



HEARTLAND ENVIRONMENTAL SERVICES, INC.

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N60478.AR.000132
NWS EARLE
5090.3a

September 4, 1991

To: John Williams
Roy F. Weston, Inc.
One Weston Way
Lionville, PA

From: Paul B Humburg
Project Manager
Heartland ESI

Subject: Submittal of Analytical Data Validation of the Pesticide/PCB analytical results of sampling conducted at the Naval Weapons Station/Earle, Colts Neck, NJ on March 6, 1991. There was one (1) water sample and eight (8) sediment samples with one soil MS/MSD which were analyzed by the Roy F. Weston - Lionville Laboratory included in this analytical batch.

Samples Reviewed Water Samples

<u>Field ID</u>	<u>Lab ID</u>
04-001-D201	9103L829-020

Soil Samples

<u>Field ID</u>	<u>Lab ID</u>	<u>Field ID</u>	<u>Lab ID</u>
04-001-D001	9103L829-018	04-004-D001	9103L829-011
04-001-D101	9103L829-019	10-001-D001	9103L829-021
04-002-D001	9103L829-015	10-002-D001	9103L829-022
04-003-D001	9103L829-013	10-003-D001	9103L829-023
04-003-D001MS	9103L829-013MS		
04-003-D001MSD	9103L829-013MSD		

Heartland ESI has reviewed the data from the samples listed above for the Pesticide/PCB Target Compound List (TCL) based upon analytical and quality assurance requirements specified in the EPA CLP Statement of Work (SOW) 2/88 and 9/88 revisions, using the EPA Region II Standard Operating Procedure (SOP) HW-6, Revision 7, 3/90. Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to the requirements and deliverables of the U.S. EPA CLP and Region II. This screening assumes that the analytical results are correct as reported and merely provides an interpretation of the reported quality control results.

Individual analytical fractions were reviewed as follows:

- * Pesticide/PCB by Christopher D. Scarpellino with secondary review by Paul B. Humburg

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DATA ASSESSMENT NARRATIVE
PESTICIDE/PCB ANALYSIS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, GC instrument performance, initial and continuing calibrations, analytical sequence, blank analysis results, surrogate recoveries, and MS/MSD results. All comments made within this report should be considered when examining the analytical results (Form Is). Please refer the specific findings found in each category to the Summary of Data Qualification table.

In general, the laboratory performance was fair. The chromatography was generally of fair quality, only partially due to the nature of the soil/sediment samples. All analyses were performed on packed columns utilizing peak heights for compound quantitation.

Holding Times

All samples were extracted and analyzed within holding times.

GC Instrument Performance

The peak for 4,4'-DDD resulting from standards analyses was outside the laboratory provided retention time windows (RTWs) for the confirmation sequence containing the soil samples. The sample chromatograms were carefully reviewed with slightly expanded RTWs.

All percent breakdowns were less than 20%. The DBC retention time differences (%Ds) were within QC limits for all standards, samples and blanks.

Initial Calibration

The %RSD for Aldrin in the initial calibration of the sample quantitation sequence exceeded the QC limit. No positive results were reported for this compound, or any other single component pesticide, from this sequence. This calibration does not impact the reported sample results.

Continuing Calibrations

Specific Finding

1. The continuing calibration associated with samples 04-003-D001 and 04-004-D001 showed decreased sensitivity for Lindane, Endo I and 4,4'-DDT (> 15% Difference). The non-detect results are qualified as estimated, "UJ".



DATA ASSESSMENT NARRATIVE - continued - Page 2

Blanks

No target compounds were confirmed in either the water method blank or the reported soil method blank.

Surrogate Recoveries

All DBC surrogate recoveries were within the required QC limits.

Matrix Spike/Matrix Spike Duplicate

No qualifications were required based on the Recoveries or RPDs reported for the soil MS/MSD, or the reported water BS/BSD.

Analyte Identification/Quantitation

Specific Finding

2. All soil samples, with the exception of 10-002-D001, exhibited significant negative peaks in the primary analysis making the reported quantitation limits for Endosulfan II, p,p'-DDD, and p,p'-DDT extremely qualified.
3. The laboratory incorrectly calculated the reported result for AR1260 in sample 04-004-D001. The laboratory included a peak for the standard reponse which was not present or was completely overwhelmed by a negative baseline deflection in the sample. This lack of identified peak in the sample at or near the 11.286 RT may be due to changes in the aroclor which occur through environmental degradation or may simply be masking due to the baseline deflection, or some combination of both. It must be noted that the missing sample peak should be of significant height. If the peaks absence is due entirely to the baseline deflection also noted previously, then probably the single component pesticides whose peaks occur during this deflection should be rejected entirely.

Overall Assessment

The overall quality of the data package was fair. The reported results for the samples are qualified as described in this validation report.



