A	ND	10		mg/L	200	05/27/00
Aroclor 1242	A	ND	10		mg/L	200	05/27/00
Aroclor 1248	A	ND	10		mg/L	200	05/27/00
Aroclor 1254	A	ND	10		mg/L	200	05/27/00
Aroclor 1260	A	5.2	10	J	mg/L	200	05/27/00
Aroclor 1262	A	ND	10		mg/L	200	05/27/00
Aroclor 1268	A	ND	10		mg/L	200	05/27/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	200	05/27/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	200	05/27/00
PCB'S		Method: SW8082		Prep Date: 5/26/00		Analyst: CMC	
(REANALYSIS)							
Aroclor 1016	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1221	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1232	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1242	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1248	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1254	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1260	A	77000	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1262	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Aroclor 1268	A	ND	7600		mg/Kg-dry	50,000	05/27/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	50,000	05/27/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	50,000	05/27/00

Samp Type: A - Analyte, S - Surrogate, I - Internal Standard

Qual: ND - Not Detected at the Reporting Limit
B - Detected in the associated Method Blank
* - Exceeds Maximum Contaminant Level
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INTERNATIONAL

ANALYTICAL RESULTS

Date: *Tuesday, June 06, 2000*

Client: Environmental Protection Agency

Client Project: 2000TS09 / Ohio Edison
Work Order: ME0005031

Client Sample ID: S03
SIMALABS ID: ME0005031-02A
Sample Description: South Sump 1
Sample Matrix: Aqueous/Solid
Collection Date: 04/25/00
Date Received: 05/02/00

Analyses	Samp Type	Result	Reporting Limit	Qual	Units	DF	Date Analyzed
PCB'S		Method: SW8082		Prep Date: 5/9/00		Analyst: CMC	
Aroclor 1016	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1221	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1232	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1242	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1248	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1254	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1260	A	63000	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1262	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Aroclor 1268	A	ND	7600		mg/Kg-dry	50,000	05/18/00
Surr: Decachlorobiphenyl	S	0	50-150	SD	% REC	50,000	05/18/00
Surr: Tetrachloro-m-xylene	S	0	50-150	SD	% REC	50,000	05/18/00

Samp Type: A - Analyte, S - Surrogate, I - Internal Standard
Qual: ND - Not Detected at the Reporting Limit
B - Detected in the associated Method Blank
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Case Narrative
PCBs Analyses

Client: Environmental Protection Agency-Region 5

Project: 2000TS09/ Ohio Edison

Work Order #: ME0005031

The soil samples were extracted by sonication Method 3550 and the water fraction was extracted by liquid/liquid extraction Method 3510 and analyzed by SW-846 Method 8082 for Polychlorinated biphenyls (PCBs) by GC/ECD gas chromatography.

The samples were collected on 04/25/00. The soils were initially extracted on 5/09/00 and initially analyzed on 5/18/00. Due to laboratory error,all samples in the initial extraction batch were spiked with surrogate solutions that were too low a concentration (10 times too low). The LCS also had the spike solution ten times too low. When this error was discovered, the entire batch was re-extracted and reanalyzed. Both the original and re-extraction/reanalyses are reported for all soil samples, and are comparable. The re-extracted LCS was within control limits for Ar1260.

The action level for the soil samples was 50 ppm. Sample extraction parameters were established to obtain a sample concentration of 5 to 100 ppm, wet weight. The LCS and the MS and MSD were spiked with AR1260 at a level of 50 ppm. The initial LCS was spiked with AR1260 at a level of 5 ppm, wet weight. Both LCSs were within control limits for Ar1260.

The sample, MB, LCS, MS and MSD were all spiked with two surrogates. All recoveries were within QC limits for the QC samples Due to necessary dilutions, the surrogates were diluted out in the samples.

Sample SO3 had a water fraction which was extracted on 5/15/00. Due to laboratory error, all samples in the extraction batch were spiked with surrogate solutions that were too low a concentration (10 times too low). The LCS also had the spike solution ten times too low. When this error was discovered, the MB and LCS were re-extracted. Due to limited sample, the water fraction could not be re-extracted. The associated LCS was within control limits for Ar1260.

All standards associated with these samples met Method 8082 criteria. The laboratory runs initial calibration standards for all PCBs from AR1016 thru AR1260. The raw data from the AR1016/1260 initial linearity standards is included in this data package. The raw data from all the CCVs is also included in this package.

Arochlor 1260 was detected in all samples.

Nancy L Tavitas 6/06/00

Nancy L Tavitas
Organics Manager

Date

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

PCU 5/4/00

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: 20 COTS 09
PROJECT NAME: Ohio Edison
Activity Code: 90102C
SAMPLERS: (Print Name and Sign) Randall Moore

TOSG 20000031

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: PCB					TAG NUMBERS
501	4/25	1:00		X	South Sump Basin	1	✓			0050310	1A	5-017993
SD23	↓	1:30		X	South Sump 1	1	✓				02A	~~5-017985~~ 5-017990 RP 4-27-00
SD2 RP 4-27-00		2:30		X	Sump 4	1	✓			☆	03A	~~5-017990~~ 5-017989 RP 4-27-00

Action Level 50 ppm.
SD3 ~~SD2~~ is multiphasic. RP 4-27-00
check with Dave Payne on separation of phases prior to analysis of SD3

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	4-27-00 3:30pm	Sylvia Griffin 4/27/00
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Sylvia Griffin	5-2-00 3.10pm	[signature] 5/2/00 15:[illegible]
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) / Date / Time
		[signature] 4/28/00 18:02

Ship To:
ATTN:
Airbill Number
Chain of Custody Seal Numbers

Distribution: White - Accompanies Shipment; Pink - Coordinator Field Files; Yellow - Laboratory

5/1/00 Nicole Taylor 5/1/00 10:00

50107