



Department of Energy

Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246



DEC - 7 2006

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0084-07

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS AND CHANGE PAGES ON ADDENDUM 4 TO THE CERTIFICATION REPORT FOR AREA 1, PHASE II FOR CERTIFICATION OF THE DISSOLVED OXYGEN FACILITY

- References:
- 1) "Certification Report for Area 1, Phase II," Document 20710-RP-0016, dated September 2000
 - 2) Letter DOE-0017-07, J. Reising to J. Saric/T. Schneider, "Transmittal of Addendum 4 to the Certification Report for Area 1, Phase II," dated October 19, 2006
 - 3) Letter, J. Saric to J. Reising, "Addendum 4 to the A1,P2 Certification Report," dated October 30, 2006
 - 4) Letter DOE-0056-07, J. Reising to J. Saric/T. Schneider, "Transmittal of Responses to U.S. Environmental Protection Agency Comments on Addendum 4 to the Certification Report for Area 1, Phase II for Certification of the Dissolved Oxygen Facility," dated November 9, 2006
 - 5) Letter, T. Schneider to J. Reising, "Disapproval - Addendum 4 to the Certification Report for A1P2," dated November 17, 2006
 - 6) Letter, J. Saric to J. Reising, "Addendum 4 to the A1,P2 Certification Report RTC," dated November 29, 2006

Mr. James Saric
Mr. Thomas Schneider

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DOE-084-07

Enclosed for your approval are responses to Ohio Environmental Protection Agency comments and change pages on Addendum 4 to the Certification Report for Area 1, Phase II. These change pages to Addendum 4 include the incorporation of all comment responses in the certification of the area surrounding the Dissolved Oxygen Facility. The U.S. Environmental Protection Agency has approved the comment responses previously sent as noted in References 4 and 6.

If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,



Johnny W. Reising
Director

Enclosures

cc w/enclosures:

J. Desormeau, DOE-OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosures)
G. Jablonowski, USEPA-V, SRF-5J
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
S. Helmer, ODH
AR Coordinator, Fluor Fernald, Inc./MS12

cc w/o enclosures:

J. Chiou, Fluor Fernald, Inc./MS1
F. Johnston, Fluor Fernald, Inc./MS12
C. Murphy, Fluor Fernald, Inc./MS1
T. Terry, Fluor Fernald, Inc./MS1

**RESPONSES TO
OHIO ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON ADDENDUM 4 TO THE
CERTIFICATION REPORT FOR AREA 1, PHASE II**

