006185

Department of Energy

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

AUG 28 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-00188-06

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 CHANGE PAGES TO APPENDIX A OF THE CERTIFICATION REPORT FOR AREA 1, PHASE II

Reference: "Certification Report for Area 1, Phase II," Document 20710-RP-0016, dated September 2000

Enclosed are replacement tables for two certification results presented in Appendix A of the final Certification Report for Area 1, Phase II. The replacement pages for Certification Units A1P2-S2NI-05 and A1P2-S3CD-02 contain statistical calculations for radium-228 and arsenic, respectively, that were not presented on the original pages. These corrections do not change the conclusion reached in Section 5.2 of the Certification Report (i.e., certification activities for Area 1, Phase II are complete).

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

Sincerely,

Johnny Reising

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./MS6

cc w/o enclosures:
J. Chiou, Fluor Fernald, Inc./MS88
F. Johnston, Fluor Fernald, Inc./MS12
C. Murphy, Fluor Fernald, Inc./MS1
T. Terry, Fluor Fernald, Inc./MS1

Appendix A: Certification Statistics for A1P2-S2NI-05

Sample ID	PRIMARY COCs					SECONDARY COCs	
	Radium-226	Radium-228	Thorium-228	Thorium-232	Uranium, Total	Arsenic	Lead
A1P2-S2NI-05-01-RM	1.44 J	1.21 J	0.94 J	1.21 J	5.50 J	8.40 -	18.20 J
A1P2-S2NI-05-02-RM	1.23 J	1.26 J	0.98 J	1.26 J	17.70 J	6.70 -	16.00 J
A1P2-S2NI-05-03-RM	1.05 J	1.05 J	1.12 J	1.05 J	23.00 J	7.40 -	22.30 J
A1P2-S2NI-05-04-RM	1.41 -	1.22 -	1.25 -	1.22 -	13.42 -		
A1P2-S2NI-05-05-RM	1.14 J	1.02 J	1.09 J	1.02 J	9.66 J	7.70 -	20.30 J
A1P2-S2NI-05-06-RM	1.17 J	1.21 J	0.95 J	1.21 J	8.85 J	8.60 -	17.20 J
A1P2-S2NI-05-07-RM	1.31 -	1.31 -	1.30 -	1.31 -	45.20 -		
A1P2-S2NI-05-08-RM	1.20 J	1.31 J	1.44 J	1.31 J	52.20 J	10.20 -	32.60 J
A1P2-S2NI-05-08-RM-D	1.53 J	1.39 J	1.42 J	1.39 J	39.60 J	7.90 -	26.10 J
A1P2-S2NI-05-09-RM	1.27 -	1.18 -	1.17 -	1.18 -	36.93 -		
A1P2-S2NI-05-10-RM	1.31 J	2.53 J	0.95 J	1.31 J	12.80 J	11.70 -	22.30 J
A1P2-S2NI-05-11-RM	1.26 J	1.32 J	1.55 J	1.32 J	64.90 J	6.20 -	22.60 J
A1P2-S2NI-05-12-RM	1.26 J	1.35 J	1.33 J	1.35 J	55.00 J	6.50 -	22.20 J
A1P2-S2NI-05-13-RM	1.45 J	1.49 J	1.67 J	1.49 J	54.70 J	9.00 -	26.70 J
A1P2-S2NI-05-14-RM	1.28 -	1.18 -	1.18 -	1.18 -	39.70 -		
A1P2-S2NI-05-15-RM	1.23 J	1.51 J	1.38 J	1.51 J	62.60 J	6.60 -	22.30 J
A1P2-S2NI-05-16-RM	1.17 J	1.47 J	1.21 J	1.47 J	63.10 J	7.20 -	23.70 J
FRL	1.70	1.80	1.70	1.50	82.00	12.00	400.00
Units	pCi/g	pCi/g	pCi/g	pCi/g	ug/g	mg/kg	mg/kg
Confidence Level	95%	95%	95%	95%	95%	90%	90%
Max Result	1.53 @	2.53	1.67 @	1.51	64.90 @	11.70 @	32.60 @
Standardized Skewness	- -	4.69	- -	-0.084	- -	- -	- -
W-Statistic Probability*	- -	<0.01% (LN)	- -	63.0% (N)	- -	- -	- -
Test Procedure	- -	Median (sign)	- -	t-Test (N)	- -	- -	- -
Sample Size	16	16	16	16	16	12	12
Estimated Mean	- -	1.29	- -	1.28	- -	- -	- -
UCL on the Mean**	- -	1.39	- -	1.34	- -	- -	- -
Non-Parametric Prob.	- -	- -	- -	- -	- -	- -	- -
Est. Mean - Pass / Fail	- -	Pass	- -	Pass	- -	- -	- -
2x Rule Pass / Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass
a posteriori Sample	- -	6	- -	4	- -	- -	- -
Size calculation	- -	Pass	- -	Pass	- -	- -	- -

Definition of Qualifiers
"J" = estimated result
"UJ" = not detected, estimated
"U" = not detected
" - " = no data qualifier
"NV" = not validated
"UNV" = not detected, not validated

NOTES:
(1) Maximum result did not exceed the FRL, therefore no statistics were generated and no other tests performed.
(2) The maximum value of the two duplicates was used in all statistical equations.
(3) • W-Statistic Probability is the highest calculated 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 (Normal) and the log-transformed data (LogNormal) to test for lognormality.
(4) **Estimated Mean = Estimated measure of central tendency (Normal: Mean; LogNormal: Est. Mean; Non-Parametric: Median).