QUALIFICATION CODES

- U = Not detected
 - J = Estimated value
 - UJ = Reported quantitation limit is qualified as estimated
 - R = Result is rejected and unusable
 - N = Result is negated, do not consider result in sample
 - NJ = Presumptive evidence for the presence of the material at an estimated value
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Heartland ESI specific findings are footnoted numerically on the Form Is in this data validation report. These specific finding footnotes refer to findings listed in the Data Assessment Narrative which describe the reasons for qualifications applied to the data.



SUMMARY OF DATA QUALIFICATIONS

<u>SAMPLE ID</u>	<u>ANALYTE ID</u>	<u>DL</u>	<u>QL</u>	<u>SPECIFIC FINDINGS</u>
04-003-D001 & 04-004-D001(DL)	Lindane, Endo I & DDT	U	UJ	1
All Sediments except 10-002-D001	Endo II, DDD, & DDT	U	UJ	2
04-004-D001	AR 1260	+	+J	3

* DL denotes the Form I laboratory qualifier/value
+ in the DL column denotes a positive result
- in the DL column denotes a negative result
QL denotes the qualifier used by Heartland ESI

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1D

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

04-004-D001

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-011

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 04219113.35

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 40 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.5 Dilution Factor: 5.00

SW

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

6/20/91

CAS NO.	COMPOUND	CONCENTRATION UNITS:		
319-84-6	Alpha-BHC	66	U	
319-85-7	Beta-BHC	66	U	
319-86-8	Delta-BHC	66	U	
58-89-9	gamma-BHC (Lindane)	66	U	1
76-44-8	Heptachlor	66	U	
309-00-2	Aldrin	66	U	
1024-57-3	Heptachlor epoxide	66	U	
959-98-8	Endosulfan I	66	U	1
60-57-1	Dieldrin	130	U	
72-55-9	4,4'-DDE	130	U	
72-20-8	Endrin	130	U	
33213-65-9	Endosulfan II	130	U	2
72-54-8	4,4'-DDD	130	U	2
1031-07-8	Endosulfan sulfate	130	U	
50-29-3	4,4'-DDT	130	U	1, 2
72-43-5	Methoxychlor	660	U	
53494-70-5	Endrin ketone	130	U	
5103-71-9	alpha-Chlordane	660	U	
5103-74-2	gamma-Chlordane	660	U	
8001-35-2	Toxaphene	1300	U	
12674-11-2	Aroclor-1016	660	U	
11104-28-2	Aroclor-1221	660	U	
11141-16-5	Aroclor-1232	660	U	
53469-21-9	Aroclor-1242	660	U	
12672-29-6	Aroclor-1248	660	U	
11097-69-1	Aroclor-1254	1300	U	
11096-82-5	Aroclor-1260	1400	U	3

1600

1D
PESTICIDE ORGANICS ANALYSIS SHEET

0000028 CLIENT SAMPLE NO.

04-003-D001

Lab Name: Proy. F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-013

Sample wt/vol: 31.8 (g/mL) G Lab File ID: 04219113.34

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 34 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	11	U
319-85-7	Beta-BHC	11	U
319-86-8	Delta-BHC	11	U
58-89-9	gamma-BHC (Lindane)	11	U ✓ 1
76-44-8	Heptachlor	11	U
309-00-2	Aldrin	11	U
1024-57-3	Heptachlor epoxide	11	U
959-98-8	Endosulfan I	11	U ✓ 1
60-57-1	Dieldrin	23	U
72-55-9	4,4'-DDE	23	U
72-20-8	Endrin	23	U
33213-65-9	Endosulfan II	23	U ✓ 2
72-54-8	4,4'-DDD	23	U ✓ 2
1031-07-8	Endosulfan sulfate	23	U
50-29-3	4,4'-DDT	23	U ✓ 1, 2
72-43-5	Methoxychlor	110	U
53494-70-5	Endrin ketone	23	U
5103-71-9	alpha-Chlordane	110	U
5103-74-2	gamma-Chlordane	110	U
8001-35-2	Toxaphene	230	U
12674-11-2	Aroclor-1016	110	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U

*544
6/20/91*

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

04-002-D001

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-015

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 04219113.15

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 50 ^{close} dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.5 Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