**FERNALD CLOSURE PROJECT
FERNALD, OHIO**

DECEMBER 2006

U.S. DEPARTMENT OF ENERGY

**ADDENDUM 4 TO THE
CERTIFICATION REPORT
FOR AREA 1, PHASE II**

**FERNALD CLOSURE PROJECT
FERNALD, OHIO**



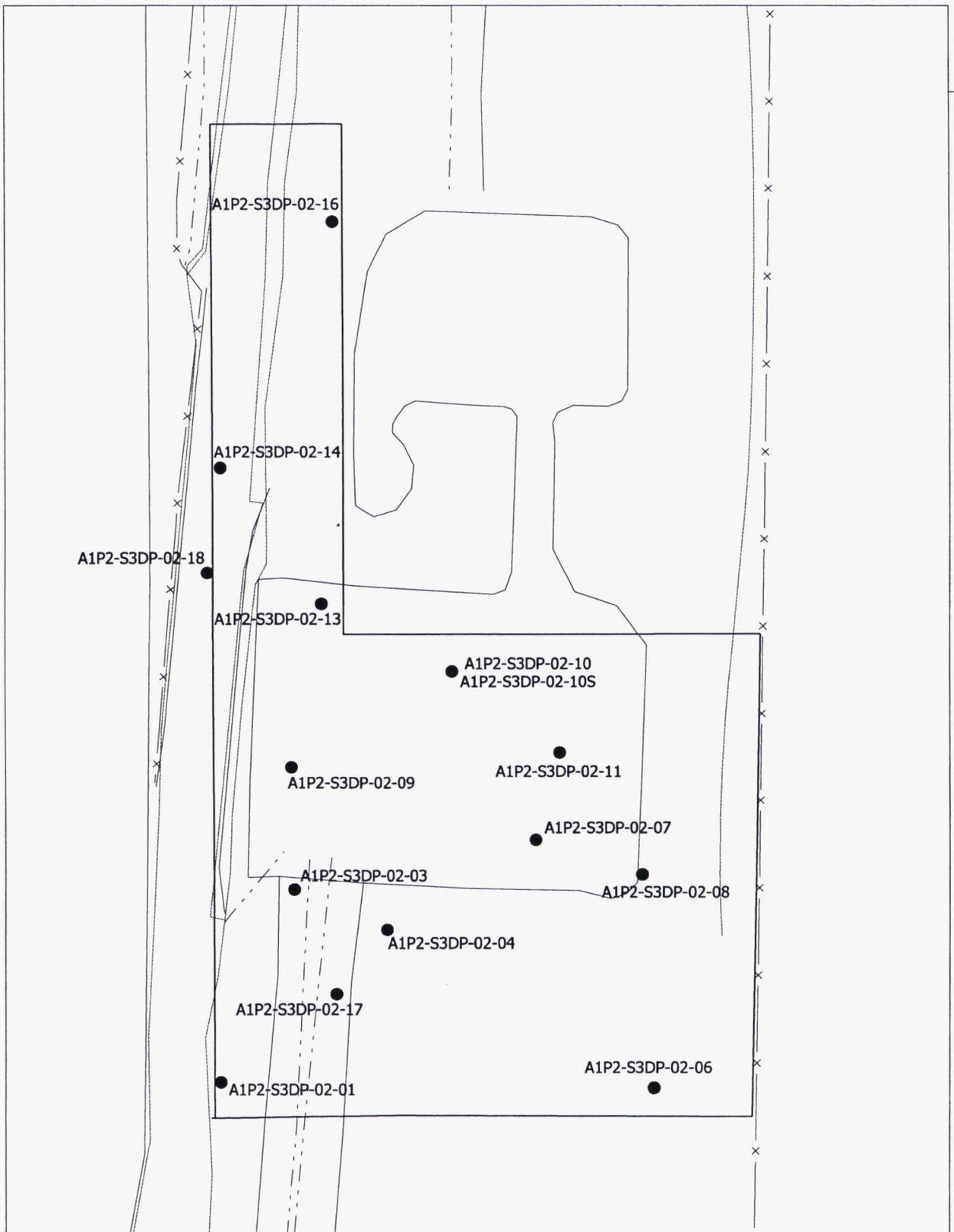
DECEMBER 2006

**U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE**

**20710-RP-0016
REVISION 1
ADDENDUM 4
PCN 1**

REVISION SUMMARY

<u>Revision</u>	<u>Date</u>	<u>Description of Revision</u>
Revision 0	9-28-00	Initial controlled issuance.
PCN 1	11-7-00	Correction of inaccurate reference to failed CUs in Paragraph 1 of the Executive Summary, an incorrectly reported analytical result unit on Page 3-3 and information on the failed CUs in Section 5.1.5.
Addendum 1	1-22-02	Created to include coverage of the Equipment Wash Facility, associated drainage line, and the immediate surrounding area.
Addendum 2	7-1-04	Revised to include updated statistics for CU A1P2-S3HR-04 due to debris discovered during site preparation excavation activities for the construction of the OSDF Cell 7 and 8 liners.
Addendum 3	3-1-05	Revised to include coverage of the footprint of the Debris Haul Road, which is located north of the former OSDF Equipment Wash Facility.
Addendum 3 PCN 1	4-18-05	Revised Table 5-1 to correct typographical error requested by OEPA.
Addendum 4	10-18-06	Revised to include coverage of the area surrounding the Dissolved Oxygen Facility, as well as an area where a clay pipe was encountered while excavating/relocating the drainage ditch east of Cell 8.
PCN 1	12-4-06	Revisions were made to Section 5.1.1, Tables 5-1 and 5-2, and Figure 3-2 to incorporate both EPA and OEPA comment responses.