Appendix A: Certification Statistics for A1P2-S3CD-02

Sample ID	PRIMARY COCs					SECONDARY COCs				
	Radium-226	Radium-228	Thorium-228	Thorium-232	Uranium, Total	Technietum-99	Antimony	Arsenic	Beryllium	Lead
A1P2-S3CD-02-01-RM	1.34 -	1.01 -	0.99 -	1.01 -	5.95 -	1.45 U	2.99 J	9.60 -	0.18 J	24.0 -
A1P2-S3CD-02-02-RM	1.18 -	0.80 -	0.79 -	0.80 -	5.88 -	1.54 U	2.45 J	6.68 -	0.07 J	20.2 -
A1P2-S3CD-02-04-RM	1.12 -	0.77 -	0.77 -	0.77 -	6.70 -	1.32 U	3.96 J	4.59 -	0.12 J	13.5 -
A1P2-S3CD-02-05-RM	1.45 -	1.09 -	1.06 -	1.09 -	4.85 J	1.63 U	2.56 J	6.68 -	0.64 J	27.5 -
A1P2-S3CD-02-06-RM	1.15 -	0.86 -	0.84 -	0.86 -	15.70 -	1.35 U	2.59 J	5.54 -	0.03 U	19.3 -
A1P2-S3CD-02-07-RM	1.08 -	0.88 -	0.87 -	0.88 -	15.87 -	1.57 U	2.54 J	6.85 -	0.09 J	24.0 -
A1P2-S3CD-02-09-RM	1.20 -	0.90 -	0.89 -	0.90 -	4.95 J	1.38 U	3.29 J	4.60 -	0.07 J	18.7 -
A1P2-S3CD-02-09-RM-D	1.16 -	0.87 -	0.86 -	0.87 -	3.07 U	1.44 U	2.52 J	6.41 -	0.21 J	19.8 -
A1P2-S3CD-02-11-RM	1.00 -	0.78 -	0.75 -	0.78 -	4.45 J	1.29 U	3.38 J	3.21 U	0.03 U	24.3 -
A1P2-S3CD-02-12-RM	0.91 -	0.77 -	0.77 -	0.77 -	2.91 U	1.64 U	3.71 J	7.87 -	0.03 U	15.6 -
A1P2-S3CD-02-13-RM	1.12 -	0.91 -	0.88 -	0.91 -	5.45 -	1.50 U	3.11 J	14.30 -	0.03 U	25.6 -
A1P2-S3CD-02-14-RM	1.22 -	1.07 -	1.03 -	1.07 -	40.36 -	1.66 U	1.97 J	8.00 -	0.03 U	30.4 -
A1P2-S3CD-02-16-RM	1.02 -	0.68 -	0.67 -	0.68 -	3.42 J	1.35 U	5.01 J	4.97 -	0.18 J	17.3 -
FRL	1.70	1.80	1.70	1.50	82.00	30.00	10.00	12.00	1.50	400.00
Units	pCi/g	pCi/g	pCi/g	pCi/g	ug/g	pCi/g	ug/g	ug/g	ug/g	ug/g
Confidence Level	95%	95%	95%	95%	95%	90%	90%	90%	90%	90%
Max Result	1.45 @	1.09 @	1.06 @	1.09 @	40.36 @	1.66 U @	5.01 @	14.30	0.64 @	30.40 @
Standardized Skewness	- -	- -	- -	- -	- -	- -	- -	2.10	- -	- -
W-Statistic Probability*	- -	- -	- -	- -	- -	- -	- -	90.5% (LN)	- -	- -
Test Procedure	- -	- -	- -	- -	- -	- -	- -	lognormal	- -	- -
Sample Size	12	12	12	12	12	12	12	12	12	12
Estimated Mean	- -	- -	- -	- -	- -	- -	- -	7.09	- -	- -
UCL on the Mean**	- -	- -	- -	- -	- -	- -	- -	8.40	- -	- -
Non-Parametric Prob.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Est. Mean - Pass / Fail	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2x Rule Pass / Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
a posteriori Sample	- -	- -	- -	- -	- -	- -	- -	3	- -	- -
Size calculation	- -	- -	- -	- -	- -	- -	- -	Pass	- -	- -

Definition of Qualifiers
"J" = estimated result
"UJ" = not detected, estimated
"U" = not detected
" - " = no data qualifier
"NV" = not validated
"UNV" = not detected, not validated

NOTES:

(1) Maximum result did not exceed the FRL, therefore no statistics were generated and no other tests performed.

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

(3) * W-Statistic Probability is the highest calculated 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 (Normal) and the log-transformed data (LogNormal) to test for lognormality.

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

006185