*5214
6/20/91*

319-84-6	Alpha-BHC	16	U
319-85-7	Beta-BHC	16	U
319-86-8	Delta-BHC	16	U
58-89-9	gamma-BHC (Lindane)	16	U
76-44-8	Heptachlor	16	U
309-00-2	Aldrin	16	U
1024-57-3	Heptachlor epoxide	16	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	32	U
72-55-9	4,4'-DDE	32	U
72-20-8	Endrin	32	U
33213-65-9	Endosulfan II	32	U J
72-54-8	4,4'-DDD	32	U J
1031-07-8	Endosulfan sulfate	32	U
50-29-3	4,4'-DDT	32	U J
72-43-5	Methoxychlor	160	U
53494-70-5	Endrin ketone	32	U
5103-71-9	alpha-Chlordane	160	U
5103-74-2	gamma-Chlordane	160	U
8001-35-2	Toxaphene	320	U
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	160	U
53469-21-9	Aroclor-1242	160	U
12672-29-6	Aroclor-1248	160	U
11097-69-1	Aroclor-1254	320	U
11096-82-5	Aroclor-1260	320	U

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1D
PESTICIDE ORGANICS ANALYSIS SHEET

0000039

CLIENT SAMPLE NO.

04-001-D001

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-018

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 04219113.16

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 24 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.5 Dilution Factor: 1.00

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/Kg

CAS NO.	COMPOUND	CONCENTRATION UNITS
319-84-6	Alpha-BHC	10 U
319-85-7	Beta-BHC	10 U
319-86-8	Delta-BHC	10 U
58-89-9	gamma-BHC (Lindane)	10 U
76-44-8	Heptachlor	10 U
309-00-2	Aldrin	10 U
1024-57-3	Heptachlor epoxide	10 U
959-98-8	Endosulfan I	10 U
60-57-1	Dieldrin	20 U
72-55-9	4,4'-DDE	20 U
72-20-8	Endrin	20 U
33213-65-9	Endosulfan II	20 U J 2
72-54-8	4,4'-DDD	20 U J 2
1031-07-8	Endosulfan sulfate	20 U
50-29-3	4,4'-DDT	20 U J 2
72-43-5	Methoxychlor	100 U
53494-70-5	Endrin ketone	20 U
5103-71-9	alpha-Chlordane	100 U
5103-74-2	gamma-Chlordane	100 U
8001-35-2	Toxaphene	200 U
12674-11-2	Aroclor-1016	100 U
11104-28-2	Aroclor-1221	100 U
11141-16-5	Aroclor-1232	100 U
53469-21-9	Aroclor-1242	100 U
12672-29-6	Aroclor-1248	100 U
11097-69-1	Aroclor-1254	200 U
11096-82-5	Aroclor-1260	200 U

JWM
4/20/91

0000044

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

04-001-D101

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-019

Sample wt/vol: 31.7 (g/mL) G Lab File ID: 04219113.17

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 21 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

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

*5413
1/20/91*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	<u>ug/Kg</u>
319-84-6	Alpha-BHC	9.5	U
319-85-7	Beta-BHC	9.5	U
319-86-8	Delta-BHC	9.5	U
58-89-9	gamma-BHC (Lindane)	9.5	U
76-44-8	Heptachlor	9.5	U
309-00-2	Aldrin	9.5	U
1024-57-3	Heptachlor epoxide	9.5	U
959-98-8	Endosulfan I	9.5	U
60-57-1	Dieldrin	19	U
72-55-9	4,4'-DDE	19	U
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U J
72-54-8	4,4'-DDD	19	U J
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	19	U J
72-43-5	Methoxychlor	95	U
53494-70-5	Endrin ketone	19	U
5103-71-9	alpha-Chlordane	95	U
5103-74-2	gamma-Chlordane	95	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	95	U
11104-28-2	Aroclor-1221	95	U
11141-16-5	Aroclor-1232	95	U
53469-21-9	Aroclor-1242	95	U
12672-29-6	Aroclor-1248	95	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

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0000049

1D

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

04-001-D201

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: WATER Lab Sample ID: 9103L829-020

Sample wt/vol: 990 (g/mL) ML Lab File ID: 04179113.15

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. dec. Date Extracted: 03/08/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 04/17/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

5419
4/20/91

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L -	
319-84-6	Alpha-BHC	0.050	U
319-85-7	Beta-BHC	0.050	U
319-86-8	Delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

10-001-D001

Lab Name: Roy F. Weston, Inc. Work Ord r: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-021

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 04219113.20

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 19 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

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

SAM
6/20/91

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	<u>ug/Kg</u>
319-84-6	Alpha-BHC	9.9	U
319-85-7	Beta-BHC	9.9	U
319-86-8	Delta-BHC	9.9	U
58-89-9	gamma-BHC (Lindane)	9.9	U
76-44-8	Heptachlor	9.9	U
309-00-2	Aldrin	9.9	U
1024-57-3	Heptachlor epoxide	9.9	U
959-98-8	Endosulfan I	9.9	U
60-57-1	Dieldrin	20	U
72-55-9	4,4'-DDE	20	U
72-20-8	Endrin	20	U
33213-65-9	Endosulfan II	20	U J
72-54-8	4,4'-DDD	20	U J
1031-07-8	Endosulfan sulfate	20	U
50-29-3	4,4'-DDT	20	U J
72-43-5	Methoxychlor	99	U
53494-70-5	Endrin ketone	20	U
5103-71-9	alpha-Chlordane	99	U
5103-74-2	gamma-Chlordane	99	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	99	U
11104-28-2	Aroclor-1221	99	U
11141-16-5	Aroclor-1232	99	U
53469-21-9	Aroclor-1242	99	U
12672-29-6	Aroclor-1248	99	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U