LEGEND:

● SAMPLE LOCATION



FIGURE 3-2. SAMPLE LOCATIONS FOR CU A1P2-S3DP-02

5.0 CERTIFICATION EVALUATION AND CONCLUSIONS

5.1 CERTIFICATION RESULTS, ISSUES AND EVALUATIONS

5.1.1 CU A1P2-DO

The CU for the area surrounding the DO Building passed the certification criteria. The determination of successful certification or certification failure was based on a review of certification sample data for the CU. All initial results were below the FRL except for four above-FRL arsenic results and one above-FRL radium-226 result. Statistical analysis, as described in the SEP, of the data showed that both arsenic and radium-226 passed the certification criteria. All of the certification data is presented in Table 5-1.

5.1.2 CU A1P2-S3DP-02

Two samples within CU A1P2-S3DP-02 had two elevated above-FRL arsenic results. The samples were collected under the original certification effort of A1P2. The samples results from the two newly collected samples were below-FRL for all analytes, and the CU passes the certification criteria. The certification data is presented in Table 5-2.

5.2 CERTIFICATION CONCLUSIONS

DOE has determined that the remedial objectives in the Operable Unit 5 Record of Decision (DOE 1996) have been achieved both CU A1P2-DO and A1P2-S3DP-02 addressed in this addendum, and no further remedial actions are required. Upon U.S. Environmental Protection Agency and Ohio Environmental Protection Agency concurrence, this area will be released for final land use.

TABLE 5-1
CU AIP2-DO CERTIFICATION DATA

PCN 1

SAMPLE ID	Radium-226	Radium-228	Thorium-228	Thorium-232	Uranium, Total	Technetium-99	Antimony	Arsenic	Beryllium	Lead	Molybdenum	Aroclor-1254
A1P2-DO-01^1-RMP	1.31 J	1.26 J	1.21 J	1.26 J	3.72 U	0.801 U	1.24 U	13.8 J	0.654 J	17.7 J	2.07 J	1.4 J
A1P2-DO-02^1-RMP	1.15 J	0.953 J	0.955 J	0.953 J	6.47 -	0.793 U	1.52 U	10 J	0.772 J	17.1 J	1.17 J	4.4 U
A1P2-DO-03^1-RMP	1.52 J	1.38 J	1.36 J	1.38 J	5.68 J	0.819 U	1.34 U	15.2 J	1.28 J	24 J	1.55 J	4 U
A1P2-DO-04^1-RMP	1.1 J	0.988 J	0.985 J	0.988 J	15 -	0.876 -	1.42 U	8.93 J	1 J	20 J	1.56 J	4.3 U
A1P2-DO-05^1-RMP	1.26 J	1.17 J	1.13 J	1.17 J	8.55 -	0.781 U	1.47 U	6.89 J	0.633 J	19.9 J	0.919 J	4.1 U
A1P2-DO-05^1-RMP-D	0.707 J	0.697 J	0.695 J	0.697 J	6.59 -	0.749 U	1.15 U	12.3 J	0.269 J	8.56 J	0.864 J	4 U
A1P2-DO-06^1-RMP	1.34 J	0.859 J	0.859 J	0.859 J	4.2 J	0.77 U	1.17 U	5.69 J	0.754 J	17.5 J	0.873 J	3.6 U
A1P2-DO-07^1-RMP	1.02 J	0.718 J	0.726 J	0.718 J	5.37 J	0.753 U	1.31 U	4.09 J	0.46 J	8.88 J	1.1 J	3.8 U
A1P2-DO-08^1-RMP	1.08 -	0.778 J	0.782 J	0.778 J	4.62 -	0.76 U	1.4 U	3.94 J	0.972 -	15 J	1.75 J	1.7 J
A1P2-DO-09^1-RMP	1.73 J	1.18 J	1.26 J	1.18 J	5.09 J	0.825 U	1.59 U	13.7 J	0.903 J	15.4 J	1.84 J	4.2 U
A1P2-DO-10^1-RMP	0.998 J	0.947 J	0.962 J	0.947 J	5.59 J	0.771 U	1.32 U	7.18 J	0.762 J	14 J	1.31 J	3.8 U
A1P2-DO-11^1-RMP	0.966 J	1.03 J	1.05 J	1.03 J	5.85 -	0.75 U	1.17 U	2.19 U	0.607 J	10.5 J	0.948 J	3.8 U
A1P2-DO-12^1-RMP	1.03 J	1.02 J	1 J	1.02 J	6.22 -	0.755 U	1.4 U	7.02 J	0.685 J	12.9 J	1.45 J	3.8 U
A1P2-DO-T-1^RMP	0.425 -	0.3 -	0.28 -	0.3 -	3.2 -	1.56 U	0.417 U	2.8 -	0.16 -	3.3 J	0.84 J	3.5 U
A1P2-DO-T-2^RMP	0.353 -	0.28 -	0.273 -	0.28 -	3.87 -	1.68 U	0.55 U	2.1 -	0.12 J	2.3 J	0.78 J	3.5 U
A1P2-DO-T-3^RMP	0.672 -	0.649 -	0.65 -	0.649 -	3.81 J	1.68 U	1 U	4.8 -	0.39 -	7.9 J	0.86 J	3.7 U
Limit	1.7	1.8	1.7	1.5	82	30	96	12	1.5	400	2900	130
Units	pCi/g	pCi/g	pCi/g	pCi/g	mg/kg	pCi/g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg
Conf. Level	95%	95%	95%	95%	95%	90%	90%	90%	90%	90%	90%	90%
Max. Result	1.73	1.38	1.36	1.38	15	0.876	1.59 U	15.2	1.28	24	2.07	1.7
Max. > Limit	Yes	No	No	No	No	No	No	Yes	No	No	No	No
W-statistic Prob. #	54.0% (N)	--	--	--	--	--	--	41.4% (LN)	--	--	--	--
Test Procedure	Normal	--	--	--	--	--	--	Lognormal	--	--	--	--
Sample Size	15	15	15	15	15	15	15	15	15	15	15	15
Nondetects	0	0	0	0	1	14	15	1	0	0	0	13
% Nondetects	0%	0%	0%	0%	7%	93%	100%	7%	0%	0%	0%	87%
Est. Mean*	1.064	--	--	--	--	--	--	8.0	--	--	--	--
UCL	1.23	--	--	--	--	--	--	11.46	--	--	--	--
Prob. > Limit	--	--	--	--	--	--	--	--	--	--	--	--
Pass / Fail	pass	--	--	--	--	--	--	pass	--	--	--	--
<i>a posteriori</i> Sample Size calculation	4 Pass	-- --	-- --	-- --	-- --	-- --	-- --	7 Pass	-- --	-- --	-- --	-- --