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0000059

1D
PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

10-002-D001

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-022

Sample wt/vol: 31.2 (g/mL) G Lab File ID: 04219113.21

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 21 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.00

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

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4/20/91*

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	<u>ug/Kg</u>
319-84-6	Alpha-BHC	9.7	U
319-85-7	Beta-BHC	9.7	U
319-86-8	Delta-BHC	9.7	U
58-89-9	gamma-BHC (Lindane)	9.7	U
76-44-8	Heptachlor	9.7	U
309-00-2	Aldrin	9.7	U
1024-57-3	Heptachlor epoxide	9.7	U
959-98-8	Endosulfan I	9.7	U
60-57-1	Dieldrin	19	U
72-55-9	4,4'-DDE	19	U
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U
72-54-8	4,4'-DDD	19	U
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	19	U
72-43-5	Methoxychlor	97	U
53494-70-5	Endrin ketone	19	U
5103-71-9	alpha-Chlordane	97	U
5103-74-2	gamma-Chlordane	97	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	97	U
11104-28-2	Aroclor-1221	97	U
11141-16-5	Aroclor-1232	97	U
53469-21-9	Aroclor-1242	97	U
12672-29-6	Aroclor-1248	97	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

0000064

1D

CLIENT SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS SHEET

10-003-D001

Lab Name: Roy F. Weston, Inc. Work Order: 1771-15-03-0000

Client: NAVAL WEAPONS/COLTSNECK

Matrix: SEDIMENT Lab Sample ID: 9103L829-023

Sample wt/vol: 30.8 (g/mL) G Lab File ID: 04219113.22

Level: (low/med) LOW Date Received: 03/06/91

% Moisture: not dec. 22 dec. Date Extracted: 03/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/22/91

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.00

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

CAS NO.

COMPOUND

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	
319-84-6	Alpha-BHC	10	U
319-85-7	Beta-BHC	10	U
319-86-8	Delta-BHC	10	U
58-89-9	gamma-BHC (Lindane)	10	U
76-44-8	Heptachlor	10	U
309-00-2	Aldrin	10	U
1024-57-3	Heptachlor epoxide	10	U
959-98-8	Endosulfan I	10	U
60-57-1	Dieldrin	20	U
72-55-9	4,4'-DDE	20	U
72-20-8	Endrin	20	U
33213-65-9	Endosulfan II	20	U J 2
72-54-8	4,4'-DDD	20	U J 2
1031-07-8	Endosulfan sulfate	20	U
50-29-3	4,4'-DDT	20	U J 2
72-43-5	Methoxychlor	100	U
53494-70-5	Endrin ketone	20	U
5103-71-9	alpha-Chlordane	100	U
5103-74-2	gamma-Chlordane	100	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	100	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U

Handwritten: JCL 4/20/91

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: RFW# 9103L829

LAB: Roy F. Weston - Lionville

SITE: NWS/Earle - Colts Neck, NJ.

1.0 Data Completeness and Deliverables

YES NO N/A

1.1 Have any missing deliverables been received and added to the data package.

ACTION: Call lab for explanation / resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-compliance" section of reviewer narrative.

1.2 Was SMD OCS checklist included with package?

2.0 Cover Letter/Case Narrative

2.1 Is the Narrative or Cover Letter present?

2.2 Are Case Number and/or SAS number contained in the Narrative or Cover Letter?

3.0 Data Validation Checklist

The following checklist is divided into three parts. Part A is filled out if the data package contains any VOA analyses, Part B for any BVA analyses and Part C for Pesticide/PCBs.

Does this package contain:

VOA data?

BVA data?

Pesticide/PCB data?

ACTION: Complete corresponding parts of checklist.

PART C: PESTICIDE/PCB ANALYSES

YES NO N/A

1.0 Traffic Reports and Laboratory Narrative

1.1 Are the Traffic Report Forms present for all samples?

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special notations affecting the quality of the data?

ACTION: Use professional judgement to evaluate the effect on the quality of the data.

ACTION: If any sample analyzed as a soil contains more than 50% water, all data should be flagged as estimated (J).