Note: Est. Mean = Estimated measure of central tendency (Normal: Mean; LogNormal: Est. Mean; Non-Parametric: Median)

The maximum value of the two duplicates was used in all statistical equations.

#: This is the highest reported probability of the Shapiro-Wilk W-statistic for tests for the validity of the normality assumption.

The test is performed on the raw data (untransformed) data (N) and the log-transformed data (LN) to test for lognormality.

TABLE 5-1
CU A1P2-DO CERTIFICATION DATA

SAMPLE ID	Aroclor-1260	Tetrachloroethene
A1P2-DO-01^1-RMP	3.7 U	1.1 U
A1P2-DO-02^1-RMP	4.4 U	1 U
A1P2-DO-03^1-RMP	4 U	0.9 U
A1P2-DO-04^1-RMP	3.1 J	1.1 U
A1P2-DO-05^1-RMP	4.1 U	0.9 U
A1P2-DO-05^1-RMP-I	4 U	1 U
A1P2-DO-06^1-RMP	3.6 U	1 U
A1P2-DO-07^1-RMP	3.8 U	1 U
A1P2-DO-08^1-RMP	4.2 U	0.9 U
A1P2-DO-09^1-RMP	4.2 U	1.1 U
A1P2-DO-10^1-RMP	3.8 U	1.1 U
A1P2-DO-11^1-RMP	3.8 U	0.8 U
A1P2-DO-12^1-RMP	3.8 U	0.9 U
A1P2-DO-T-1^RMP	3.5 U	1.1 U
A1P2-DO-T-2^RMP	3.5 U	1.1 U
A1P2-DO-T-3^RMP	3.7 U	0.8 U
Limit	130	3600
Units	ug/kg	ug/kg
Conf. Level	90%	90%
Max. Result	3.1	1.1 U
Max. > Limit	No	No
W-statistic Prob. #	--	--
Test Procedure	--	--
Sample Size	15	15
Nondetects	14	15
% Nondetects	93%	100%
Est. Mean*	--	--
UCL	--	--
Prob. > Limit	--	--
Pass / Fail	--	--
<i>a posteriori</i> Sample	--	--
Size calculation	--	--