*04-002-D001
 contained = 50% moisture
 reported on extraction record
 as 50.0*

not flagged, not > 50%

1.0 Holding Times

2.1 Have any PEST/PCB holding times, determined from date of collection to date of extraction, been exceeded?

Samples for PEST/PCB analysis, both soils and waters, must be extracted within seven days of the date of collection. Extracts must be analyzed within 40 days of the date of extraction.

1.0 Surrogate Recovery (Form II)

3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices:

- a. Low Water
- b. Med Water
- c. Low Soil
- d. Med Soil

3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summaries for each of the following matrices:

- a. Low Water
- b. Med Water
- c. Low Soil
- d. Med Soil

YES NO N/A

ACTION: Call lab for explanation / resubmittals. If missing deliverables are unavailable, document effect on data under "Conclusions" section of reviewer narrative.

3.3 Were outliers marked correctly with an asterisk?

ACTION: Circle all outliers in red.

3.4 Was surrogate (DBC) recovery outside of the contract specification for any sample or blank?

ACTION: No qualification is done if surrogates are diluted beyond detection. If recovery is below contract limit (but above zero), flag all results for that sample "J". If recovery is zero, flag positive results "J" and non-detects "R". If recovery for the blank is zero, flag non-detects for all associated samples "R". If recovery is above contract limit, flag all positive results for that sample "J", unless in the reviewers professional judgement the high recovery is due to co-eluting interference (check the associated blank - if recovery is high there also, flag the sample data).

3.5 Are there any transcription/calculation errors between raw data and Form II?

ACTION: If large errors exist, call lab for explanation / resubmittal, make any necessary corrections and note errors under "Conclusions".

4.0 Matrix Spikes (Form III)

4.1 Is the Matrix Spike Duplicate/Recovery Form (Form III) present?

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:

a. Low Water

Blank Spike / BS Duplicate

b. Med Water

c. Low Soil

d. Med Soil

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many PEST/PCB spike recoveries are outside QC limits?

Water

Soils

2 out of 12

0 out of 12

00017

YES NO N/A

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water Soils
1 out of 6 0 out of 6

ACTION: If MS and MSD both have less than zero recovery for an analyte, negative results for that analyte should be rejected, and positive results should be flagged "J". The above applies only to the sample used for MS/MSD analysis. Use professional judgement in applying this criterion to other samples.

*high Recoveries for Endrin in water BS/BSD
Duplicate RPD out for Aldrin in BS/BSD for water*

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present?

5.2 Frequency of Analysis: for the analysis of Pesticide TCL compounds, has a reagent/method blank been analyzed for each set of samples or every 20 samples of similar matrix (low water, med water, low soil, medium soil), whichever is more frequent?

5.3 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs?

ACTION: Use professional judgement to determine the effect on the data.

relatively minor negative peaks mostly in 1^o column - no action

6.0 Contamination

NOTE: "Water blanks" and "distilled water blanks" are validated like any other sample and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor.

6.2 Do any field/rinse blanks have positive PEST/PCB results?

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

None identified probably 04-001-D201 no targets identified

YES NO N/A

NOTE: Only field/rinse blanks taken the same day as the samples are used to qualify data. Blanks may not be qualified because of contamination in another blank. Blanks may be qualified for surrogate, spectral, tuning or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"; cross out "B" flag	Reject sample result and report CRQL; cross out "B" flag	No qualification is needed

6.3 Are there field/rinse/equipment blanks associated with every sample?

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

not clearly identified not for each sampling date

7.0 Calibration and GC Performance

7.1 Are the following Gas Chromatograms and Data System Printouts for both Primary and Confirmation (confirmation standards not required if there are no positive results above CRQL) column present:

- a. Evaluation Standard Mix A
- b. Evaluation Standard Mix B
- c. Evaluation Standard Mix C
- d. Individual Standard Mix A
- e. Individual Standard Mix B
- f. Multi-component Pesticides Toxaphene & ~~Chlordane~~ ^{CDS 9/3/91}
- g. Aroclors 1016/1260
- h. Aroclors 1221, 1232, 1242, 1248, and 1254

ACTION: If no, take action specified in 3.2 above

	YES	NO	N/A
7.2 Is Form VIII Pest-1 present and complete for each GC column (primary and confirmation) and each 72 hour sequence of analyses?	<input checked="" type="checkbox"/>	—	—

ACTION: If no, take action specified in 3.2 above.

7.3 Are there any transcription/calculation errors between raw data and Form VIII?	—	<input checked="" type="checkbox"/>	—
------------------------------------------------------------------------------------	---	-------------------------------------	---

ACTION: If large errors exist, call lab for explanation / resubmittal, make any necessary corrections and note errors under "Conclusions".

*rounding
& minor differences*

7.4 Has the total breakdown on quantitation or confirmation column exceeded 20% for DDT?	—	<input checked="" type="checkbox"/>	—
------------------------------------------------------------------------------------------	---	-------------------------------------	---

- for Endrin?