Note: Est. Mean = Estimated measure of central tendency (Normal: Mean; LogNormal: Est. Mean; Non-Parametric: Median)

The maximum value of the two duplicates was used in all statistical equations.

#: This is the highest reported probability of the Shapiro-Wilk W-statistic for tests for the validity of the normality assumption.

The test is performed on the raw data (untransformed) data (N) and the log-transformed data (LN) to test for lognormality.

TABLE 5-2
CU A1P2-S3DP-02 CERTIFICATION DATA

SAMPLE ID	Radium-226	Radium-228	Thorium-228	Thorium-232	Uranium, Total	Technetium-99	Antimony	Arsenic	Beryllium	Lead	Molybdenum
A1P2-S3DP-02-01	1.105 -	0.809 -	0.8 -	0.809 -	7.032 -	1.73 U	0.98 U	9.1 -	0.74 -	19.8 J	1.2 U
A1P2-S3DP-02-03	1.234 -	0.955 -	0.932 -	0.955 -	6.067 -	1.28 U	1.13 -	11.7 -	0.91 -	16.9 J	1.2 U
A1P2-S3DP-02-03-D	1.213 -	0.925 -	0.911 -	0.925 -	5.384 -	1.24 U	3.9 -	8.5 -	0.77 -	12.3 J	0.88 U
A1P2-S3DP-02-04	1.532 -	1.275 -	1.261 -	1.275 -	2.992 U	1.4 U	1.02 U	13.1 -	1 -	15.8 J	0.84 U
A1P2-S3DP-02-06	1.284 -	0.998 -	1.005 -	0.998 -	8.202 -	1.32 U	1.04 U	7 U	0.42 U	17.4 J	0.93 U
A1P2-S3DP-02-07	0.78 -	0.657 -	0.662 -	0.657 -	2.363 -	1.22 U	2.53 -	5.6 U	0.58 -	10.4 J	1.5 -
A1P2-S3DP-02-08	0.85 -	0.773 -	0.779 -	0.773 -	3.498 J	1.31 U	3.04 -	6.7 U	0.62 -	10.7 J	1 U
A1P2-S3DP-02-09	1.164 -	0.681 -	0.668 -	0.681 -	5.379 -	2.17 -	3.38 -	7.4 U	0.77 -	12.2 J	1.6 -
A1P2-S3DP-02-10	0.717 -	0.664 -	0.673 -	0.664 -	2.655 J	1.16 U	1.9 -	5.8 U	0.55 U	10 J	1.4 -
A1P2-S3DP-02-11	0.918 -	0.648 -	0.642 -	0.643 -	2.311 U	1.26 U	3.77 -	6.8 U	0.63 U	10 J	1 U
A1P2-S3DP-02-13	0.831 -	0.847 -	0.838 -	0.847 -	2.514 J	1.22 U	2.99 -	6 U	0.75 -	10.7 J	1.3 U
A1P2-S3DP-02-14	1.541 -	1.22 -	1.206 -	1.22 -	5.178 -	1.1 J	1.76 -	8.9 -	0.76 -	14.8 J	1.7 -
A1P2-S3DP-02-16	1.526 -	1.159 -	1.158 -	1.159 -	4.543 J	1.15 U	1.65 -	12.3 -	1.1 -	13.1 J	0.3 U
A1P2-S3DP-02-17	1.21 -	1.12 -	1.11 -	1.12 -	9.34 -	1.88 U	0.111 UJ	7.5 -	0.9 -	16.1 J	0.8 U
A1P2-S3DP-02-18	1.12 -	0.96 -	0.972 U	0.96 -	3.76 -	1.67 U	2.22 UJ	5.9 -	0.79 -	16.9 J	0.89 J
A1P2-S3DP-02-10S	0.881 -	0.676 -	0.657 -	0.676 -	3.973 -	1.39 U	2.71 -	6.4 U	0.74 -	9.2 J	0.61 J
Limit	1.7	1.8	1.7	1.5	82	30	96	12	1.5	400	2900
Units	pCi/g	pCi/g	pCi/g	pCi/g	mg/kg	pCi/g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Conf. Level	95%	95%	95%	95%	95%	90%	90%	90%	90%	90%	90%
Max. Result	1.541	1.275	1.261	1.275	9.34	2.17	3.9	13.1	1.1	19.8	1.7
Max. > Limit	No	No	No	No	No	No	No	Yes	No	No	No
W-statistic Prob. #	--	--	--	--	--	--	--	1.4% (LN)	--	--	--
Test Procedure	--	--	--	--	--	--	--	Proportions (Sign)	--	--	--
Sample Size	15	15	15	15	15	15	15	15	15	15	15
Nondetects	0	0	1	0	2	13	5	8	3	0	9
% Nondetects	0%	0%	7%	0%	13%	87%	33%	53%	20%	0%	60%
Est. Mean*	--	--	--	--	--	--	--	3.7	--	--	--
UCL	--	--	--	--	--	--	--	--	--	--	--
Prob. > Limit	--	--	--	--	--	--	--	0.00	--	--	--
Pass / Fail	--	--	--	--	--	--	--	pass	--	--	--
<i>a posteriori</i> Sample	--	--	--	--	--	--	--	7	--	--	--
Size calculation	--	--	--	--	--	--	--	Pass	--	--	--