—	<input checked="" type="checkbox"/>	—
---	-------------------------------------	---

or if Endrin aldehyde and 4,4'-DDD co-elute and there is a peak at their retention time, has the combined DDT and Endrin breakdown exceeded 20%?

—	<input checked="" type="checkbox"/>	—
---	-------------------------------------	---

ACTION:

a. If DDT breakdown is greater than 20% on quantitation column beginning with the samples following the last in control standard:

1. Flag all positive DDT results "J".
2. If DDT was not detected but DDD and/or DDE are positive, flag the DDT non-detect "R".
3. Flag positive DDD and DDE results "JN".
4. If DDT breakdown is > 20% on confirmation column and DDT is identified on quantitation column but not on confirmation column, use professional judgement to determine whether DDT should be reported on Form I (if reported, flag result "N").

b. If Endrin breakdown is > 20% on quantitation column, beginning with the samples following the last in control standard:

1. Flag all positive Endrin results "J".
2. If Endrin was not detected, but Endrin Aldehyde and/or Endrin Ketone are positive, flag the Endrin non-detect "R".
3. Flag Endrin Ketone positive results "JN".
4. If Endrin breakdown is > 20% on confirmation column and Endrin is identified on quantitation column but not on confirmation column, use professional judgement to determine whether Endrin should be reported on Form I (if reported, flag result "N").

c. If the combined breakdown is used (it can only be used if the conditions in 7.4 above are met) and is > 20% on quantitation column beginning with the last in control standard, take the actions specified in 7.4 a and b above. If the combined breakdown is > 20% on confirmation column and Endrin or DDT is identified on quantitation column but not on confirmation column, use professional judgement to determine whether Endrin or DDT should be reported on Form I (if reported, flag result "N").

00020

7.5 Is the linearity check: RSD of all four calibration factors <10% for the quantitation column?

YES NO N/A

ACTION: If no, flag positive hits for all pesticide and PCB analytes "J" for all associated samples. Do not flag toxaphene or DDT if they are quantified from a 3-point calibration curve.

CDS 9/3/91 Aldrin out 4/21 Instr. 13

7.6 Is the % difference between the EVAL A and each analysis (quantitation and confirmation) DBC retention time within QC limits (2% for packed column, 0.3% for capillary [I.D. < 0.32 mm], 1% for megabore [0.32 < I.D. < 2 mm]) ?

ACTION: DBC retention time cannot be evaluated if DBC is not detected. If it is present and has a retention time out of QC limits, then use professional judgement to determine the reliability of the analysis and flag results "R", if appropriate.

However, samples not associated with this case

7.7 Was the proper analytical sequence followed for each 72 hour period of analyses (page PEST D-36 in 8/87 SOW).

ACTION: If no, use professional judgement to determine the severity of the effect on the data and accept or reject it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

8.0 Pesticide/PCB Standards Summary

8.1 Is Form IX present and complete for each GC column and 72 hr sequence of analyses?

ACTION: If no, take action specified in 3.2 above.

8.2 Are there any transcription/calculation errors between raw data and Form IX?

ACTION: If large errors exist, call lab for explanation / resubmittal, make any necessary corrections and note errors under "Conclusions".

8.3 Is DDT retention time for packed columns > 12 min (except OV-1 and OV-101 columns)?

ACTION: If no, check that there is adequate resolution between individual components. If not, flag results for compounds that interfere with each other (co-elute) "R".

8.4 Do all standard retention times fall within the windows established for the first IND A and IND B analyses?

DDD - Instr. 14 (Conf.) 4/18/91 16:54

ACTION: Beginning with the samples following the last in control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and, DBC is visible non-detects are valid. If peaks are present and cannot be identified through "pattern recognition" or a consistent shift in standard retention times, flag all affected compound results "R".

YES NO N/A

- 8.5 Are the continuing calibration standard calibration factors within 15% (for quantitation column) or 20% (for confirmation column) of the initial (at beginning of 72 hr sequence) calibration factors?

ACTION: If no, flag all associated positive results "J". Use professional judgement to determine whether or not to flag non-detects.

Instr. 13+14
4/17+18/91
"Water" sequence had 90% out only in INDB analyzed well after samples of interest, shows increased sensitivity

"Soil" sequence shows decreasing sensitivity - flag NDs as estimated - Instr. 13

4/22/91 17:51 INDA - Lindane, Endo I, DDT

8.0 Pesticide/PCB Identification

- 9.1 Is Form X complete for every sample in which a pesticide or PCB was detected?

ACTION: If no, take action specified in 3.2 above.

4/23/91 02:15 JWPB - α , β , γ -BHC, Aldrin, DDE, DDD, Endosulfan sulfate, γ - δ -Chlordane

- 9.2 Are there any transcription errors between raw data and Form X?