Note: Est. Mean = Estimated measure of central tendency (Normal: Mean; LogNormal: Est. Mean; Non-Parametric: Median)

The maximum value of the two duplicates was used in all statistical equations.

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TABLE 5-2
CU A1P2-S3DP-02 CERTIFICATION DATA

SAMPLE ID	Aroclor-1254	Aroclor-1260	Tetrachloroethene
A1P2-S3DP-02-01	38.4 U	38.4 U	11.7 U
A1P2-S3DP-02-03	38.1 U	38.1 U	11.8 U
A1P2-S3DP-02-03-D	38.6 U	38.6 U	12 U
A1P2-S3DP-02-04	42.5 U	42.5 U	11.5 U
A1P2-S3DP-02-06	40.1 U	40.1 U	11.7 U
A1P2-S3DP-02-07	38.2 U	38.2 U	11.3 U
A1P2-S3DP-02-08	38.3 U	38.3 U	11.4 U
A1P2-S3DP-02-09	41.4 U	41.4 U	13.3 U
A1P2-S3DP-02-10	39.4 U	39.4 U	2.85 J
A1P2-S3DP-02-11	39.2 U	39.2 U	13.5 U
A1P2-S3DP-02-13	38.1 U	38.1 U	8.94 J
A1P2-S3DP-02-14	42.1 U	42.1 U	12.6 U
A1P2-S3DP-02-16	41.1 U	41.1 U	12.8 U
A1P2-S3DP-02-17	3.8 U	3.8 U	1.3 U
A1P2-S3DP-02-18	3.9 U	3.9 U	1.4 U
A1P2-S3DP-02-10S	48.5 U	48.5 U	5.43 J
Limit	130	130	3600
Units	ug/kg	ug/kg	ug/kg
Conf. Level	90%	90%	90%
Max. Result	48.5 U	48.5 U	8.94
Max. > Limit	No	No	No
W-statistic Prob. #	--	--	--
Test Procedure	--	--	--
Sample Size	15	15	15
Nondetects	15	15	12
% Nondetects	100%	100%	80%
Est. Mean*	--	--	--
UCL	--	--	--
Prob. > Limit	--	--	--
Pass / Fail	--	--	--
<i>a posteriori</i> Sample Size calculation	--	--	--

Note: Est. Mean = Estimated measure of central tendency (Normal: Mean; LogNormal: Est. Mean; Non-Parametric: Median)

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