ACTION: If large errors exist, call lab for explanation / resubmittal, make any necessary corrections and note errors under "Conclusions".

- 9.3 Are retention times of sample compounds within the calculated retention time windows for both quantitation and confirmation analyses?

Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)?

ACTION: Reject ("R") all positive results (meeting quantitation column criteria, but missing confirmation by a second column or GC/MS (if appropriate). Also, reject ("R") all positive results not meeting retention time window criteria unless associated standard compounds are similarly biased (i.e. base on RRT to DBC).

- 9.4 Check chromatograms for false negatives, especially for the multiple peak components toxaphene and PCB's. Were there any false negatives?

ACTION: If appropriate PCB standards were not analyzed, or if the lab performed no confirmation analysis, flag the appropriate data with an "R".

00022

10.0 Compound Quantitation and Reported Detection Limits

YES NO N/A

10.1 Are there any transcription / calculation errors in Form I results? Check at least two positive values. Were any errors found?

NOTE: Simple peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an estimated quantity ("JN"). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has obscured the attempt at a second column confirmation.

AR 1260 calculated incorrectly by lab for sample 04-004-D001 DL - peak included on std. not present in sample - masked in sample by large negative peak

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture?

ACTION: If errors are large, call lab for explanation / resubmittal, make any necessary corrections and note errors under "Conclusions".

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

1.0 Chromatogram Quality

11.1 Were baselines stable?

11.2 Were any electropositive displacement (negative peaks) or unusual peaks seen? *All soils except "UJ" 10-002-D001*

11.3 Were early eluting peaks (for early eluting analytes) resolved to baseline?

*Endo II
DDD
& PDT*

ACTION: For 11.1 and 11.2, comment only. For 11.3, reject ("R") those analytes that are not sufficiently resolved.

	YES	NO	N/A
--	-----	----	-----

2.0 Field Duplicates

12.1 Were any field duplicates submitted for PEST/PCB analysis?

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

TOTAL REVIEW

CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organics Analysis

RFW#
Case No. 9103L829 SDG No. 04-001-0001 LABORATORY P.F. Weston Lionville SITE NWS-Earle
Colt Neck, N.J.

DATA ASSESSMENT:

The current functional guidelines for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "U" (non-detects), "R" (unusable), or "NJ" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Reviewer's
Signature: Christopher D. Scapellato Date: 9/4/1991
Verified By: Paul B. Amby Date: 9/5/1991

DATA ASSESSMENT:

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples will be qualified as estimated, "J". The non-detects sample quantitation limits will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

*no action
all holding times met*

DATA ASSESSMENT:

2. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip field, rinse and water blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross- contamination of samples during field operations. Water blanks measure potential contamination of the distilled water used used during decontamination of field equipment. If the concentration of the analyte is less than 5 times (10 times for the common contaminants), the analytes are qualified as non- detects, "U". The following analytes in the samples shown were qualified with "U" for these reasons:

A) Method blank contamination

No positive/confirmed hits

B) Field or rinse blank contamination

None identified

C) Water blank contamination

NA

D) Trip blank contamination

NA

DATA ASSESSMENT:

5. CALIBRATION:

A) PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be <30% and %D must be <25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If there is a gross deviation of %RSD and %D, the non-detects may be qualified as rejected, "R".

For the PCB/PESTICIDE fraction, %RSD for aldrin, endrin, DDT, and dibutylchloroendate must not exceed 10%. Percent D must be within 15% on the quantitation column and 20% on the confirmation column.

*Aldrin >10% RSD in 4/21 Instr. 13 initial calibration
— no associated positive results in samples*

*%Ds >15% for Lindane, Endo I & DDT in INDA @
4/22/91 17:51 in 1^o sequence (Instr. 13) — decreasing
instrument response — quality non-detects in
samples 04-003-D001 & 04-004-D001 (DL)*

DATA ASSESSMENT:

6. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation in order to evaluate the laboratory performance and to estimate the efficiency of the analytical technique. If the measured surrogate concentration is outside of the contract specifications, qualifications were applied to the samples and analytes as shown below.

no qualifications required

DATA ASSESSMENT:

8. COMPOUND IDENTIFICATION:

A) VOLATILE AND SEMI-VOLATILE FRACTIONS:

TCL compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary M/E lines within 20% of that in the standard compound. For the tentatively identified compounds, TIC, the ion spectra must match accurately. In the cases where there is not a perfect ion spectrum match, the laboratory may have provided false positive identifications.

B) PESTICIDE FRACTION:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10 ng/uL in the final sample extract.

← PIP'-DDD in INDB Instr. 14 (Conf.) 4/18/91 16:54

no inspect

← no GC/MS Confirmation required

DATA ASSESSMENT:

9. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for some additional qualification of the data.

*High Endrin recoveries for BS/BSD
for water - no impact*

*Soil MS/MSD Recoveries & RPDs
good*

ATTACHMENT 1
SOP NO. HW-6

PAGE__OF__

DATA ASSESSMENT:

10. OTHER QC DATA OUT OF SPECIFICATION:

NA

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

Fair

12. CONTRACT PROBLEMS____NON-COMPLIANCE:

None

13. This package contains re-extraction, re-analysis or dilution. Upon reviewing the QA results, the following form I(s) are identified to be used.

Only one per sample included

00032

DATA ASSESSMENT:

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT:

Baseline instability for soils caused reviewer to flag, as estimated, the reported DLs for most soils.

Sample 04-004-D001
AR 1260

2250/2401 Column (1°)

Inst. 13

4/22/91

Sample RT	Ht. (Sample)	(Std.)
7.957	81033	88986
8.865	120777	125112
9.955	199466	195773
12.701	158983	148365
13.592	87221	72632
16.575	63096	52148
17.415	13059	10768
19.576	209973	170981
25.372	132318	103823
	1065926	948588

11.286 RT also circled for Std. PR.H. = 113572

Lab Value reported
1400 µg/kg

if added to total Std. response, yields sample conc. of 1389 but should not be included because no corresponding peak appears in sample! (large negative peak!)

$$\begin{aligned} \mu\text{g/kg AR 1260} &= \frac{(1065926) (3 \mu\text{L}) (20000 \times 5 \text{ dil})}{948588} \\ &= 1555.5 \text{ or } 1600 \mu\text{g/kg} \end{aligned}$$

DPO: ACTION FYI

Region _____

ORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 9103L829

LABORATORY R.F. Weston - Lionville

SDG NO. 04-061-D001

DATA USER _____

SOW 2/88 w/ Revs.

REVIEW COMPLETION DATE 9/4/91

NO. OF SAMPLES 1 WATER 8 SOIL _____ OTHER _____

REVIEWER ESD ESAT OTHER, CONTRACT/CONTRACTOR Heartland ESI

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	_____	_____	<u>0</u>	_____
2. GC-MS TUNE/ GC PERFORMANCE	_____	_____	<u>M</u>	_____
3. INITIAL CALIBRATIONS	_____	_____	<u>0</u>	_____
4. CONTINUING CALIBRATIONS	_____	_____	<u>X</u>	_____
5. FIELD BLANKS (*F = not applicable)	_____	_____	<u>F</u>	_____
6. LABORATORY BLANKS	_____	_____	<u>0</u>	_____
7. SURROGATES	_____	_____	<u>0</u>	_____
8. MATRIX SPIKE/DUPLICATES	_____	_____	<u>0</u>	_____
9. REGIONAL QC (*F = not applicable)	_____	_____	<u>F</u>	_____
10. INTERNAL STANDARDS	_____	_____	_____	_____
11. COMPOUND IDENTIFICATION	_____	_____	<u>0</u>	_____
12. COMPOUND QUANTITATION	_____	_____	<u>X</u>	_____
13. SYSTEM PERFORMANCE	_____	_____	<u>M</u>	_____
14. OVERALL ASSESSMENT	_____	_____	<u>M</u>	_____

O = No problems or minor problems that do not affect data usability.
 X = No more than about 5% of the data points are qualified as either estimated or unusable.
 M = More than about 5% of the data points are qualified as estimated.
 Z = More than about 5% of the data points are qualified as unusable.

DPO ACTION ITEMS: _____

AREAS OF CONCERN: _____

REJECTION SUMMARY FORM
(No. of Compounds/No. of Fractions (Samples))

SOP NO: HW-6
Date: February 1989

Type of Review: CLP Region II - SOP 3/90 Rev. 7

Date: 9/4/91

Case #: 9103L829

Project: NWS-Earle / Colts Neck, N.J.

Lab Name: Roy F. Weston - Lionville

Reviewer's Initials: ~~Tristram D. Jay~~ CDS

Number of Samples: 11

Analytes Rejected Due to Exceeding Review Criteria:

	Surrogates	Holding Time	Calibration	Contamination	ID	Other	Total # Samples	Total # Rejected/ Total # in all Samples
Acids (15)								
H/N (50)								
VOA (35)								
PEST (20)	0	0	0	0	0	0	11	0/220
ICB (7)	0	0	0	0	0	0	11	0/77
TCDD (1)								

Analytes Estimated Due to Exceeding Review Criteria for:

Acids (15)								
H/N (50)								
VOA (35)								
PEST (20)	0	0	6	0	0	21	11	27/220
PCB (7)	0	0	0	0	0	1	11	1/77
TCDD (1)								

00032